

Benzie County, Michigan Natural Hazard Mitigation Plan

2023



448 Court Place • Beulah, MI 49617

Resolution # 2024-008

A RESOLUTION OF THE BENZIE COUNTY BOARD OF
COMMISSIONERS AUTHORIZING THE ADOPTION OF THE
2023 BENZIE COUNTY, MICHIGAN
NATURAL HAZARD MITIGATION PLAN - 5 YEAR
UPDATE

Whereas, all jurisdictions within Benzie County have exposure to natural, technological and human-induced hazards that may damage or destroy life, property, the environment, or local economy; and

Whereas, pro-active mitigation of known hazards before a disaster event can reduce or eliminate damages and impacts to life, property, the environment or local economy; and

Whereas, The Disaster Mitigation Act (OMA) of 2000 (Public Law 106-390) established new requirements for pre- and post-disaster hazard mitigation programs;

Whereas, the 2023 Benzie County Natural Hazard Mitigation Plan has been developed in accordance to the DMA of 2000 to reflect the concerns of the citizens and stakeholders of Benzie County;

Now, therefore, be it resolved that:

1. The 2023 Benzie County Hazard Mitigation Plan 5 Year Update is hereby adopted as an official plan of Benzie County.
2. The Benzie County Local Emergency Planning Committee/Local Planning Team will serve as the Natural Hazards Task Force. The duties shall be as outlined in the 2023 Benzie County Natural Hazard Mitigation Plan 5 Year Update.
3. The Benzie County Emergency Management Coordinator is charged with supervising the implementation of the Plan's recommendations within the funding limitations as provided by the County or other funding sources.
4. The Benzie County Emergency Management Coordinator shall convene the Natural Hazards Task Force annually. The Coordinator's responsibilities will include monitoring the implementation of the plan and shall submit a written progress report to the Task Force in accordance with the following format:
 - a. A review of the original plan.
 - b. A review of any disasters or emergencies that occurred during the previous calendar year.

- c. A review of the actions taken, including what was accomplished during the previous year.
- d. A discussion of any implementation problems.
- e. Recommendations for new projects or revised action items. Such recommendations shall be subject to approval by the Benzie County Board of Commissioners.

Date of Adoption: February 13, 2024

I, Tammy Bowers, Clerk to the Benzie County Board of Commissioners, hereby do certify that the above resolution was adopted by the Benzie County Board of Commissioners on the 13th, day of February, 2024.

Tammy Bowers, Clerk



U.S. Department of Homeland Security
FEMA Region 5
536 S. Clark St., 6th Floor
Chicago, IL 60605

FEMA

February 26, 2024

Mr. Matt Schnepf
State Hazard Mitigation Officer
Michigan State Police
Emergency Management and Homeland Security Division
P.O. Box 30634
Lansing, MI 48909

Dear Mr. Schnepf:

Thank you for submitting adoption documentation for the 2023 Benzie County Hazard Mitigation Plan. The plan was reviewed based on the local plan criteria contained in 44 CFR Part 201, as authorized by the Disaster Mitigation Act of 2000. The plan met the required criteria for a multi-jurisdictional hazard mitigation plan and the plan is now approved for Benzie County.

Please submit adoption resolutions for any remaining jurisdictions who participated in the planning process.

The expiration date of the 2023 Benzie County Hazard Mitigation is five years from the date of this letter.

An approved local mitigation plan, including adoption by the local government, is one of the conditions for applying for and/or receiving FEMA mitigation grants from the following programs:

- Hazard Mitigation Grant Program (HMGP)
- HMGP Post-Fire
- Building Resilient Infrastructure and Communities
- Flood Mitigation Assistance

Having an approved mitigation plan does not mean that mitigation grant funding will be awarded. Specific application and eligibility requirements for the programs listed above can be found in each FEMA grant program's respective policies and annual Notice of Funding Opportunities, as applicable.

To avoid a lapsed plan, the next plan update must be approved before the end of the approval period, including adoption by the participating jurisdiction(s). Before the end of the approval period, please allow sufficient time to secure funding for the update, including the review and approval process. Please include time for any revisions, if needed, and for your jurisdiction to formally adopt the plan after the review, if not adopted prior to submission. This will enable you to remain eligible to apply for and receive funding from FEMA's mitigation grant programs with a mitigation plan requirement. Local governments, including special districts, with a plan status of "Approvable Pending Adoption" are not eligible for FEMA's mitigation grant programs with a mitigation plan requirement.

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We look forward to discussing options for implementing this mitigation plan. If there are any questions from either you or the communities, please contact Meghan Cuneo at (202) 615-5294 or email at Meghan.Cuneo@fema.dhs.gov.

Sincerely,

JOHN A WETHINGTON
Digitally signed by
JOHN A WETHINGTON
Date: 2024.02.26
20:24:10 -06'00'

John Wethington
Chief, Risk Analysis Branch
Mitigation Division

www.fema.gov



U.S. Department of Homeland Security
FEMA Region 5
536 S. Clark St., 6th Floor
Chicago, IL 60605

FEMA

April 19, 2024

Mr. Matt Schnepf
State Hazard Mitigation Officer
Michigan State Police
Emergency Management and Homeland Security Division
P.O. Box 30634
Lansing, MI 48909

Dear Mr. Schnepf:

Thank you for submitting adoption documentation for the 2023 Benzie County Hazard Mitigation Plan. The plan was reviewed based on the local plan criteria contained in 44 CFR Part 201, as authorized by the Disaster Mitigation Act of 2000. The plan met the required criteria for a multi-jurisdictional hazard mitigation plan and the plan is now approved for the Village of Beulah, Village of Benzonia, Village of Thompsonville, Crystal Lake Township, and Lake Township.

Please submit adoption resolutions for any remaining jurisdictions who participated in the planning process.

The expiration date of the 2023 Benzie County Hazard Mitigation is February 25, 2029.

An approved local mitigation plan, including adoption by the local government, is one of the conditions for applying for and/or receiving FEMA mitigation grants from the following programs:

- Hazard Mitigation Grant Program (HMGP)
- HMGP Post-Fire
- Building Resilient Infrastructure and Communities
- Flood Mitigation Assistance

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Sincerely,

JOHN A
WETHINGTON

Digitally signed by
JOHN A WETHINGTON
Date: 2024.04.19
11:26:03 -0500

John Wethington
Chief, Risk Analysis Branch
Mitigation Division

www.fema.gov



U.S. Department of Homeland Security
FEMA Region 5
536 S. Clark St., 6th Floor
Chicago, IL 60605

FEMA

June 18, 2024

Mr. Matt Schnepf
State Hazard Mitigation Officer
Michigan State Police
Emergency Management and Homeland Security Division
P.O. Box 30634
Lansing, MI 48909

Dear Mr. Schnepf:

Thank you for submitting adoption documentation for the 2023 Benzie County Hazard Mitigation Plan. The plan was reviewed based on the local plan criteria contained in 44 CFR Part 201, as authorized by the Disaster Mitigation Act of 2000. The plan met the required criteria for a multi-jurisdictional hazard mitigation plan and the plan is now approved for Weldon Township, Lake Ann Village, City of Frankfort, and Elberta Village.

Please submit adoption resolutions for the remaining jurisdictions who participated in the plan:

Benzonia Township	Inland Township
Honor Village	Joyfield Township
Blaine Township	Platte Township
Colfax Township	Almira Township
Homestead Township	Gilmore Township

The expiration date of the 2023 Benzie County Hazard Mitigation is February 25, 2029.

An approved local mitigation plan, including adoption by the local government, is one of the conditions for applying for and/or receiving FEMA mitigation grants from the following programs:

- Hazard Mitigation Grant Program (HMGP)
- HMGP Post-Fire
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including special districts, with a plan status of "Approvable Pending Adoption" are not eligible for FEMA's mitigation grant programs with a mitigation plan requirement.

We look forward to discussing options for implementing this mitigation plan. If there are any questions from either you or the communities, please contact Meghan Cuneo at (202) 615-5294 or email at Meghan.Cuneo@fema.dhs.gov.

Sincerely,

John Wethington
Chief, Risk Analysis Branch
Mitigation Division

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U.S. Department of Homeland Security
FEMA Region 5
536 S. Clark St., 6th Floor
Chicago, IL 60605

FEMA

August 8, 2024

Mr. Matt Schnepf
State Hazard Mitigation Officer
Michigan State Police
Emergency Management and Homeland Security Division
P.O. Box 30634
Lansing, MI 48909

Dear Mr. Schnepf:

Thank you for submitting adoption documentation for the 2023 Benzie County Hazard Mitigation Plan. The plan was reviewed based on the local plan criteria contained in 44 CFR Part 201, as authorized by the Disaster Mitigation Act of 2000. The plan met the required criteria for a multi-jurisdictional hazard mitigation plan and the plan is now approved for Benzonia Township, Almira Township, Village of Honor, and Joyfield Township.

Please submit adoption resolutions for the remaining jurisdictions who participated in the plan:

Blaine Township	Inland Township
Colfax Township	Platte Township
Homestead Township	Gilmore Township

The expiration date of the 2023 Benzie County Hazard Mitigation is February 25, 2029.

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Sincerely,

John Wethington
Chief, Risk Analysis Branch
Mitigation Division

www.fema.gov



U.S. Department of Homeland Security
FEMA Region 5
536 S. Clark St., 6th Floor
Chicago, IL 60605

FEMA

September 24, 2024

Mr. Matt Schnepf
State Hazard Mitigation Officer
Michigan State Police
Emergency Management and Homeland Security Division
P.O. Box 30634
Lansing, MI 48909

Dear Mr. Schnepf:

Thank you for submitting adoption documentation for the 2023 Benzie County Hazard Mitigation Plan. The plan was reviewed based on the local plan criteria contained in 44 CFR Part 201, as authorized by the Disaster Mitigation Act of 2000. The plan met the required criteria for a multi-jurisdictional hazard mitigation plan and the plan is now approved for Gilmore Township.

Please submit adoption resolutions for the remaining jurisdictions who participated in the plan:

Blaine Township	Inland Township
Colfax Township	Platte Township
Homestead Township	

The expiration date of the 2023 Benzie County Hazard Mitigation is February 25, 2029.

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Sincerely,

A handwritten signature in black ink that reads "John Wethington".

John Wethington
Chief, Risk Analysis Branch
Mitigation Division

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U.S. Department of Homeland Security
FEMA Region 5
536 S. Clark St., 6th Floor
Chicago, IL 60605

FEMA

October 16, 2024

Mr. Matt Schnepf
State Hazard Mitigation Officer
Michigan State Police
Emergency Management and Homeland Security Division
P.O. Box 30634
Lansing, MI 48909

Dear Mr. Schnepf:

Thank you for submitting adoption documentation for the 2023 Benzie County Hazard Mitigation Plan. The plan was reviewed based on the local plan criteria contained in 44 CFR Part 201, as authorized by the Disaster Mitigation Act of 2000. The plan met the required criteria for a multi-jurisdictional hazard mitigation plan and the plan is now approved for Homestead Township and Platte Township.

Please submit adoption resolutions for the remaining jurisdictions who participated in the plan:

Blaine Township Inland Township
Colfax Township

The expiration date of the 2023 Benzie County Hazard Mitigation is February 25, 2029.

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Sincerely,

John Wethington
Chief, Risk Analysis Branch
Mitigation Division

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U.S. Department of Homeland Security
FEMA Region 5
536 S. Clark St., 6th Floor
Chicago, IL 60605

FEMA

December 30, 2024

Mr. Matt Schnepf
State Hazard Mitigation Officer
Michigan State Police
Emergency Management and Homeland Security Division
P.O. Box 30634
Lansing, MI 48909

Dear Mr. Schnepf:

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Please submit adoption resolutions for the remaining jurisdictions who participated in the plan:

Blaine Township

The expiration date of the 2023 Benzie County Hazard Mitigation is February 25, 2029.

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Sincerely,

John Wethington
Chief, Risk Analysis Branch
Mitigation Division

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ACKNOWLEDGEMENTS

The Benzie County Natural Hazard Mitigation Plan is prepared for Benzie County, Michigan and all the jurisdictions within it. This plan is the culmination of an interdisciplinary and interagency planning effort that required the participation, technical assistance and expertise of individuals within the agencies and organizations listed below. Each jurisdiction is invited to be a continuing participant in future regular review and updates of the Plan. Refer to Appendix E for a complete table of how and when the representatives of each participating organization contributed to the development of the plan.

Organization	Representative
Benzie County Board of Commissioners (see page 7 for a District Coverage Map)	Bob Roelofs, District 1
	Art Jeannot, District 2
	Karen Cunningham, District 3
	Rhonda Nye, District 4
	Tim Markey, District 5
	Evan Warsecke, District 6
	Gary Sauer, District 7
Benzie County Government	Katie Zeits, Administrator
	Tammy Bowers, Clerk
	Tom Longanback, Equalization Director (former)
	Jim Zimmerman, Building Inspector, Plan Review, Soil Erosion
	Chad Hollenbeck, Benzie Bus Operations Manager
	Rebecca Hubers, Emergency Management Coordinator
	Tom King, EMS Director
	Cory Ellis, 911 Central Dispatch Director
	Michael Draeger, Deputy Director/Dispatch Supervisor
	David Hanchett, Benzie Community Emergency Response Team
	Kyle Rosa, Sheriff
Gregory T. Hubers, Undersheriff	
Benzie County Road Commission	Matt Skeels, Manager
	Mike Johnson, Shop Foreman/Facility Mgr.
Benzie-Leelanau District Health Department	Bobbi Scott, Emergency Preparedness Coordinator
	Eric Johnston, Director of Environmental Health
Benzie Conservation District	Tad Peacock, Executive Director
Almira Township	Mark Roper, Supervisor
	Tammy Clous, Clerk
	Mandy Gray Rineer, Trustee
	Lori Florip, Trustee
	Matt Therrien, Trustee
	Brad Drury, Fire Chief
Benzonia Township	Jason Barnard, Supervisor & Zoning Administrator
	Diana Heller, Clerk
	Karen Burns, Treasurer
	Jim Sheets, Trustee
	Sheila Priest, Trustee
	Steve Adams, Fire Chief
Blaine Township	Paul E. Crandall, Supervisor
	Cyndi Sauer, Treasurer
	Marjorie Rohn, Clerk
	Chuck Beale and Walter Rohn, Trustees

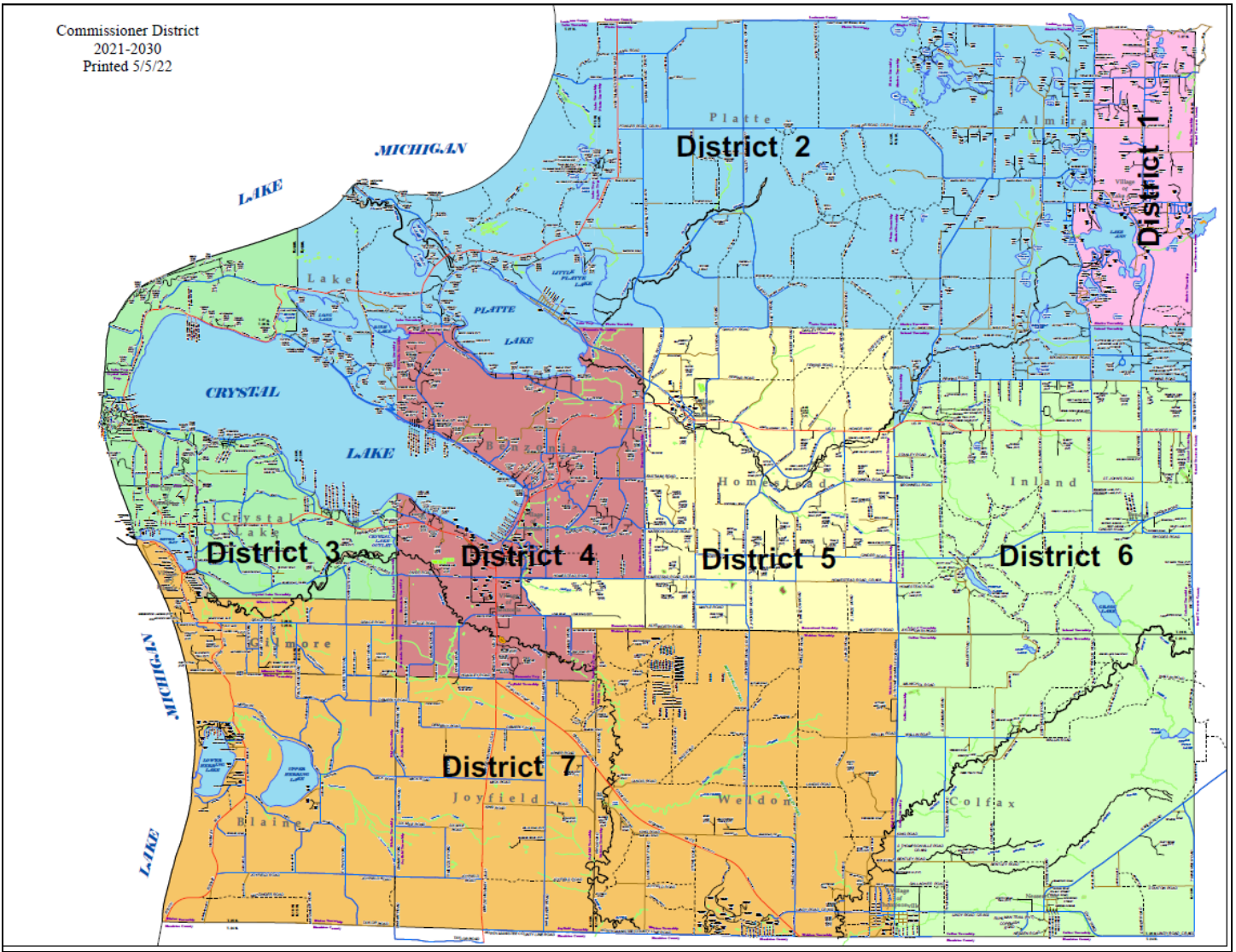
Organization	Representative
Colfax Township	Ron Seguin, Supervisor
	DeAnn Mosher, Clerk
	Barbara Hoseit, Treasurer
	Shelley Greene, Trustee
	Tom Bessey, Trustee
Crystal Lake Township	Amy Ferris, Supervisor
	Judy VanMeter, Clerk
	Sue Sullivan, Clerk (former)
	Sondra Halliday, Deputy Clerk
	Brooke Trentham Popp, Treasurer
	Richard Nielsen, Trustee
	William Northway, Trustee
	Gregory Wright, Planning Commission Chair
Gilmore Township	Carl Noffsinger, Supervisor
	Shannon Spencley, Clerk
	Robin Rommell, Treasurer (former)
	Douglas Holmes, Trustee (former)
Homestead Township	Tia Kurina-Cooley, Supervisor
	Karen Mallon, Clerk
	Shannon Purchase, Trustee
	Mike Mead, Trustee
	Patricia Delorme, Treasurer
	Bess Butler, Trustee (former)
	Tim Markey, Fire Chief
	Doreen Strang, Community Member
Inland Township	David Davis, Supervisor
	Paul Beechraft, Supervisor (former)
	Rose Wirth, Clerk
	Therese Zielinski, Treasurer
	Linda Wilson, Treasurer (former)
	Mary Miller, Trustee
	Sheri Poulisse, Trustee
Joyfield Township	Matthew Emery, Supervisor
	Jim Evans, Trustee
	Dodie Putney, Clerk
	Mark Evans, Trustee
	Patricia Daugherty, Treasurer
	Ed Kowalski, Community Member
Lake Township	Anna Grobe, Clerk (and former Supervisor)
	Maryanne Goodman, Treasurer
	Kyle Orr, and Sally Casey, Trustees
	Dotty Blank, Clerk (former)
Platte Township	Paul Solem, Supervisor
	Alison Michalak, Clerk
	Cynthia Gottschalk, Treasurer
	Robert Bollenberg, Trustee
	Daniel Haswell, Trustee

Organization	Representative
Weldon Township	Ron Hitesman, Supervisor
	Sally Bobek, Treasurer
	Fran Griffin, Clerk
	Sue Meredith, Trustee
	Scott Williams, Trustee
	Charles Kraus, Planning Commission Chair
	Craig Meredith, Zoning Administrator (former)
City of Frankfort	Joshua Mills, Superintendent
	JoAnn M. Holwerda, Mayor
	Daniel Walenta, Mayor Pro-Tem
	Brady Olsen, Councilmember
	Mary Ann Short, Councilmember
	MacKenzie Stratton, Councilmember
	Christine Spence, Clerk/Treasurer
	Mike Cederholm, Fire Chief
	Rob Lozowski, Police Chief
Village of Benzonia	Timothy Flynn, President
	Maridee Cutler, Clerk
	Toni Flynn, Treasurer
	Chris Pritchard, Superintendent
	Sara Kirk, Zoning Administrator
	Hazel Heyn, Trustee
	John Hafer, Trustee
	Bob French, Trustee
	Alexandra Herryman, Trustee
	Theresa Moss, Trustee
	Shane Myers, Trustee
Village of Beulah	Jeri VanDePerre, President
	Dan Hook, President Pro-Tem
	Mark Heniser, Trustee
	Phil Downs, Trustee
	Annie Browning, Trustee
	Margaret Lumm, Treasurer
	Dawn Olney, Clerk
	Jeff Cypert, Superintendent
Village of Elberta	Jennifer S. Wilkins, President
	Emily Votruba, Trustee
	Ken Holmes, President Pro-Tem
	Norma Corwin, Clerk/Treasurer
	Teri Reisner, Deputy Clerk
	Ken Bonney, DPW Superintendent
	Mike Cederholm, Fire Chief

Organization	Representative
Village of Honor	Jeff Sandman, President
	Bill Ward, President Pro-Tem
	Maryanne Goodman, Treasurer
	Deb Reed, Clerk
	Cheri K. Sessions, Deputy Clerk
	Jake Leone, Street Administrator/Maintenance
	Dallas Denoyer, Trustee
	Dennis Sternburgh, Trustee
	Andrew Smith, Trustee
Village of Lake Ann	Dan Hawkins, President
	Craig Timm, President (former)
	Christi Grant-Wagner, Trustee
	Tammy Clous, Clerk
	Mandy Gray-Rineer, Treasurer
	Nick Beckwith, Trustee
	Kyle Belton, Trustee/Streets Administrator
Village of Thompsonville	Eugene Allen, President
	Mary Wixson, Clerk
	Deidra Pomranky, Treasurer
	Florence Smith, Trustee
	Brent Johnson, Trustee
	Chelsea Willis, Trustee
	Fran Griffin, Trustee
	Michael MacGirr, Fire Chief
Grand Traverse Band of Ottawa and Chippewa Indians	Jolanda Murphy, Public Safety Department Manager
	Doris Winslow, Executive Assistant to the Tribal Manager
Manistee/Benzie Michigan Dept. of Health and Human Services	Joleen Peck, Dept. Analyst E.
	Jennifer Savage, Director
Northwest Michigan Invasive Species Network	Audrey Menninga, ISN Coordinator
Michigan Department of Natural Resources	Steve Cameron, Forest Fire Supervisor
	Lt. Joe Molnar, Law Enforcement District, Customer Service Center
Michigan State Police	Lt. Frank Keck, 7th District Assistant Commander
	Lt. Matthew McCaul (Retired)
	Lt. Michael deCastro, Region 7 District Coordinator, EMHSD
	F/LT Steve Porter, Commander of MSP Traverse City Post
	Lt. Travis House, Commander of MSP Cadillac Post
Trooper Trevor Baesch, MSP Gaylord Post	
American Red Cross - N. MI Chapter	Meghan Powers, Disaster Program Manager
Smeltzer Orchard Company	Tim Brian, President
Graceland Fruit	Cody Allen, Human Resources Coordinator
Paul Oliver Memorial Hospital	Fred Craigin, Manager-Safety, Security & Emergency Management

Benzie County Commissioner District Map, 2022

Commissioner District
2021-2030
Printed 5/5/22



Prepared for: Benzie County Board of Commissioners

Prepared by: Benzie County Office of Emergency Management and the Benzie County Local Emergency Planning Team with assistance from:



Networks Northwest
PO Box 506
Traverse City MI 49685-0506
Telephone: 231.929.5000
www.networksnorthwest.org

TABLE OF CONTENTS

I. Introduction.....	10
II. Planning Process.....	12
III. Community Profile	17
IV. Hazard Identification and Assessments.....	33
V. Community Vulnerability Analysis.....	89
VI. Goals and Objectives	95
VII. Mitigation Strategies and Priorities	96
VIII. Implementation.....	115
APPENDIX A: MAPS	117
APPENDIX B: COMMUNITY SURVEY RESULTS	124
APPENDIX C: 2015 NATURAL HAZARDS MITIGATION PLAN STRATEGIES & CURRENT STATUS	145
APPENDIX D: CONSIDERATION OF ALTERNATIVE STRATEGIES.....	150
APPENDIX E: PARTICIPATION TABLE.....	157
APPENDIX F: MEETING AND PUBLIC INPUT DOCUMENTATION	176

I. INTRODUCTION

Hazard mitigation is defined as any action taken before, during, or after a disaster or emergency to permanently eliminate or reduce the long-term risk to human life and property from natural, technological and human-related hazards. Mitigation is an essential element of emergency management, along with preparedness, response and recovery.

Mitigation allows repairs and reconstruction to be completed after an incident occurs in such a way that does not just restore the damaged property as quickly as possible to pre-disaster conditions. It also ensures that such cycles are broken, that post-disaster repairs and reconstruction take place after damages are analyzed, and that sounder, less vulnerable conditions are produced. Through a combination of regulatory, administrative, and engineering approaches, losses can be limited by reducing susceptibility to damage. When successful, hazard mitigation will lessen the impact of a disaster on people, property, the environment and economy, and continuity of services through the coordination of available resources, programs, initiatives, and authorities.

A *hazard*, in the context of this plan, is an event or physical condition that has potential to cause fatalities; injuries; damage to personal property, infrastructure, or the environment; agricultural product loss; or interruption of business or civic life. The Benzie County Natural Hazard Mitigation Plan focuses on *natural* hazards such as extreme heat/cold, drought, wildfires, tornadoes, thunderstorm with wind, high winds, hail, extreme winter weather, flooding, shoreline erosion, dangerous shoreline currents, and invasive species. An exception is that it will also consider these technological and human-related hazards: dam failure and public illness outbreak.

The following natural hazards were not included in the analysis for this Hazard Mitigation Plan: earthquakes, subsidence, space weather, and meteorites and other impacting objects. Based upon review of the Michigan State Police's 2019 Michigan Hazard Analysis, most of Michigan is not located in an area subject to major earthquake activity. Additionally, Benzie County does not contain potential subsidence hazards such as active or abandoned mines, and sinkhole risks in the county range from "absent or likely absent" to "infrequent or likely infrequent". Space weather and meteorite events were not evaluated due to their low probability of occurrence.

The main objective of the Benzie County Natural Hazard Mitigation Plan is to permanently eliminate or reduce long-term risks to people and property from natural hazards so that county assets such as transportation, infrastructure, commerce, and tourism can be sustained and strengthened. This can be accomplished through collaborative efforts/activities amongst agencies within the county to protect the health, safety, and economic interests of the residents and businesses through planning, awareness, and implementation.

Through the development of this Plan, a broad perspective was taken in examining multiple hazard mitigation activities and opportunities in Benzie County. Each hazard was analyzed from a historical perspective, evaluated for potential risk, and considered for possible mitigation.

Since the 2015 Plan's adoption period, the county and municipalities have made progress on the following key endeavors to address their previously identified mitigation strategies:

- Ongoing: Enforcement of soil erosion control permitting to prevent soil erosion during construction
- Ongoing: Enforcement of building codes (permits and inspections based on State Building Code) for new construction; this includes MI EGLE floodplain verification with new builds and structural additions
- Ongoing: Tree trimming by power companies
- Completed: "Work on a multi-hazard warning plan". Benzie County now offers CodeRED free of charge to interested residents. The CodeRED system is used to send emergency notifications, from evacuations notices to missing child alerts. Residents and businesses located within Benzie County are encouraged to sign up for CodeRED to be sure they receive timely emergency notifications and other important information and instructions when alerts are issued.

Appendix C provides a full list of all mitigation strategies included in the Benzie County 2015 Natural Hazards Mitigation Plan, along with their current status and how they may have been integrated into local planning mechanisms.

Section VII of this plan, "Mitigation Strategies and Priorities", provides a current list of hazard mitigation strategies for each natural hazard identified. Mitigation strategies were developed based on discussions with local officials and a review of FEMA/MSP best practices for hazard mitigation. (Refer to Appendix D for a list of Alternative Strategies that were considered.) Strategies are grouped according to their purpose: Awareness and Preparation; Shelters; Buildings, Roads & Dams; Utilities & Technology; and Environment & Natural Resources. The strategies table also includes: a description of each strategy; what hazards it addresses; where the strategy applies; who is responsible for implementing the strategy; how the strategy will be implemented (what resources are available to apply the strategy); the estimated timeframe for

completion; the level of priority; and what type of strategy it is. Most strategies are intended to be action items completed during the 5-year timeframe in which the plan is active. Some long-term strategies may extend beyond the 5-year timeframe due to feasibility or level of difficulty.

Recognizing the importance of reducing community vulnerability to natural hazards, Benzie County is actively addressing the issue through the development and implementation of this plan. This process will help ensure that Benzie County remains a vibrant, safe, enjoyable place in which to live, raise a family, continue to conduct business, and maintain a tourist base. The Plan serves as the foundation for natural hazard mitigation activities and actions within Benzie County, and will be a resource for building coordination and cooperation within the community for local control of future mitigation and community preparedness around the goals outlined in Table 1.

Table 1: 2023 Benzie County Hazard Mitigation Planning Goals

Goal 1: Increase local participation in natural hazard mitigation.
Goal 2: Integrate natural hazard mitigation considerations into the County's comprehensive planning process.
Goal 3: Utilize available resources and apply for funding for natural hazards mitigation projects.
Goal 4: Develop and complete natural hazards mitigation projects in a timely manner.

II. PLANNING PROCESS

The Stafford Act, as amended by the Disaster Mitigation Act of 2000, shifted the Federal Emergency Management Agency's (FEMA) scope of work to promoting and supporting prevention, or what is referred to as hazard mitigation planning. FEMA requires government entities to have a natural hazard mitigation plan in place and updated on a 5-year cycle as a condition for applying for grant funding related to natural hazard mitigation and remediation. Benzie County has a history of mitigation planning and adopted past Natural Hazard Mitigation Plans in 2007 and 2015. The adoption of the 2023 plan will reaffirm the eligibility of the county, as well as those local municipalities who participated in the planning process and adopted the county's plan, for federal funding.

The update of the County's plan was led by the Natural Hazards Task Force composed of the County's Local Emergency Planning Committee (LEPC). LEPC members consist of first responders and local, regional, and state public entities that ensure the readiness of County entities by recommending equipment purchases, training and exercises, and public education on preparedness issues. Networks Northwest staff assisted with the creation of the updated plan by providing meeting presentations, conducting an online survey, and writing the plan. The Task Force generally met every month, in-person, at the Benzie County Governmental Center in the Village of Beulah. Meetings were open to the public.

Invitations to participate in the planning process via email invitation, phone calls, meeting attendance/presentation, or mailed letters were sent to the following stakeholders: local and regional agencies involved in hazard mitigation activities; agencies that have the authority to regulate development; neighboring communities; representatives of businesses, academia, or other private organizations; and representatives of nonprofit organizations, including community-based organizations that work directly with and/or provide support to underserved communities and socially vulnerable populations. Please refer to the Acknowledgements section in the beginning of this plan for a list of participants; Appendix E for a detailed table showing how and when representatives participated in the planning process; and Appendix F for meeting and public input documentation. All jurisdictions in Benzie County remain as continuing participants in the 2023 Hazard Mitigation Plan (since the 2015 plan was completed).

The following is an outline of the planning process for the development of the 2023 Benzie County Natural Hazard Mitigation Plan:

- An online public survey was made available from October 4, 2021 to February 4, 2022 to obtain input on community experiences, concerns and priorities regarding natural hazard mitigation in Benzie County. Table 2 indicates who participated in the survey. A copy of the survey results are included in Appendix B.

Responses to Question 3-5 asked about participants' knowledge of local planning efforts including the current hazard mitigation plan (61% indicated they were unfamiliar with the plan), local master plans (84% yes they have an adopted Master Plan), and a local Capital Improvements Plan (CIP) (45% indicated yes, they have a CIP).

Questions 6 and 7 asked participants if there had been significant natural hazards in the past and to identify them. 35% said yes, they have experienced a significant natural hazard in the last 10 years. The following are descriptive responses to these questions:

- County-wide events
 - "Snowmageddon" snowstorm of 2012
 - Straight line winds of August 2, 2016
 - Pandemic
- Lakeshore erosion and flooding due to high water levels in Lake MI
 - Lake MI Coastline communities: Blaine Twp., Gilmore Twp., Village of Elberta, City of Frankfort, Crystal Lake Twp., Lake Twp.
- Flooding and erosion brought on by high groundwater tables and/or high lake levels
 - City of Frankfort
 - Crystal Lake Twp.
 - Homestead Twp. (also river ice over with large backup)
 - Blaine Twp. (flooding and loss of shoreline along shores of Lower Herring Lake)
- Snow and wind storms causing significant tree damage
 - City of Frankfort

Questions 8 and 9 asked about community concerns for future natural hazard events and the types of natural hazard events that are likely to have the largest impact. 74% of participants are "somewhat concerned" about a future natural hazard impacting the community. When asked what type of hazard participants were most likely to cause the largest impact responses included the following: Flooding/High Lake Levels (mentioned 20 times), Illness/Pandemic (19), Wildfire (18), High Winds (7), Severe Winter Weather/Heavy Snow/Snow Storms (4),

Tornado (3), Erosion/Lakeshore Erosion (3), Landslide (1) “We live at the base of an unstable hill filled with springs” [location not mentioned]. Concerns of a loss of power was mentioned 5 times.

Question 10 asked about community concerns regarding existing infrastructure and what forms of investment might be required to mitigate impacts to infrastructure from natural hazards. Of the responses, aging bridges, dams and securing power were mentioned the most frequently. Other responses included shoreline hazards such as flooding and shoreline erosion; keeping roads clear to aid in transportation needs during an emergency/power outage (i.e., getting people to shelters). Specific areas with infrastructure concerns mentioned include:

- Village of Elberta: The M-22 Causeway over the Betsie River in Elberta was mentioned specifically five times, due to the concern of another flooding/ potential washout situation if/when lake water levels rise again like they did in 2019 and 2020.
- Blaine Township: “Somewhat concerned about structural integrity of the dam in Lower Herring Lake [adjoining Lake Michigan]. Hasn’t been a functioning dam in years, but if waters receded a lot it may be something to watch.”
- City of Frankfort: “Critical infrastructure concerns include the water and sanitary sewer distribution systems”; dams and rivers in the event of a flood
- The Platte and Betsie River both run through the county. The BCRC maintains 17 bridges (not counting the bridges maintained by MDOT). Losing a major bridge could have long term negative impacts to the county.
- Weldon Township: “We have a bridge that was...removed and we have hoped that it would be replaced. We have residents that live on the other side of the river. Any emergency vehicles now have to go way out of their way to get to any residents or forest area on the other side of the former bridge location (Haze Road).”
- Village of Beulah: Potential services failure due to pressures from seasonal tourists; “sustained power outages will have a significant impact on our ability to sustain major DPW responsibilities”
- Crystal Lake Township: further bluff erosion/ shoreline erosion

Questions 12 and 13 asked if participants were familiar with requests for assistance for mitigation projects in the past. 52% were unknown as to whether or not requests have been made. Similarly, Question 13 asked if those mitigation projects were granted:

- Village of Thompsonville: “Replacing the bridge after the dam on the Betsie River went out”
- Village of Beulah: “The Village requested and received a grant to do significant work on the village water/sewer system. [It] is working well right now but, for how long will this be true, with all of our out-of-town visitors?”
- “Funds were received for private property flooding – land purchase” (along Lake MI in Crystal Lake Twp.?)
- Village of Lake Ann: Guardrail replacement project, Federal Safety Grant
- “Control water run-off from storm events” (Unknown community)

Questions 13 and 14 asked participants if they had considered mitigation strategies (52% said unknown), but some answered with strategies they would like to explore:

- Benzie County: “Joint planning and/or training with the utilities companies to help them restoring power to our citizens could be beneficial.” Pursue FEMA mitigation grants.
- Village of Beulah: “I am concerned about our freshwater environment – Crystal Lake, the Betsie and Platte Rivers, and, not to mention Lake Michigan.”
- City of Frankfort: “Better establish a resilient shoreline to overcome high water cycles that create erosion concerns. Install check valves on storm discharge locations.”
- Crystal Lake Township: “Fire, further effects of pandemic”
- Grand Traverse Band Tribe: Underground utilities, erosion and floods
- American Red Cross: [Disaster] preparedness.

Question 15 asked if there was any additional information to be considered for the County’s Natural Hazard Mitigation Plan:

- City of Frankfort: Natural resiliency strategies to critical areas of our shoreline
- Village of Elberta: High water level – flooding information
- Grand Traverse Band Tribe: Underground infrastructure for continual power and erosion control along waterways

The final question, Question 16, asked survey-takers to respond with their contact information if they wish to be involved with the plan process. Several responses included a name, email address, and phone number to contact those who are interested. Many indicated no, they are not interested or they do not have the time.

Table 2: Survey Responses

Local Unit	Title/Role (If Identified)
Benzie County	Central Dispatch/Deputy Director/ECS Supervisor; Sheriff and Undersheriff; Emergency Management Coordinator; EMS Director; District 2 Commissioner; District 5 Commissioner; District 7 Commissioner
Benzie County Road Commission	Road Commission Manager
City of Frankfort	Chief of Police; City Superintendent (Chief Administrative Officer)
Village of Beulah	Trustees; Chair of Parks and Rec; Chair of Law and Finance;
Village of Elberta	President
Village of Lake Ann	President
Village of Thompsonville	Fire Chief
Almira Township	Clerk, Zoning Administrator
Benzonia Township	Treasurer, Supervisor
Blaine Township	Supervisor, Clerk, Trustee/Planning Commissioner
Crystal Lake Township	Supervisor, Treasurer, Planning Commission Chair
Homestead Township	Supervisor, Fire Chief, Trustee, Treasurer
Inland Township	Supervisor, Treasurer
Lake Township	Supervisor
Weldon Township	Planning Commission Chair, Clerk, Treasurer
Grand Traverse Band of Ottawa and Chippewa Indians Tribe	Tribal Member; Emergency Manager/Tribal Public Safety

On March 21, 2022, Networks Northwest staff met with the Manager of the Benzie County Road Commission to discuss problems areas with road infrastructure related to natural hazards, as well as plans for road/bridge repairs.

LEPC meetings where the Natural Hazard Mitigation Plan update work was discussed.

- June 21, 2021
- September 20, 2021
- October 18, 2021
- January 18, 2022
- March 21, 2022
- April 18, 2022
- June 20, 2022
- July 18, 2022
- August 15, 2022
- October 17, 2022
- January 17, 2023
- February 21, 2023
- March 20, 2023
- April 17, 2023
- May 15, 2023

Rebecca Hubers, Benzie County Emergency Management Coordinator, attended regular meetings of local units of government in Benzie County to obtain input on hazard concerns and feedback on the draft plan and mitigation strategies. Ms. Hubers attended these meetings at various times between February and July 2022, and November 2022 and February 2023.

A Notice of Availability was published in the *Benzie County Record Patriot* newspaper on April 26, 2023 that the County's draft Natural Hazard Mitigation Plan was available for review, and welcomed feedback before or at the scheduled public hearing held on May 23, 2023 (Figure 3). The same notice was posted on the front of the Benzie County Government Center building. A website link to the draft plan materials was published openly on the County's website and Networks Northwest's website. Following the public hearing, the County Board of Commissioners recommended the draft plan be submitted to Michigan State Police and FEMA for their review and approval.

A letter was mailed, via certified mail, and emailed, from Networks Northwest to all Benzie County local government offices on April 19, 2023. The letter provided notification of the public hearing on the draft plan, a website address to access the plan, and requested local government review and feedback.

The draft plan was published openly on the Benzie County “news” webpage, as well as on the project page on Networks Northwest’s website (Figures 1 and 2). The public was encouraged to review the draft plan and invited to submit suggestions, questions or comments. While no comments were received during the draft public review period, verbal comments and questions about the plan were received from the public and county commissioners during the public hearing on May 23, 2023 (see Appendix F for meeting minutes).

During development of the plan, all Benzie County municipalities were provided the opportunity to participate in the online community survey, participate in scheduled meetings, and comment on draft plan materials. Additionally, representatives from county and regional agencies that share jurisdictional boundaries with Benzie County were invited to participate in the LEPC planning meetings and were able to view and comment on the draft plan by accessing it from the hazard mitigation project page of Networks Northwest’s website. Those agency staff members are:

- Gregg Bird, Grand Traverse County Emergency Management Coordinator
- Jolanda Murphy, Public Safety Department 2 Manager and Emergency Manager, Grand Traverse Band of Ottawa and Chippewa Indians
- Matt Ansorge and Kelly LaCross, Leelanau County Office of Emergency Management
- Alvin Rischel, Manistee County Deputy Director/Emergency Management Coordinator
- Randy Boike, Wexford County Emergency Management Coordinator
- Robert Carson, Regional Director of Community Development, Networks Northwest

All meetings where the plan was discussed were openly published for public and other jurisdiction/municipality participation. Additionally, County and Networks Northwest staff received feedback on the plan via other methods besides meetings, such phone calls or emails.

Below are images of the websites providing the available draft plan for review and a copy of the published public hearing notice:

Figure 1: Public Review/Hearing Announcement on Benzie County’s Webpage (accessed 4/20/23)

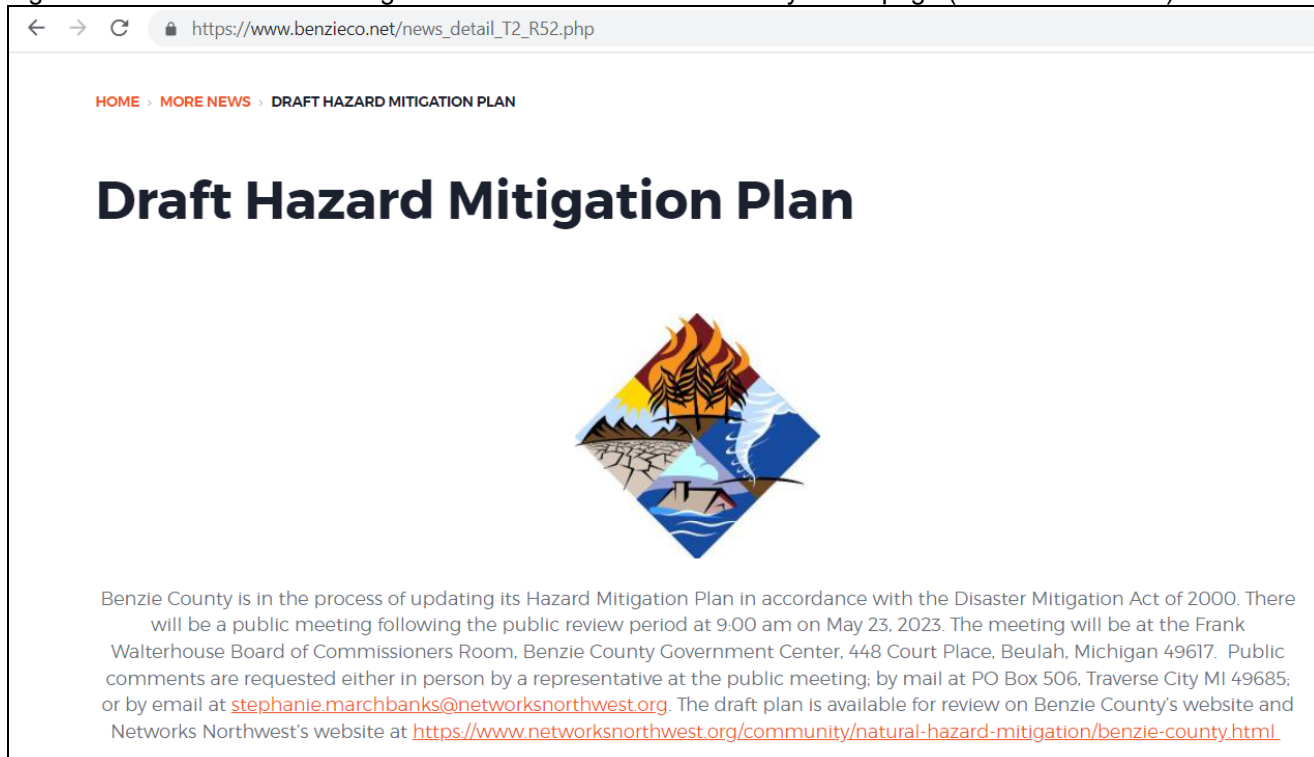


Figure 2: Networks Northwest Project Webpage (accessed 5/11/23)

https://www.networksnorthwest.org/community/natural-hazard-mitigation/benzie-county.html

Networks Northwest
Talent / Business / Community

TALENT BUSINESS COMMUNITY DATA ABOUT US CAREERS

BENZIE COUNTY

Notice of Availability of Draft Hazard Mitigation Plan and Public Meeting for Input on the Draft Hazard Mitigation Plan

A public hearing for the plan will be held on May 23, 2023 at 9:00 AM as part of the Benzie County Board of Commissioner's regular meeting. The meeting will be at the Frank Walterhouse Board of Commissioners Room, Benzie County Government Center, 448 Court Place, Beulah, Michigan 49617. Upon review of the plan, Board of Commissioners shall recommend it be sent to Michigan State Police Homeland Security Division for review/preliminary approval and then on to FEMA for their review and approval. Once FEMA has approved the plan, it will be brought before all local government boards for adoption.

Public comments are requested either in person or by representative at the public meeting or at PO Box 506, Traverse City MI 49685, or by email at stephanie.marchbanks@networksnorthwest.org.

Current Drafts for Review:

[2/21/2023 Draft Plan](#) and [10/19/22 Strategies Table](#)

Hazard Maps (Appx. A of the plan)

- [Environmental Features](#)
- [Infrastructure](#)
- [Hazard Areas](#)
- [Vulnerable Populations and Hazard Areas](#)

Meeting Dates and Documentation

Hazard Mitigation work meetings will be posted here as they become

ABOUT US >
GOVERNMENTS >
FRAMEWORK FOR OUR FUTURE >
PROJECTS >
GROWTH & INVESTMENT >
TRANSPORTATION >
RECREATION >
NATURAL HAZARD MITIGATION >

Antrim County
 Benzie County
 Charlevoix County
 Emmet County
 Grand Traverse County
 Kalkaska County
 Leelanau County
 Manistee County
 Missaukee County
 Wexford County
 Grand Traverse Band of Ottawa and Chippewa
 Indians
 Little River Band of Ottawa Indians

HOUSING >
NATURAL RESOURCES >
HEALTHY COMMUNITIES >
FOOD & FARMING >
ARTS AND CULTURE >

Figure 3. Benzie County Record Patriot Public Notice 4/26/23

AFFIDAVIT OF PUBLICATION


STATE OF MICHIGAN
County of Benzie

NOTICE OF AVAILABILITY of
Draft Hazard Mitigation
Plan and
Public Meeting for Input on
the
Draft Hazard Mitigation Plan

Crystal Van Buren, being duly sworn, deposes and says that she is one of the editors, publishers, representatives of the Benzie County Record Patriot, a newspaper published and circulated in said County of Benzie, and the annexed notice was duly printed and published in the said newspaper on the following dates:


April 26, 2023

Benzie County is in the process of updating its Hazard Mitigation Plan in accordance with the Disaster Mitigation Act of 2000. There will be a public meeting following the public review period at 9:00 am on May 23, 2023. The meeting will be at the Frank Walterhouse Board of Commissioners Room, Benzie County Government Center, 448 Court Place, Beulah, Michigan 49617. Public comments are requested either in person by a representative at the public meeting; by mail at PO Box 506, Traverse City MI 49685; or by email at stephanie.marchbanks@networksnorthwest.org. The draft plan is available for review on Benzie County's website and Networks Northwest's website.



Crystal Van Buren

Subscribed to and sworn to me this 26th day of April 2023.



Notary Public: Denise M. Favreau
State of Michigan, County of Benzie
My Commission Expires: July 16, 2028
(Acting in the county of Benzie)

III. COMMUNITY PROFILE

Land Use/ Land Cover

Benzie County is located in Northwest Lower Michigan, and is bordered by Lake Michigan to the west, Leelanau County to the north, Grand Traverse County to the east, Wexford County to the southeast, and Manistee County to the south. The Environmental Features Map in Appendix A illustrates the locations of the county's roads, water bodies and jurisdictions.

The smallest county in Michigan, Benzie County is approximately 316 square miles containing pristine lakes and rivers, rolling hills and fields, thick forests, orchards, and 60 miles of Lake Michigan shoreline. The State has designated Critical Dune Protection Areas and High Risk Erosion Areas along portions of the coastline in the county, as shown in Figures 2 through 4. The county is divided into nineteen communities, including twelve townships, six villages, and the City of Frankfort. About 4%, or 19 square miles of the county is located within the Grand Traverse Bay watershed. The highest elevation point is 1,161 feet at an unnamed location in Colfax Township (44.25935, -85.830033).

Benzie County plays an important role in the region's tourist activity. Its six villages and the small City of Frankfort provide a blend of beachfront, walkable downtowns, historic character, and small town charm. Sleeping Bear Dunes National Lakeshore, partly located in the northwest portion of the county, is a national attraction; and Crystal Mountain is a popular, well-known ski/outdoor resort destination that attracts visitors year round.

There are 135 lakes scattered across the county. Eleven of the inland lakes provide public access including Ann, Betsie, Crystal, Herendeene, Little Platte, Loon, Lower Herring, Pearl, Platte, Stephens, Turtle, and Upper Herring. Many of the lakes are of significant size, the largest being Crystal Lake, which is also the ninth largest inland lake in Michigan. Significant rivers and streams include the Betsie River, Platte River, Otter Creek, and Herring Creek, which all flow westward into Lake Michigan. All of these waters are valued for their fisheries, recreational opportunities and beauty.¹

The 2017 USDA Census of Agriculture indicates the county had 18,516 acres of land in farms, for a total of 197 farms. This represents a 9% increase in the number of farms and a 10% decrease in the acreage of farms since the 2012 USDA Census of Agriculture. About 78% of the market value (\$7,868,000) of agricultural products sold in the county is from crops. Forage (hay/hayage), tart cherries, corn for grain, cultivated Christmas trees and apples comprised the top five crops in acreage in the county. Benzie County ranks 53 out of 83 counties in the Michigan for agricultural crop sales.

The predominant land cover type is "forested", followed by "wetlands" and "herbaceous/grassland" (Table 3). Developed land cover is found predominantly in and around the City of Frankfort and local villages.

Table 3: Land Cover by Type, Benzie County

Classification ²	Acres	Percent
Forested	114,064.45	51.27%
Wetlands	26,265.20	11.80%
Herbaceous/Grassland	24,692.88	11.10%
Open Water	17,067.14	7.67%
Agriculture (Cultivated Crops & Hay/Pasture)	16,166.52	7.27%
Developed, Open Space	10,245.86	4.61%
Shrub/Scrub	6,095.74	2.74%
Developed, Low Intensity	5,048.99	2.27%
Barren Land	2,007.53	0.90%
Developed, Medium Intensity	707.16	0.32%
Developed, High Intensity	131.40	0.06%
Total	222,492.87	100.00%

Source: Networks Northwest

The 2015 Benzie County Hazard Mitigation Plan indicates that the county contained 146,900 acres of forested lands and 34,294 acres of wetlands. Current land cover data provided in Table 3 indicates these percentages have decreased since 2015. While development in the county has remained fairly steady in the past decade, the type of new development is

¹ Benzie County 2017 Master Plan, https://www.benzieco.net/departments/planning_commission/documents.php#outer-1455

² Land Cover Definitions: <https://cfpub.epa.gov/roe/definitions.cfm?i=49>

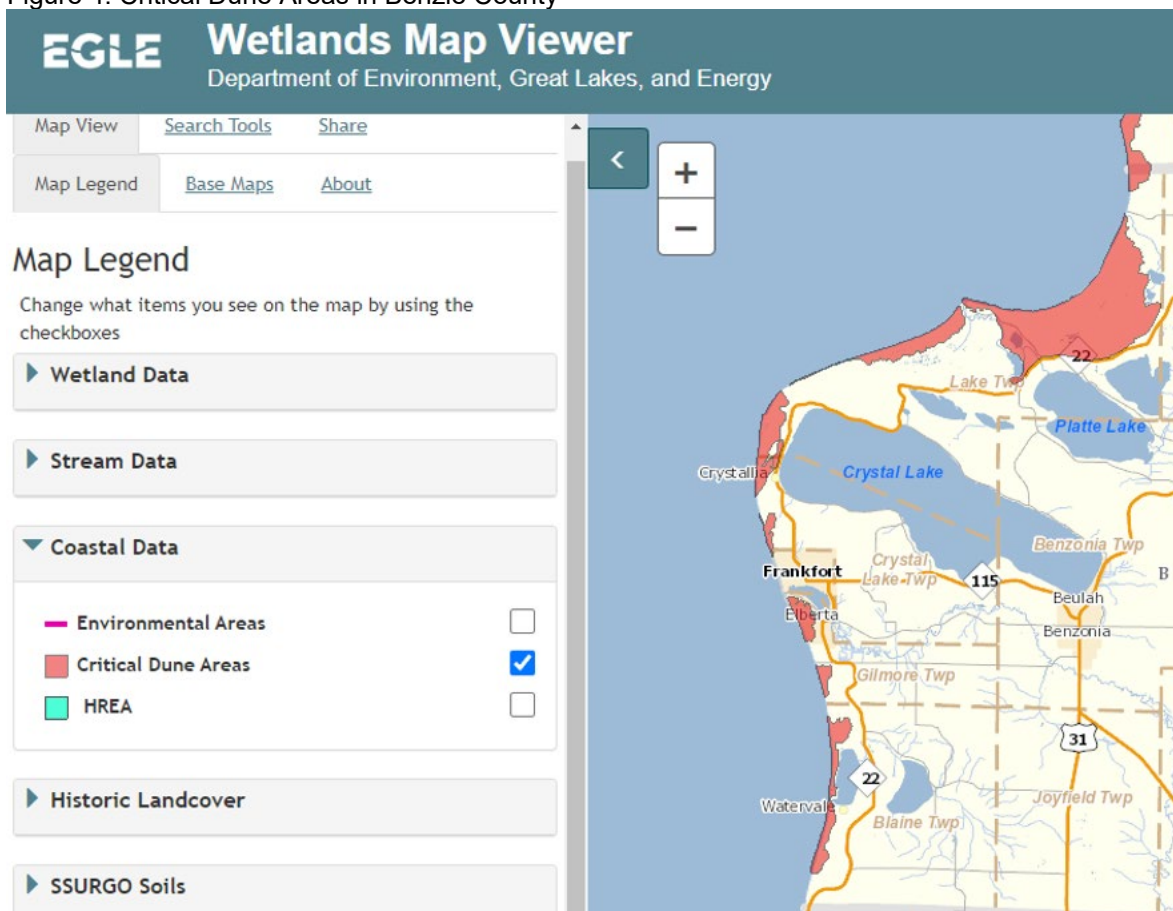
changing. Office and industrial development has largely stopped, commercial development has slowed, but residential development is occurring as quickly as plans can be approved. Housing of all types and prices is in demand, but many communities desire smaller units and multiple family units. This type of housing is especially important for the senior population and will likely be in demand for many years. The Environmental Features Map in Appendix A shows the intensity of development in the county as well as natural features.

Many of Benzie County's Lake Michigan Shoreline areas contain State-designated and regulated Critical Dune Areas (Figure 4) as well as High Risk Erosion Areas (Figures 5 and 6).

Critical Dune Areas (CDAs) are a combination of coastal barrier dunes, land that has dune-like features, and unique plant communities. Regulatory authority goes to the water's edge. The CDAs include public lands and private properties where developmental, silvicultural, and recreational activities are regulated and a permit is required under Part 353, Sand Dunes Protection and Management, of the NREPA. The law balances the benefits of protecting, preserving, restoring and enhancing the diversity, quality, functions, and value of the critical dunes with the benefits of economic development, multiple uses, and public access. A permit is required for activities that significantly alter the CDA, such as the construction of a house or garage, building a road or driveway, installing a septic system, installing retaining walls, and sand removal. Currently EGLE administers Part 353 for all CDAs in Benzie County.

High-Risk Erosion Areas (HREAs) are shorelines of the Great Lakes where the land is receding at a rate of one foot or more per year for a minimum of 15 years. Recession rates change over time as water levels fluctuate and coastal conditions change. Along these shorelines, new structures are required to meet setbacks for their protection from a changing shoreline. When structures are not in danger, the shoreline does not need to be altered to protect the structure. A permit is required for construction of a structure on any portion of a designated High-Risk Erosion Area parcel regardless of how far the project is from the lakeshore. Common activities requiring a permit include construction of a house, garage, or addition, substantial reconstruction of an existing home, the installation of a septic system, covered porches, or a commercial building. HREAs are regulated by the Administrative Rules of Part 323, Shorelands Protection and Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Currently EGLE administers Part 323 for all HREAs in Benzie County.

Figure 4: Critical Dune Areas in Benzie County



Source: <https://www.mcgi.state.mi.us/wetlands/mcqiMap.html#>

Figure 5: High-Risk Erosion Areas in Blaine and Gilmore Townships

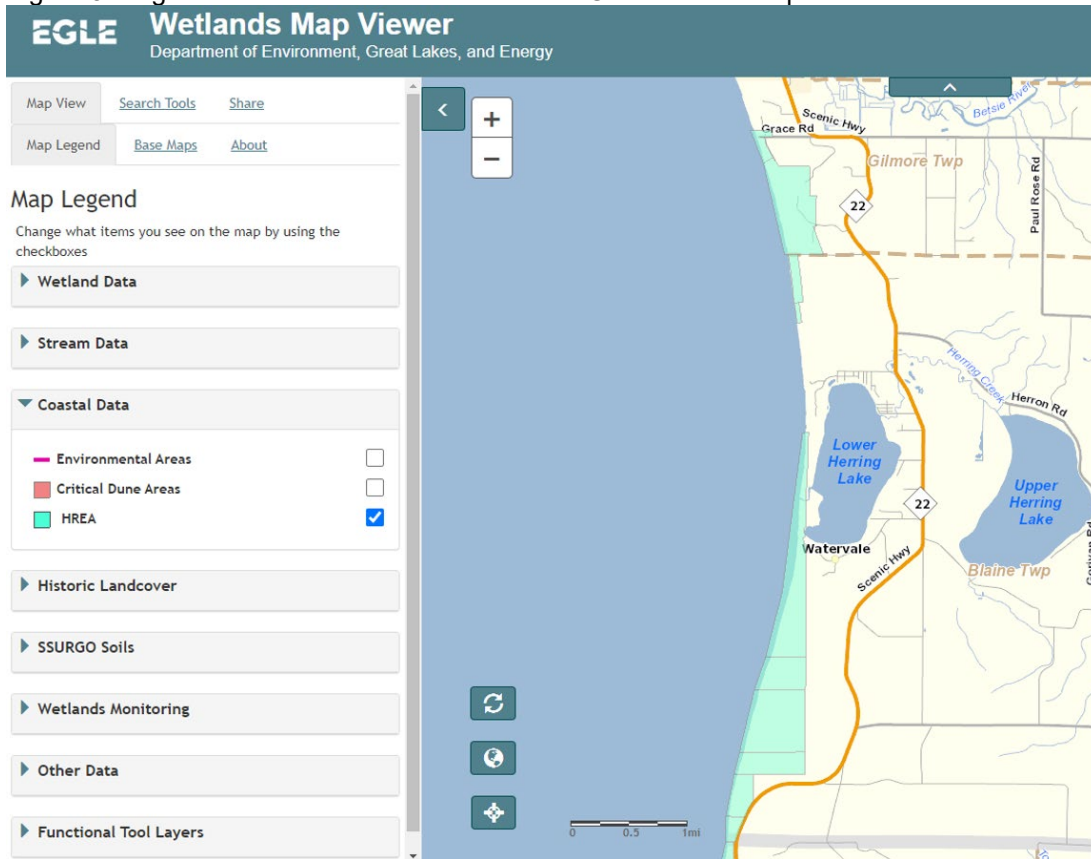
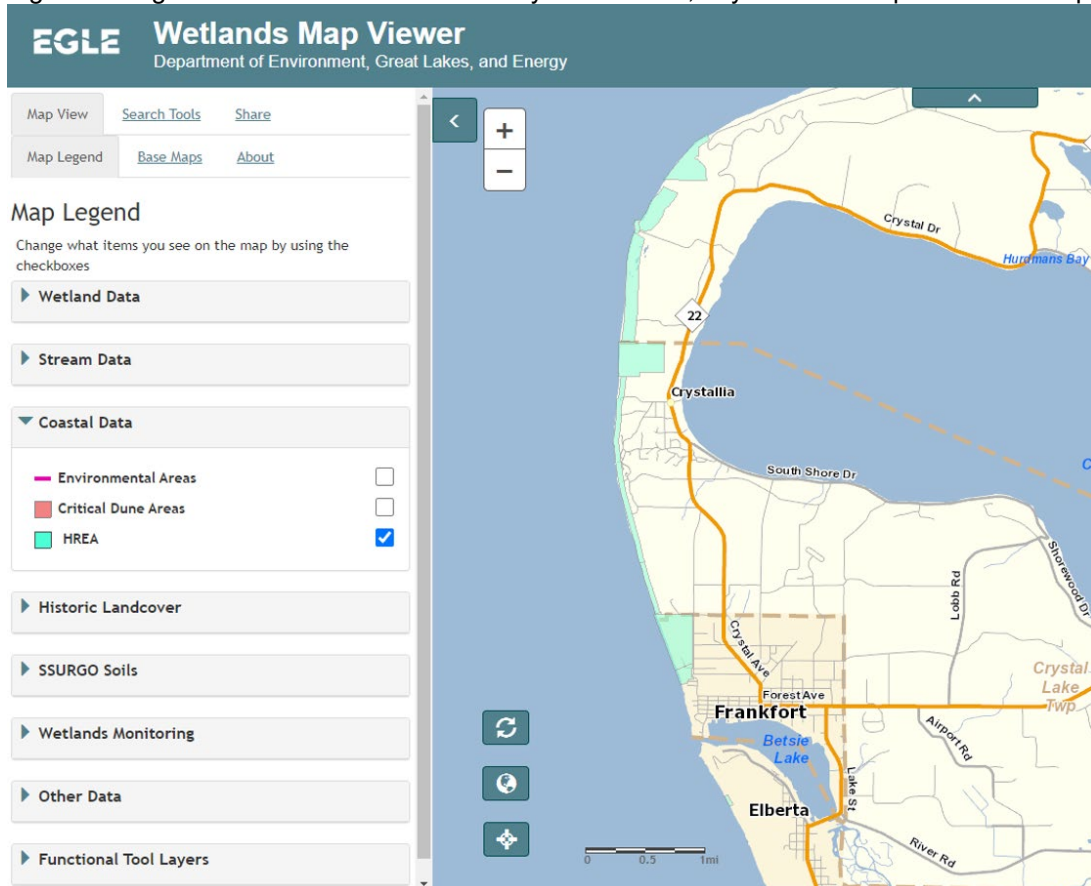


Figure 6: High-Risk Erosion Areas in the City of Frankfort, Crystal Lake Twp. and Lake Twp.



Source: <https://www.mcgi.state.mi.us/wetlands/mcgiMap.html#>

Population

Benzie County is the 8th most populated county in the ten county region of Northwest Lower Michigan (Table 4) and is the ranked 66 out of 83 counties in the state for population.² The 2019 American Community Survey (ACS) estimated the county population to be 17,615 people. A comparison of the 2010 and 2019 ACS data indicates a 1% decrease in county population from 2010, when the population was an estimated 17,705 persons (Table 5). The estimated 2019 population per square mile is approximately 1.8 people.

Benzie County is composed of twelve (12) townships, six (6) villages, of the City of Frankfort. Between 2010 and 2019, the county lost an estimated 90 persons, resulting in a -1% decrease in population. All of the villages, the City of Frankfort and the Townships of Platte, Blaine, Gilmore, Homestead and Benzonia lost population (shown in red, Table 5). Inland, Crystal Lake and Joyfield Townships were among the communities that saw the most significant increases in population (shown in green, Table 5). Refer to Figure 7 for a map of the population estimates of communities within the county.

Almira Township, located in the northeast portion of the county and containing the Village of Lake Ann, is the most populated community with an estimated 3,665 persons. Note that the population estimates for the villages are shown separately for informational purposes; however, those population count estimates are incorporated into the totals presented for the township in which they are located.

The second most populated community is Benzonia Township, which contains the villages of Beulah and Benzonia, at an estimated 2,735 persons. The third most populated community is Inland Township, at 2,374 persons.

Table 4: 2019 Estimated Regional Population by County, State

Jurisdiction	Population
Missaukee County	15,028
Kalkaska County	17,585
Benzie County	17,615
Leelanau County	21,652
Antrim County	23,206
Manistee County	24,457
Charlevoix County	26,188
Emmet County	33,104
Wexford County	33,256
Grand Traverse County	92,181
State of Michigan	9,965,265

Source: US Census, 2019 ACS 5-Year Estimates

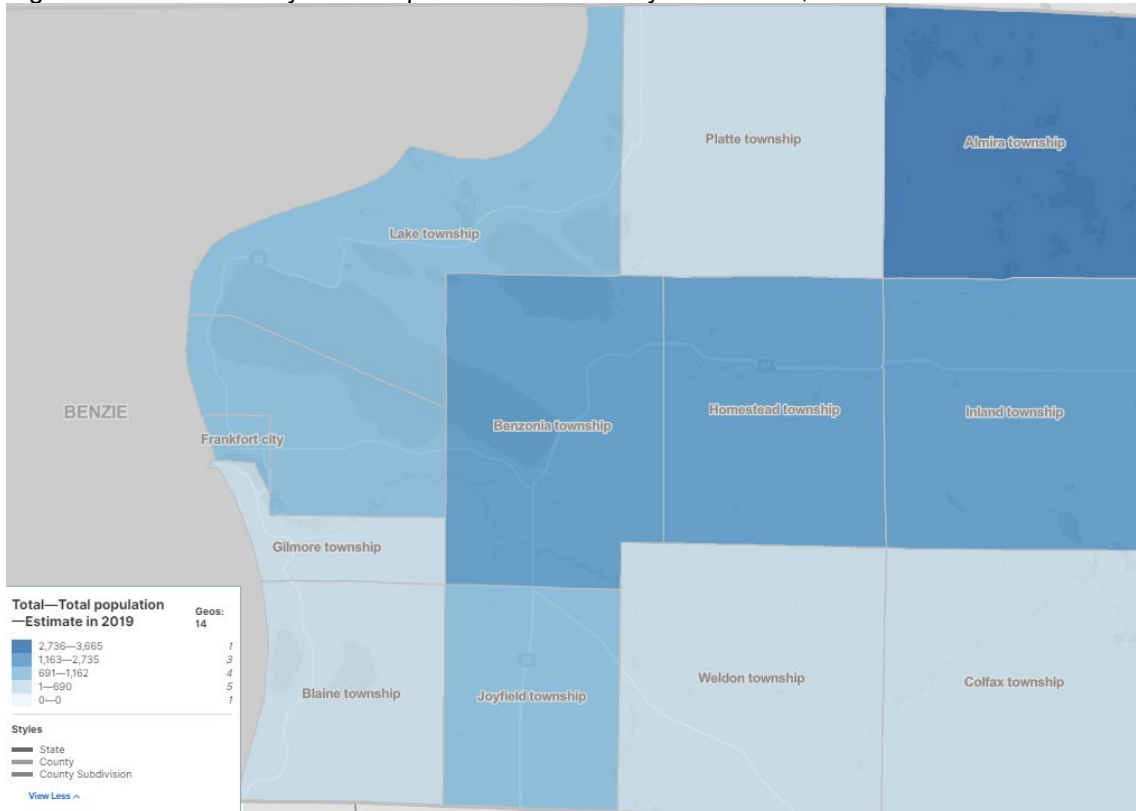
² https://www.michigan-demographics.com/counties_by_population

Table 5: Population Change by Municipality, 2010 & 2019

Municipality	2010 Estimated Population	2019 Estimated Population	Numeric Change	Percent Change	% of Total Population	Jurisdiction Status*
Village of Elberta	283	165	(118)	-41.70%		P
Village of Lake Ann	307	196	(111)	-36.16%		P
Village of Beulah	491	203	(288)	-58.66%		P
Village of Honor	266	222	(44)	-16.54%		P
Village of Thompsonville	488	481	(7)	-1.43%		P
Village of Benzonia	562	503	(59)	-10.10%		P
Platte Township	392	380	(12)	-3%	2%	P
Blaine Township	697	493	(204)	-41%	3%	P
Weldon Township	596	630	34	5%	4%	P
Colfax Township	603	663	60	9%	4%	P
Gilmore Township	893	690	(203)	-29%	4%	P
Joyfield Township	694	836	142	17%	5%	P
Lake Township	778	844	66	8%	5%	P
City of Frankfort	1,427	1,059	(368)	-35%	6%	P
Crystal Lake Township	928	1,162	234	20%	7%	P
Homestead Township	2,352	2,084	(268)	-13%	12%	P
Inland Township	1,934	2,374	440	19%	13%	P
Benzonia Township	2,818	2,735	(83)	-3%	16%	P
Almira Township	3,593	3,665	72	2%	21%	P
Benzie County	17,705	17,615	(90)	-1%	100%	P
State of Michigan	9,952,687	9,965,265	12,578	0.1%		

Source: US Census, 2010 and 2019 5-Year ACS Estimates. *2023 Hazard Mitigation Plan Participant Status: P = Participant or N = Non-Participant

Figure 7: Benzie County Total Population Estimates by Jurisdiction, 2019



Source: US Census, 2019 5-Year ACS Estimates

Like many northwest Michigan communities, Benzie County experiences an influx of seasonal residents and tourists during the summer months. However, the US Census Bureau’s Decennial Census and the American Community Survey only consistently and comprehensively track the permanent population. The 2022 *Seasonal Population Study for Northwest Lower Michigan* analyzed the 2020 seasonal population for ten counties in northwest Michigan. All ten counties in the Networks Northwest service area were included in the study: Antrim, Benzie, Charlevoix, Emmet, Grand Traverse, Kalkaska, Leelanau, Manistee, Missaukee, and Wexford. The study collected data for permanent and part-time residents and overnight visitors in accommodations and short-term rentals by County. Northwest Lower Michigan’s permanent base population is 310,802 and expands by 118% to its largest seasonal population of 676,052 in July.

With a permanent population of 17,970, Benzie County is one of the smallest counties in the region in population. However, in the month of July, when accounting for the second-home owners and overnight visitors, Benzie County becomes the third-most populous county in the region. As indicated in Table 6, Benzie County’s base population increases by as much as 138.9% in July (17,970 to 59,278). On average, the county’s population grows by 33.6%, or 6,036 people, throughout the year.

Table 6: Benzie County Seasonal Population

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg.
Permanent Population	17,970	17,970	17,970	17,970	17,970	17,970	17,970	17,970	17,970	17,970	17,970	17,970	17,970
Overnight / Part-Time Population	10,142	9,564	10,763	10,853	31,259	41,308	42,935	42,844	32,525	32,725	11,421	11,729	24,006
Total Population	28,112	27,534	28,733	28,823	49,229	59,278	60,905	60,814	50,495	50,695	29,391	29,699	41,976
Difference	7,828	8,406	7,207	7,117	13,289	23,338	24,965	24,874	14,555	14,755	6,549	6,241	6,036
% Change	43.6%	46.8%	40.1%	39.6%	74.0%	129.9%	138.9%	138.4%	81.0%	82.1%	36.4%	34.7%	33.6%

Source: 2022 Seasonal Population Study for Northwest Lower Michigan, Networks Northwest

Age, Race & Disability

Understanding the age distribution and median age of Benzie County can help identify social, economic, and public service needs in the community. The county’s total estimated 2019 population is broken into age cohorts (analyzing which proportions of a municipality’s population are in which stages of life). This gives a nuanced view of the makeup of a community. Figure 8 indicates the cohort group with the largest population is the 45 to 64 year old group, followed by those in 20-44 year old group and then closely by the 65-84 year old group. As shown in Figure 9, the median age (the midpoint where half the population is younger and half the population is older) of Benzie County is older (50.2 years) than the State (39.7 years). The county, like the State, is aging, but at a faster rate. The youngest community in the county is Almira Township with a median age of 37.9 years; the oldest community in the county is Lake Township with a median age of 65.8 years (Figure 10).

Figure 8: Benzie County Population by Age Cohort, 2019

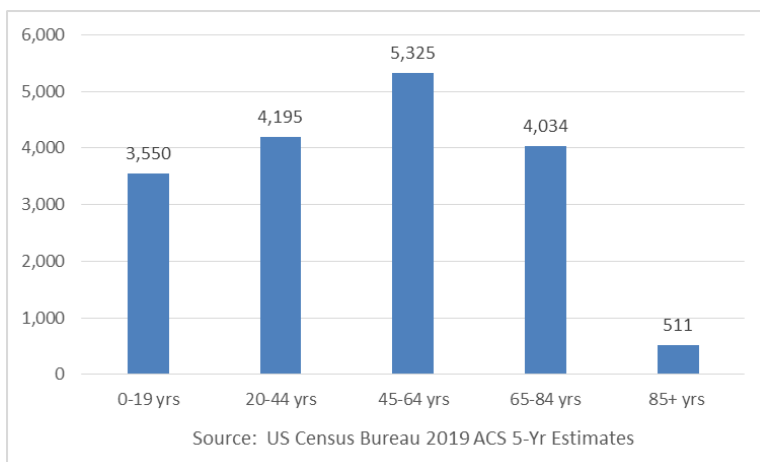


Figure 9: Median Age Trend, 2000, 2010, and 2019

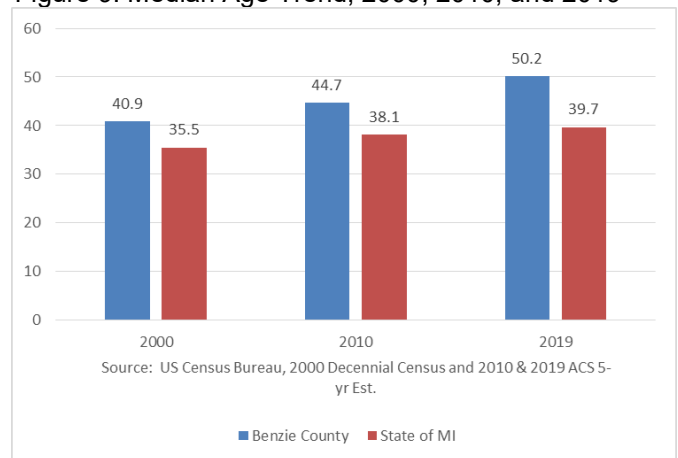
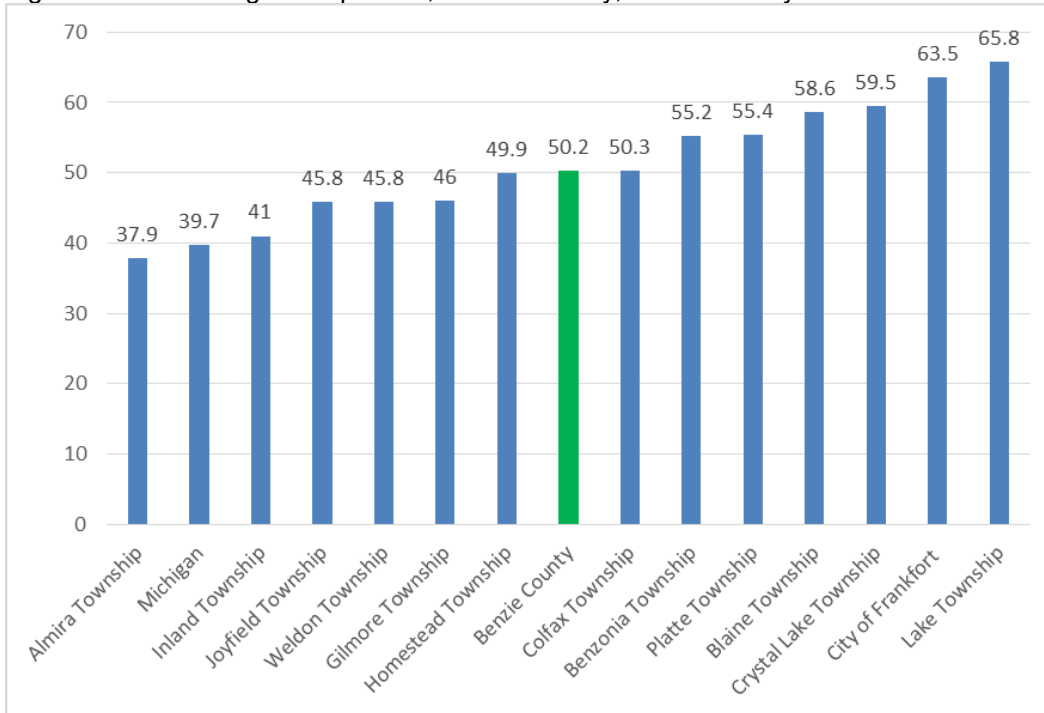
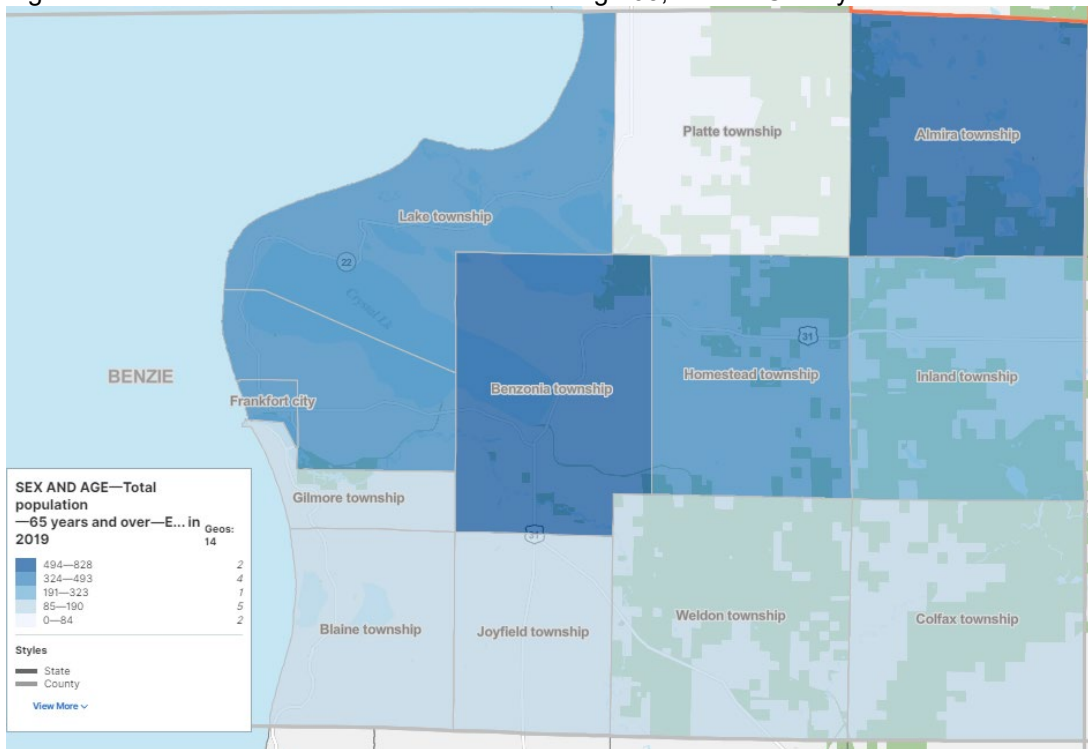


Figure 10: Median Age Comparison, Benzie County, 2019 ACS 5-yr Est.



Persons over the age of 65 are considered a socially vulnerable population group. An estimated 31.6% of persons aged 65 years or older in Benzie County has one or more type of disability (Table 9). Figure 11 and Table 7 indicate that the greatest concentrations of this cohort are located in Benzonia Township, followed by Almira Township, Homestead Township, the City of Frankfort, Crystal Lake Township and Lake Township. These communities represent areas where a greater focus on services may be needed for senior citizens pertaining to enduring natural hazard events such as extreme temperatures, severe winter weather, high winds, and resulting power outages from these events. Table 7 provides the community estimates of persons over age 65, in order from most to least number of persons.

Figure 11. Estimated Number of Residents over Age 65, Benzie County



Source: US Census, 2019 5-Year ACS Estimates

Table 7. Estimated Population Over Age 65 by Jurisdiction

Jurisdiction	Est. Population Age 65+ Years	
	Number	Percentage
Benzonia Township	828	30.30%
Almira Township	643	17.50%
Homestead Township	493	23.70%
Frankfort City	489	46.20%
Crystal Lake Township	470	40.40%
Lake Township	441	52.30%
Inland Township	323	13.60%
Joyfield Township	190	22.70%
Blaine Township	176	35.70%
Gilmore Township	146	21.20%
Colfax Township	139	21.00%
Weldon Township	123	19.50%
Platte Township	84	22.10%
Benzonia Village	90	17.90%
Beulah Village	71	35.00%
Honor Village	57	25.70%
Lake Ann Village	51	26.00%
Thompsonville Village	51	10.60%
Elberta Village	21	12.70%

Source: US Census Bureau, 2019 ACS 5-Year Estimates

The racial makeup of Benzie County is predominantly white (96.2% of those that identify as not being of Hispanic or Latino origin in Table 8). 2.5% of the population identifies as Hispanic or Latino; this may be representative of the agricultural industry in the county. 1.6% of the population (that does not identify as being of Hispanic or Latino origin) is American Indian or Alaskan Native; this is higher than the percentage of that race in the State as a whole. 0.4% of the population is Asian; 0.2% is Black; and 1.6% consists of two or more races.

The racial composition estimates of each jurisdiction in the County for those not identifying as being of Hispanic or Latino Origin, as well as those identifying as being of Hispanic and Latino Origin, are shown in Table 8. Yellow highlighted entries in the table indicate concentrations of races by geography. The largest estimates of racial groups by community are listed below.

- Identifying as being of Black or African American race alone: Benzonia Township, 19 persons; 11 of which reside in Beulah Village
- Identifying as being American Indian/Alaskan Native alone: Benzonia Township (89 persons), Homestead Township (61 persons, 16 of which reside in the village of Honor), Inland Township (61 persons), Weldon Township (28 persons), and Colfax Township (50 persons). The Village of Thompsonville is located in both Weldon and Colfax Townships; it contains 11 persons of this race.
- Identifying as being Asian alone: Benzonia Township (48 persons), Inland Township (19 persons)
- Identifying as being of two or more races: Benzonia Township (109 persons; 51 of which are in Benzonia Village), Almira Township (96 persons)
- Identifying as being of Hispanic or Latino Origin (these survey respondents can identify as any type of race): Colfax Township (70 persons), Platte Township (67 persons), Almira Township (56 persons), Inland Township (55 persons).

These communities represent areas that contain small concentrations of minority populations, which are also considered socially vulnerable populations in a natural hazard event scenario. There may be an increased need for public assistance in these communities as these population groups may have limited social and financial resources to withstand or recover from a hazard event. Those identifying as being of Hispanic or Latino Origin may also not be fluent in the English language, which could be a communication challenge for receiving public notices/warnings prior to or during a hazard event, or during rescue and recovery efforts after a disaster.

Table 8: Racial Composition (2019 ACS 5-yr estimates)

	State of Michigan	Benzie County	Almira Township	Benzonia Township	Blaine Township	Colfax Township	Crystal Lake Township	Frankfort City	Gilmore Township	Homestead Township	Inland Township	Joyfield Township
Total:	9,965,265	17,615	3,665	2,735	493	663	1,162	1,059	690	2,084	2,374	836
Not Hispanic or Latino:	9,457,912	17,174	3,609	2,706	493	593	1,162	1,014	661	2,062	2,319	792
	94.9%	97.5%	98.5%	98.9%	100.0%	89.4%	100.0%	95.8%	95.8%	98.9%	97.7%	94.7%
White alone	7,477,400	16,516	3,513	2,441	489	528	1,158	997	651	1,987	2,269	787
	79.1%	96.2%	97.3%	90.2%	99.2%	89.0%	99.7%	98.3%	98.5%	96.4%	97.8%	99.4%
Black or African American alone	1,358,034	32	0	19	0	0	2	6	0	0	0	0
	14.4%	0.2%	0.0%	0.7%	0.0%	0.0%	0.2%	0.6%	0.0%	0.0%	0.0%	0.0%
American Indian and Alaska Native alone	45,569	269	0	89	4	50	0	0	3	61	21	0
	0.5%	1.6%	0.0%	3.3%	0.8%	8.4%	0.0%	0.0%	0.5%	3.0%	0.9%	0.0%
Asian alone	310,420	76	0	48	0	0	2	0	0	5	19	0
	3.3%	0.4%	0.0%	1.8%	0.0%	0.0%	0.2%	0.0%	0.0%	0.2%	0.8%	0.0%
Native Hawaiian and Other Pacific Islander alone	2,649	0	0	0	0	0	0	0	0	0	0	0
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Some other race alone	13,652	0	0	0	0	0	0	0	0	0	0	0
	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Two or more races	250,188	281	96	109	0	15	0	11	7	9	10	5
	2.6%	1.6%	2.7%	4.0%	0.0%	2.5%	0.0%	1.1%	1.1%	0.4%	0.4%	0.6%
Hispanic or Latino:	507,353	441	56	29	0	70	0	45	29	22	55	44
	5.1%	2.5%	1.5%	1.1%	0.0%	10.6%	0.0%	4.2%	4.2%	1.1%	2.3%	5.3%

Table 8, Continued: Racial Composition (2019 ACS 5-yr estimates)

	Lake Township	Platte Township	Weldon Township	Benzonia Village	Beulah Village	Elberta Village	Honor Village	Lake Ann Village	Thompsonville Village
Total:	844	380	630	503	203	165	222	196	481
Not Hispanic or Latino:	839	313	611	497	201	151	212	196	462
	99.4%	82.4%	97.0%	98.8%	99.0%	91.5%	95.5%	100.0%	96.0%
White alone	833	295	568	441	186	146	186	192	434
	99.3%	94.2%	93.0%	88.7%	92.5%	96.7%	87.7%	98.0%	93.9%
Black or African American alone	0	5	0	0	11	0	0	0	0
	0.0%	1.6%	0.0%	0.0%	5.5%	0.0%	0.0%	0.0%	0.0%
American Indian and Alaska Native alone	6	7	28	5	0	3	16	0	13
	0.7%	2.2%	4.6%	1.0%	0.0%	2.0%	7.5%	0.0%	2.8%
Asian alone	0	0	2	0	0	0	1	0	2
	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.5%	0.0%	0.4%
Native Hawaiian and Other Pacific Islander alone	0	0	0	0	0	0	0	0	0
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Some other race alone	0	0	0	0	0	0	0	0	0
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Two or more races	0	6	13	51	4	2	9	4	13
	0.0%	1.9%	2.1%	10.3%	2.0%	1.3%	4.2%	2.0%	2.8%
Hispanic or Latino:	5	67	19	6	2	14	10	0	19
	0.6%	17.6%	3.0%	1.2%	1.0%	8.5%	4.5%	0.0%	4.0%

Table 9 represents the number of persons with one or more disability and also those with a disability by age group. An estimated 2,607 (15%) of Benzie County residents have one or more type of disability. An estimated 54% of persons with one or more disabilities are aged 65 years or older.

Table 9: Persons with a Disability, 2019

Total Civilian Noninstitutionalized Population	17,340 persons
With one or more disability	2,607 (15%)
Age 0-17 with a disability	72 (2.2% of that age group)
18 to 64 years with a disability	1,127 (11.6% of that age group)
65 years and over with a disability	1,408 (31.6% of that age group)

Source: US Census, 2019 ACS 5-yr Estimates

Housing Characteristics and Development Trends

The average household size for Benzie County residents is 2.55 persons, which is slightly higher than the State's average of 2.46. Benzie County has an estimated 12,524 total households (Table 10). The Census defines a household as all the people who occupy a single housing unit, regardless of their relationship to one another. Benzonia Township has the largest percentage of housing units of all municipalities in the county (17%), followed by Almira Township (13%). About 49.3% of residential units were estimated to be built before 1980 (Table 11). The 2019 ACS also estimates that over 90% of the county's household units are 1-unit, detached structures, which are commonly referred to as single-family homes.

Table 10: Housing Units by Municipality, 2019

Municipality	2010 Housing Units	2019 Housing Units	Units Change	% of Total
Platte Township	284	246	-15%	2%
Colfax Township	359	399	10%	3%
Joyfield Township	389	416	6%	3%
Blaine Township	507	506	0%	4%
Gilmore Township	468	525	11%	4%
Weldon Township	644	718	10%	6%
City of Frankfort	1,057	991	-7%	8%
Inland Township	985	1,065	8%	9%
Homestead Township	1,230	1,172	-5%	9%
Crystal Lake Township	1,184	1,276	7%	10%
Lake Township	1,180	1,374	14%	11%
Almira Township	1,771	1,672	-6%	13%
Benzonia Township	2,011	2,164	7%	17%
Benzie County	12,069	12,524	4%	

Source: US Census, 2010 & 2019 ACS 5-Yr Estimates * The number of housing units for each village is incorporated into the totals for the respective township in which each village is located.

Table 11: Year Structure Built, 2019

Housing Units	Number	% of Total
Built 2010 or later	345	2.8%
Built 2000-2009	1,863	14.9%
Built 1980-1999	4,150	33.1%
Built 1960-1979	3,104	24.8%
Built 1940-1959	1,640	13.1%
Built 1939 or earlier	1,422	11.4%
Total Housing Units	12,524	

Source: US Census, 2019 ACS 5-Year Estimates

Housing Tenure, Table 12, summarizes the status of housing units, whether occupied or vacant, as well as the median housing value of owner-occupied units (\$185,500) and the median gross rent (\$702). Of the 12,524 total housing units, (90%) are occupied (indicating physically occupied, principal residence housing units).

Table 12: Housing Tenure, 2019

Total housing units	12,524	%
Occupied housing units	6,792	54%
Owner-occupied	6,093	90%
Median Housing Value	\$185,500	
Renter-occupied	699	10%
Median Gross Monthly Rent	\$702	
Vacant housing units	5,732	46%

Source: US Census, 2019 ACS 5-year Estimates

Economic Profile

The 2021 Comprehensive Economic Development Strategy (CEDS) prepared by Networks Northwest is the product of a locally-based, regionally-driven economic development planning process to identify strategies for economic prosperity. The plan was prepared for the ten county region of northwest Lower Michigan. Table 13 provides a comparison of annual average wage for each county in the CEDS planning area for 2018. Kalkaska County has the highest average annual wage with \$ 50,971, followed by Grand Traverse County at \$44,562. Benzie County has the 8th highest average annual wage at \$33,908. As a western neighbor, it is not unexpected to have residents of Benzie County travel to Grand Traverse County for work.

Table 13: Average Annual Wage by County, 2018

County	Average Annual Wage
Antrim	\$33,081
Manistee	\$33,821
Benzie	\$33,908
Missaukee	\$35,917
Leelanau	\$36,833
Emmet	\$40,258
Wexford	\$40,586
Charlevoix	\$44,558
Grand Traverse	\$44,562
Kalkaska	\$50,971

Source: 2021 Comprehensive Economic Development Strategy (CEDS) prepared by Networks Northwest

The Economic Profile of Benzie County is further described in Table 14. The table provides the county's industry makeup divided into 20 different North American Industry Classification Sectors (NAICS) as well as industry's establishments, jobs, percent distribution, and annual average wage.

The industry with the largest percent distribution is "**Accommodation and Food Service**" at 27.2%, followed by "**Other (includes private, management of business, and unallocated)**" at 14.4% of jobs, and then followed by and "**Retail Trade**" at 13.8%. The annual average wage for "Accommodation and Food Services" is \$22,005; for "Other" is not available; and for "Retail Trade" is \$25,294. "**Health Care, Social Assistance**" is the fourth largest industry with an average annual wage of \$47,075.

The industry with the highest annual average wage is "**Finance and Insurance**" at \$55,011, followed by "**Construction**" at \$548,217.

Table 14: Benzie County Economic Distribution by Industry, 2018

Industry	Establishments (2018)	Jobs (2018)	% Distribution of Jobs	Annual Average Wage
Total Covered Employment	445	4,297	100.00%	\$33,908
Agri., forestry, hunting	9	D	0.00%	D
Mining	1	D	0.00%	D
Construction	85	298	6.90%	\$48,217
Manufacturing	19	379	8.80%	\$43,086
Wholesale trade	4	D	0.00%	D
Retail trade	62	593	13.80%	\$25,294
Transportation, warehousing	14	49	1.10%	\$44,430
Utilities	2	D	0.00%	D
Information	10	28	0.70%	\$26,091
Finance and Insurance	17	158	3.70%	\$55,011
Real Estate, rental, leasing	15	43	1.00%	\$26,725
Professional, technical services	29	79	1.80%	\$27,778
Administrative, waste services	19	D	0.00%	D
Educational services	6	8	0.20%	\$19,870
Health care, social assistance	20	386	9.00%	\$47,075
Arts, entertainment, recreation	14	105	2.40%	\$25,180
Accommodation and food services	55	1,168	27.20%	\$22,005
Other services (except for Public admin.)	42	141	3.30%	\$25,955
Public administration	18	247	5.70%	\$36,572
Other Includes (private, utilities, management of business, and unallocated)	4	615	14.40%	N/A

Source: 2021 Comprehensive Economic Development Strategy, Networks Northwest

*D means limited industries of a sector that would disclose confidential information

Additionally, OnTheMap, an online interactive tool available from the US Census Bureau, allows for viewing the estimated job density within the county. This website may be useful for emergency preparedness planning as related to response and potential impact to local economic activity areas. It appears the greatest density of jobs are located within the along the main roads of US-31 and M-115, linking the Villages of Honor, Beulah, Benzonia, Elberta, Thompsonville, and the City of Frankfort. The Village of Lake Ann in Almira Township is also an employment center, as well as Crystal Mountain Resort, located off of M-115 in Weldon Township. Figures 12 and 13 are screenshots of the interactive map when completing an area profile analysis for all workers in all jobs in the county in 2019.

Figure 12: OnTheMap Web Image, Benzie County Employment Areas

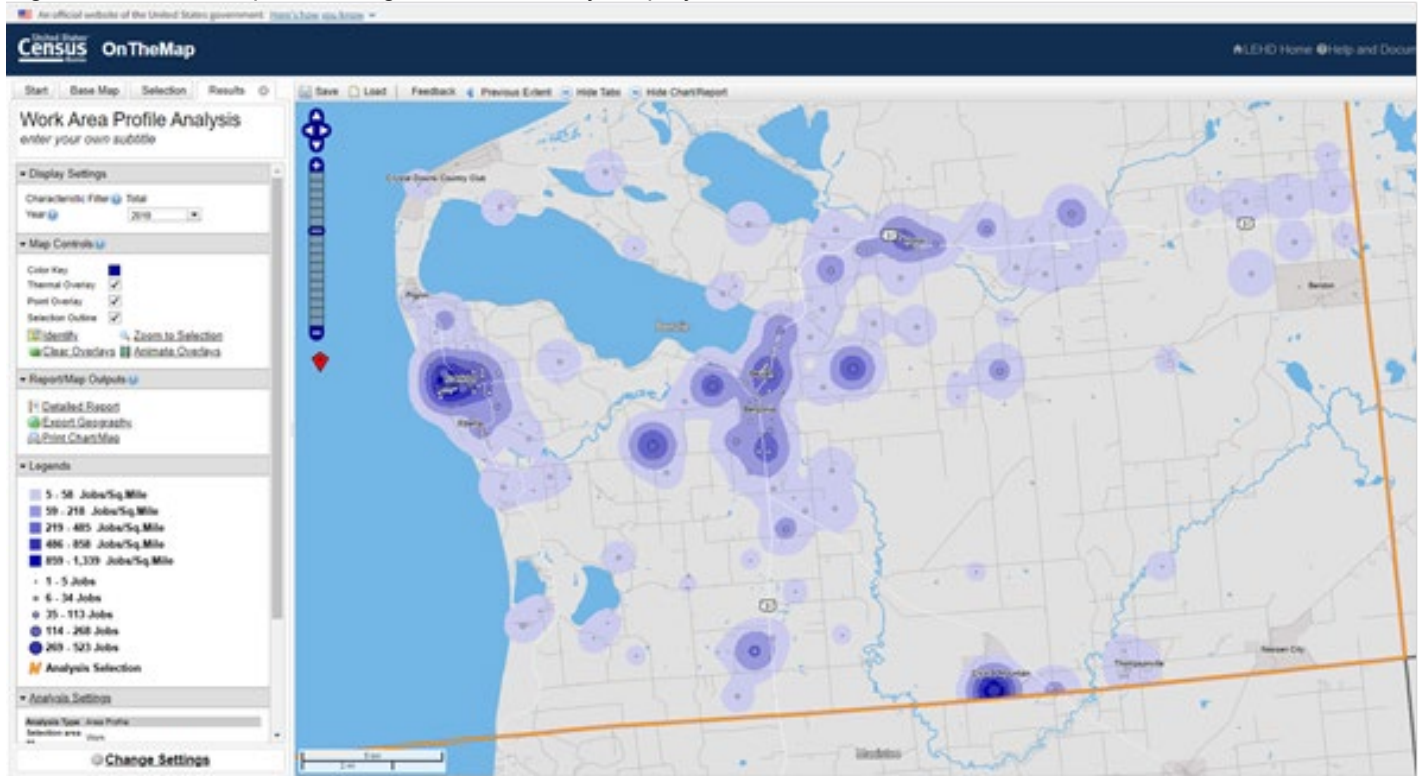
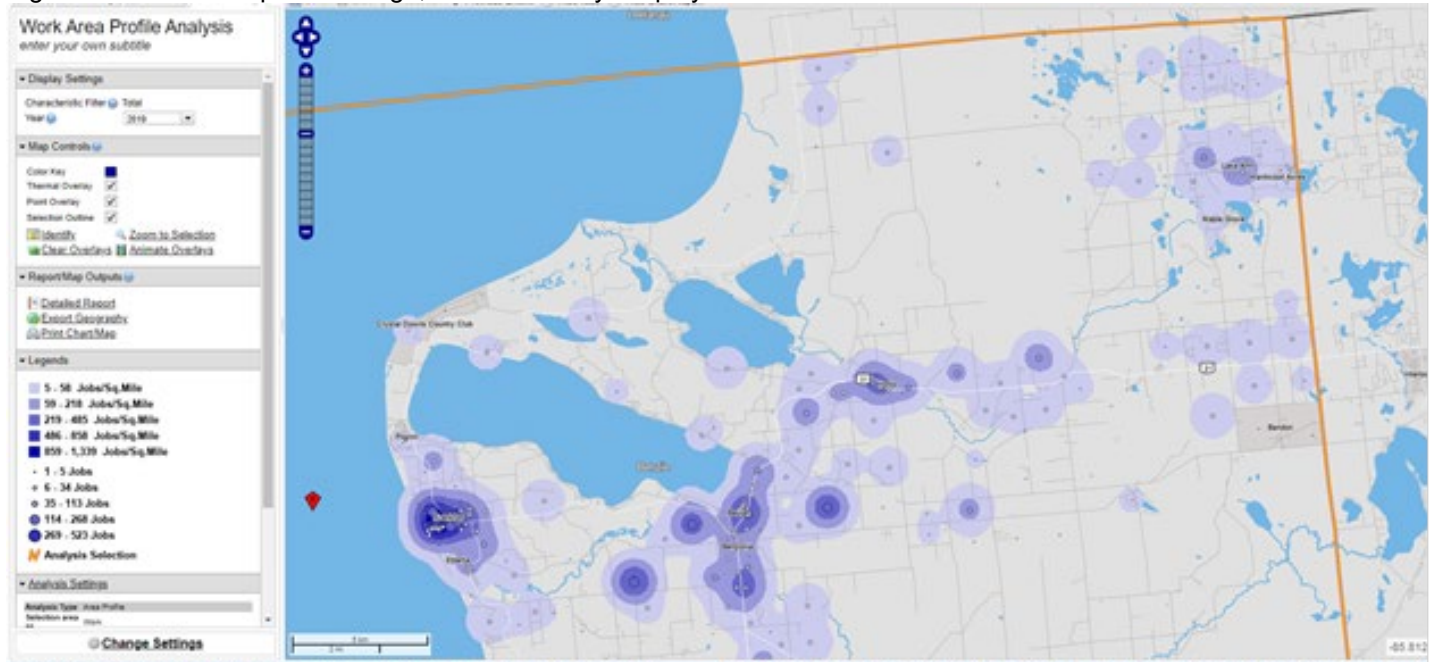


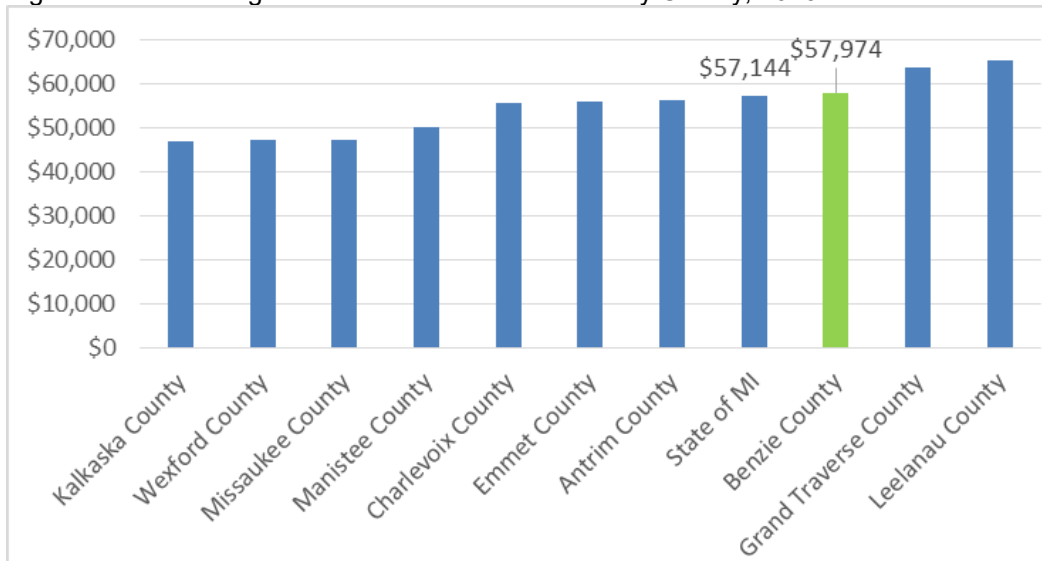
Figure 13: OnTheMap Web Image, Benzie County Employment Areas



Figures 14 and 15 present a comparison of the median household income (MHI) across the ten county region, the State of Michigan, and local jurisdictions. Benzie County has a median household income of \$57,974, ranking third highest in the region, and also above that of the State. Almira Township, which is also county's most populated jurisdiction (Table 5), has the highest median household income at \$80,938 (Figure 6). The county's economic profile can be further described by considering the cost of housing, transportation, and other goods and services. The budgeting rule of thumb has been that a household should spend no more than 30 percent of its income on housing costs. Considering the MHI of Benzie County over twelve months, a household is earning \$4,831 per month. The US Census 2019 5-year ACS estimates that the median gross monthly rent is \$702 in Benzie County, which equates to about 14.5% of the median household income.

However, according to the 2019 Northwest Michigan Target Market Analysis³ (conducted by LandUseUSA on behalf of Housing North and Networks Northwest), rents are far higher in Benzie County than what many renters can afford. While the affordable rent for a renter earning the mean wage in the county is \$800, the affordable rent for a full-time minimum wage worker earning \$9.45 an hour is \$491. And anecdotally, the demand for housing is driving prices higher still. Home prices are also increasing where the cost to purchase a home is often as much as \$200/square foot or more.

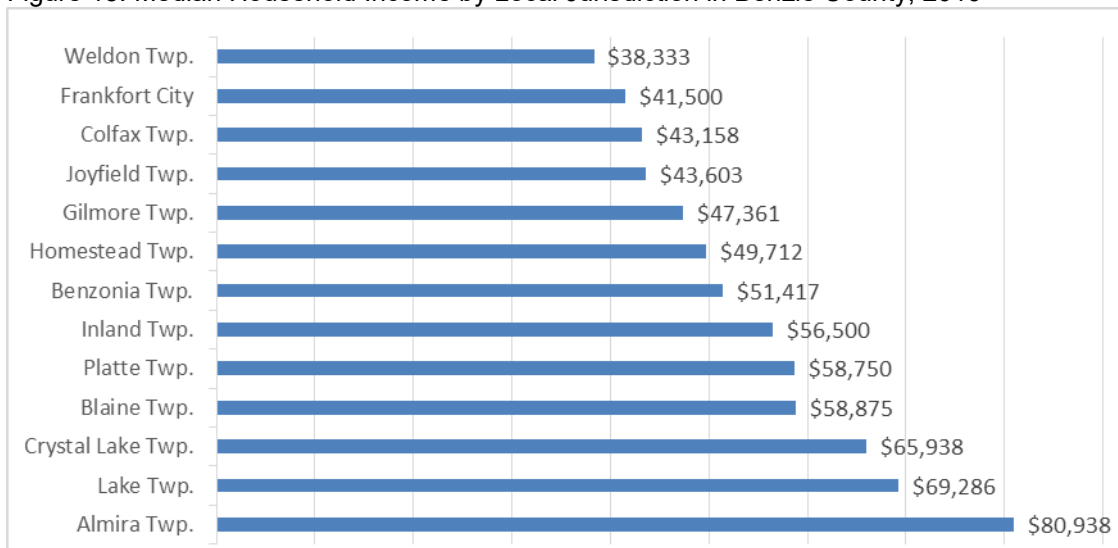
Figure 14: NW Michigan Median Household Income by County, 2019



Source: US Census Bureau, 2019 ACS 5-Year Estimates

Source: US Census, 2019 ACS Estimates

Figure 15: Median Household Income by Local Jurisdiction in Benzie County, 2019



Source: US Census Bureau 2019 ACS 5-yr Estimates

³ <https://www.housingnorth.org/target-market-analysis>

The following tables describe the population with the lowest incomes. It is estimated that in 2019, 9.5 percent of all people in the county lived at or below the poverty level (Table 15). The Census describes poverty thresholds differently based on the size of the family and the number of related children living together, as illustrated in Table 16.

Table 15: Benzie County Poverty Estimates, 2019

Poverty	Statistics
All families living below the poverty level	226 (5%)
Families with related children under age 18, in poverty	156 (11.4%)
All persons living below the poverty level	1,650 (9.5%)

Source: US Census, 2019 ACS Estimate

Table 16: 2019 Federal Poverty Level Guidelines

Persons in family/household	Poverty guideline
1	\$12,490
2	\$16,910
3	\$21,330
4	\$25,750
5	\$30,170
6	\$34,590
7	\$39,010
8*	\$43,430

*For families/households with more than 8 persons, add \$4,420 for each additional person.

Financial hardship is further described in the United Ways of Michigan report entitled *ALICE in Michigan: A Financial Hardship Study*. ALICE, which is an acronym for Asset Limited, Income Constrained, Employed, are those households with income above the Federal Poverty Level, but below the basic cost of modern living, such as housing, child care, food, health care, technology and transportation. The ALICE threshold is described as, “the average income that a household needs to afford the basic necessities... for each county in Michigan. Households earning below the ALICE Threshold include both ALICE and poverty-level households” (ALICE, 2019). Table 17 identifies the number of ALICE and poverty households for the county and each municipality. These households likely would not have reserve savings to cover an emergency, such as impacts to their personal property from a natural hazard event.

Every community in Benzie County contains low-income households, which are considered to be socially vulnerable populations. These households may have more of a need for social/public services, such as assistance with transportation, food, water or shelter, during or after a hazard event. The estimated numbers of these households are shown in Table 17, with Benzonia Township containing the most and Platte Township containing the fewest.

Table 17: United Ways of Michigan ALICE Report Findings, 2019

Benzie County Jurisdiction	Total Households	% of Total HH that are in Poverty & ALICE	# of Total HH that are in Poverty and ALICE
BENZIE COUNTY	6,792	29% (State Avg. is 25%)	
Benzonia Twp.	1,049	44%	462
Homestead Twp.	786	44%	346
Inland Twp.	880	39%	343
Almira Twp.	1,286	20%	257
Frankfort City	468	49%	229
Colfax Twp.	460	37%	170
Joyfield Twp.	305	48%	146
Weldon Twp.	250	55%	138
Crystal Lake	248	55%	136
Gilmore Twp.	285	46%	131
Lake Twp.	404	27%	109
Blaine Twp.	225	30%	68
Platte Twp.	146	43%	63

IV. Hazard Identification and Assessments

Vulnerability Assessment

Natural hazard impact on the community can be understood by evaluating vulnerabilities for commonly agreed upon assets. A community's assets are defined broadly to include anything that is important to the character and function of a community and can be described very generally in the following categories:

People
 Economy
 Built environment
 Natural environment

Vulnerable populations include the economically disadvantaged, elderly, homeless, and persons with a disability. Those that live unsheltered or in homeless encampments, assisted living facilities, mobile home parks, or isolated subdivisions are more susceptible to hazardous events. Vulnerable populations that consist of mobile homes and campgrounds/RV parks are represented on the *Vulnerable Populations and Hazard Areas Map* in Appendix A. (There may be other existing locations of vulnerable populations that are not indicated on the map.) Those locations included on the map were specifically discussed during public input sessions. The State Equalized Value (SEV) of the approximate area of these properties, based on the US Census Bureau's 2019 ACS 5-year estimates and Benzie County Equalization data, is as follows:

- Campgrounds: \$3,622,117
- Mobile homes: \$199,741

The natural environment is the primary feature residents choose to live and vacation in northwest Michigan. Benzie County is home to abundant forest lands, inland lakes and streams, unique sand dune areas, Lake Michigan shoreline and all of the wildlife within that are integral to the identity of the community. While natural resources are abundant, they are vulnerable to all types of hazards. Northwest Lower Michigan is also home to many sensitive wildlife populations that require specific climates and habitats to survive. Damaged, destroyed, or changing natural environments may decrease the chances for certain species' survival.

Additionally, countywide critical infrastructure is represented on the Critical Infrastructure Map, shown in Appendix A. Benzie County Office of Emergency Management and community stakeholders identified the critical facilities and infrastructure shown on the base map. The Critical Infrastructure Points Map is in Appendix A. Table 18 is a summary of critical infrastructure points in Benzie County.

Table 18: Critical Facilities and Infrastructure

Total # of Facilities	Facility Type
6	Commercial Agricultural and Food Product Distribution (1) – Graceland Fruit in Frankfort Ag. Processing, Packaging and Production (2) – Graceland Fruit in Gilmore Township and Smeltzer Orchard Co. in Joyfield Township Entertainment or Media Facility (1) – The Cherry Bowl Drive-In in Benzonia Twp. Public Assembly (1) - The Garden Theatre in Frankfort
5	Communications Information Services (1) – Benzie Central Dispatch in Beulah Regulatory, Oversight, or Industry Organization (2) – Radio Towers in Homestead and Inland Townships Wired Communications Offices (2) – Beulah and Frankfort
11	Emergency Services Emergency Management (1) – Office of Emergency Mgmt. in Beulah Emergency Medical Services (EMS) (2) – Station 2 in Beulah and Station 3 in Frankfort Fire and Emergency Services (6) – Townships of Almira, Inland, Homestead, Benzonia; Village of Thompsonville; City of Frankfort Law Enforcement (2) – Frankfort Police and Benzie County Sheriff's Office

1	<p>Energy Natural Gas (1) – Jordan Development Pipeline, Thurman Rd., Thompsonville</p>
21	<p>Government Facilities Dam Project (1) – Homestead Dam in Benzonia Dam Flood Damage Reduction System (2) – Crystal Lake Outlet in Crystal Lake Township; Grass Lake Dam in Thompsonville. Government Storage or Preservation Facility (1) – MDNR Platte River Fish Hatchery in Beulah Military Facility (1) – USCG Station in Frankfort Personnel-Oriented Government Facility (1) – Benzie County Govt. Center in Beulah Service-Oriented Government Facility - (6) USPS Service Centers; (1) Benzie County Governmental Center in Beulah; (1) Frankfort City Hall; (1) GTB Tribal Office in Benzonia Township Treated Water Distribution Control Center (5) – City of Frankfort and Villages of Beulah, Benzonia, Elberta, and Thompsonville Wastewater Facility (1) – City of Frankfort</p>
3	<p>Healthcare Extended Care Facility (1) – “The Maples” LTC in City of Frankfort Healthcare and Public Health (1) – Benzie-Leelanau Health Dept. in Benzonia Township Hospital (1) – Paul Oliver Memorial Hospital in City of Frankfort</p>
7	<p>School K-12 School Facilities (7) Benzie Central Schools Middle/High School, Benzonia BCS Lake Ann Elementary, Interlochen BCS Crystal Lake Elementary, Benzonia BCS Bus Garage, Benzonia Frankfort-Elberta Schools Middle/HS and Elementary School, Frankfort New Covenant Christian Academy, Interlochen</p>
5	<p>Transportation Aviation (2) – Frankfort Dow Memorial Airport Maritime (1) – Point Betsie Lighthouse in Frankfort Mass Transit (1) – Benzie Bus in Beulah Road (1) – Benzie County Road Commission in Honor</p>

Source: Benzie County Emergency Services

Historical Analysis

The Historical Analysis of Benzie County hazards uses information on impacts and losses from previous hazard events to predict potential impacts and losses during a similar event. Because of the frequency of these events, communities are more likely to have experience with and data on impacts and losses. Additionally, there have been seven (7) federal-or state-declared incidents that have involved Benzie County (Table 19). These are included in the hazard analysis for individual event types.

Table 19: Presidential and Governor Declared Disasters or Emergencies for Benzie County

Date of Declaration	Type of Incident	Affected Area	Type of Declaration/ Fed ID#
March 2020	COVID-19; Pandemic	Statewide & National	State of Emergency, National Emergency (3455), and Governor and Presidential Declared Major Disaster (4494)
1/29/2019	Extreme Cold	Statewide	Governor Declared Emergency
5/7/2013	Flooding	Benzie and other counties; Some homes along the Crystal Lake Outlet Creek were flooded, along with several homes on Rhodes Road, Demerly Road and Wallaker Road. Some of these homes were not in flood plains.	Governor Declared Disaster
9/4/2005 and 9/7/2005	Hurricane (Katrina) Evacuation	Statewide (Declared due to the emergency conditions in the State of Michigan, resulting from the influx of evacuees from states impacted by Hurricane Katrina beginning on August 29, 2005.)	Governor Declared Disaster and Presidential Declared Emergency (3225)
1/26-27/1978	Blizzard, Snowstorm	Statewide	Presidential Declared Emergency (3057); Governor Declared Disaster
3/2/1977	Drought	Benzie and 43 other counties	Presidential Declared Emergency (3035)
4/5/1956	Tornado	4 Counties: Benzie, Leelanau, Manistee and Ottawa	Presidential Declared Major Disaster (53)

Sources: FEMA <https://www.fema.gov/data-visualization/disaster-declarations-states-and-counties> and Michigan State Police [2019 Michigan Hazard Analysis \(MHA\) pub. 103](#)

Hazard Descriptions

Benzie County is vulnerable to a wide range of natural hazards. Hazard events have the potential to impact local residents, economic drivers in the community, critical infrastructure and the built environment, and the natural environment. The Benzie County Emergency Services Department is challenged with managing these threats to protect life and property. This plan includes a profile for each natural hazard event the county is likely to face. Each profile includes the location, extent, previous occurrences, probability of future events, and vulnerability assessment.

Location is the geographic areas within the planning area that are affected by the hazard, such as a floodplain. The entire planning area may be uniformly affected by some hazards, such as drought or winter storm. Location may be described in narrative and/or through map illustrations.

Extent is the strength or magnitude of the hazard. Extent can be described in a combination of ways depending on the hazard.

Previous occurrences describe the history of previous hazard events within the county. This information helps estimate the likelihood of future events and predict potential impacts. The extent of historic events may be included when the data is available. Severe weather event data is primarily collected from the National Oceanic and Atmospheric Administration's (NOAA) National Centers for Environmental Information (NCEI) Storm Events Database.

Probability of future events is the likelihood of the hazard occurring in the future and any trends that may appear. Probability may be defined using historical frequencies or statistical probabilities.

Vulnerability assessment accounts for the type, amount, and value of assets such as: existing and future buildings, infrastructure, critical facilities, populations, recreation areas and environmental features that may be impacted by a hazard.

Data for natural hazard events in Benzie County was compiled from several different sources. Weather event data was collected primarily from the National Centers for Environmental Information through the National Oceanic and Atmospheric Administration's (NOAA) website utilizing the following sections:

Climate <https://www.weather.gov/wrh/Climate?wfo=apx> – Historical local observed weather data; Climate prediction and variability; local high impact event summaries

NOAA Storm Events Database <https://www.ncdc.noaa.gov/stormevents/> - Data available to search beginning in 1950 to within approximately 3 months prior to present day; however, information on record for various types of events is limited and non-contiguous. The database provides local storm reports, damage reports, and recorded event descriptions. The event types researched for Benzie County include the following (the event types in italics are as these types of events are listed in the Storm Events Database):

- Dangerous Currents (i.e., *Rip Current*)
- Dense Fog (*Dense Fog*)
- Drought (*Drought*)
- Extreme Temperatures (*Cold/Wind Chill, Extreme Cold/Wind Chill, Heat, Excessive Heat*)
- Extreme Winter Weather (*Blizzard, Freezing Fog, Frost/Freeze, Heavy Snow, Ice Storm, Lake-Effect Snow, Sleet, Winter Storm, Winter Weather*)
- Flood (*Flash Flood, Flood*)
- Hail (*Hail*)
- Seiche (Seiche)
- Shoreline Flood (*Lakeshore Flood*)
- Thunderstorm and High Wind (*Heavy Rain, Lightning, High Wind, Strong Wind, Thunderstorm Wind*)
- Tornado (*Tornado, Funnel Cloud, Waterspout*)
- Wildfire (*Wildfire*)

Historical local observed drought data was obtained from the [US Drought Monitor](#).

The 2019 [Michigan Hazard Analysis](#) completed by the Michigan Department of State Police was referenced to obtain data on wildfires that occurred on State of Michigan-owned land between 1981 and 2018 (as reported by the MDNR).

The websites for the [National Inventory of Dams](#) and [MI-EGLE's Michigan Dam Inventory](#) were used to collect information on dams in the county.

The [Great Lakes Current Incident Database](#), provided by the National Weather Service and Michigan Sea Grant, was referenced for information about dangerous current-related fatalities and rescues on the Great Lakes occurring between 2002 and 2020.

The NOAA NCEI Storm Events Database is updated on a rolling basis, and thus the database is always being added to. The most up to date information was added to Table 20, but as events occur the database will change. Thus, additional events will be added in subsequent years. The database was searched for any events in In Benzie County between 01/01/1950 and 12/31/2022 (26,633 days), which returned the following results: 179 reported events; 166 days with an event; 2 days with event and death; 4 days with an event, death and injury; 26 days with event and property damage; and 2 days with event and crop damage. It is important to note when viewing the data that most of the events were recorded after the mid-1990's, even though the search range went back to 1950.

Those events, including State and Federal emergency or disaster declarations, wildfires on MDNR land, and dangerous lake current incidents, result in a total of 374 events in the hazard analysis, as illustrated in Table 20.

Table 20: Reported Benzie County Hazard Events by Type

Type of Event	# of Events	Event Location	Years Event Recorded
Wildfire (on MDNR land)	184	County	1981-2018
Extreme Winter Weather	108	County/Region	1978*; 1996-1999, 2001-2016, 2018, 2019, 2021, 2022
Thunderstorm/Wind & High Wind	41	County and Region	1975, 1983, 1985, 1987, 1991, 1995, 1998, 1999, 2001-2006, 2010, 2013, 2015, 2016, 2019, 2021
Hail⁴	18	Countywide	1982, 1987, 1993, 2002-2003, 2005-2007, 2016, 2019, 2021
Coastal Hazards (Lakeshore Flooding, Rip Current)	4 / 2	Benzie County Lake MI coastline	2010, 2012 (rip currents); 2019 & 2020 (lakeshore flooding)
Tornadoes	4	Countywide	1956*, 1983, 1986, 1989
Extreme Cold / Wind Chill	3	Region; Statewide	2007, 2015, 2019*
Heat/Excessive Heat	2	Region	2001, 2018
Flash Flood / Flooding	1 / 1	Countywide and Region	2000, 2013*
Drought	1	Countywide and Region	1977*
Lightning	1	County/Region	2000
Public Health Emergency (COVID-19 Pandemic)	1	Statewide/National	March 2020*
Invasive Species (Terrestrial/Aquatic)**	2	Hemlock Woolly Adelgid found in Lake Township	2021, 2023
TOTAL	372		

Sources: [NOAA National Centers for Environmental Information Storm Events Database](#); [Michigan State Police-Dept. of Homeland Security 2020 MI Hazard Analysis](#); [FEMA Disaster Declarations for States and Counties](#); Northwest Michigan Invasive Species Network

Notes: * indicates a state or federal event designation. **There are various invasive species management efforts ongoing throughout the county.

⁴ One hail event on record for 1955 was excluded from this analysis, since the next recorded hail event occurred almost three decades later, in 1982. No deaths, injuries, property damage or crop damage were associated with the 1955 hail event.

Economic Impact Analysis

Table 21 presents the *reported* deaths, illnesses/injuries, property damages, and crop damages of hazard events in Benzie County from 1950-2022. There were 6 injuries attributed to thunderstorm/wind events; 24 injuries related to tornados, and 11 rescues related to coastal hazards (dangerous currents). Three deaths have been attributed to dangerous currents. The COVID-19 pandemic* resulted in an estimated 4,121 illnesses and 78 deaths.

The estimated economic impact of Benzie County natural hazard events as reported to NOAA is nearly \$1.26 million in property damages and \$17 million in crop damages. It should be noted that many events, such as hailstorms, likely cause numerous small amounts in property damage, but this often goes unreported. The total reported Damaging Events' Costs recorded with NOAA for Benzie County are as follows:

Table 21: Impact Estimates by Event Type

Event	Property Damage Estimate	Crop Damage Estimate	Directly Related Deaths	Directly Related Rescues, Injuries or Illnesses
Winter Weather	\$600,000 (heavy snow 3/2/2012)	\$17,000,000 (\$15M from 4/24/2012 frost freeze; \$2M from 3/2/2012 heavy snow)	-	-
T-Storm with Wind	\$188,000	-	-	6
High Wind	\$49,000	-	-	-
Tornado	\$277,750	-	2	24
Hail	-	-	-	-
Coastal Hazards	\$145,000	-	3	11
Extreme Heat or Cold	-	-	-	-
Drought	-	-	-	-
Flood/Flash Flood	-	-	-	-
Lightning	-	-	-	-
COVID-19/Pandemic	-	-	78*	4,121*
TOTAL	\$1,259,750	\$17,000,000	83	4,162

Sources: NOAA's National Centers for Environmental Information; <https://www.michigan.gov/coronavirus/stats>; Great Lakes Current Incident Database

* This is the total of confirmed and probable deaths for COVID-19 in Benzie County as of 2/14/2023

Table 22 provides an overview of each potential hazard's impact on the permanent population and the estimated impact on the State Equalized Values (SEV) for real and personal property (residential and commercial). The SEV is equal to half the true value of the property. Population data collected from the US Census, 2019 ACS 5-year Estimates. Based on the findings of the 2022 Seasonal Population Study for Northwest Lower Michigan, apply a 33.6% increase from the base population of permanent residents to account for the estimated annual average seasonal population increase within the county.

Table 22: Hazard Impacts by Geography, Population and/or SEV

Potential Hazard Event	Geography	Population Est.	SEV
Extreme Winter Weather, Thunderstorm, Wind, Hail, Lightning, Tornado, Extreme Temperatures, Drought, Public Health Emergency	Benzie County	17,615	\$839,071,400
Riverine and Urban Flooding	City of Frankfort and the Village of Elberta are susceptible to riverine/urban flooding along the Bestie River and Bestie Lake; all other communities have areas susceptible to riverine flooding	1,059 in the City of Frankfort; 165 in the Village of Elberta	\$40,216,718
Road Washout Problem Areas	Homestead Township: Valley Road (CR-677); S. Weldon Road/Brownell Rd./N. Pioneer Rd. Crystal Lake Twp.: Hidden Hollow Road on the north side of Crystal Lake; Lake St. Road end on south side of Crystal Lake; areas of South Shore Drive East on SW side of Crystal Lake Benzonia Township: Eldridge Rd. near Narrow Gauge Rd.		\$7,568,465
Shoreline Erosion	Coastline areas in: Lake Twp., Crystal Lake Twp., City of Frankfort, Village of Elberta, Gilmore Twp., Blaine Twp.		\$17,453,093
Wildfire	Areas with Pine Forest Areas		\$105,734,704
Tornado, High Wind, Thunderstorm/Wind, Hail, Lightning, Extreme Temps, Wildfire, Flooding	Campgrounds		\$3,622,117
Tornado, High Wind, Thunderstorm/Wind, Hail, Heavy Snow	Mobile Homes		\$199,741
Invasive Species	Woolly Hemlock Adelgid confirmed at Crystal Downs Country Club	N/A	N/A

Sources: 2019 ACS Estimates from the U.S. Census Bureau; Benzie County Equalization

Extreme Winter Weather

The National Weather Service defines a winter weather event as: *a winter weather phenomenon (such as snow, sleet, ice, wind chill) that impacts public safety, transportation, and/or commerce. It typically occurs during the climatological winter season between October 15 and April 15.* The Extreme Winter Weather category in this Plan's hazard analysis includes the following subcategories: winter weather, winter storm, ice storm, heavy snow, blizzard, frost/freeze, and lake effect snow. Blizzards are the most perilous snowstorms and are characterized by low temperatures, strong winds, and enormous amounts of fine, powdery snow. Snowstorms have the potential to reduce visibility, cause property damage, and loss of life.

According to the 2019 Michigan Hazard Analysis, the 29 counties of the Northern Lower Peninsula of Michigan have an annual average of 79 snowstorm events, with 0 average annual deaths or injuries, \$6.53 million in average annual property damage and \$20 million in crop damage. Michigan experiences large differences in snowfall over short distances due to the Great Lakes. The average annual snowfall accumulation ranges from 30 to 200 inches with the highest accumulations in the northern and western parts of the Upper Peninsula. In Lower Michigan, the highest snowfall accumulations occur near Lake Michigan and in the higher elevations of northern Lower Michigan. For example, the average snowfall ranges from 141 inches in the Gaylord area to 101 inches in Traverse City.

Ice and sleet storms generate sufficient quantities of ice or sleet that result in hazardous conditions and/or property damage. Ice storms occur when cold rain freezes on contact with the surface and coats the ground, trees, buildings, and overhead wires with ice. Ice storms are often accompanied by snowfall, which can cause property damage, treacherous conditions, and power loss. When electric lines are down, households are inconvenienced, and communities experience economic loss and the disruption of essential services. Conversely, sleet storms are small ice pellets that bounce when hitting the ground or other objects. The ice pellets do not stick to objects, but can cause hazardous driving conditions.

According to the 2019 Michigan Hazard Mitigation Plan, Michigan has 16 average annual ice and sleet storm events with 0.2 average annual deaths, 0.5 average annual injuries, and \$11.4 million in average annual property and crop damages.

Location

Extreme winter weather events are regional events that are not confined to geographic boundaries and can affect several areas at one time with varying severity depending on factors such as elevation and wind patterns. All of Benzie County is at risk to the occurrence and impacts from extreme winter weather; the county is more susceptible to lake-effect snow as it adjoins Lake Michigan.

Extent

Snowstorms can be measured based on snowfall accumulations or damages. According to the [Benzie County Road Commission's annual snowfall records](#) dating from the 1966-67 season to the 2020-21 season, the average annual snowfall in Benzie County is 126.6 inches. Extreme winter weather events on record with NOAA in total caused \$600,000 in property damages during the March 2012 heavy snowstorm, and \$17,000,000 in crop damages (2012 heavy snowstorm and 2012 frost/freeze).

Previous Occurrences

Since 1996, there have been 107 extreme winter weather events, including heavy snowstorms, ice storms, frost/freeze, lake-effect snow, blizzards, and winter storms reported in Benzie County (Table 23).

During the January 28 to February 2, 2019 Statewide Winter Emergency, many rivers experienced ice jams that threatened some areas with floods as well; Benzie County's Platte River near the Village of Honor threatened 20 homes and cottages. Additionally, in 1978, Benzie County, along with the rest of the state of Michigan, received a Presidential Emergency Declaration for a snowstorm and blizzard.

In recent years, the more common events are winter storms with moderate snowfall of 5-10 inches. Heavy snow, blizzards, and lake-effect snows have been less common. Nonetheless, extreme winter weather events are the second most frequently recorded natural hazard event in the county, with the potential to impact the entire county and cause widespread damage. With combined property and crop damages, winter weather events are also the most costly events to occur in the county.

Table 23: Benzie County Historic Extreme Winter Weather Events

Event Type	Total Events	Property Damage	Crop Damage	Event Years
Winter Storm	49	-	-	1997-1999, 2003-2010, 2012-2016, 2018-2019, 2021-2022
Heavy Snow	35	\$600,000	\$2,000,000	1996-2002, 2004-2009, 2011, 2012, 2014, 2016
Lake-Effect Snow	12	-	-	2006, 2008-2011, 2013, 2016, 2019
Blizzard	1 / 5	-	-	*1978 / 1997-1999, 2002, 2019
Ice Storm	4	-	-	2001, 2002, 2005, 2008
Frost/Freeze	1	-	\$15,000,000	4/27/2012
Winter Weather	1	-	-	2006
TOTAL	1 / 107	\$600,000	\$17,000,000	1978 / 1996-2022

Source: NOAA: National Centers for Environmental Information; MSP 2019 Michigan Hazard Analysis

One of the highest-impact snowstorms in recent memory impacted Northern Michigan on the night of March 2, 2012. Low pressure tracked from Missouri, to southern Lower Michigan, and on to eastern Canada, while rapidly strengthening. Precipitation surged northward into the region on the evening of the 2nd. This was primarily snow, except in parts of east central Lower Michigan (especially near Lake Huron), where temperatures were mild enough for rain. Snow wound down on the morning of the 3rd, and though somewhat blustery winds occurred behind the system on the 3rd, blowing snow was limited because the snowfall was so wet. Snow totals ranged from 6 to 14 inches across most of Northern Michigan. Higher amounts fell near and west of Grand Traverse Bay, with a maximum amount of 20 inches near Lake Ann. With relatively warm temperatures, the snow was very wet; Traverse City saw around a foot of snow during the night, with a low temperature of 33 degrees. The snow stuck to everything, with the weight of the snow downing many, many trees and power lines. Power outages were widespread, with an outright majority of Northern Michigan residents losing power at some time during or after the storm. In Benzie County, 95 percent of residents lost power. Outages lasted up to a week in some spots. Great Lakes Energy described it as the worst snowstorm (in regards to power outages) in 30 years. A number of counties and communities opened shelters to aid those without power or heat. Also included in the tree damage was substantial damage to fruit trees in the Grand Traverse Bay region, particularly cherry trees. This event accounted for \$600,000 in property damages and \$2 million in crop damages.

The frost/freeze event on listed in Table 23 took place on April 27, 2012 across Northwest Lower Michigan, but especially in the Traverse City region. A killing freeze caused extreme damage to agriculture, particularly in the fruit belt of Northwest Lower Michigan. Traverse City saw low temperatures of 25 degrees on the 27th, 31 degrees on the 28th, and 26 degrees on the 29th. These values were not exceptionally colder than normal lows, which are in the middle 30s. Ultimately, the main culprit was a five consecutive days of unprecedented warmth (80 degrees) from March 17-21. This caused fruit trees to bud out far, far ahead of schedule, and left them vulnerable to even relatively normal weather as the spring progressed. The tart cherry crop was a total loss, while other orchard fruits such as sweet cherries, apples, pears, and peaches saw losses in excess of 90% of the expected crop. Total crop losses were estimated at \$15 million.

Probability of Future Events and Vulnerability Assessment

Since 1996, Benzie County has had 107 extreme winter weather events. This averages to about to about 4 events per year. The probability of an extreme winter weather event occurring in a future year is 100 percent. Heavy snow events have the potential of shutting down towns and businesses for a significant period of time. Blowing and drifting snow with blizzard conditions cause driving hazards. Ice damage may occur when high winds push lake water and ice past the shoreline, causing damage to public infrastructure and residential property. Benzie County remains a leading producer in the state of fruits, tree nuts, and berries with over \$5 million in these products sold (2017 USDA Census of Agriculture). A frost/freeze event of the magnitude in 2012 would decimate more than three quarters of the products sold today. This would greatly impact the local economy that is also reliant on agriculture and agri-tourism (wineries, orchards, etc.).

Winter-related events cause difficult driving conditions and in the event of an emergency, can make travel increasingly difficult for emergency personnel who may be more frequently dispatched to rural areas. During the winter months, the population is largely made up of the base permanent residents. However, there is increasing demand from seasonal residents to purchase property and retire or work remotely from highly desirable northern and coastal communities like those in Benzie County. Many aspects of Benzie County, including natural wooded areas and proximity to lakes/rivers, are attractive to prospective buyers and the permanent population is expected to continue to grow. New residents, especially those locating in remote areas, increase the chance of risk to life and property during severe weather events.

Additionally, elderly residents are the most likely persons to have a disability, and therefore, are the most vulnerable to extreme winter weather events. Lake Township has the highest median age of all communities in the county, at 65.8 years; an estimated 52.3% of their population (441 persons) is over age 65. Benzonia Township has the greatest estimated number of residents over age 65 (828 persons), followed by Almira Township (643), Homestead Township (493), City of Frankfort (489) and Crystal Lake Township (470).

Thunderstorms and Severe Winds

The National Weather Service defines a severe thunderstorm as: *a thunderstorm that produces a tornado, winds of at least 58 mph (50 knots or ~93 km/h), and/or hail at least 1" in diameter.* These storms can also produce lightning and heavy rain (that could cause flash flooding). Severe thunderstorms can occur at any time in Michigan, although they are most frequent during the warm spring and summer months from May through September.

High wind events are included in this hazard category. Long-lived wind events associated with fast-moving severe thunderstorms are known as a *derecho* (pronounced similar to "deh-REY-cho"). According to the National Weather Service, a derecho is a widespread, long-lived wind storm that is associated with a band of rapidly moving showers or thunderstorms. Although a derecho can produce destruction similar to the strength of tornadoes, the damage typically is directed in one direction along a relatively straight swath. As a result, the term "*straight-line wind damage*" sometimes is used to describe derecho damage. By definition, if the wind damage swath extends more than 240 miles (about 400 kilometers) and includes wind gusts of at least 58 mph (93 km/h) or greater along most of its length, then the event may be classified as a derecho. A derecho often occurs during the spring or summer; however, it can occur any time of the year.

Severe windstorms can cause damage to homes and businesses, power lines, trees and agricultural crops, and may require temporary sheltering of individuals without power for extended periods of time.

Location

Thunderstorms and severe wind are regional events that are not confined to geographic boundaries and can affect several areas at one time with varying severity depending on factors such as elevation and wind patterns. All of Benzie County is at risk to the occurrence and impacts from thunderstorms and severe winds.

Extent

Thunderstorms can be measured based on wind speed or damages. The average wind speed for events in Benzie is 53.2 knots. Benzie County had a reported \$237,000 in property damages caused by thunderstorms and severe winds. There have been six injuries reported in relation to thunderstorm/wind event in Benzie County. No crop damages or deaths have been reported.

Previous Occurrences

Since 1991, there have been a total of 41 thunderstorm/wind and 8 high wind events reported in Benzie County (Table 24). This is the second-most frequently occurring type of severe weather event in the county. A thunderstorm/wind event at Lake Ann in 1987 resulted in 6 injuries.

Table 24: Benzie County Historic Thunderstorm and High Wind Events

Event Type	Number of Events	Property Damage	Crop Damage	Injuries	Event Year(s)
Thunderstorm Wind	33	\$ 188,000	\$ -	6	1975, 1983, 1985, 1987, 1991, 1995, 1998, 1999, 2001-2006, 2010, 2013, 2016, 2019, 2021
High Wind	8	\$ 49,000	\$ -		1998, 2001, 2003, 2005, 2010, 2015, 2021
TOTAL	41	\$237,000	\$ -		

Source: NOAA: National Centers for Environmental Information

The most damaging event occurred on November 10, 1998. One of the strongest storms ever recorded in the Great Lakes crossed the region on the 10th and 11th. The storm originated over the Central Plains and lifted across western portions of Lake Superior. The wind shifted to the southwest during the afternoon...with the strongest winds generally developing along the Lake Michigan shoreline. During the afternoon and evening of the 10th wind gusts of 70 to 80 mph were common along the Lake Michigan shoreline...with 50 to 60 mph gusts across the rest of the region.

A large number of trees were uprooted or snapped off with many branches also torn off. Many of the trees and branches fell on power lines resulting in widespread power outages regionwide. Many roads were also blocked by falling trees and several accidents were reported as cars collided with debris on the roadways. Several homes and cars received damage from falling trees and branches. The strong winds generated 15 to 20 foot waves on Lake Michigan. Most ships took shelter with the approach of the storm and rode out the storm in protected waters.

In Frankfort...located on the Lake Michigan shoreline of Benzie County...80 to 90 mph wind gusts destroyed a hangar at the City-County airport and damaged 6 private planes. Damage to the hangar was estimated at around \$500,000 dollars.

Probability of Future Events and Vulnerability Assessment

Between 1975 and 2022, Benzie County has had 41 thunderstorm/wind and high wind events. Therefore, the probability of an event occurring in a future year is 85 percent. Damage from straight line winds usually affects multiple counties through the loss of electricity from trees/tree limbs downing power lines; causing widespread property damage; and potentially exposing the public to severe injury or fatality due to flying debris. The magnitude and severity depend on the county population, seasonal activity, and the spread of development. During the warm summer months, the permanent population expands by up to 138% to include the seasonal short-term population. Residents and visitors are attracted to both rural, sparsely populated areas and city/village centers. Mobile home parks, campgrounds, institutions (schools, places of worship, etc.), and numerous annual events that draw a large number of tourists to outdoor recreation areas were identified as specific areas of concern. The locations of mobile homes and campgrounds are identified on the Vulnerable Populations and Hazard Areas map in Appendix A.

Hail

Hailstorms occur when a severe thunderstorm produces hail that falls to the ground. Hail is formed when the updrafts of the storm carries water droplets above the freezing level, where they form into rounded or irregular lumps of ice that range from the size of a pea to the size of a grapefruit. When the weight of the hail is no longer supported by the air, it falls to the ground and has the potential to batter crops, dent automobiles, and injure people and wildlife. Sometimes, large hail appears before a tornado since it is formed in the area of a thunderstorm that tornadoes are most likely to form.

According to the *2019 Michigan Hazard Mitigation Plan*, Michigan has on average 191 hail storms, an expected annual statewide loss of about \$16.6 million, no deaths, and approximately 1 injury per year. Despite damaging hail occurring in every part of Michigan, the areas of the state most prone to severe thunderstorms (e.g. the Southern half of the Lower Peninsula) are also most prone to large and damaging hail. The majority of the hailstorms occur during the growing season from May through August when crops have the greatest potential to be damaged by hail.

The National Weather Service issues forecasts for severe thunderstorms with sufficient warning time to allow residents to take appropriate action to reduce the effects of hail damage to vehicles and some property. However, little can be done to prevent damage to crops. For example, during September 26-27, 1998, a line of severe thunderstorms moved across northern Lower Michigan producing hail up to 2" in diameter in Manistee County and destroying an estimated 30,000-35,000 bushels of apples at area farms, and damaging several homes and vehicles.

Location

Hailstorms are regional events that frequently accompany thunderstorms, and are not confined to geographic boundaries. The severity of hailstorms may range across the affected areas. All of Benzie County is at risk to the occurrence and impacts from hailstorms. According to the National Weather Service, Benzie County is in an area of the United States that has on average two days of hailstorm events per year.

Extent

According to the NOAA National Centers for Environmental Information, the approximate size of hail is described as follows in Table 24. If a thunderstorm produces hail that is 1 inch in diameter (quarter size) or larger, it is considered to be a severe thunderstorm.

Table 25: NOAA Hail Size Description

Appearance	Approximate Size in Inches
Pea	0.25-0.5 inch
Penny	0.75 inch
Nickel	0.88 inch
Quarter	1.00 inch (<i>Severe Criteria</i>)
Walnut/Ping Pong	1.50 inch
Golf Ball	1.75 inch
Hen Egg	2.00 inch
Tennis Ball	2.50 inch
Baseball	2.75 inch
Tea Cup	3.00 inch
Grapefruit	4.00 inch
Softball	4.50 inch

The greatest size of hail reported in Benzie County was 3.25 inches on October 3, 2006 in Benzonia. According to the scale, hailstones of this size are slightly larger than a tea cup.

Hail can damage aircraft, homes, vehicles, agricultural crops, and can also injure or kill animals and people.

Previous Occurrences

Between 1982 and 2021, Benzie County had 18 hailstorms reported to NOAA (Table 26). There are no reported property/crop damages, injuries or deaths attributed to hail.

Table 26: Benzie County Hail Events, 1982-2021

Location	Date	Magnitude
Benzie County	7/17/1982	1.75
Benzie County	7/9/1987	0.75
Frankfort	4/24/1993	0.75
Honor	5/30/2002	1.25
Lake Ann	8/3/2003	0.75
Lake Ann	8/28/2003	0.88
Frankfort	9/15/2003	0.75
Lake Ann	9/7/2005	0.75
Elberta	9/7/2005	0.75
Lake Ann	6/28/2006	0.75
Honor	7/17/2006	1
Benzonia	10/3/2006	3.25
Honor	10/3/2006	1
Benzonia	6/20/2007	1
Lake Ann	10/17/2016	1
Benzonia	5/31/2019	0.75
Nessen City	5/31/2019	0.88
Beulah	9/7/2021	0.75

Source: NOAA: National Centers for Environmental Information

During one particularly strong event on July 17, 2006, hail damage was significant within Benzie County and the region. A strong cold front ran headlong into warm and humid air in place over Michigan. Thunderstorms ignited by midday in Eastern Upper Michigan, and became widespread by late afternoon in Northern Lower Michigan. A large number of storms became severe, as this became the largest severe weather outbreak in Northern Michigan in several years. Millions of pounds of fruit crops were destroyed by hail and wind.

Probability of Future Events and Vulnerability Assessment

With 18 events reported in the past 40 years, Benzie County has a 45% chance of a major hailstorm in a given year. All existing and future buildings, exposed infrastructure, and populations are at risk from hailstorms since hail causes damage to roofs, brick walls, glass, landscaping, crops, livestock, and cars. Manufactured homes and campground populations located throughout the county and are more susceptible to hail damage; the locations of these are identified in the Vulnerable Populations and Hazard Areas Map in Appendix A. Hail can also damage roads, sidewalks, bridges, and above ground utilities. Hail has the potential to cause injury and death, and populations are advised to take shelter when an event occurs.

Riverine and Urban Flooding

Fluvial, or Riverine flooding occurs when rivers, streams, and lakes overflow into adjacent floodplains due to prolonged, intense rainfall, rapid snowmelt or ice jams. Flooding can damage or destroy property, disable utilities, destroy crops and agricultural lands, make roads and bridges impassable, and cause public health and safety concerns. Floods occur in the early spring, but also occur in the winter due to ice jams, and during the summer or fall from severe thunderstorms. Flooding caused by severe thunderstorms has a greater impact on watercourses with smaller drainage areas.

Pluvial, or Urban flooding occurs when water flows into low-lying areas because it does not have a place to go, due to impervious surface coverage. This flooding occurs from a combination of excessive rainfall, snowmelt, saturated ground, and inadequate drainage, and is becoming more common in Michigan. Since development is occurring in floodplains, the natural landscape is unable to properly disperse the water. Urban flooding also has the potential to overflow onto docks or other structures with electricity running to them, which increases the risk for an electric shock drowning. Additionally, storm and sanitary sewers are unable to handle the water flows associated with storm events, which can result in sewer overflows and affect the water quality of nearby lakes and rivers, as well as structures with basements or shallow groundwater tables.

Dam failure is also a potential source of flooding. Dam infrastructure in the state is aging and costly to maintain. FEMA provides Federal Guidelines for Dam Safety, which encourage strict safety standards in the practices and procedures employed by federal agencies or required of dam owners regulated by the federal agencies (2004). The National Inventory of Dams provides a catalogue of dams in the nation with a profile of each. Each profile lists the Hazard Potential Classification. This is a system that categorizes dams according to the degree of adverse incremental consequences of a failure or mis-operation of a dam. The hazard potential classification does not reflect in any way on the current condition of the dam. Three classification levels are adopted as follows: Low, Significant, and High, listed in order of increasing adverse incremental consequences.

According to the 2019 Michigan Hazard Analysis, the most damaging hazard in Michigan, based upon estimated physical damages and known response/recovery costs, appears to be floods. The MSP reports that flooding events have a statewide expected annual loss estimated at more than \$100 million (\$25.69 million had previously been estimated in the 2014 Michigan Hazard Mitigation Plan, but Federal Disaster 4195 confirmed a higher magnitude more in line with earlier MDEQ estimates, as that Metro Detroit flood event was quite similar to Federal Disaster 1346 during the previous decade).

The MSP's 2019 Michigan Hazard Analysis indicates that the Northern Lower Peninsula averages 0.3 annual flooding events, with average annual property and crop damages of \$2,591,244 due to flooding.

Location

The City of Frankfort and the adjoining Village of Elberta comprise an urbanized area of the county and is the most likely location to experience both riverine and urban flooding, due to the presence of impervious surfaces and the presence of the Benzie River it ends at Lake Michigan.

The Betsie River and the Platte River are the two major rivers in the county. There are also multiple inland lakes. The major lakes are Crystal Lake, Platte Lake, Little Platte Lake, Upper Herring and Lower Herring Lakes, and Lake Ann.

The following communities are likely to experience riverine flooding from the Betsie River and its tributaries: the southeast part of Inland Township, Colfax Township, The Village of Thompsonville, Weldon Township, Benzonia Township, Crystal Lake Township, Gilmore Township, the Village of Elberta and the City of Frankfort.

The following communities are likely to be at risk from riverine flooding from the Platte River and its tributaries: Lake Ann Township, Inland Township, Homestead Township, the Village of Honor, Platte Township, Benzonia Township (northern part) and Lake Township.

High groundwater tables are prevalent within the Villages of Benzonia and Beulah, which are in the Crystal Lake watershed. The Village of Beulah recently completed a municipal water and sewer system. A study is underway to evaluate expansion of those systems to the Village of Benzonia and parts of Benzonia Township.

Blaine Township experienced flooding within neighborhoods surrounding Lower Herring Lake in 2020, when exceptionally high Lake Michigan water levels resulted in Lake Michigan waters flowing into Lower Herring Lake. Combined with a high groundwater table, residential backyards and some roads (such as Buena Road near the Herring Creek) around the lake were flooded, and the operability of residential septic systems were compromised. Additionally, Gorivan Road, south of

Heron Road, along Herring Creek in Blaine Township, floods occasionally. The Benzie County Road Commission has indicated they may consider elevating the road with a few feet of fill.

In Homestead Township and the Village of Honor, ice dams on the Platte River caused localized flooding on adjoining properties in 2019.

Other flooding may involve low-lying areas that collect runoff waters; flaws or shortcomings in existing sewer infrastructure; undersized or poorly designed storm water control practices; collective effects of land use and development trends; illegal diversion of water, or actions that interfere with system function.

There are four existing publicly-owned dams in Benzie County that are regulated by MI Dept. of EGLE, as indicated in Table 27 and Figure 16. (Note that the Thompsonville Dam was removed in 1989 after it failed.) The Homestead Dam on the Betsie River in Benzonia Township is the only one that has a “significant” hazard potential; meaning that if the dam were to fail, there would be a significant impact on life and property downstream of the dam. The remaining have a low hazard potential and are therefore not required to have an Emergency Action Plan on file with the State of MI/ Benzie County Emergency Management.

The most recent Emergency Action Plan for the Homestead Dam was received by the MDNR on January 14, 2008, and indicates the following:

The dam was constructed in 1974 at the site of a former powerhouse barrier. It consists of a 60 foot wide fixed crest steel sheet piling spillway, with 25 foot earth fill sections on either side. The total length of the dam is 110 feet. There are two spillway crests within the spillway section, each 29.5 feet. There is no auxiliary spillway. The low head dam now functions as a lamprey barrier for the Betsie River. The dam is considered to have adequate spillway capacity based on hydraulic calculations on file with the MI EGLE Dam Safety Program.

The dam is a very popular fishing area during the spring and fall. The State of Michigan owns the dam and 75% of the stream frontage from the dam downstream to the US 31 Bridge (approximately 2 miles.) The dam hazard area in case of dam failure would be most severe within 1 mile of the dam. Below this area only minor flooding should occur.

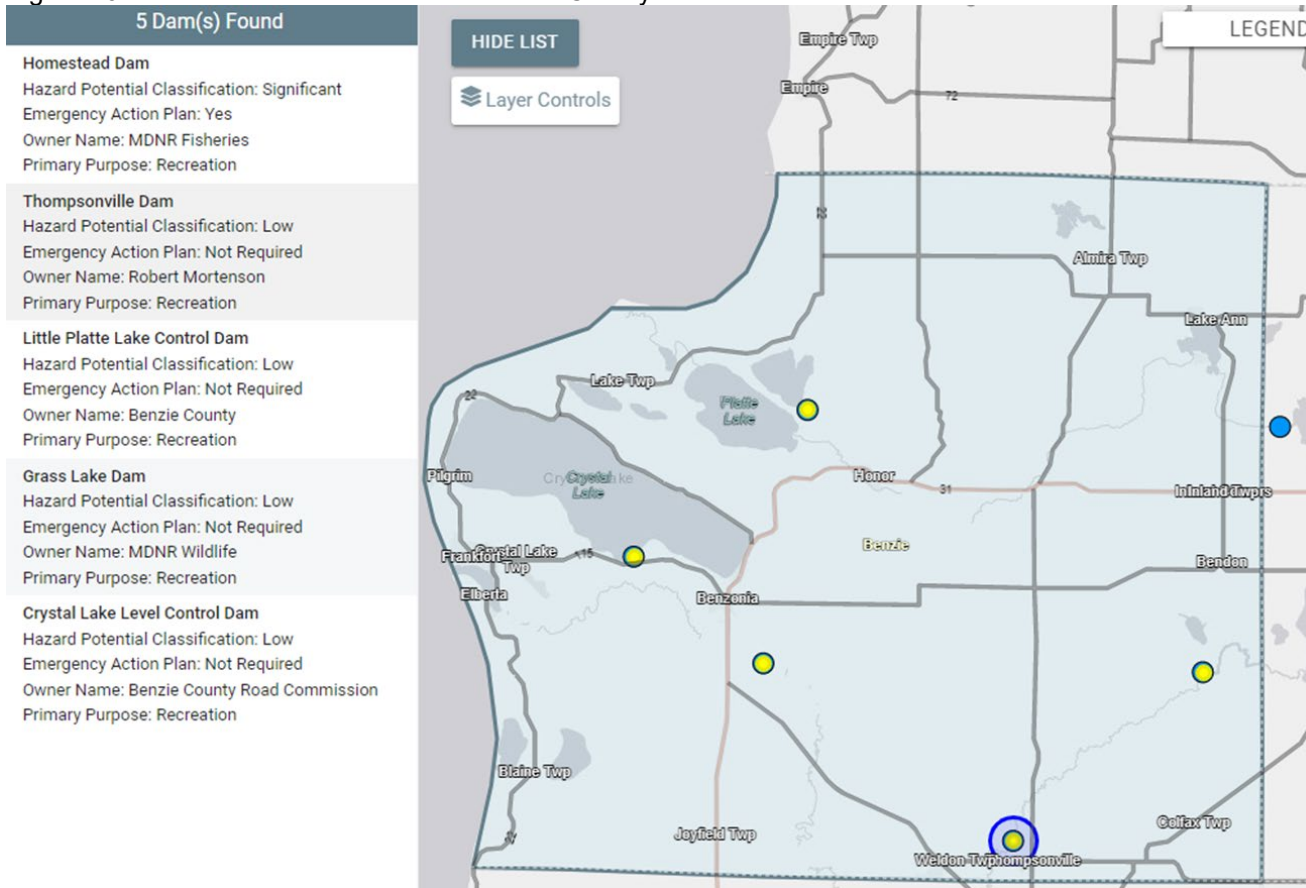
The most recent Operation and Maintenance Plan for the Dam was completed July 27, 2006, and indicates that formal inspections should be made periodically at intervals not to exceed 10 years. The dam was last inspected May 1, 2016 and has a “satisfactory” rating. Should there be an update to the EAP or O&M Plan, the Benzie County Emergency Manager should provide those documents to the EGLE Dam Safety Unit.

Table 27. Public Dams in Benzie County

Name	Height (ft.)	Storage (acre-feet)	Location	Owner	Dam Type	Year Completed	Dam Purpose	Hazard Potential
Crystal Lake Level Control Dam	7	27,190	Crystal Lake Outlet	Benzie County Road Commission	Gravity	1977	Recreation, Other	Low
Grass Lake Dam	8.4	5,200	Betsie River	MDNR Wildlife	Gravity	1951	Recreation	Low
Homestead Dam	14	1,800	Betsie River	MDNR Fisheries	Other	1974	Recreation	Significant
Little Platte Lake Control Dam	10	3,400	N. Branch Platte River	Benzie County	Other	1969	Recreation, Other	Low
(Former) Thompsonville Dam (was removed in 1989 after it failed)	20	165	Betsie River	Robert Mortenson	Earth, Gravity	1901	Recreation	Low

Source: [EGLE Michigan Dam Inventory](#)

Figure 16. Locations of Public Dams in Benzie County



Source: [National Inventory of Dams](#)

Extent

There are no reported property damages associated with inland flooding events for Benzie County. There are no reported deaths or injuries occurred from these events (Table 28).

Table 28: Fluvial and Pluvial Flood Events

LOCATION	DATE	EVENT TYPE	PROPERTY DAMAGE	CROP DAMAGE	FLOOD CAUSE
Countywide/Region	9/1/2000	Flash Flood of Road	-	-	Thunderstorm producing 2-6 inches of rain within four hours
Countywide/Region	April - May 2013	Flooding	-	-	Extensive rainfall during a spring thaw.
TOTAL			-		

Sources: NOAA National Centers for Environmental Information; *Michigan State Police 2019 Michigan Hazard Analysis

Previous Occurrences

On September 1, 2000, flash flooding of roadways occurred in northern Benzie County and surrounding counties. An area of thunderstorms formed over northern Benzie County and surrounding Leelanau County and the Traverse City metropolitan area and persisted until from about 7:00 pm to 11:30 pm, continually affecting the same areas. Over the 4 to 5 hour period of rainfall, much of Leelanau County reported rainfall amounts ranging from 4 to 8 inches, while amounts ranged from 2 to 6 inches in Benzie and Grand Traverse counties. These storms led to flooding of roadways across the northern half of Benzie County as well as Leelanau and Grand Traverse counties.

On May 7, 2013, Governor Snyder issued a State of Disaster Declaration for Benzie County and 18 other counties and two cities in Michigan that were impacted by severe flooding that occurred between April 9 and May 3, 2013. Some

homes along the Crystal Lake Outlet Creek (Crystal Lake Township) were flooded, along with several homes on Rhodes Road (Inland Township), and Demerly Road and Wallaker Road (Joyfield Township). Some of these homes were not located in floodplains. The water table rose so high in some places that it flooded foundations and caused the floors to buckle.

Though not a common occurrence in the county, riverine flooding has occurred when spring snowmelt coincides with prolonged, intense rains.

The county may see an increase in flood events from an increase in rain and snowfall, and the backwater effect from fluctuating high water levels of the Great Lakes.

Probability of Future Events and Vulnerability Assessment

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. People may be stranded in their homes for several days without power or heat, or they may be unable to reach their homes at all. 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.

Between 2000 and 2021, Benzie County has had two major inland flooding events. This represents a 9% chance of an annual major fluvial or pluvial flood event. The magnitude and severity depend on the county population, seasonal activity, and the spread of development. During the warm or summer months, the population expands to include both the permanent resident base population and the seasonal short- and long-term population. The seasonal population is attracted to both rural, sparsely populated rural areas and urban activity centers. The City of Frankfort's Business District is located at the mouth of the Betsie River. City infrastructure is also vulnerable where it intersects with the Betsie River.

High groundwater tables are prevalent in many areas of the county, which poses a compatibility issue with the use of ineffective on-site septic disposal systems resulting potential groundwater contamination. The Village of Lake Ann does not have a local sewer or water supply system. The Village of Honor has sewer, but not municipal water. The Village of Thompsonville has municipal water, but not sewer. The Villages of Elberta, Beulah, and the City of Frankfort each have municipal water and sewer systems. A study is underway to evaluate expansion of those systems to the Village of Benzonia and parts of Benzonia Township. Concerns were expressed in the community survey about how well the existing sewer system in Beulah will keep up with demands placed on it by the seasonal population.

The following comments from the community survey and stakeholder meetings were provided regarding inland flooding/erosion concerns:

Village of Elberta: The M-22 Causeway over the Betsie River in Elberta was mentioned specifically five times in the survey due to the concern of another flooding/ potential washout situation if/when lake water levels rise again like they did in 2019 and 2020.

Blaine Township: "Somewhat concerned about structural integrity of the dam in Lower Herring Lake [adjoining Lake Michigan]. Hasn't been a functioning dam in years, but if waters receded a lot it may be something to watch." The lake flooded in 2020 due to high Lake MI water levels and excessive rain.

City of Frankfort: "Critical infrastructure concerns include the water and sanitary sewer distribution systems"; "dams and rivers in the event of a flood"; and the need to "install check valves on storm discharge locations".

The Platte and Betsie River both run through the county. The BCRC maintains 17 bridges (not counting the bridges maintained by MDOT). Losing a major bridge could have long term negative impacts to the county.

Village of Beulah: Potential services failure due to pressures from seasonal tourists; "sustained power outages will have a significant impact on our ability to sustain major DPW responsibilities"

Village of Thompsonville/Colfax Twp.: Spring runoff issues north of Lindy Road from a natural drain that runs from Thurman Road in Colfax Township and combined with a high water table.

Weldon Township: ice backups along Little Betsie River crossing Wallin Road and Thompsonville Highway and along the Betsie River north of Lindy Road.

Platte Township: sometime have high water/flooding along the North Branch Platte River along Gudemoos Road. High water table in low ground areas on the north end of the Little Platte Lake and Saffron Road.

Homestead Township: Dirt road washouts on hilly roads at Weldon and Brownell and Valley Road north of US 31. Ice dams along Platte River.

Almira Township: the Pinewoods subdivision off of Lake Ann Road has a high groundwater table and has experienced flooding.

Benzonia Township: Dirt road washouts on the north side of Hidden Hollow Road and the south side of Crystal Lake on Lake Street. High water area could impact businesses/multi-unit housing along US-31 between Narrow Gauge and Eldridge Road on the north side of US-31, toward Crystal Drive.

Crystal Lake Township: Betsie River and Crystal Lake outlet area is a flood zone. Have had beach erosion and road washout at the end of Figg Road and the end of Bellows Road, on the south side of Crystal Lake. Also a culvert/possible road washout at Thomas Road east of Bellows Road.

Gilmore Township: high water near M-22 causeway; concerns about the [structural] soundness of the steel wall along the Betsie Lake in Elberta.

Specific flood hazard areas were identified during public input meetings and the online survey are identified on the Hazard Areas Map provided in Appendix A. Flood hazard information may be obtained from the Flood Insurance Rate Maps (FIRM) available for jurisdictions.

NFIP Participation Status

FEMA's online National Flood Hazard Layer (NFHL) is a geospatial database that contains current effective flood hazard data, which support the National Flood Insurance Program. Flood Insurance Rate Maps, or FIRMs, can be viewed for participating areas in the U.S. through the NFHL. The FIRMs aid in better understanding a property's level of flood risk and type of flooding in the area. The maps show the delineation of the 1% Annual Chance Floodplain Boundary (the "100-Year Flood Boundary") and the 0.2% Annual Chance Floodplain Boundary (the "500-Year Flood Boundary").

For a particular river, USGS collects river streamflow data over time, determines the largest flood in each year, and then calculate statistical data for that river. The more years of data available, the more accurate the estimates for the various flood quantiles. As more years of data become available, the estimates become more refined, which can result in revisions to the quantiles and thus revised floodplain boundaries.⁵ Urban development and installation of flood controls can also result in changes in streamflow data over time.

Almira Township, Blaine Township, Crystal Lake Township, the City of Frankfort, Gilmore Township, Lake Township and the Village of Elberta are the Benzie County communities participating in the National Flood Insurance Program (Table 29). Communities that are not currently participating in the NFIP are listed in Table 30. All communities in Benzie County have a FIRM effective date of 03/23/2021, as FEMA completed a countywide Flood Insurance Study (FIS) and preliminary Flood Insurance Rate Maps for all of Benzie County in 2020.

The 2019 *Michigan Hazard Analysis* by the Michigan State Police reports the following flood insurance policy and claim data for Benzie County (Table 29).

Table 29: National Flood Insurance Statistics for Benzie County

Total Premium	Policies	A-Zone Policies	Total Coverage	Claims since 1978	Total paid since 1978
\$48,653	34	22	\$7,862,600	7	\$54,860

Source: Michigan State Police, 2019 Michigan Hazard Analysis

FEMA defines a "repetitive loss property" as any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period since 1978 (the year at which consistent claims data collection began). According to Susan Conradson, Floodplain Engineer with EGLE's Water Resources Division, there have been no properties in Benzie County that have had repetitive flood losses.

However, in 2015, Benzie County was awarded a FEMA Hazard Mitigation Planning Grant⁶ to assist in acquiring and demolishing a flood-prone home located at 4696 Frankfort Hwy., Frankfort, MI 49365 (in Crystal Lake Township). The project period was from April 27, 2016 to June 21, 2019. Work included the removal of the house and outbuildings, removal of the septic tank, water well abandonment, site grading, and restoration of topsoil, seed and mulch. Following the acquisition and demolition the property was deed restricted as permanent public open space.

Communities in Benzie County that are listed in FEMA's Community Status Book Report⁷ for Michigan are listed in Table 30. One discrepancy was found when researching local ordinances and FEMA's online Flood Map Service Center in comparison to the "Book Report". The Village of Elberta passed an ordinance on March 1, 2021 addressing the floodplain management provisions of the State Construction Code as related to the issued FIRMs for the Village. The Village intends to investigate this discrepancy and attain compliance with the NFIP.

⁵ <https://www.usgs.gov/faqs/why-do-values-100-year-flood-seem-change-every-flood>

⁶ Project # P4195.3. Total project cost was \$127,935. Total 4195 HMPG contribution was \$95,951. Benzie County's non-federal contribution was \$31,984.

⁷ Contains the current "NFIP status" of a community in the declared counties.

Table 30: NFIP Participating Communities in Benzie County

	Almira Township	Blaine Township	Crystal Lake Township	City of Frankfort	Gilmore Township	Lake Township	Village of Elberta
1 Floodplain Management Adoption*	Y	Y	Y	Y	Y	Y	N
2 FIRM Map Adoption	Y	Y	Y	Y	Y	Y	N
3 Current Effective Map Date	NSFHA	3/23/2021	3/23/2021	3/23/2021	3/23/2021	3/23/2021	3/23/2021
4 Reg-Emerg Date**	3/23/2021	10/21/2009	6/19/1989	3/18/1991	4/28/2021	6/5/1989	9/19/1975
5 Sanction Date	-	-	-	-	-	-	9/19/1976
6 Community ID #	261921	260027A	260028A	260029A	261920A	260030A	260553A
7 Implementation Method***	Local Ordinance	Village Ordinance 2021-1 /Appendix G of Michigan Building Code	Township Ordinance 08 of 2021; Local Zoning Ordinance Section 22.9	Local Zoning Ordinance	Local Ordinance	Local Ordinance No. 2021-001	Village Ordinance #38/Appendix G of Michigan Building Code
8 Appointed Designee****	Benzie County Building Official	Benzie County Building Official	Township Zoning Administrator	Benzie County Building Official	Benzie County Building Official	Benzie County Building Official	Benzie County Building Official
9 Implementation of Damage Provisions*****	<p>Should a structure located in the flood plain be damaged by any means to an extent of more than fifty (50%) percent of the structure's pre-catastrophe market value as recorded by the assessing officer, it shall not be reconstructed.</p> <p>Any building damaged by any means to an extent of less than fifty (50%) percent of the structure's pre-catastrophe market value as recorded by the assessing officer may be modified, repaired, or replaced, but any alterations must incorporate floodproofing of utility and sanitary facilities up to the level of the 100 year floodplain or the level to be inundated during an Intermediate Regional Flood as determined by the U.S. Army Corps of Engineers. The costs of said improvements for floodproofing shall not be included in determining the damage costs.</p>						
Source of Data in Rows 1-6: FEMA Community Status Book Report, accessed 5/15/2023							
Notes:							
* Adoption of NFIP minimum floodplain management criteria via local regulation.							
** The date the community first joined the NFIP.							
*** How local floodplain management regulations are implemented and enforced in Special Flood Hazard Areas.							
**** The primary designee or agency that is appointed to implement the addressed commitments and requirements of the NFIP. Note elevation measurements are required for new building permits; elevation for a proposed building is confirmed when a final Certificate of Occupancy is issued by the Building Department.							
***** How participants implement the substantial improvement/substantial damage provisions of their floodplain management regulations after an event.							
NSFHA = No Special Flood Hazard Area – An area that is in a moderate-to-low risk flood zone; an area of minimal flood hazard. An NSFHA is not in any immediate danger from flooding caused by overflowing rivers or hard rains.							

The communities in Benzie County that are not currently participating in the NFIP are listed in Table 31. These communities are not listed in FEMA’s Community Status Book Report as “Communities Not in the National Flood Program”, meaning that FIRMs have not been issued for these communities.

Table 31: Communities Not Participating in the National Flood Insurance Program

Community Name	FIRM Map Date Effective 3/23/2021 Indications
Benzonia Township	Some areas surrounding Crystal Lake and Platte Lake are in Zone A; rest of the Township contains areas of minimal flood hazard.
Colfax Township	Areas of Minimal Flood Hazard
Homestead Township	Areas of Minimal Flood Hazard
Inland Township	Areas of Minimal Flood Hazard
Joyfield Township	Areas of Minimal Flood Hazard
Platte Township	Some areas adjoining Little Platte Lake are in Zone A; rest of the Township contains areas of minimal flood hazard.
Weldon Township	Areas of Minimal Flood Hazard
Village of Benzonia	Areas of Minimal Flood Hazard
Village of Beulah	Some areas adjoining Crystal Lake are in Zone A; rest of the Village contains areas of minimal flood hazard
Village of Honor	Areas of Minimal Flood Hazard
Village of Lake Ann	Areas of Minimal Flood Hazard
Village of Thompsonville	Areas of Minimal Flood Hazard

Sources: FEMA Community Status Book Report, accessed 5/15/2023; FEMA online Flood Map Service Center

Lightning

Lightning is a random and unpredictable discharge of electricity in the atmosphere between the clouds, air, or ground to equalize the charged regions in the atmosphere. It is still being debated how the electrical charges build up in the clouds. Lightning generally occurs during thunderstorms; however, it can occur without a thunderstorm, such as during intense forest fires and heavy snowstorms. Lightning that occurs without nearby rain is most likely to cause forest fires.

Location

Lightning is not confined to geographic boundaries and is a regional event. Since lightning occurs randomly, it is impossible to predict where lightning will occur and how severe it will be. All of Benzie County is at risk to the occurrence and impacts from lightning.

Extent

Only one lightning event has been reported to NOAA for Benzie County. That event occurred in conjunction with a flash flood event in the county on September 1, 2000. While no property damages, injuries or fatalities were reported for Benzie County, the NOAA Episode Narrative describes there was one injury and one fatality in the region from that lightning event. A father and son were exposed on a hillside viewing the lightning storm. The 40 year old father was struck and killed by a lightning bolt. His son was thrown to the ground, but only sustained minor injuries. Emergency crews performed CPR on the father immediately and a police officer arrived with a defibrillator. However attempts to revive the man failed.

During the same event, lightning later that Friday night also disrupted numerous high school football games. Many games were cancelled or postponed until the following Saturday morning. Many of the schools which began play had lengthy delays and many waited an hour or more before fans and players could return to the field.

Previous Occurrences

There has been one lightning event reported to NOAA for Benzie County since 1950 (Table 32). Outside of Benzie County, there was one injury and one fatality that occurred associated with this event.

Table 32: Lightning Events

LOCATION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE
Countywide/Region	9/1/2000	0	0	\$-

Source: NOAA: National Centers for Environmental Information

Probability of Future Events and Vulnerability Assessment

Since there have been one lightning event reported in the last 22 years, this indicates a 4.5% chance an impactful lightning event would occur every year. However, not all lightning events been reported to NOAA, since events with injuries, deaths, and extensive damages/disruptions tend to be the only ones reported. Therefore, the number of lightning events and damages may be higher.

All existing and future buildings, exposed infrastructure, and populations are at risk from lightning events since it may cause structural and wildland fires, loss of electrical and telecommunications equipment, and damage to buildings or vehicles from falling trees struck by lightning. People that work outside or participate in outdoor recreation activities are at a higher risk to be struck by lightning. The locations of campgrounds are identified on the Vulnerable Populations and Hazard Areas Map in Appendix A.

Tornado

Tornadoes are rapidly rotating columns of air that impact the ground after forming from some of the severe thunderstorms that occur during Michigan's warm months. Tornadoes can cause catastrophic damage to either a limited or an extensive area. A tornado can have winds exceeding 200 miles per hour and can have widths over one mile. These storms are the most violent of the atmospheric storms since they have the potential to destroy buildings, uproot trees, hurl objects, and cause loss of life.

According to the National Oceanic and Atmospheric Administration/National Weather Service's Storm Prediction Center, tornadoes cause approximately 60 deaths and hundreds of millions of dollars in property damage each year. The Michigan State Police's *2019 Michigan Hazards Analysis*, Michigan is located on the northern fringe of the nation's tornado belt, and since 1996 has averaged about 18 tornadoes per year. The longer term annual average (since 1950) is 8 injuries and one death per year, and over \$17 million in property damages statewide.

Between 1996 and 2017, Michigan has had 382 reported tornado events. Approximately 67% of all Michigan tornadoes have been weak tornadoes (EF0 or EF1 intensity), while 29% have been strong tornadoes (EF2 or EF3 intensity) and 4% have been classified as violent tornadoes (EF4 or EF5 intensity). However, those few violent tornadoes have been responsible for 88% of Michigan's tornado-related deaths. Strong tornadoes (EF2 or EF3 intensity) have accounted for approximately 11% of the deaths, while weak tornadoes (EF0 or EF1 intensity) have caused only 1% of all tornado-related deaths.

In Michigan, tornados are most likely to occur in the summer months, although some have occurred in the spring and fall.

Location

Tornadoes are a regional event that are not confined to geographic boundaries and can affect several areas at one time. Also, the magnitude of tornadoes may range across the affected areas. All of Benzie County is at risk to the occurrence and impacts from tornadoes. It is impossible to predict where and with what magnitude a tornado will touch down. Approximate trajectories of recorded tornadoes with NOAA are illustrated on the Vulnerable Populations and Hazard Areas Map in Appendix A.

Extent

The Fujita Scale (Table 33) categorizes tornado severity based on observed damage. The six-step scale ranges from F0 (light damage) to F5 (incredible damage). As of February 2007, the National Weather Service uses the Enhanced Fujita Scale (EF Scale). This new scale ranges from EF0 to EF5. Based on the Fujita Scale, Benzie County's strongest tornado occurred in 1956 with winds ranging from 210-261 mph.

Table 33: Fujita and Enhanced Fujita Scale Comparison

Fujita Scale (Old)		EF Scale (Current)	
Fujita Scale	3-Second Gust Speed (mph)	EF Scale	3-Second Gust Speed (mph)
F0	45-78	EF0	65-85
F1	79-117	EF1	86-109
F2	118-161	EF2	110-137
F3	162-209	EF3	138-167
F4	210-261	EF4	168-199
F5	262-317	EF5	200-234

Source: FEMA

Previous Occurrences

Between 1950 and 2022, Benzie County has had four (4) reported tornadoes touch down, causing \$277,750 in property damage (Table 34). The most destructive tornado occurred in 1956. It was a category F-4, causing two (2) deaths, twenty-four (24) injuries and \$250,000 in property damage. The remaining three tornadoes were category E-1 tornados.

The EF4 tornado that occurred in 1956 began near Wallaker Road in southern Joyfield Township and continued northeast through Weldon, Homestead, Inland and Almira Townships for 19.4 miles before ending just east of Lake Ann in Grand Traverse County.

The EF1 tornado that occurred in 1983 was located near Lamerson Lane, between St. Johns Rd. and US-31, in Inland Township.

The EF1 tornado that occurred in 1986 was located in the Village of Thompsonville.

The EF1 tornado that occurred in 1989 began near the Crystal Downs Country Club and traveled 12 miles southeast across Crystal Lake, ending southwest of Narrow Gauge Rd and S. Marshall Rd. in Benzonia Township.

Table 34: Tornado Events, 1950-2022

Location	Date	Deaths	Injuries	Magnitude	Property Damage	Crop Damage
Joyfield, Weldon, Homestead, Inland and Almira Townships	4/3/1956	2	24	F4	\$250,000	
Inland Township	7/21/1983	0	0	F1	\$250	
Village of Thompsonville	6/26/1986	0	0	F1	\$2,500	
Lake, Crystal Lake, and Benzonia Townships	10/15/1989	0	0	F1	\$25,000	
TOTAL	4	2	24		\$277,750	\$

Source: NOAA: National Centers for Environmental Information

Probability of Future Events and Vulnerability Assessment

Since there have been four tornadoes events reported in the last 72 years, the data shows that there is a 5.6% chance a tornado would occur every year. While the chance for a tornado is low, if an event occurs, there is potential for a high magnitude tornado to touch down. All of the reported historic events have caused property damage.

Similar to thunderstorms and severe wind events, populations without access to permanent, sturdy shelter are most vulnerable to tornado events. This includes mobile home parks, campgrounds, recreation areas, and large outdoor gatherings. The locations of mobile homes and campgrounds are identified on the Vulnerable Populations and Hazard Areas Map in Appendix A. Persons with a disability or elderly persons are also more vulnerable. Tornadoes can occur suddenly with very little warning, and it may be difficult for these populations to find adequate shelter in a hurry.

The Benzie County Office of Emergency Management utilizes CodeRED mass notification system or NWS messaging to notify citizens of events and emergencies in the community. CodeRED enables real-time, communication through text, email, voice messages, social media, and the CodeRED mobile app. There are no operable tornado sirens in the county.

Additionally, the Grand Traverse Band Tribe of Ottawa and Chippewa Indians maintains two underground tornado shelters on tribal property at Four Seasons Drive in Benzonia. Completed in 2008, each shelter can accommodate up to 32 individuals and their pets and belongings. The prefabricated underground shelters were designed and installed for the safety and protection of tribal residents without basements in their homes during severe storms and tornadoes. The shelters are open during the severe weather months (April – September) and are locked during the late fall and winter months.

Extreme Temperatures

Prolonged periods of very high or very low temperatures are often accompanied by other extreme meteorological conditions, such as high humidity, drought, heavy snowfall, or high winds. Extreme heat or extreme cold primarily affect the most vulnerable segments of the population, such as the elderly, children, impoverished individuals, and people in poor health.

Nationwide, there are approximately 175 deaths per year that are attributable to extreme heat, according to the 2019 Michigan Hazard Analysis. The threats from extreme heat are heatstroke, sunstroke, muscle cramps, heat exhaustion, and fatigue. It is hazardous to livestock and agricultural crops, causes water shortages, exacerbates fire hazards, exacerbates respiratory problems, prompts excessive electrical energy demands, and causes infrastructure failures. Urban areas experience the most serious extreme heat with the combined high temperatures and high humidity that produce a heat-island effect.

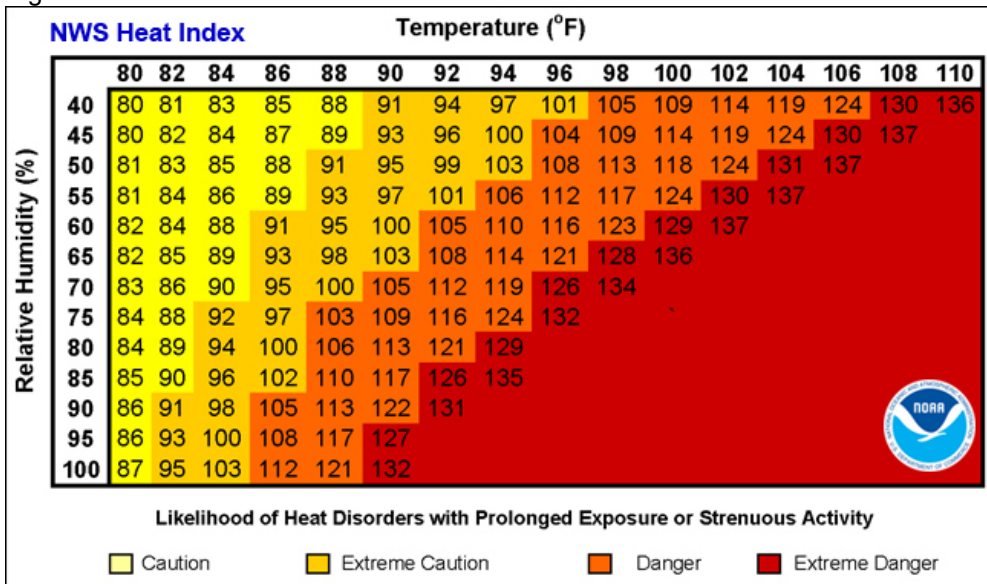
According to the 2019 Michigan Hazard Mitigation Plan, Michigan has 11 average annual extreme heat events with 0.4 average annual deaths and 41 average annual injuries.

In the United States, approximately 700 people die each year as a result of severe cold temperature-related causes according to the 2019 Michigan Hazard Analysis, with a significant number of deaths occurring due to illnesses or disease that are negatively impacted by severe cold weather, such as stroke, heart disease, and pneumonia. Exposure to extreme cold temperatures can be life threatening and can cause hypothermia and frostbite. According to the 2019 Michigan Hazard Mitigation Plan, Michigan has 35 average annual extreme cold events with 1 death, 9.4 average annual injuries, and \$6.4 million in average annual property and crop damage. Extreme cold affects transportation modes and power utilities, resulting in dead vehicle batteries and loss of power/heat.

Measuring Extreme Temperatures (Extreme Heat and Extreme Cold)

Extreme heat is measured with the National Weather Service’s Heat Index Chart (Figure 17). The chart uses relative humidity and air temperature to determine the likelihood of heat disorders with prolonged exposure or strenuous activity. Individuals are unable to shed excess heat from their bodies when they experience prolonged exposure to hot temperatures, which results in heat disorders.

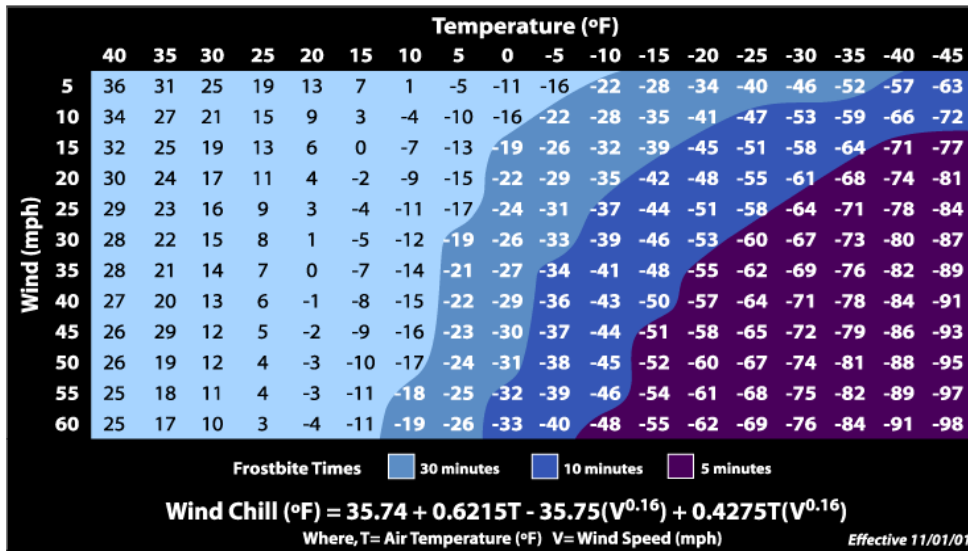
Figure 17: National Weather Service Heat Index



Source: National Weather Service

Extreme cold is measured with the wind chill index, which is a measure of the rate of heat loss from exposed skin caused by the combined effects of wind and cold. As the wind increases, heat is carried away from the body and reduces the external and internal body temperatures. Figure 18 shows the NOAA Wind Chill Chart as it corresponds to various temperatures and wind speeds.

Figure 18: National Weather Service Wind Chill Chart



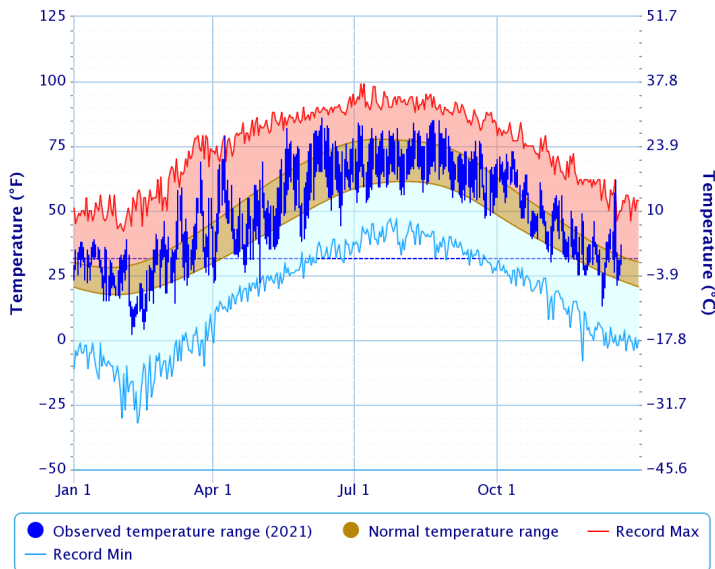
Source: National Weather Service

Figures 19 and 20 are the observed temperatures at Frankfort and Beulah for 2021. The dark blue line shows temperatures recorded between January 1 2021 and December 21, 2021. The red line shows record high temperatures for that day, and the light blue line below indicates record low temperatures for that day.

Figure 19: Daily Temperature Data for Frankfort

Daily Temperature Data - FRANKFORT 2NE, MI

Period of Record - 1898-03-01 to 2022-08-11. Normals period: 1991-2020. Click and drag to zoom chart.

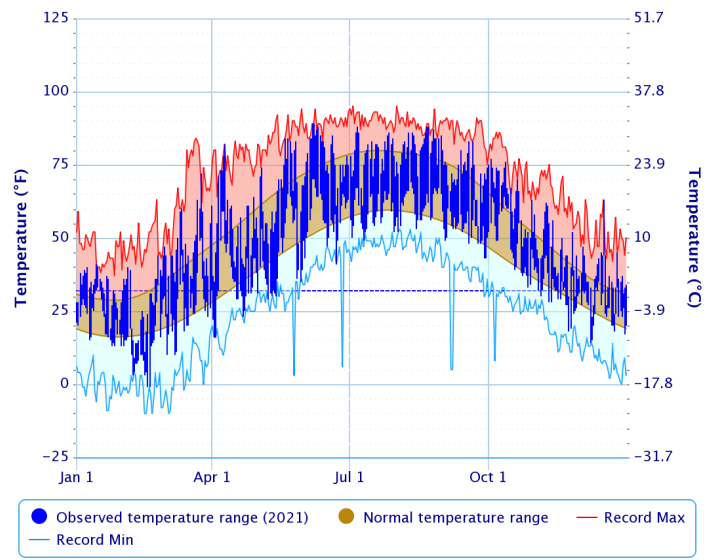


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Figure 20: Daily Temperature Data for Beulah

Daily Temperature Data - BEULAH 7SSW, MI

Period of Record - 2000-04-02 to 2022-08-11. Normals period: 1991-2020. Click and drag to zoom chart.



Powered by ACIS

Source: [NOAA Climate Data Online](https://www.noaa.gov/data/observational-and-diagnostic-data/temperature-time-series-data/)

Location and Extent

Extreme temperatures are a regional event that are not confined to geographic boundaries and range in severity across the affected areas. All of Benzie County is at risk to the occurrence and impacts from extreme temperatures.

There have been two heat/extreme heat events recorded in Benzie County. The first occurred on August 1, 2001. Excessive heat was a problem the first two weeks that August across all of northern Michigan. Temperatures reach the mid to upper 90s, on average, a few days each year; however, for a 5 day (8/5 - 8/9) stretch overnight low temperatures failed to fall below the lower 70s in most areas. This very humid air mass was unusual for northern Michigan, an area which typically sees cool nighttime temperatures and for this reason has very few homes with air conditioners. No heat related deaths or injuries were reported; however, most outdoor events were modified due to the forecasts of hot and humid conditions. County fairs sent animals home, yet still there were livestock losses at fairs in Otsego and Alcona counties. Attendance at county fairs was well below normal and this was attributed to the heat. This period of excessive heat also brought on a drought event at the same time.

The second instance of reported excessive heat occurred on June 30, 2018. The month of June closed with one of the hottest days in recent memory. Highs were well into the 90s, including 99 at Alpena, and 98 at Traverse City and Gaylord. The National Weather Service office near Gaylord also hit 98; that was (by several degrees) the warmest reading recorded at that location since observations began there in the late 1990s. Heat indices exceeded 105 degrees across most of northern Lower Michigan, and some locations exceed 110. The warmest reported heat index on the day was 114 near Indian River. An estimated 25 and 30 individuals visited local hospitals due to heat-related illnesses.

There have been two extreme cold events reported in Benzie County. The first occurred on February 4, 2007. Exceptionally cold air surged into Northern Michigan. High temperatures on the 4th (Super Bowl Sunday) were around zero, with low temperatures that night from five to ten below zero. Gusty northwest winds produced hazardous wind chills of 20 to 30 below zero, along with blowing and drifting snow. Many area schools closed on the 5th, due to the extreme cold and poor road conditions.

The second instance of extreme cold is the Governor Declared Emergency that occurred on January 29, 2019. Wind chills of 15 to 30 below zero were common in northern Lower Michigan. Wind chills were much colder in eastern upper Michigan, including -51 at Kinross, and -42 at Sault Ste Marie and Mackinac Island.

Previous Occurrences

Benzie County has had two extreme heat events in 2001 and 2018 (Table 35). The events did not have any deaths, injuries, or property/crop damages. The events consisted of hot and humid conditions that caused outdoor events to be modified and attendance at outdoor events to be lower than normal.

Table 35: Extreme Heat Events

	DATE	EVENT TYPE	INJURIES, DEATHS, DAMAGES	EVENT DESCRIPTION
BENZIE (ZONE)	8/1/2001	Heat	0	Excessive Heat was also a problem the first two weeks in August across all of northern Michigan. Temperatures reach the mid to upper 90s, on average, a few days each year; however, for a 5 day (8/5 - 8/9) stretch overnight low temperatures failed to fall below the lower 70s in most areas. County fairs sent animals home, yet still there were livestock losses at fairs in Otsego and Alcona counties. Attendance at county fairs was well below normal and this was attributed to the heat.
BENZIE (ZONE)	6/30/2018	Excessive Heat	0	Highs were well into the 90s, including 98 at Traverse City and Gaylord. The National Weather Service office near Gaylord also hit 98; that was (by several degrees) the warmest reading recorded at that location since observations began there in the late 1990s. Heat indices exceeded 105 degrees across most of northern lower Michigan, and some locations exceed 110. The warmest reported heat index on the day was 114 near Indian River. There were estimated to be between 25 and 30 individuals who visited local hospitals due to heat-related illnesses.

Source: NOAA: National Centers for Environmental Information

There have been three extreme cold events reported in Benzie County (Table 36). These events did not have any deaths, injuries, or property/crop damages for the county. The low temperatures caused schools to close. However, since very cold temperatures/wind chills typically occur during winter months, many events may have gone unrecorded.

A Governor-declared emergency for extreme cold in the State was enacted in January 2019 and included Benzie County.

Table 36: Extreme Cold Events

DATE	EVENT TYPE	INJURIES, DEATHS, DAMAGES	EVENT DESCRIPTION
BENZIE (ZONE) 2/4/2007	Extreme Cold/Wind Chill	0	High temperatures on the 4th (Super Bowl Sunday) were around zero, with low temperatures that night from five to ten below zero. Gusty northwest winds produced hazardous wind chills of 20 to 30 below zero, along with blowing and drifting snow. Many area schools closed on the 5th, due to the extreme cold and poor road conditions.
BENZIE (ZONE) 2/19/2015	Extreme Cold/Wind Chill	0	Wind chills reached 30 to 40 below zero across part of northern Michigan, bottoming out at -43 near Cadillac early in the morning on the 19th.
BENZIE (ZONE) 1/29/2019	Extreme Cold/Wind Chill	0	Governor Declared Emergency – Wind chills of 15 to 30 below zero were common in northern lower Michigan. Wind chills were much colder in eastern upper Michigan, including -51 at Kinross, and -42 at Sault Ste Marie and Mackinac Island.

Sources: NOAA: National Centers for Environmental Information; MSP 2019 Michigan Hazard Mitigation Plan

Probability of Future Events and Vulnerability Assessment

Since 2001, there have been two extreme heat events in Benzie County. This indicates an approximate 9.5% chance of an annual extreme heat event occurring.

Since 2007, there have been three extreme cold/wind chill events in Benzie County. This indicates an approximate 20% chance of an extreme cold event occurring in a year. Since these events tend to occur during the winter months and are coupled with blustery winds and snowstorms, these events may have been reported as other hazards or not at all, which means there may have been more extreme cold events in the county.

Extreme heat and cold events are more likely to impact unsheltered populations. The county's homeless population is especially vulnerable. Seasonal emergency shelters are essential services for the community. The *Northwest Lower Michigan Coastal Resilience Atlas* written by the Land Information Access Association completed a Heat Vulnerability Assessment⁸ of coastal communities. A community's vulnerability is their exposure to the hazard (determined by tree canopy and impervious surface coverage) + their sensitivity. Sensitivity is determined by the following factors:

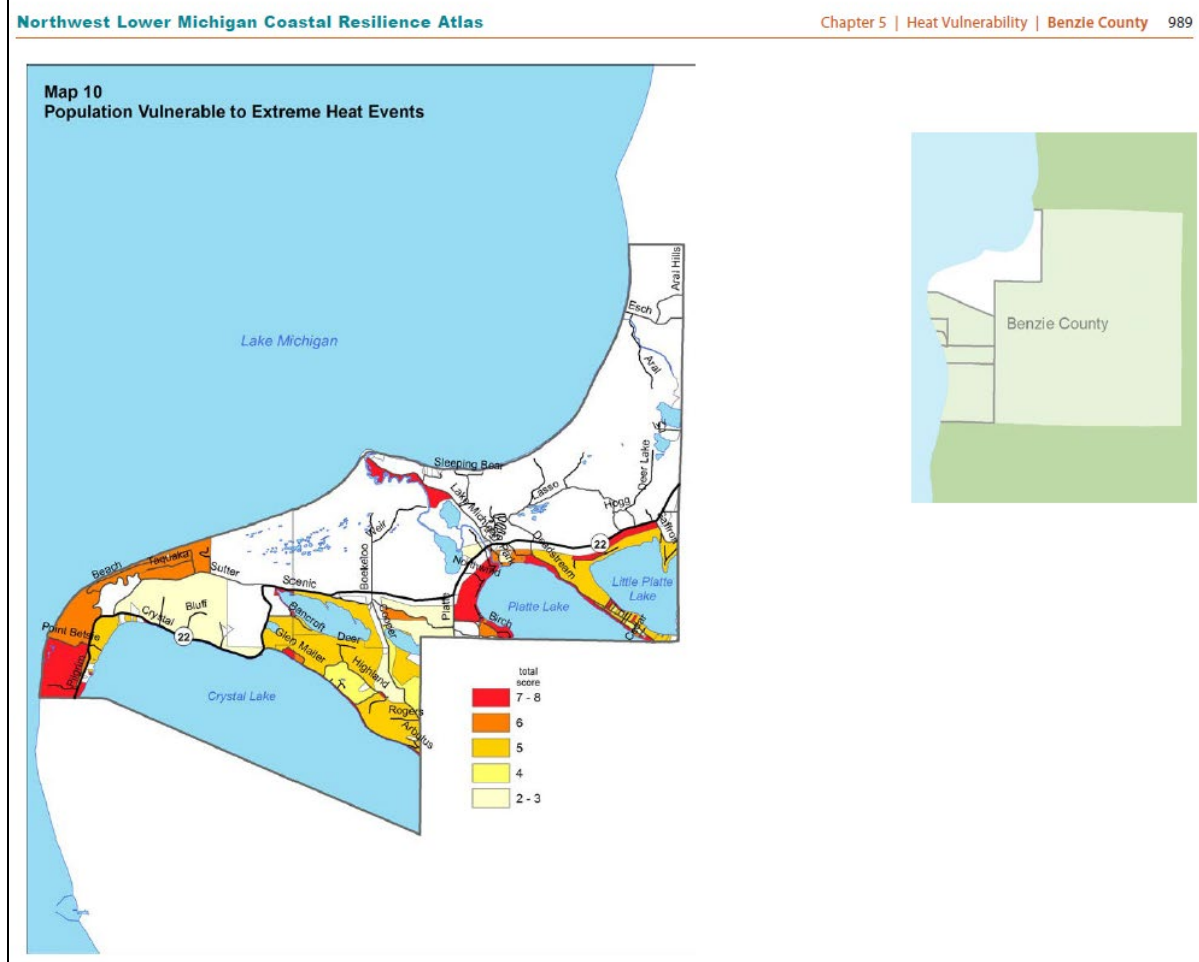
- Persons > 65 years
- Persons living alone
- Minority (non-white) persons
- Persons living below the poverty threshold
- People > age 25 with less than a high school education
- Disability status (i.e., ambulatory difficulty, mental disability)

Lake Township has the highest median age of all communities at the county, at 65.8 years (Figure 10). Figure 21, sourced from the NW MI Coastal Resilience Atlas, shows the relative sensitivity of the population in Lake Township to extreme heat events. Other Lake Michigan shoreline communities in Benzie County consist of Crystal Lake Township, The City of Frankfort, The Village of Elberta, Gilmore Township and Blaine Township. The Heat Vulnerability maps for Benzie County coastal communities can be found in pages 979 to 1029 of the NW MI Coastal Resilience Atlas.

Benzie County Emergency Management maintains agreements with many community organizations, as listed in Section VI of this plan, for use of their facilities for temporary heating and cooling shelters if needed.

⁸ Land Information Access Association. (2019). *Northwest Lower Michigan Coastal Resilience Atlas*. http://www.resilientmichigan.org/nw_atlas.asp

Figure 21: Lake Township Relative Sensitivity of Population to Extreme Heat Events



Drought

Drought is a normal part of the climate cycle. It is a slow-moving hazard, which causes people to underestimate the damage it can do. Losses from drought are as substantial as those from hurricanes, tornadoes and other faster-moving disasters. Drought causes losses to agriculture and affects domestic water supply, energy production, public health, and contributes to wildfire.

Location

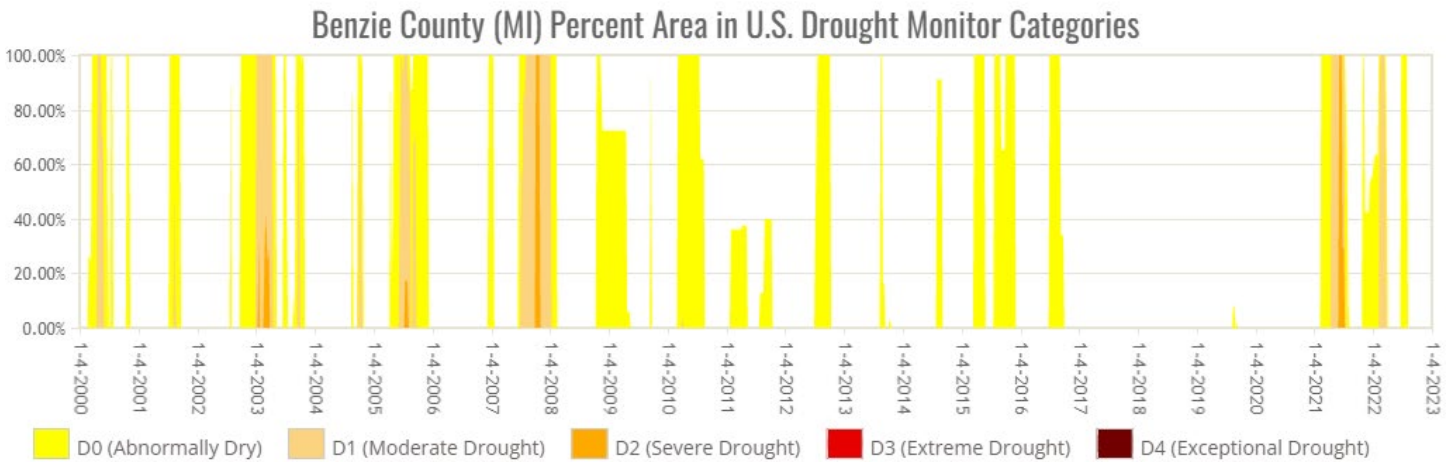
Drought is a regional event that is not confined to geographic boundaries and ranges in severity across the affected areas. All of Benzie County is at risk to the occurrence and impacts from drought.

Extent

The Palmer Drought Severity Index (PDSI) uses readily available temperature and precipitation data to estimate relative dryness. It is a standardized index that generally spans -10 (dry) to +10 (wet). Maps of operational agencies like NOAA typically show a range of -4 to +4, but more extreme values are possible. The PDSI has been reasonably successful at quantifying long-term drought.

The U.S. Drought Monitor (Figure 22) combines several input sources including the PDSI and the Standardized Precipitation Index to prepare a weekly map showing parts of the U.S. that are in drought. The map uses five classifications: abnormally dry (D0), showing areas that may be going into or are coming out of drought, and four levels of drought: moderate (D1), severe (D2), extreme (D3) and exceptional (D4) (Figure 23).

Figure 22: Benzie County Historical Drought Levels



Source: [US Drought Monitor](#)

Figure 23: U.S. Drought Categories and Historically Observed Impacts

Michigan

Category	Historically observed impacts
D0	Grass fires increase
	Lawns are brown; landscape and gardens are watered more frequently
D1	Most crops and vegetation are stressed; farmed Christmas trees are stressed
	Well levels decline
D2	Corn and soybean yields are low
	Mature trees are stressed
	Streamflow is extremely low, potentially too low to irrigate

Source: US Drought Monitor

Previous Occurrences

There has been one recorded incident of drought in Benzie County. In March 1977 there was a Presidential Declared Emergency for drought problems plaguing counties in the Upper Peninsula and Northern Lower Peninsula, which included Benzie County. This event was part of the 1976-77 drought in the Great Plains, Upper Midwest, and Western regions of the United States. At a statewide level, the drought lasted for 11 consecutive months, from September 1976 to July 1977, and reached a low point in January 1977, with a Palmer Index value of -5.29 (within the D4 exceptional drought classification).⁹

Probability of Future Events and Vulnerability Assessment

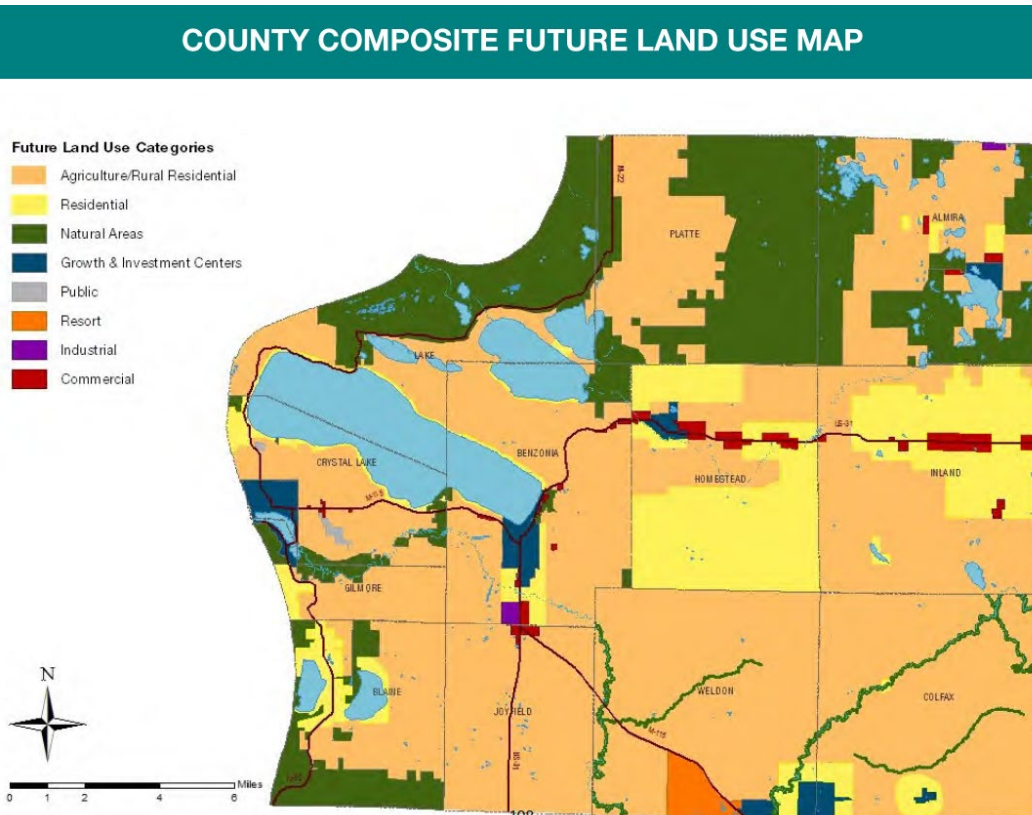
Since 1977, there has been one drought incident on record for Benzie County, which equates to a 2.2% annual chance for a drought event in Benzie County. In Northern Michigan's forested regions, drought can adversely impact timber production and some tourism and recreational enterprises. This can also cause a drop in income, which impacts other economic sectors. The biggest problem drought presents, however, is the increased threat of wildfire. The western portions of Benzie County are at highest risk for wildfire due to the presence of grasslands in the sand dune environment.

Additionally, the threat to water sources should also be considered. Many county residents rely on ground water wells for drinking water. Even drought events in category D1 experience water well level decline. Drought events combined with excessive heat can have severe impacts the health of vulnerable populations, such as elderly and low income persons.

Agriculture is also a key component of Benzie County's economy. Figure 24, the County's Composite Future Land Use Map, indicates much of the county consists of desired "Agricultural/Rural Residential" areas. Drought may cause the following damages to agricultural land:

- Agricultural production losses: crop failure and pasture losses
- Decreased water availability: water depletion from soils causes significant decline in crop/livestock productivity
- Pests and diseases: drought, coupled with high temperatures, may expand the distribution and incidence of pests and diseases that affect crops, forage, and livestock.
- Damage to specialty crops: most specialty crops (such as fruits, vegetable, tree nuts, and herbs) are more vulnerable to drought than field crops and have a higher value per unit of land/water.

Figure 24. Benzie County Composite Future Land Use Map (2017 Benzie County Master Plan)



⁹ MSP [2019 Michigan Hazard Analysis](#)

Wildfire

A wildfire is an unplanned, uncontrolled fire in grassland, brushland, or forested areas. Wildfires can occur in any forest or grassland type under dry conditions; however, some forest types are more susceptible to wildland fires. For example, jack and red pine forest stands have a high risk for wildfires, as they dependent on fire to provide all the right conditions for regeneration, while aspen and white pine forest stands have a moderate risk. The primary cause of wildfires is from human activities, specifically burning outdoor debris. Wildfires cause destruction to property and timber resources, and injuries or loss of life to wildlife and persons living or recreating in wildfire prone areas. Long-term effects include scorched and barren land, soil erosion, landslides/mudflows, water sedimentation, and loss of recreational opportunities.

Approximately 55% (20.4 million acres) of Michigan's total land area is forest cover. The vast forests provide Michigan with the largest state-owned forest system in the United States. In addition, Michigan has the fifth largest quantity of timberland acreage, with 19.3 million acres (including hardwoods and softwoods). That vast forest cover is a boon for both industry and recreation, and these areas have been gradually increasing in recent years. However, it also means that many areas of Michigan are vulnerable to wildfires.

Michigan's fire season starts in early spring, when leaves and grasses remain dry from fall and winter and trees are not yet green. Wildfires are often accompanied by drought where dry conditions increase the potential to burn. Often a thunderstorm will roll through and lightning will strike causing sparking of dry leaves and dead wood. High winds can then spread wildfire. Wildfires can become unpredictable in windy conditions or when the wind changes direction suddenly. Cooler nighttime temperatures often help suppress wildfires and the potential for wildfire; however Michigan has had several major fire events.

According to MDNR and U.S. Forest Service records, between 1910 and 1949, over 5.8 million acres of forest were burned in Michigan, an average of 145,000 acres per year. By comparison, it was reported that between 1950 and 1996, the MDNR and U.S. Forest Service were involved in suppressing over 46,100 wildfires that burned 390,000 acres of forest, which averages only 8,300 acres burned per year. This drastic reduction in the acres of timber burned was largely the result of increased use of specialized equipment to suppress the fires, and intensified efforts toward fire prevention.

However, lightning strikes are not the primary cause of wildfires in Michigan. Recently, only about 4% of all wildfire in 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 Michigan. Most Michigan 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 of persons who live in or are using recreational facilities in the area.

Location

All of the county's communities and developed areas are vulnerable to wildfires since the community centers and rural residential developments interface with areas of pine forest that are prone to fire (Red Pine, Eastern White Pine, and Jack Pine). Approximately 159,469.7 acres, or 64.6% of Benzie County is forested. Red Pine forest comprises 25,005.99 acres of forested land (15.7%); Jack Pine forests comprise 4,938.69 acres (3.1%); and Eastern White Pine comprises 9.56 acres (0%). As shown on the Environmental Features Map in Appendix A, pine forests are scattered throughout various portions of the entire county, and are present in every jurisdiction.

Extent and Previous Occurrences

Extent can be measured by the number of acres burned and the cost of property damage. Between 1981 and 2018 there were 184 wildfires on lands under MDNR jurisdiction, or 4.8 wildfires per year. This resulted in a total of 396.8 acres burned, equating to an average of 10.4 acres burned per year. No property damages were recorded. NOAA records do not indicate any wildfire incidents within Benzie County.

Probability of Future Events and Vulnerability Assessment

There is a 100% chance there will be a wildfire on MDNR lands in a given year, and a small chance there will be a wildfire on lands outside of MDNR jurisdiction. Forest types of Red Pine, Eastern White Pine, and Jack Pine are scattered throughout Benzie County and are susceptible to wildfires.

Additional factors that increase fire risk include dead or dying Ash trees as a result of disease/invasive species, invasive species (i.e., dense thickets of Autumn olive may create hazardous fuel loads for wildfires), lightning strikes, and human factors such as the number of persons residing, camping, or traveling through the County. Historically, Michigan's landscape has been shaped by wildfire; however, over the last several decades, the current landscape has transformed from wildland to residential development. With the increase in residential development in and around rural areas prone to wildfires, there is an increase in the potential for loss of life and property damage. Local fire departments have mutual aid agreements in order to provide additional coverage for rural, sparsely populated, or difficult to reach areas. Residential

development in rural Benzie County is often isolated from town centers and emergency services. Many of these areas interface with public lands and local emergency services coordinate fire services with State and Federal fire protection agencies.

Furthermore, a Weldon Township representative expressed a concern in the community survey pertaining to road access in the event of an emergency event, such as a wildfire: “We have a bridge that was...removed and we have hoped that it would be replaced. We have residents that live on the other side of the river. Any emergency vehicles now have to go way out of their way to get to any residents or forest area on the other side of the former bridge location (Haze Road).” The Benzie County Road Commission has indicated they are not planning on replacing that bridge.

Coastal Flooding and Coastal Recession

Shoreline hazards also include coastal flooding and coastal recession, which are two types of hazards associated with the Lake Michigan shoreline.

Coastal (shoreline) flooding results when Great Lakes water levels rise and push inland, or when rainfall or snowmelt accumulates along the shoreline and is not able to drain properly. Shoreline flooding may also be caused during storms and wind events with high-energy waves.

Coastal recession (subsidence) is the wearing away of land, such as loss of riverbank, beach, shoreline, or dune material. It is measured as the rate of change in the position or displacement of a riverbank or shoreline over a period of time. Short-term erosion typically results from periodic natural events, such as flooding, hurricanes, storm surge, and windstorms, but may be intensified by human activities. Long-term erosion is a result of multi-year impacts such as repetitive flooding, wave action, sea level rise, sediment loss, subsidence, and climate change. Death and injury are not typically associated with erosion; however, it can destroy buildings and infrastructure. Much of the coastline of northwest Lower Michigan is susceptible to coastal recession and many areas are designed High Risk Erosion Areas by EGLE.

In developing the *Northwest Lower Michigan Coastal Resilience Atlas*, scenario planning was used to determine the potential impact of three differing levels of storms combined with high waters. The three scenarios are described as follows:

The first scenario, **“Lucky” Future**: Under the Lucky Climate Future, Great Lakes water levels will continue to stay relatively low. Although there will be wave and wind action, major storm events and wave impacts will not encroach on properties landward of current beaches. A Lucky Future projection, indicating the land areas that would be affected by high-energy waves along the shorefront and/or adjacent riverine flooding under these conditions, is shown in green on the maps.

“Expected” Future: Under the Expected Climate Future, Great Lakes water levels will continue to fluctuate according to long-term decadal patterns, including recent extreme storm events incorporated into the ongoing Great Lakes Coast Flood Study being conducted by the Federal Emergency Management Agency (FEMA). Given those ongoing fluctuations, this Climate Future accounts for periods when Great Lakes still-water elevations are closer to the long-term average. In addition, this Climate Future anticipates the so-called “100-year storm event” (or 1% storm) becoming more like a 20- or 50-year storm event (i.e., an expected storm within the normal community planning time horizon) because of increased storminess. The Expected Future projection is shown in yellow on the maps.

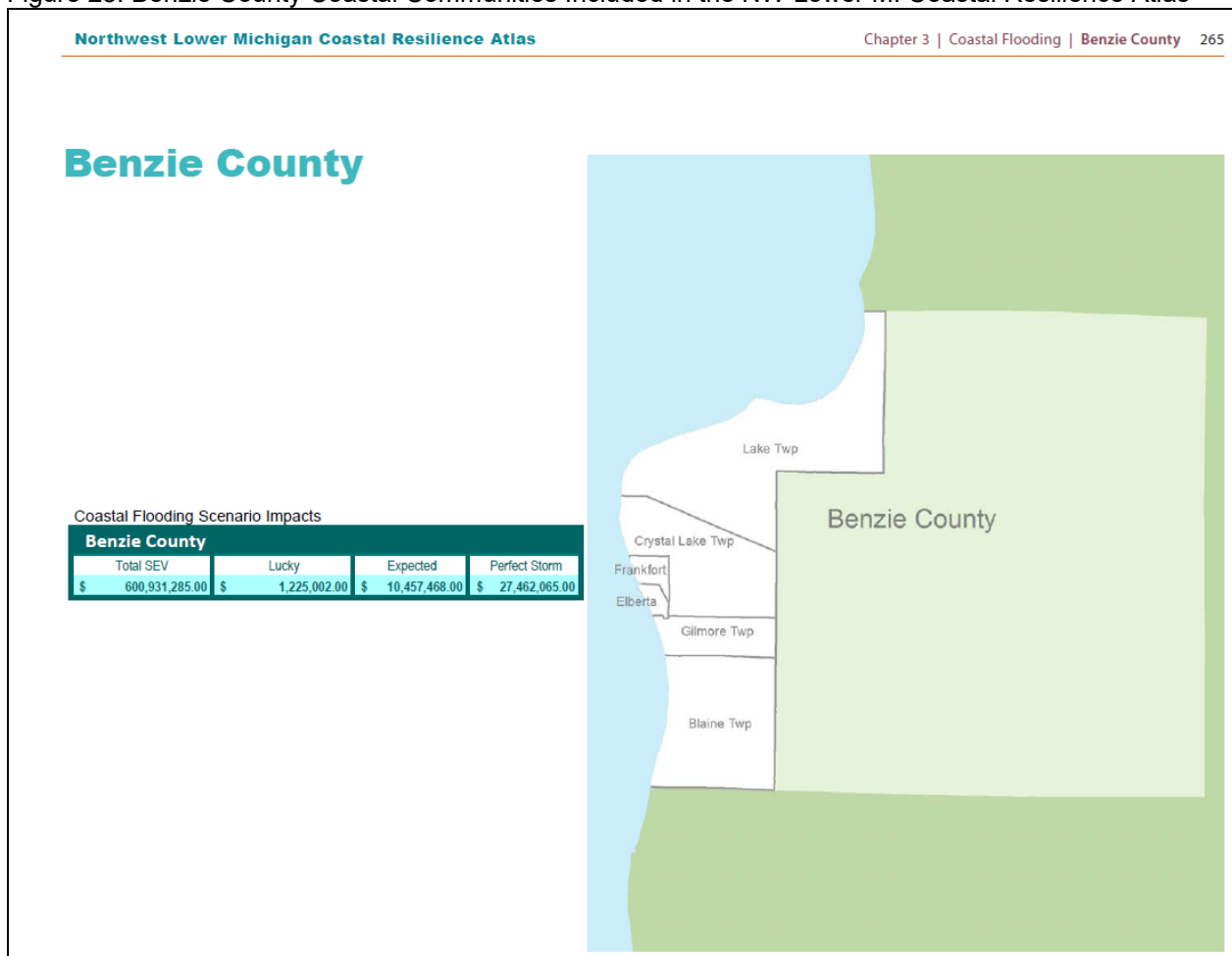
“Perfect Storm” Future: Under the Perfect Storm Climate Future, Great Lakes water levels will continue to fluctuate according to decadal patterns, consistent with assumptions made for the Expected Future. However, for this Perfect Storm Climate Future, the estimated still-water elevation is set higher than the long-term average and closer to the long-term high (583 feet). In addition, this Climate Future anticipates the occurrence of a so-called “500-year storm event” (or 0.2% storm) occurring within the planning time horizon while lake levels are high. The Perfect Storm Future projection is shown in red on the maps.

Location

To reference the *Northwest Lower Michigan Coastal Resilience Atlas*, “Climate scientists predict that northwest Lower Michigan can expect more frequent storms of increasing severity in the decades ahead. The total amount of rainfall per year is also likely to increase. The potential for substantially larger rain events and severe storms raises concerns of harm to human health and damage to buildings and infrastructure, especially for areas along the Lake Michigan coastline.”

Jurisdictions located on the Lake Michigan coast that are impacted by shoreline hazards include: Lake Township, Crystal Lake Township, the City of Frankfort, the Village of Elberta, Gilmore Township and Blaine Township (Figure 25). The Land Information Access Association documented potential shoreline hazards for these communities in the *Northwest Lower Michigan Coastal Resilience Atlas*. Additionally, specific areas of shoreline hazards were identified during the hazard mitigation planning public input sessions. These are marked as a hazard area on the Hazard Area Map in Appendix A.

Figure 25: Benzie County Coastal Communities Included in the NW Lower MI Coastal Resilience Atlas



Source: LIAA, Northwest Lower Michigan Coastal Resilience Atlas

While there have been Governor-Declared Disasters for shoreline problems in the State in 1985-1986, these declarations did not include Benzie County. However, NOAA’s National Centers for Environmental Information storm event database indicates that there have been four (4) lakeshore flood incidents; two occurred in 2019 in and two occurred in 2020, during a time of very high Great Lakes water levels. Three out of the four event narratives described the presence of shoreline erosion. Two of these events occurred within the City of Frankfort; one occurred “several miles north of Frankfort”, and one occurred around the border of the Village of Elberta and the City of Frankfort, on M-22 causeway over the Betsie River.

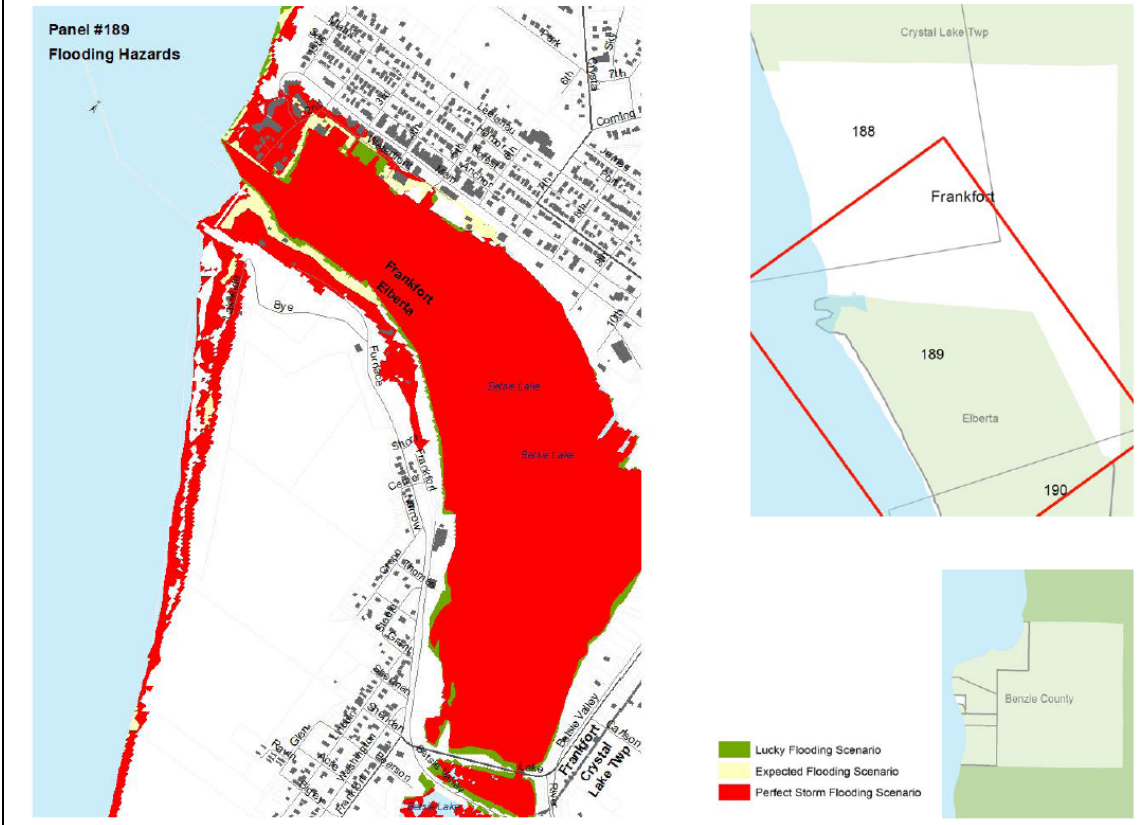
Figures 26 through 29 illustrate the three potential flooding scenarios in the City of Frankfort, the Village of Elberta and Gilmore Township. The “Lucky” scenario flooding is shown in green, “Expected” flooding scenario is shown in yellow, and “Perfect Storm” future scenario is shown in red.

Coastal recession or erosion to Lake Michigan communities is a constant, but very small wearing away of the shoreline. The Great Lakes are estimated to lose one foot of shoreline per year to normal wave and wind activity. However, storms and increased wave activity have caused increased coastal recession to varying degrees in Benzie County’s coastal communities. Chapter 4 of the *Northwest Lower Michigan Coastal Resilience Atlas* describes bluffline recession since its recorded shoreline in 1938. The blue line indicates the shoreline in 1938, the green line indicates the bluffline in 1938, the yellow line is the bluffline in 2016, and the red line is the predicted 30 year bluffline.

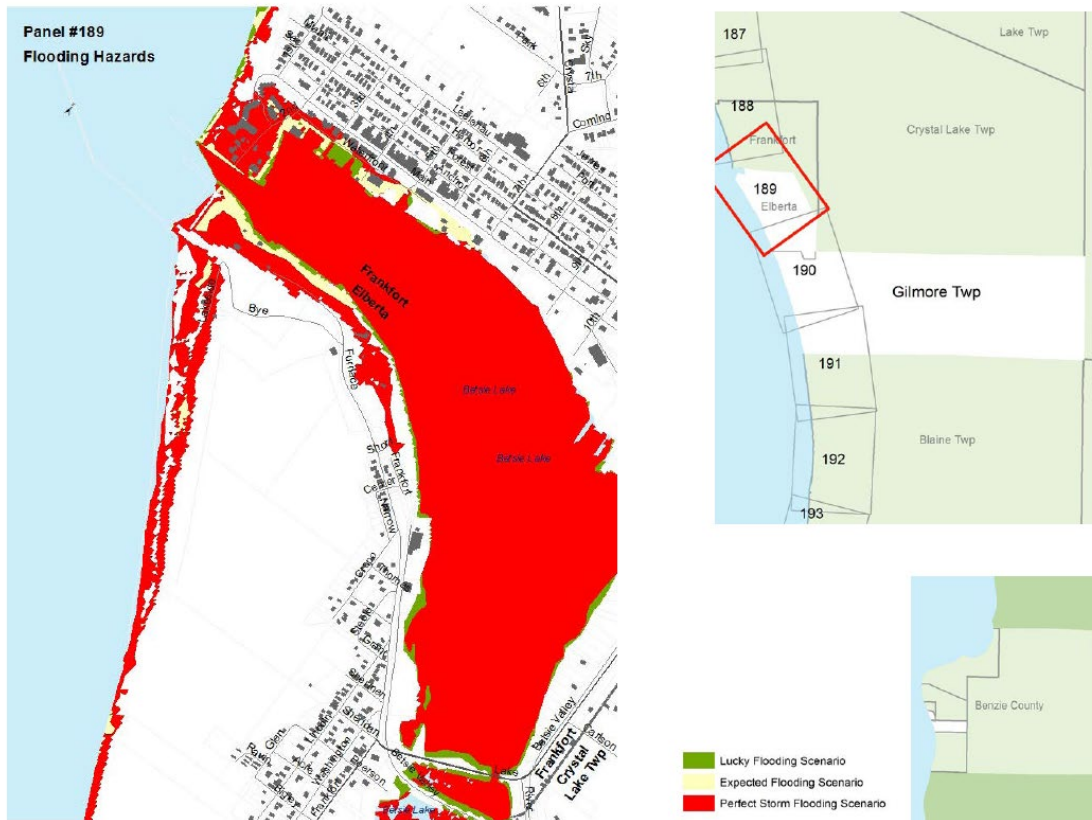
The varying lines shown in Figures 30-31 depict the recession of the bluffline in the City of Frankfort and Crystal Lake Township. There are several structures located near or on the predicted 30-year bluffline. Refer to the full Atlas for panels depicting bluffline erosion for the remained of Benzie County coastal communities.

Figures 26 & 27: Panels #188 & 189 - Flooding Hazards, City of Frankfort





Figures 28 & 29: Panels #189-190 - Flooding Hazards, Gilmore Twp. & Village of Elberta

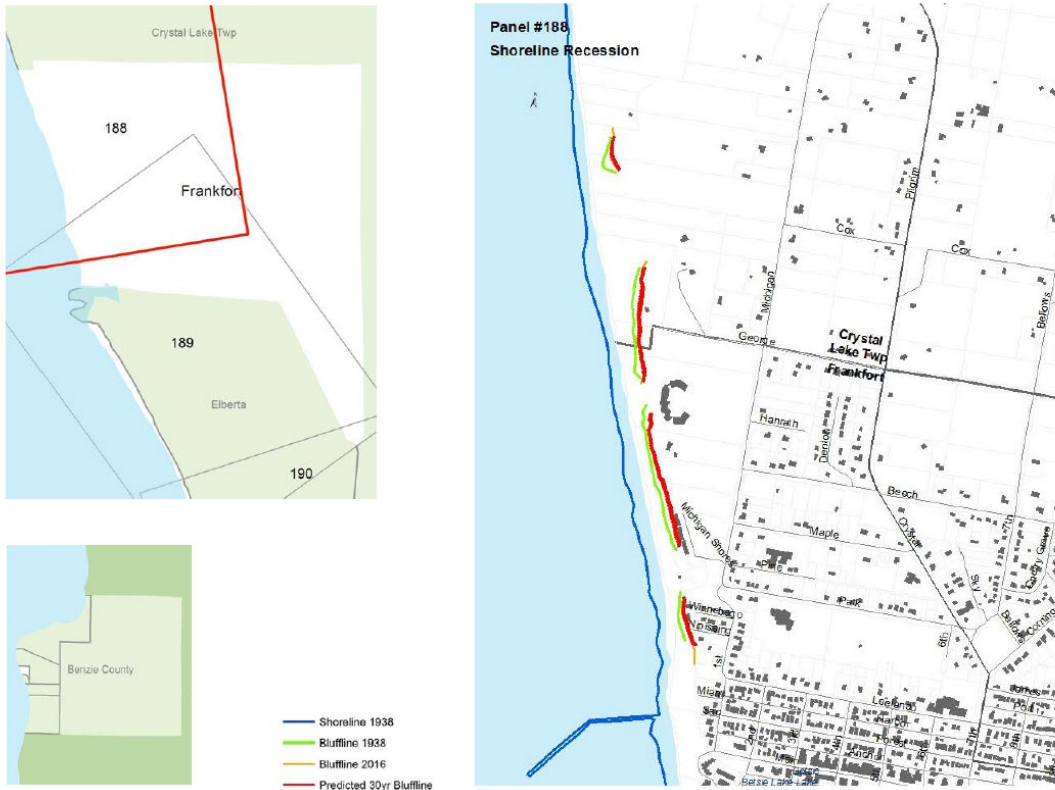




- Lucky Flooding Scenario
- Expected Flooding Scenario
- Perfect Storm Flooding Scenario



Figure 30: Panel #188 Shoreline Recession, City of Frankfort and Crystal Lake Township



Source: LIAA, Northwest Lower Michigan Coastal Resilience Atlas

Figure 31: Panel #187-188, Shoreline Recession in Crystal Lake Township

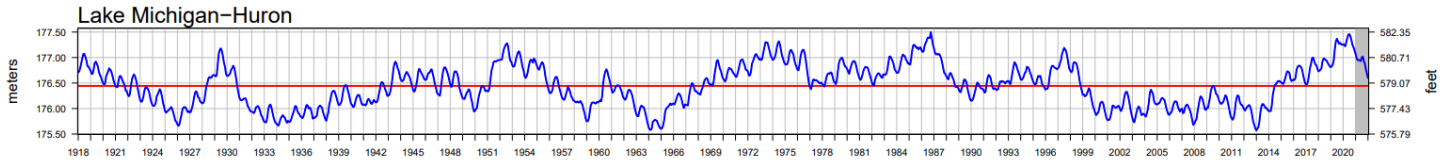


Extent

Shoreline recession can be measured by feet of bluffline retreat and property damages. Bluffline retreat distances vary across the county, and there are no reported damages from bluffline recession. Shoreline flooding can be measured by flood water levels, inches of rainfall, lake water levels (shown in Figure 30), and damages. The four lakeshore flooding events in 2019 and 2020 caused \$145,000 in property damages within and near the City of Frankfort (Table 37).

In recent years, the swings in water levels have been unprecedented. In January 2013, Lake Michigan-Huron set an all-time record low of 576.02 feet, and seven years later in July of 2020 Lake Michigan-Huron reached a monthly record high of 582.22, only second to the October 1986 monthly record high of 582.35 (Figure 32).

Figure 32: Lake Michigan-Huron Historic Water Levels, 1918-2021



LAKES MICHIGAN-HURON

2021	580.94	580.68	580.54	580.54	580.54	580.48	580.71	580.77	580.48	580.41	579.95	579.69	580.48
Mean	578.48	578.44	578.48	578.77	579.07	579.30	579.40	579.33	579.17	578.94	578.77	578.61	578.90
Max	581.56	581.53	581.43	581.69	581.96	582.19	582.22	582.09	581.96	582.35	581.96	581.56	
	2020	2020	2020	2020	2020	2020	2020	2020	2020	1986	1986	1986	1986
Min	576.02	576.08	576.05	576.15	576.57	576.64	576.71	576.67	576.64	576.44	576.28	576.15	
	2013	1964	1964	1964	1964	1964	1964	1964	1964	1964	1964	2012	

Source: US Army Corps of Engineers

Additionally, portions of all six of the Lake Michigan coastal communities in Benzie County contain High Risk Erosion Areas (HREAs) as designated by the State of Michigan EGLE (refer to Figures 5 and 6 earlier in this plan.) HREAs are those shorelands of the Great Lakes where recession of the landward edge of active erosion has been occurring at a long-term average rate of one foot or more per year, over a minimum period of 15 years.

Previous Occurrences

The Great Lakes experienced record high lake levels in 1985-86, 1997-98, and most recently in 2019-2020. Issues of erosion and high lake levels, causing rivers, lakes and tributaries to back up have caused infrastructure damage and failures throughout Benzie County and many other areas in Michigan. There have been four lakeshore floods on record with the NOAA Storm Events database, as indicated in Table 37.

Table 37. Lakeshore Flooding Events, Benzie County

Date	Property Damage	Event Narrative	Episode Narrative
10/16/2019	\$8,000	Severe beach erosion threatened to destroy a home several miles north of Frankfort.	Northwest to north winds produced high waves and elevated water levels along the northwest lower Michigan coastline. With Great Lakes water levels at near-record levels, significant coastal flooding and beach erosion resulted.
10/22/2019	\$129,000	A parking lot next to Betsie Lake in Frankfort flooded. A large field of debris, including entire trees and large tree limbs, was deposited along the beach at Point Betsie Lighthouse.	Strong northerly to easterly winds resulted in another round of substantial coastal flooding and beach erosion, this time on both Lake Michigan and Lake Huron, for the 21st into the 22nd.
4/13/2020	\$8,000		Strong low pressure passed just north of eastern upper Michigan on the morning of the 13th. Gusty west to northwest winds of 40-50 mph were common. Lakeshore flooding also occurred along portions of the Lake Michigan coastline of northwest lower Michigan. The city boat launch in Frankfort experienced flooding of docks and the parking lot.
6/10/2020	\$0	M-22 was closed across the Betsie Lake Causeway near Elberta due to high water.	The remnants of Atlantic Tropical Cyclone Cristobal lifted across Lake Superior and into northern Ontario, producing multiple rounds of showers and thunderstorms. Some lakeshore flooding occurred on the northwest lower Michigan coastline, thanks to gusty onshore winds.
	\$145,000		

Input received from the community survey and stakeholder meetings included the followings site specific concerns related to past shoreline hazard incidents experienced in 2019-2020:

Gilmore Township: Lake Michigan erosion prevented beach access for emergency vehicles; high water flooded the M-22 causeway.

Crystal Lake Township: Bluff erosion along Lake Michigan at Golf Lane and Ness Roads

Blaine Township: Lake Michigan waters flowed into Lower Herring Lake in 2020

City of Frankfort: Would like to pursue mitigation strategies to “better establish a resilient shoreline to overcome high water cycles that create erosion concerns”.

Probability of Future Events and Vulnerability Assessment

Considering that the data on record from 1950-2022 (73 years) indicates four shoreline flooding events, there would be a 5.5% chance that shoreline flooding/erosion would occur in a given year. Shoreline or soil erosion hazards involve the loss of property or necessitate the relocation of homes as sand or soil is removed by flowing water (lake, river, etc.) and carried away over time. The foundation of a structure, or underground utility pipes in the area, may become fully exposed and vulnerable to weather, extreme temperatures, water damage, or other sources of risk. Shoreline banks that support roadways may erode and cause the road surface to crack, become unstable, or more prone to deposits of sand, snow, water, and ice. This hazard is especially relevant to those municipalities that contain residential and commercial development along Lake Michigan (Lake, Crystal Lake, Gilmore, and Blaine Townships; Village of Elberta; and City of Frankfort) that experience seasonal shifts in water levels and possible ice erosion hazards.

As lake water levels fluctuate and increased storminess occurs, shoreline recession and flooding will continue. In 2021 the levels of Lake Michigan-Huron began to decline, however, as historic data shows us, the water will begin to rise again. Those communities that have already faced shoreline hazards are likely to experience issues in the future. Changes in land use practices and improvements to the shoreline such as natural vegetation plantings or shoreline armoring may reinforce the shoreline for a period of time, but is likely not a permanent solution.

Dangerous Currents

Dangerous currents and breaking waves are common in the Great Lakes region. Rip currents and other currents found near piers are extremely dangerous for swimmers and can lead to drownings. Currents in the Great Lakes can form from any combination of wind, waves, bottom formation, beach slope, water temperature, man-made structures, and natural outlets. In the Great Lakes, swimmers are most likely to encounter one of five common currents: rip, longshore, structural, outlet, and channel.

During rip currents, the water “piles up” between a sandbar and the beach. It has to find a way back out to sea. After the pressure builds up, the water creates a pathway and gushes from the shore back out to open water. That’s a rip current: a narrow but powerful stream of water and sand moving (ripping) swiftly away from shore. Rip currents vary in size and speed and can be found on many beaches every day. They typically extend from the shoreline through the surf zone, and past the line of breaking waves. Typically, they form at breaks in sandbars, and also near structures, such as jetties and piers, as well as cliffs that jut into the water.

Rip currents carry swimmers into deeper water, where they may not be able to get their footing. These currents rarely extend far out, and will not pull a swimmer underwater. Rip currents vary in size from very narrow to more than 50 yards wide. Speeds can also vary. The average speed is 1-2 feet per second, but they have been measured as fast as 8 feet per second.

Longshore currents move parallel to or the “long” way along the shoreline. These currents will exert a force to move along shore, making it difficult to remain in front of a spot on the beach. They often happen between the first and second sandbars near the shore. Longshore currents become more dangerous when they combine with rip currents or structural currents since they can move a swimmer swiftly down a beach and into the path of another current or into a structure (pier or breakwall), making it more difficult to swim to shore.

Structural currents - the currents found alongside or as a result of structures like piers and breakwalls - are usually always present. Structural currents are dangerous on their own, but when paired with others like longshore or rip currents, the combination can create a washing machine effect, moving the swimmer from one dangerous current area to another with no clear path to safety.

Outlet currents can be found where rivers and streams empty into the Great Lakes. The flow of water from the river or stream can move quickly. As it enters the open water of a lake, it may take awhile for that current to dissipate. Pair that with currents that are present in the lake and the situation can become dangerous.

Channel currents are like a river running parallel to shore. With a channel current, typically there is an island or structure such as a large group of rocks not far from shore. A channel current forms when the flow of water speeds up as it goes between the island and shore, like a bottleneck. This is made worse by the presence of a submerged or partially submerged sandbar connecting the beach to the island, which allows pressure to build behind the water and waves until it breaks through. When the wind speed increases, the waves also increase in intensity, and this causes the current to become stronger and faster.

According to the Great Lakes Current Incident Database, between 2002 and 2020, there have been 75 deaths and 274 persons rescued from dangerous current incidents along the Lake Michigan coastline of Michigan’s Lower Peninsula.

It is important to note that there are no “rip tides” or “undertows” in the Great Lakes. Since there are no tides in the Great Lakes, and rip currents don’t pull a person down under the water (it will carry them out to the open water, away from shore), “rip tides” or “undertows” are inaccurate coastal hazard terms.

Location

All Lake Michigan coastal areas in Benzie County are at risk to the occurrence and impacts from dangerous currents. The presence of piers and breakwalls, such as in the City of Frankfort, pose a more likely risk for structural currents to occur.

Dangerous current-related incidents in the Great Lakes most often occur when:

- Winds are blowing towards the shore
- Wave heights reach 3 to 6 feet
- A cold weather front is passing through

Extent

The National Weather Service provides a Surf Zone Forecast to measure the risk level associated with rip current hazards. Surf Zone Forecasts contain three levels of Rip Current Outlooks:

Low Risk: The risk for rip currents is low, however, life threatening rip currents often occur in the vicinity of groins, jetties, reefs, and piers.

Moderate Risk: Life threatening rip currents are possible in the surf zone.

High Risk: Life threatening rip currents are likely in the surf zone.

Dangerous current events can be measured by damages caused, including rescues, injuries and deaths, as described in Table 38.

Previous Occurrences

According to the [Great Lakes Current Incident Database](#), and the NOAA Storm Events database, Benzie County has had seven lake current incidents along Lake Michigan between 2002 and 2020 (Table 38). This has resulted in 12 rescues and 3 fatalities.

Table 38. Lake Michigan Dangerous Current Incidents, Benzie County

Date	Fatalities	Rescues	NOAA Event Narrative	NOAA Episode Narrative	Type Of Current	Wave Direction	Wave Height (ft.)
8/17/2010	0	1	A 14-year-old male was caught in a rip current while swimming in Lake Michigan, near Frankfort. He was carried away from the beach, and eventually was submerged for 5 to 10 minutes. When rescued, he was not breathing and had no pulse. He was revived by CPR, and taken to a Frankfort hospital, then eventually transported to Traverse City and from there to Grand Rapids. The victim was unconscious and on a respirator for two days, before coming to. At this time, he is not expected to suffer any long-term damage.	Rip currents produced a near-fatality on Lake Michigan.	Rip Current		
8/12/2011	0	4			STRUCTURAL	SW	3 TO 4
8/5/2012	1	3	A rip current fatality occurred near Peterson Beach, in the Sleeping Bear Dunes National Lakeshore. During a family outing, a 40 year old male from Cincinnati went into the water to pull out two nephews who were struggling with waves and strong currents. He was able to get them to safety, but was unable to himself escape the water. A park ranger retrieved his body from about five feet water a half-hour later, and CPR was performed on site, but he was pronounced dead soon after arrival at a local hospital. Rescue personnel estimated waves of 3 to 5 feet at the time of the incident.	Wave action produced by onshore winds of 15 to 20 mph contributed to rip current development on Lake Michigan.	CLASSIC RIP	NW	5 TO 6
8/5/2012	0	2			CLASSIC RIP	NW	5 TO 6
8/25/2018	1	0			STRUCTURAL	SW	5 TO 6
7/3/2019	0	2			CLASSIC RIP	NW	0 TO 2
7/4/2020	1	0			Longshore Current	NW	0 TO 2

Probability of Future Events and Vulnerability Assessment

There have been seven (7) current incidents on Lake Michigan in Benzie County between 2002 and 2020. In that time period of 19 years, that equates to a 36.8% chance that another current incident will occur. These events likely happen occasionally, but may be unreported if injuries or deaths do not occur. Dangerous currents are a hazard to all swimmers, especially those who are unprepared to be swept up in the current. Swimmers who are caught unaware may panic when caught up in the fast-moving water, tire as they try to swim against the current (instead of sideways, parallel to the beach), and drown. Many Lake Michigan beaches also do not have a lifeguard on duty who may identify potential hazardous swimming conditions.

Shoreline communities with public (or private) Lake Michigan access are expected to receive a continuous, if not an increase in, seasonal visitors.

People may feel comfortable swimming in seemingly moderate wind and wave conditions, public education is important to convey that when there are onshore winds and breaking waves dangerous currents may be present. The highest number of deaths and rescues happen in Michigan, specifically along the eastern shore of Lake Michigan. Additionally, swimmers near structures are more likely to die, and dangerous currents can exceed 5 mph — faster than an Olympic swimmer can swim (2 mph and faster are considered dangerous).

Seiche

A seiche is typically caused when strong winds and rapid changes in atmospheric pressure push water from one end of a body of water to the other. When the wind stops, the water rebounds to the other side of the enclosed area. The water then continues to oscillate back and forth for hours or even days. In a similar fashion, earthquakes, tsunamis, or severe storm fronts may also cause a seiche.

Seiches are usually limited to partially or fully enclosed basins, such as Lake Erie. Lake Erie is known for seiches, especially when strong winds blow from southwest to northeast. In 1844, a 22-foot seiche breached a 14-foot-high sea wall killing 78 people and damming the ice to the extent that Niagara Falls temporarily stopped flowing. As recently as 2008, strong winds created waves 12 to 16 feet high in Lake Erie, leading to flooding near Buffalo, New York.

In some of the Great Lakes and other large bodies of water, the time period between the "high" and "low" of a seiche can be as much as four to seven hours. This is very similar to the time period between a high and low tide in the oceans, and is often mistaken as a tide.

According to the NOAA-NCEI Storm Events Database, there have been 15 seiche events in Michigan since 1998. There are no deaths, no injuries, and \$31,000 in property damages due to seiche events.

Location

Seiches are a coastal event that is not confined to geographic boundaries and may occur anywhere in Lake Michigan waters. All coastal areas are at risk to the occurrence and impacts from a seiche.

Extent/Previous Occurrences

Seiche events can be measured by damages-caused including deaths, injuries, and property damages. There are no reported seiche events for Benzie County.

Probability of Future Events and Vulnerability Assessment

While there are no storm surge (seiche) events listed in the NOAA NCEI database for Benzie County from 1950 until present, there does remain a small possibility that a seiche may occur along the Lake Michigan coastline. Seiche events have likely occurred, but may have been unreported if injuries, deaths, or significant property damages did not occur.

Persons and property at the lake shore, particularly marinas (along the Bestie Lake in Frankfort and Elberta), are vulnerable to high waves caused by a seiche. Seiche events are also dangerous to all swimmers, especially those who are unprepared to be swept up in the current. Many Lake Michigan beaches do not have a lifeguard on duty who may identify potential hazardous swimming conditions.

Public Health Emergency (Infectious Disease)

Public health emergencies occur when there is a widespread and/or severe epidemic, contamination incident, bioterrorist attacks, or other situation that negatively impacts the health and welfare of the public. These emergencies include disease epidemics, large-scale food or water contamination incidents, 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. A common characteristic of public health emergencies is that they impact or have the potential to impact a large number of people either statewide, regionally, or locally in scope and magnitude. These health emergencies can occur as primary events or as secondary events from another hazard or emergency (e.g. flood, tornado, or hazardous material incident).

Location

Public Health Emergency can be a worldwide, national, state or regional event that is not confined to geographic boundaries and range in severity across the affected areas. All of Benzie County is at risk to the occurrence and impacts from an infectious disease. Depending on the type of disease, different populations are more susceptible.

Extent

The extent of a public health emergency can be determined by the number of cases and deaths, and the amount of money spent to prepare for and respond to public health threats. In Grand Traverse County, the Grand Traverse County Health Department works with local, state, and federal agencies to prepare for and respond to public health threats. It developed a comprehensive emergency preparedness program capable of responding to a variety of emergency situations with funds from the Centers for Disease Control.

State of Michigan (<https://www.michigan.gov/coronavirus/stats>) reports, as of February 14, 2023 there have been 4,121 cumulative cases of COVID-19 and 78 deaths (total confirmed and probably cases) related to COVID-19 in Benzie County. Of the deaths with details provided, those in the age 70+ category years and older have the most deaths of any age range. All of the deaths reported were persons for persons aged 50 years and above. COVID-19 originally appeared in January 2020.

Previous Occurrences

Throughout the years, there have been many pandemics. For example, there was an outbreak of severe acute respiratory syndrome (SARS) in 2003. This virus was a new coronavirus that resulted in over 8,000 illnesses worldwide. Of these, 774 died. Since 2012, Middle East respiratory syndrome (MERS), a coronavirus, has been reported in 27 countries where there have been approximately 2,494 people infected and 858 deaths. In 2017, the World Health Organization (WHO) put SARS and MERS on its priority pathogen list to spur further research into coronaviruses. More recently in 2020, a Presidential and Governor Emergency was declared for COVID-19 Pandemic in Michigan.

Probability of Future Events and Vulnerability Assessment

Naturally occurring pandemics may result in widespread precautions around the world. The Benzie-Leelanau Health Department created a pandemic plan that serves as a template for responding to a large-scale outbreak of influenza and other highly infectious respiratory diseases. That plan is being tested currently since COVID-19 appeared in January 2020. The response is ongoing to this pandemic. The elderly, immune-compromised, and low income populations are most vulnerable to public health emergencies. Additionally, the community survey results indicated that a pandemic/illness was the second most frequently mentioned hazard event that would have the largest impact on their community.

Invasive Species

The National Invasive Species Council defines an invasive species as, “A species that is not native and whose introduction causes, or is likely to cause, economic or environmental harm or harm to human health.” The Council was formed under Presidential Executive Orders 13112 and 13751 to prevent the introduction and spread of invasive species, and to support efforts to eradicate and control invasive species that are established throughout the United States. NOAA’s National Ocean Service identifies invasive species as “capable of causing extinctions of native plants and animals, reducing biodiversity, competing with native organisms for limited resources, and altering habitats.” There are a wide variety of species considered invasive. Known and monitored species include:

- Mammals
- Birds
- Insects
- Fish
- Crustaceans
- Mollusks
- Worms
- Plants
- Diseases

Invasive species harmful to Michigan and Benzie County may be either terrestrial invasive species (TIS) or aquatic invasive species (AIS). Terrestrial invasive include non-native, land-based plants, insects, animals and diseases that harm Michigan’s environment, economy, and human health. Aquatic invasive include non-native, water-dwelling plants, animals, and other organisms that have evolved to live primarily in water (aquatic habitats) rather than on land. Aquatic habitats are habitats that are covered with water all or part of every year. Michigan State Departments cooperated to prepare the Terrestrial Invasive Species State Management Plan and the 2013 Aquatic Invasive Species State Management Plan Update: Prevention, Detection, and Management in Michigan Waters. Each plan outlines a statewide strategy to reduce the environmental and economic damages caused by either TIS or AIS.

Non-native terrestrial and aquatic species are introduced to Michigan and the Great Lakes both intentionally and unintentionally. Aquatic invasive species are the result of unwanted fish and aquatic plants released from home aquariums, transported across the ocean in ballast water carried by freighters, or entered from the ocean through human-built channels such as the Welland Canal¹⁰. There are 32 AIS specifically listed in the State Management Plan. The State TIS Management Plan lists fourteen species including insects, mollusks, plants, mammals, a shrub, and a bird.

The Midwest Invasive Species Network (MISIN) is a regional effort to develop and provide early detection and response resources for invasive species. Among many tools and resources, the website (misin.msu.edu) provides a catalog of species information and a report of occurrences submitted within each state. Animals, plants, and diseases are included in the catalog. The top five reported species in Michigan are: phragmites (invasive) with 63,018, garlic mustard with 18,368, autumn olive with 16,042, spotted knapweed with 15,436, and brown marmorated stink bug with 13,351.

Location

Terrestrial and aquatic invasive species threaten sensitive ecosystems and may be present in Benzie County forest, wetland, farmland, grassland, aquatic, shoreline, and urban environments. “A Field Guide to Invasive Plants of Aquatic and Wetland Habitats for Michigan” (Campbell, Higman, Slaughter, Schools) identifies the Lake Michigan coastline as particularly vulnerable. “Lake-moderated climates along the Lake Michigan shoreline, Saginaw Bay, the Thumb, Lake St. Clair, and western Lake Erie are much milder than those in the state’s interior... These areas have the potential to harbor species typically found far south of Michigan.” TIS and AIS designation generally applies, however, to several upland species that appear to be spreading to wetland and aquatic areas. Regular monitoring and reporting introductions detected is the only way to know where an invasive species has infested. The MISIN Species Observations Data Viewer (online) shares reported detections by species name (common and scientific) and family type. Figure 33 identifies reported MISIN Autumn olive cases throughout Benzie County and in some adjoining counties.

¹⁰ The Welland Canal is a ship canal in Ontario, Canada, connecting Lake Ontario and Lake Erie.

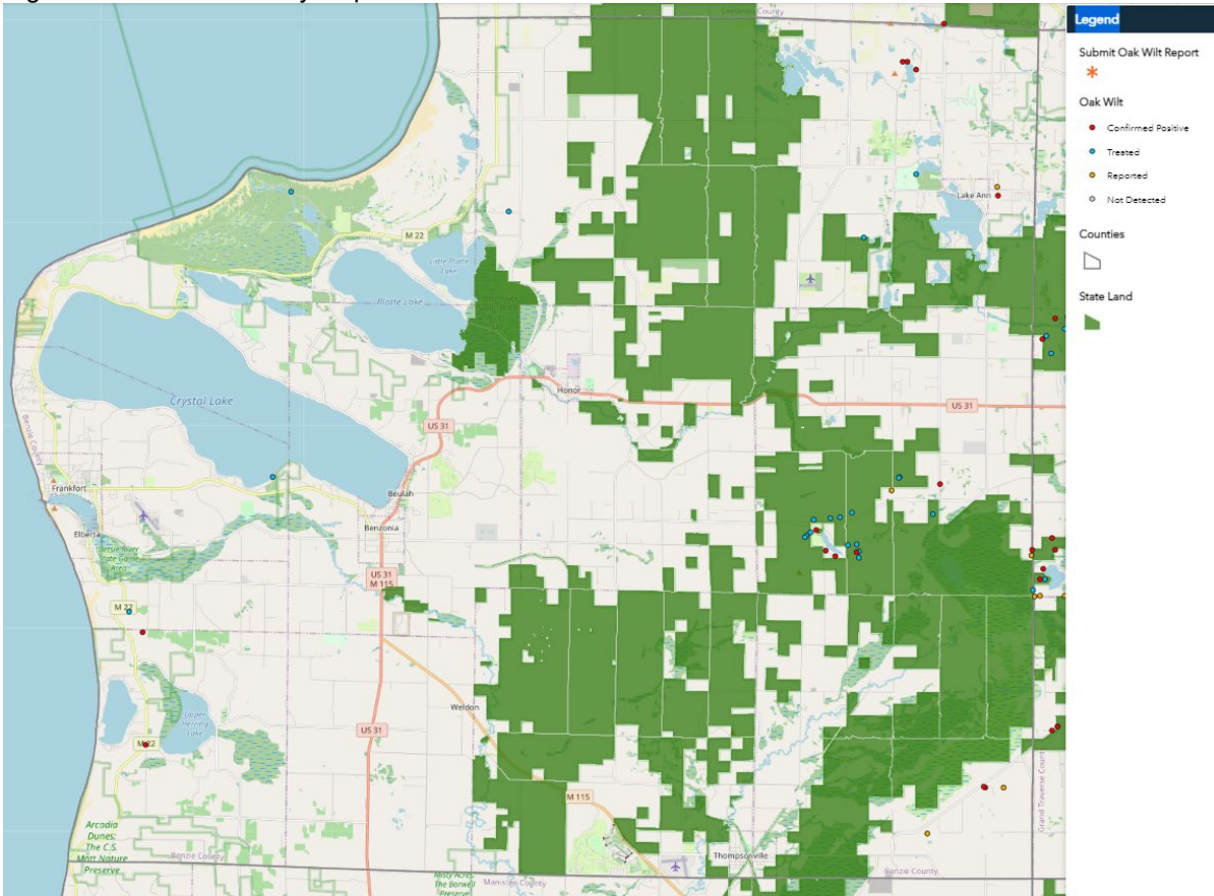
Figure 33: Benzie County Reported Autumn Olive Cases



Source: MISIN, accessed 3/22/2023

Figure 34 is from the MDNR interactive mapping resource “Look for Oak Wilt,” which allows users to submit an Oak Wilt Report throughout Michigan. Multiple Oak Wilt cases have been reported throughout Benzie County. These include trees confirmed positive for the disease and trees that are reported cases.

Figure 34: Benzie County Reported Oak Wilt Cases



Source: MDNR, accessed 2/20/2023

Extent

Invasive species impact can be measured by its damaging effects. TIS cause billions of dollars in damage annually, are extremely costly to control, and often have irreversible ecological effects. Native habitats, agriculture lands and livestock, and the outdoor recreation economy are threatened or damaged by invasive species. *Michigan's Terrestrial Invasive Species State Management Plan* lists these State-wide impacts:

The State of Michigan estimates 42% of threatened or endangered species are considered at risk due to non-native species.

Visitors spent over \$22 billion dollars in Michigan in 2014, supporting nearly 327,000 jobs (Tourism Economics 2014). Invasive species impact the use and beauty of Michigan's shorelines, trails and parks, which may result in a reduction in visitor spending and citizen enjoyment

Michigan's Forest Products Industry supports 96,000 jobs and contributes more than \$20 billion to the state's economy each year (Michigan DNR 2015). Invasive forest pests including emerald ash borer, oak wilt and beech bark disease kill trees and significantly impact the value of urban properties, forests and timber resources. The estimated cost of treating or removing dead ash within developed land in Michigan's communities due to emerald ash borer was \$230 million in 2009¹¹.

The Grand Traverse Conservation District serves the four counties of Benzie, Manistee, Leelanau and Grand Traverse, and is a partner and fiduciary agent of the Northwest Michigan Invasive Species Network (NWISN). The typical annual budget is around \$225,000 for invasive species management efforts in all four counties.

Previous Occurrences

The Department of Environment, Great Lakes, and Energy oversees invasive species programs for the State. The State has produced prohibited and restricted species lists, watch lists, and state management plans for terrestrial and aquatic species. Many of the species listed in this plan are also listed as a prohibited or restricted species: it is unlawful to possess, introduce, import, sell, or offer that species for sale as a live organism, except under certain circumstances. A full list of prohibited and restricted species can be found at Michigan.gov/invasives.

The Northwest Michigan Invasive Species Network (which utilizes the acronym NWISN) works directly with over 60 partners in Benzie, Grand Traverse, Leelanau, and Manistee Counties to manage populations of terrestrial invasive species that threaten northwest Michigan's high-quality natural areas, such as around Lake Michigan coastal dunes and waterways & riparian areas. Figure 35 describes NWISN's top 12 invasive terrestrial species in northwest Michigan that are targeted for management efforts. These species are already established in the region and are prioritized based on their habitat impact and management feasibility. Furthermore, NWISN has indicated that the top priority species particular to Benzie County include: invasive knotweeds, invasive phragmites, baby's breath, and hemlock wooly adelgid (HWA – described on the next page.) Invasive knotweeds have the potential for destruction of infrastructure, an ability to spread easily, and have dense growth patterns. Invasive phragmites negatively impacts habitat quality and can also restrict beach use and lower property values. Baby's breath grows on the sand dunes and beaches along Lake Michigan, which can limit recreational use of the beaches and can also threaten some Federally-listed "threatened" species, including pitcher's thistles.

¹¹ Kovacs, K.F., R.G. Haight, D.G. McCullough, R.J. Mercader, N.W. Siegert and A.M. Liebhold. 2010. Cost of potential emerald ash borer damage in U.S. communities, 2009–2019. *Ecological Economics* 69: 569-578.

Figure 35. NMISN's Top 12 Invasive Species



Top 12 Invasive Species

There are many invasive species in northwest Michigan, both aquatic and terrestrial. ISN prioritizes them based on their habitat impact and management feasibility. The species featured on this list are the terrestrial plants that are already established in our region which are at a higher risk to harm our regional ecology. They are prioritized in messaging, outreach, and - when possible - control efforts by ISN and many of our partners.

Those with an * by their name are illegal to move, trade, sell, or share in Michigan.



Baby's Breath
Gypsophila paniculata



Barberry, Japanese and common
Berberis thunbergii
Berberis vulgaris



Blue lyme grass
Leymus arenarius



Buckthorn, glossy and common
Frangula alnus
Rhamnus cathartica



Callery pear (Bradford and Cleveland)
Pyrus calleryana varieties and hybrids



Garlic mustard
Aliaria petiolata



Invasive honeysuckles
Many, *Lonicera* spp.



***Knotweeds - Japanese, giant, and bohemian**
Reynoutria japonica, *R. sachalinensis*,
R. x bohemica



Oriental bittersweet
Celastrus orbiculatus



***Invasive phragmites**
Phragmites australis



***Purple loosestrife**
Lythrum salicaria



Tree-of-Heaven
Ailanthus altissima

To learn more about Early Detection Species and other invasives, please visit www.HabitatMatters.org

detected on eastern hemlock trees (*Tsuga canadensis*). Often found along ravines, hillsides, and stream banks, eastern hemlock offer habitat for wildlife and provide shade for streams, effectively lowering stream temperatures and increasing oxygen for fish and other aquatic species. Hemlocks provide aesthetic value and are loved by homeowners. It is estimated that Michigan is home to 170 million eastern hemlock trees. Areas near the Lake Michigan shoreline are the most probable for new infestations, as the adelgids tend to favor the temperatures and conditions found near the lake more than those inland.

In 2018, NWISN and regional partners established a map that narrowed down areas that were expected to be denser with hemlock – following the current trajectory of HWA movement in Michigan. Winter surveys took place to minimize any potential spread of the invasive and because it is easier to locate the woolly mass of HWA ovisacs underneath hemlock needles. ISN's focus was on easier-to-access locations such as public land and conservation easements. The following winter, the focus shifted to private land surveys. Landowners meeting the following requirements are encouraged to complete a landowner survey from ISN (on their website):

- Property is in Benzie, Grand Traverse, Leelanau or Manistee County (*required*)
- Located within 10 miles of the Lake Michigan shoreline (*required*)
- A hemlock tree you planted was purchased from an online retailer

In 2021, a single tree infested with HWA was found at a campsite at the Sleeping Bear Dunes National Lakeshore in Lake Township, Benzie County. That hemlock and all hemlocks within an 800 foot buffer were preventively treated with pesticide. No signs of the insect have been found in subsequent surveys of that property. On January 27, 2023, the USDA Animal and Plant Health Inspection Service confirmed a sample taken from hemlock trees at Crystal Downs Country Club in Lake Township as positive for HWA. NWISN completed a delimitation survey of the country club and surrounding area to determine the extent of the infestation and mark the trees for treatment in the summer of 2023.

NWISN has indicated that at this time, due to how long the infestation at Crystal Downs has been there, it is likely that HWA has spread elsewhere in the county, and it's just a matter of identifying future infestations.

Local lake management associations are the primary method of monitoring and treating aquatic invasive species on inland lakes. One of the highest priorities of the Crystal Lake and Watershed Association (CLWA) is preventing the spread of aquatic invasives into the Crystal Lake watershed environment. Since these nuisances are commonly introduced into a new lake by hitchhiking on watercraft that have picked them up elsewhere in infested waters, the CLWA has promoted [boat washing](#) on Crystal Lake. CLWA has also focused on regular monitoring of the watershed to identify potential threats at an early stage, followed by rapid action to control or eliminate the intrusive plant or animal before it becomes widespread. In the summer of 2008, as part of CLWA's Cooperative Lakes Monitoring Program (CLMP) the CLWA sampled, identified, and mapped aquatic plant species for comparison with previous studies. It launched a new comprehensive aquatic plant identification and mapping survey in the summer of 2016, again under the auspices of the CLMP. This survey was completed in the summer of 2018, with the assistance of aerial drone observation.

Eurasian watermilfoil was the only invasive aquatic nuisance plant detected during the survey. It is well established and extensive at the east end of the lake, in the area of the Beulah public boat launch. Smaller patches occur at the eastern parts of the north and south shores, again in the vicinity of public boat launches (for example, at the Mollineaux Road DNR launch and the Lobb Road end). The CLWA is now developing a treatment and control plan to prevent this problem from becoming more severe.

Two other identified invasive species in Crystal Lake are *Phragmites australis* (Common Reed) and the Round Goby (*Apollonia melanostomus*). CLWA requests that occurrences be reported to info@crystallakewatershed.org so that prompt control measures can be taken.

Several other lake associations in Benzie County administer water quality monitoring and treatment for invasive species:
Lower Herring Lake Association (Blaine Township)
Little Platte Lake Association (Platte and Lake Townships)
Sanford Lake Association (Almira Township)
Benzie Long Lake Association (Lake Township)
Ann Lake Property Owners Association (Almira Township and Village of Lake Ann)

On a regional level, the following terrestrial invasive species are causing significant harm in the northwestern Lower Peninsula:

Japanese knotweed, Giant knotweed and Bohemian knotweed, *Polygonaceae*, can be a concern to homeowners, and municipalities because of these plants' ability to grow into a structure's foundation, through sidewalks and road surfaces. These plants can also be spread by root fragments and stem sections. It can create monocultures that shade out desirable vegetation, creating poor habitats for native species. This is of particular concern along water bodies and has been shown to be extremely detrimental to waterways in the Eastern US.

(Invasive) Phragmites is a large-scale clonal grass that rapidly colonizes wetlands. Phragmites crowds out native plants and alters habitat for native fauna. In doing so, Phragmites also alters human access to water resources and has adverse economic effects, including decreasing property value, inhibiting recreational use, and limiting populations of game species. It can become a fire hazard when it dries down

Cypress spurge is an erect, herbaceous to semi-woody perennial with bright yellow-green flowers that turn to purple-red as they mature. Cypress Spurge is toxic to horses and cows.

Black Swallow Wort is a rapidly growing, herbaceous perennial in the Milkweed family. However, Black Swallow Wort is toxic to animals and the monarch butterfly.

Oriental bittersweet is a vine plant that can strangle a tree and causes tree mortality. This impacts ecosystem health and economic health that is associated with trees' health.

Autumn olive is very widespread in Michigan. It is spread by birds and is recolonizing old farm fields. Its value to wildlife is relatively low (low in protein and other nutrients compared to our natives). It also is known for its nitrogen-fixing abilities. Specific areas of problematic autumn olive infestation provided by a participant in this plan development include these areas of Forest Home Township: properties along Miley Pointe Drive down to Cottage Drive, and along sections of Steiner Road between Clam Lake Road and SE Torch Lake Drive.

Oak wilt is an infectious vascular disease that can affect all species of oak. Red oaks get the disease more often and succumb more readily than white oak. The disease spreads via root grafts and sap-feeding beetles.

Beech bark disease is caused by the combination of the *Neonectria* fungus and beech scale. Beech scales are yellow, soft-bodied insects that are 0.5 to 1.0 mm long as adults. The insects, found on the tree trunk and branches, feed on sap in the inner bark. The minute wounds caused by the scale insects eventually enable the Nectria fungus to enter the tree. The Nectria kills areas of woody tissue.

Garlic mustard is an herbaceous biennial, up to 4 feet in height. Forms round basal rosette the first year, flowers the second year and dies. Grows in forests, particularly floodplain forest, open wetlands, parking lots, campgrounds, paths, and roadsides.

On a regional level, the following aquatic invasive species are causing significant harm in the northwestern Lower Peninsula:

Didymo or “rock snot” is an aquatic diatom that is brown, tan, or yellow in color. Unlike most algae, it feels like wet cotton and is not slimy. Grows in rivers, streams, and lakes. It occurs particularly in cool, oligotrophic, clear water.

Purple loosestrife is an herbaceous wetland perennial reaching 5 feet with reddish-purple flowers with five to seven petals are held in dense terminal cluster. Grows in moist soils, in wet meadows and prairies, shallow marsh, ditches, waste areas, and along lakes, ponds, streams, and rivers.

Eurasian water-milfoil is a submergent, aquatic perennial that reached 3-10 feet or more in length. Grows in ponds, lakes, and low-energy zones in rivers and streams. Specific areas of autumn olive infestation provided by a participant in this plan development include Six Mile Lake in Echo and Banks Townships, the Clam River and Alden Harbor on Torch Lake.

New Zealand mudsnail is an aquatic mollusk with an elongated shell 1/8 inch long with 7-8 whorls. Shell color varies from gray and dark brown to light brown. Grows in flowing freshwater with silt/sand to very brackish rivers; lives in water as deep as 60 feet in lakes or reservoirs.

Red swamp crayfish is an aquatic crustacean with a dark red body and claws with spiky, bright red bumps, and black wedge-shaped stripe on underside. Grows in flowing to non-flowing freshwater or salt water; permanent ponds; areas of streams and ditches with organic debris; agricultural areas; wetlands.

Zebra mussel is an aquatic mollusk with striped shells or dark or light shells with no stripes. They attach to objects (pipe, boats, etc.) causing major damage as colonies can block pipes, affecting power and water-treatment plants.

Many of the species listed above are monitored and managed by NMISN. However, the list of all invasive species impacting the county and region is extensive and many established species are treated on a case-by-case basis. Other species of concern include: Honeysuckle (non-native), Glossy buckthorn, Common buckthorn, Wild parsnip, Multiflora rose, and Periwinkle.

Probability of Future Events and Vulnerability Assessment

The State TIS Management Plan provides a list of eleven terrestrial species on the “watch list”, provided below. These are priority species that have been identified as posing an immediate and significant threat to Michigan’s natural resources. These species have either not been confirmed in Michigan, have very limited distribution, or are localized. Early detection and timely reporting of occurrences of these species is crucial for increasing the likelihood of stopping an invasion and limiting negative ecological and economic impacts. This list is reviewed and updated periodically, and the most current list is available at www.michigan.gov/invasives.

Common Name - Scientific Name - Category

Asian longhorned beetle *Anoplophora glabripennis* Insect

Asiatic sand sedge *Carex kobomugi* Plant

Balsam woolly adelgid *Adelges piceae* Insect

Chinese yam* *Dioscorea oppositifolia* Plant

Hemlock woolly adelgid* *Adelges tsugae* Insect

Himalayan balsam* *Impatiens glandulifera* Plant

Japanese stiltgrass* *Microstegium vimineum* Plant

Kudzu* *Pueraria montana* Plant

Mile-a-minute weed *Persicaria perfoliata* Plant

Nutria *Myocastor coypus* Mammal

Thousand Cankers Disease *Geosmithia morbida Pityophthorus juglandis* Tree Disease

Local land and water management groups are also monitoring for the presence of other [Michigan Watch List](#) invasives:

Spotted lantern fly which impacts fruit and winery production, and therefore impact agri-tourism.

Hydrilla is an aquatic, perennial plant forming dense mats in slow-moving water of lakes, ponds, streams, and rivers.

European frog-bit is an aquatic, floating, herbaceous annual that forms large colonies, creating dense mats. Grows in open, still waters.

Parrot feather water-milfoil is an aquatic, herbaceous perennial that can grow 6.5-16.5 feet in length and forms monotypic stands. Grows in lakes, ponds, slow streams, and mudflats, where the emergent form is found.

Starry stonewort is an aquatic microalga which forms dense mats that cover lake bottoms. Grows in still or slow moving waters.

Asian Carp (bighead, black, grass, and silver carp) are in direct competition with native aquatic species for food and habitat. Their rapid population increase is disrupting the ecology and food web of the large rivers of the Midwest.

Beech leaf disease causes dark stripes or banding between leaf veins. A nematode (microscopic worm) is associated with symptoms. Ongoing research is investigating the possibility of other contributing microorganisms.

Potential impact from the species listed on watch lists could be catastrophic for Benzie County's natural resources, agriculture, recreation, tourism, and economy. The services provided by the Northwest Michigan Invasive Species Network, Benzie Conservation District, Grand Traverse Regional Land Conservancy, and other land and water management agencies are crucial to continuous invasive species management and prevention.

Impacts from Climate Change

Climate describes the average weather conditions for a particular location and over a long period of time. The changing climate impacts society and ecosystems in a broad variety of ways. For example, climate change can alter rainfall, influence crop yields, affect human health, cause changes to forests and other ecosystems, and even impact our energy supply. Climate-related impacts are occurring across the country by increasing the severity of storms and weather-related events. Natural disasters then have a direct impact on our economy.

According to a new comprehensive report from the World Meteorological Organization (WMO), “A disaster related to a weather, climate or water hazard occurred every day on average over the past 50 years – killing 115 people and causing \$202 million (US \$) in losses daily. The number of disasters has increased by a factor of five over the 50-year period, driven by climate change, more extreme weather and improved reporting. But, thanks to improved early warnings and disaster management, the number of deaths decreased almost three-fold¹²” (World Meteorological Organization, 2021).

The impacts of climate change already are, and continue to be, deep and widespread in the Great Lakes Region and Michigan as a whole. The National Climate Assessment (NCA) assesses the science of climate change and variability and its impacts across the United States, now and throughout this century. Chapter 21 of the NCA *Fourth National Climate Assessment Volume II: Impacts Risks, and Adaptation in the United States* reports, the Great Lakes influence regional weather and climate conditions and impact climate variability and change across the region. The lakes influence daily weather by:

- 1) Moderating maximum and minimum temperatures of the region in all seasons,
- 2) Increasing cloud cover and precipitation over and just downwind of the lakes during winter, and
- 3) Decreasing summertime convective clouds and rainfall over the lakes.

The Great Lakes Integrated Sciences and Assessments (GLISA) is one of 11 NOAA Regional Integrated Sciences and Assessments teams that focus on helping the nation prepare for and adapt to climate variability and change. A summary of findings from NCA and the GLISA report, *Climate Change in the Great Lakes Region*¹³, are provided to show the impacts of climate change throughout the state of Michigan.

Temperature

Warm-season temperatures are projected to increase more in the Midwest than any other region of the United States.¹⁴ Since 1951, annual average air temperatures have increased by 2.3°F (1.3°C) in the U.S., Great Lakes region. By mid-century (2050), average air temperatures are projected to increase by 3°F to 6°F (1.7°C to 3.3°C). By end of century (2100), average air temperatures are projected to increase by 6°F to 11°F (3.3°C to 6.1°C).

The frost-free season is projected to increase 10 days by early this century (2016–2045), 20 days by mid-century (2036–2065), and possibly a month by late century (2070–2099) compared to the period 1976–2005 according to the higher scenario (RCP8.5).¹⁵

Precipitation

Since 1951, total annual precipitation has increased by 14% in the U.S., Great Lakes Region. Future projections suggest more precipitation on average, but not necessarily during all seasons (summer to be drier) and not for all locations depending on which model is used. Reduced lake ice cover and enhanced evaporation may lead to increased lake-effect snowfall in the near-term, but rising temperatures will cause more winter precipitation to fall as rain as opposed to snow across the region by late century.

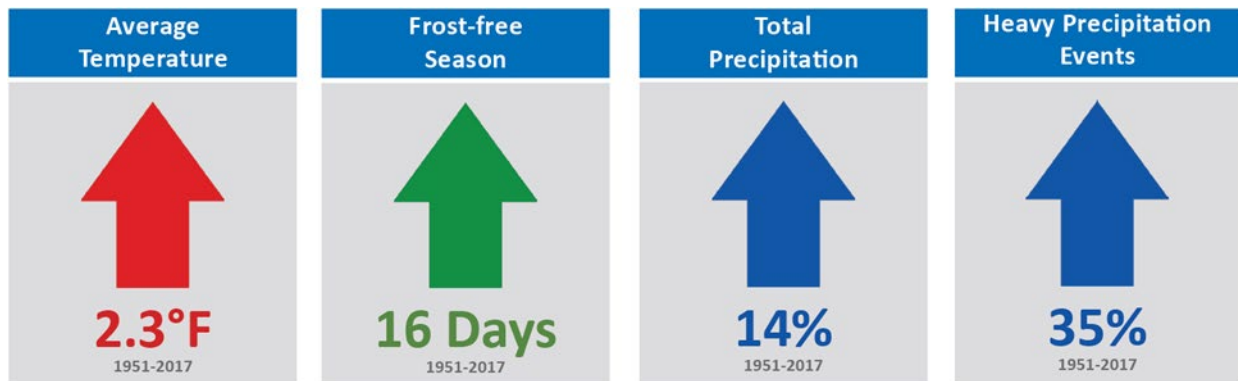
¹² World Meteorological Organization. (2021, August 31). Retrieved from Weather-related disasters increase over past 50 years, causing more damage but fewer deaths: <https://public.wmo.int/en/media/press-release/weather-related-disasters-increase-over-past-50-years-causing-more-damage-fewer>

¹³ (2019, February 14). Retrieved from Climate Change in the Great Lakes Region: <https://glisa.umich.edu/summary-climate-information/>

¹⁴ Vose, R. S., D. R. Easterling, K. E. Kunkel, A. N. LeGrande, and M. F. Wehner, 2017: Temperature Changes in the United States. *Climate Science Special Report: Fourth National Climate Assessment, Volume I*. Wuebbles, D. J., D. W. Fahey, K. A. Hibbard, D. J. Dokken, B. C. Stewart, and T. K. Maycock, Eds., U.S. Global Change Research Program, Washington, DC, USA, 185–206. doi:10.7930/J0N29V45.

¹⁵ Hibbard, K. A., F. M. Hoffman, D. Huntzinger, and T. O. West, 2017: Changes in Land Cover and Terrestrial Biogeochemistry. *Climate Science Special Report: Fourth National Climate Assessment, Volume I*. Wuebbles, D. J., D. W. Fahey, K. A. Hibbard, D. J. Dokken, B. C. Stewart, and T. K. Maycock, Eds., U.S. Global Change Research Program, Washington, DC, USA, 277–302. doi:10.7930/J0416V6X.

From 1951-2017, the United States, Great Lakes Region, overall, has seen increases in average temperature, frost-free season, total precipitation, and heavy precipitation events.



Snow, Ice Cover and Lake Temperature

Summer lake surface temperatures have been increasing faster than the surrounding air temperatures, with Lake Superior increasing by 4.5°F between 1979 and 2006. Annual average ice cover on the Great Lakes shifted from higher amounts prior to the 1990s to lower amounts in recent decades. There remains strong year-to-year variability, and high ice years are still possible. Lake-effect snowfall has increased in northern areas and may continue to increase through mid-century.

Extreme Weather

The frequency and intensity of severe storms has increased. This trend will likely continue as the effects of climate change become more pronounced. The amount of precipitation falling in the heaviest 1% of storms increased by 35% in the U.S. Great Lakes region from 1951 through 2017. More severe storms may have a negative economic impact due to resulting damages and increased costs of preparation, clean up, and business disruption.

According to the NCA *Fourth National Climate Assessment Volume II: Impacts Risks, and Adaptation in the United States*: “Climate change is transforming where and how we live and presents growing challenges to human health and quality of life, the economy, and the natural systems that support us. Risks posed by climate variability and change vary by region and sector and by the vulnerability of people experiencing impacts. Social, economic, and geographic factors shape the exposure of people and communities to climate-related impacts and their capacity to respond. Risks are often highest for those that are already vulnerable, including low-income communities, some communities of color, children, and the elderly” ([Ch. 14: Human Health, KM 2](#); [Ch. 15: Tribes, KM 1–3](#); [Ch. 28: Adaptation, Introduction](#)).

A vulnerability assessment can be found in the two-page report: *Climate Change in the Great Lakes Region* by GLISA. The report identifies key challenges from climate change such as:

Public Health

- Increased risk of heat waves and increased humidity may amplify the number of heat-related deaths and illnesses.
- More storm activity and flooding, resulting in increased point- and non-point source pollution, will likely increase watershed contamination and water-borne illnesses, while warmer surface waters amplify the risk of toxic algal blooms and fish contamination.

Tourism and Recreation

- *Winter recreation/tourism are likely to suffer* due to reduced snow cover and shorter winters. Reduced lake ice cover and enhanced evaporation may lead to increased lake-effect snowfall in the near-term, but rising temperatures will cause more winter precipitation to fall as rain as opposed to snow across the region by late century.
- Increasing temperatures and a longer summer season may *increase the demand for lake and beach use*.
- Overall, *summer tourism may grow before temperature rise becomes unfavorable* for outdoor recreation.
- *The fishing industry* (commercial and recreation) is likely to be impacted by the *decline of coldwater species of fish, such as lake trout and whitefish*.

Natural Environment

- Despite increasing precipitation, land surfaces in the region are expected to become drier overall due to increasing temperatures and evaporation rates.
- More frequent summer droughts could affect soil moisture, surface water, and groundwater supply.
- Increased evaporation rates and sustained levels of high or low water levels may change wetland areas in the region.
- The rate of warming may *outpace the rate at which ecosystems are able to migrate and adapt*.
- *Wildlife populations better adapted to cold temperatures will continue to decline* as competing species migrate into the region with rising air and surface water temperatures.
- *Forest productivity will likely increase in the short term*, until other impacts of climate change such as increased drought, fire and invasive species present additional stressors to forests.

V. Community Vulnerability Analysis

The tables on the following five pages summarize much of the information presented in Sections III (Community Profile) and IV (Hazard Identification and Assessments) as it pertains to hazard vulnerabilities and mitigation capabilities for each community in Benzie County. While most types of hazards considered in this plan could affect every jurisdiction in the County, certain characteristics of people, property, the economy and the environment were considered to evaluate each community's unique vulnerabilities (as well as assets) for each type of hazard. For reference, the locations of some of these characteristics (i.e., public lands, pine forest area, infrastructure, campgrounds, mobile home areas, hazard areas) are illustrated in the maps provided in Appendix A.

	Benzie County Townships/City													Benzie County Villages					
	Almira	Benzonia	Blaine	Colfax	Crystal Lake	Gilmore	Homestead	Inland	Joyfield	Lake	Platte	Weldon	City of Frankfort	Benzonia	Beulah	Elberta	Honor	Lake Ann	Thompsonville
Population Estimates (2019)	3,665	2,735	493	1,162	663	690	2,084	2,374	836	844	380	630	1,059	503	203	165	222	196	481
Severe Winter Weather and Extreme Temperature Vulnerabilities																			
Public Outdoor Recreation Lands	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Est. number of residents > age 65	643	828	176	470	139	146	493	323	190	441	84	123	489	90	71	21	57	51	51
Est. # of jurisdiction residents that are of a minority race (not Hispanic or Latino origin)	96	265	4	4	65	10	75	50	5	6	18	43	17	56	15	5	26	4	28
Est. # of jurisdiction residents that are of Hispanic or Latino origin	56	29	0	0	70	29	22	55	44	5	67	19	45	6	2	14	10	0	19
Est. # of households that are lower income (ALICE or below poverty level)	257	462	68	136	170	131	346	343	146	109	63	138	229						
Thunderstorm, High Winds, Hail, Tornado Vulnerabilities																			
Mobile Home Neighborhoods								1							1				1
Campgrounds	3	2	1	2	2		3	2		2	1	2							
Public Outdoor Recreation Lands	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Previous Tornadoes	1	1					1	2	1	1		1							
Est. number of residents > age 65	643	828	176	470	139	146	493	323	190	441	84	123	489	90	71	21	57	51	51
Est. # of jurisdiction residents that are of a minority race (not Hispanic or Latino origin)	96	265	4	4	65	10	75	50	5	6	18	43	17	56	15	5	26	4	28
Est. # of jurisdiction residents that are of Hispanic or Latino origin	56	29	0	0	70	29	22	55	44	5	67	19	45	6	2	14	10	0	19
Est. # of households that are lower income (ALICE or below poverty level)	257	462	68	136	170	131	346	343	146	109	63	138	229						

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Population Estimates (2019)	3,665	2,735	493	1,162	663	690	2,084	2,374	836	844	380	630	1,059	503	203	165	222	196	481
Lightning Vulnerabilities																			
Campgrounds	3	2	1	2	2		3	2		2	1	2							
Communications Critical Infrastructure							1	1					1		2				
Public Outdoor Recreation Lands	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Flooding Vulnerabilities																			
Prior Flood Incident Areas	X	X	X	X	X	X	X			X		X	X		X	X			X
FEMA FIRM issued	X		X		X	X				X			X			X		X	
Communities not in the NFIP, but a FIRM was issued 3/3/2021		Some areas surrounding Crystal Lake and Platte Lake are in Zone A; rest of the Twp. contains areas of minimal flood hazard.			Areas of minimal flood hazard		Areas of minimal flood hazard	Areas of minimal flood hazard	Areas of minimal flood hazard		Some areas adjoining Little Platte Lake are in Zone A; the rest of the Township contains areas of minimal flood hazard	Areas of minimal flood hazard		Areas of minimal flood hazard	Some areas adjoining Crystal Lake are in Zone A; the rest of the Village contains areas of minimal flood hazard	Flood Zone A along the Bestie River; Zone AE along Betsie Lake and Lake MI shorelines	Areas of minimal flood hazard	Areas of minimal flood hazard	Areas of minimal flood hazard
Increased land development since 2015 HMP		"Sunkissed Hills" residential development along the south shore of Crystal Lake			Some new homes on lots adjoining Lake Michigan coastline					Some new homes on lots adjoining Lake Michigan coastline (Crystal Downs)			Some new homes on lots adjoining Lake Michigan coastline						New "Dollar General" store in area with a high groundwater table; prone to frequent seasonal flooding
Potential dam failure (for dams that have a condition rating)		Homestead Dam (Significant Hazard Potential)		Grass Lake Dam Flood Damage Reduction System (Low Hazard Potential)	Crystal Lake Outlet Flood Damage Reduction System (Low Hazard Potential)						Little Platte Lake Control Dam (Low Hazard Potential)								
# of Road/Stream Crossings with a Moderate to Severe Rating	5	12		14	8	1	40+ (several along Valley Road)	19	3	1	8	21					1		
# of Bridges with Poor, Serious, Critical or Closed Ratings				3			1	1				3							
Road Washout Areas		X			X		X								X				
Est. number of residents > age 65	643	828	176	470	139	146	493	323	190	441	84	123	489	90	71	21	57	51	51
Est. # of residents that are of a minority race (not Hispanic or Latino origin)	96	265	4	4	65	10	75	50	5	6	18	43	17	56	15	5	26	4	28
Est. # of residents of Hispanic or Latino origin	56	29	0	0	70	29	22	55	44	5	67	19	45	6	2	14	10	0	19
Est. households that are lower income	257	462	68	136	170	131	346	343	146	109	63	138	229						

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Shoreline Erosion (Lake MI)																			
Previous or Current Shoreline Erosion Issue Areas					X	X				X			X			X			
Critical Dunes			X		X	X				X			X			X			
High Risk Erosion Areas			X		X					X			X						
FEMA FIRM issued	X		X		X	X				X			X			X		X	
Wildfire Vulnerabilities																			
Pine Forest	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
Campgrounds	3	2	1	2	2		3	2		2	1	2							
Previous Large Fire Incident(s)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Est. number of residents > age 65	643	828	176	470	139	146	493	323	190	441	84	123	489	90	71	21	57	51	51
Est. # of residents that are of a minority race (not Hispanic or Latino origin)	96	265	4	4	65	10	75	50	5	6	18	43	17	56	15	5	26	4	28
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Est. # of households that are lower income	257	462	68	136	170	131	346	343	146	109	63	138	229						
Drought Vulnerability																			
Public Outdoor Recreation Lands	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Agriculture Processing, Packaging & Production Facilities						1			1										
Invasive Species Concerns																			
Areas mapped as a locations of particular concern										X									
Public Health Emergency Vulnerabilities																			
Assisted Living Facility													1						
Est. number of residents > age 65	643	828	176	470	139	146	493	323	190	441	84	123	489	90	71	21	57	51	51
Est. # of jurisdiction residents that are of a minority race (not Hispanic or Latino origin)	96	265	4	4	65	10	75	50	5	6	18	43	17	56	15	5	26	4	28
Est. # of residents of Hispanic or Latino origin	56	29	0	0	70	29	22	55	44	5	67	19	45	6	2	14	10	0	19
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Population Estimates (2019)	3,665	2,735	493	1,162	663	690	2,084	2,374	836	844	380	630	1,059	503	203	165	222	196	481
Community Capabilities																			
Emergency Services (i.e., Fire, Police, or EMS)	Almira Twp. Fire & EMS	Benzonia Township Fire Dept.					Homestead Fire Dept.	Inland Twp. Fire Dept.; County EMS Station #2					City Fire and Police; County EMS Station #3		Benzie County EMS, Sheriff's Office & Central Dispatch				Thompsonville Fire and Rescue
Shelter Sites	1	3	2	1	2	1	2	2	1	1	1	1	6	2	1	1	1	1	1
Health Care Facilities		BLD Health Dept.											The Maples LTC facility; POM Hospital						
Benzie County 5-Year CIP (updated annually)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Benzie County Strategic Plan (updated annually)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
County Planning Commission	No; County Planning Commission ordinance was repealed in 2022																		
Benzie County Joint Recreation and Cultural Plan, 2020-2024		X			X		X			X		X	X	X	X	X			X
Benzie County Master Plan, 2017	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Local Zoning Ordinance	X	West Benzie Joint PC Zoning Ordinance	X	Colfax and Village of Thompsonville Joint Zoning Ordinance 2015	X	X	X	X	X	X	West Benzie Joint PC Zoning Ordinance	X	X	X	X	X	X	X	Colfax and Village of Thompsonville Joint Zoning Ordinance 2015
Local Planning Commission and Master Plan	X	West Benzie Joint PC - 2023 Master Plan	X	Colfax and Village of Thompsonville Joint Master Plan 2012	X	X	X	X	X	X	West Benzie Joint PC - 2023 Master Plan	X	X	X	X	X	X	X	Colfax and Village of Thompsonville Joint Master Plan 2012
Benzie County 2023 HMP Mitigation Strategies as related to local Master Plan goals/objectives		52, 54, 62			50, 51, 52	57		44, 66		52		45, 56	3g, 60, 61		52	3h, 26c, 41b, 53, 55		42	
MDNR's Homestead Dam Emergency Action Plan		2018																	
MDNR's Homestead Dam Operations & Maintenance Plan		2006																	
State Soil Erosion, Sedimentation, and Stormwater Control Act 91 of the NREPA (enforced/permited by Benzie County)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
State of Michigan Construction Codes (enforced/permited by Benzie County Building Dept.)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Bestsie River/Crystal Lake Watershed Management Plan, 2016		X	X	X	X	X	X	X	X	X		X	X	X	X	X			X
Administration of the Crystal Lake Watershed Overlay Zoning District Ordinance		X			X					X					X				
Local Boat Washing Ordinances		X			X					X					X				

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Emergency Services (i.e., Fire, Police, or EMS)	Almira Twp. Fire & EMS	Benzonia Township Fire Dept.					Homestead Fire Dept.	Inland Twp. Fire Dept.; County EMS Station #2					City Fire and Police; County EMS Station #3		Benzie County EMS, Sheriff's Office & Central Dispatch				Thompsonville Fire and Rescue
Shelter Sites	1	3	2	1	2	1	2	2	1	1	1	1	6	2	1	1	1	1	1
Health Care Facilities		BLD Health Dept.											The Maples LTC facility; POM Hospital						
Environmental Provisions and Tree Protection Ordinance No. 2020-03/Steep Slope Protection Overlay Ordinance No. 2020-04															X				
Zoning Ordinance - ARTICLE XXII Environmental Provisions					X														
Updated Benzie-Leelanau District Health Dept. Distict Sanitary Code 1/27/2023; includes time of transfer evaluation of onsite water/sewage disposal systems	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Local Floodplain Management Ordinance (NFIP participant; FIRMs issued 3/23/2021)	X (NSFHA)		X		X	X				X			X						
Communities not in the NFIP, but a FIRM was issued 3/3/2021		Some areas surrounding Crystal Lake and Platte Lake are in Zone A; rest of the Twp. contains areas of minimal flood hazard.		Areas of minimal flood hazard			Areas of minimal flood hazard	Areas of minimal flood hazard	Areas of minimal flood hazard		Some areas adjoining Little Platte Lake are in Zone A; the rest of the Township contains areas of minimal flood hazard	Areas of minimal flood hazard		Areas of minimal flood hazard	Some areas adjoining Crystal Lake are in Zone A; the rest of the Village contains areas of minimal flood hazard	Flood Zone A along the Bestie River; Zone AE along Betsie Lake and Lake MI shorelines	Areas of minimal flood hazard	Areas of minimal flood hazard	Areas of minimal flood hazard
State Designated Critical Dunes Areas - permits issued by State of MI EGLE / Benzie Conservation District			X		X	X				X			X			X			
State Designated High-Risk Erosion Areas - permits issued by State of MI EGLE			X		X					X			X						
Outdoor burning ordinance	MDNR posts current status on burning allowances/requirements for each township at https://www.dnr.state.mi.us/burnpermits/												X	?	?	?	X	?	
Local CIP and related funding					X (as indicated in Community Survey)		X	X (as indicated in Community Survey)				X (as indicated in Community Survey)	X		X (as indicated in Community Survey)	X (as indicated in Community Survey)			X (as indicated in Community Survey)
Lake Management Associations	Sanford Lake Assn.; Ann Lake Property Owners Assn.		Lower Herring Lake Assn.							Little Platte Lake Assn.; Benzie Long Lake Assn.	Little Platte Lake Assn.							Ann Lake Property Owners Assn.	

VI. Goals and Objectives

The mission of the Benzie County Natural Hazards Mitigation Plan is to protect the health and safety of the public and property in the County which includes prevention of injury, loss of life, property damage, breakdown in vital services like transportation and infrastructure, economic slumps, maintain tourist base, and liability issues. This is done by taking action to permanently eliminate or reduce the long-term risks from natural hazards.

Specific goals and objectives have been established based upon the community's natural hazards analysis, as well as input from the Task Force participants and the public through meetings, request for comments on the draft plan, and the presentation of the plan to the Local Emergency Planning Team.

Goal 1: Increase local awareness and participation in natural hazards mitigation strategies

Objectives:

Encourage cooperation and communication between planning and emergency management officials
Encourage additional local governmental agencies to participate in the natural hazards mitigation process
Encourage public and private organizations to participate, including organizations who advocate for individuals with functional or access needs (vulnerable populations)

Goal 2: Integrate natural hazards mitigation considerations into the community's comprehensive planning and operational processes

Objectives:

Enforce and/or incorporate natural hazards mitigation provisions in building code standards, ordinances, and procedures
Create or update ordinances to reflect building codes, shoreline protection rules, etc.
Incorporate natural hazards mitigation into basic land use regulation mechanisms
Develop community education programs and public warning systems
Strengthen the role of the Local Emergency Planning Committee in the land development process
Integrate natural hazards mitigation into the capital improvement planning process so that public infrastructure does not lead to development in natural hazards areas
Encourage county agencies to assess local roads, bridges, dams, and related transportation infrastructure for natural hazards vulnerability

Goal 3: Utilize available resources and apply for additional funding for natural hazards mitigation projects

Objectives:

Identify desired community mitigation measures and provide them to the State
Encourage the application for project funding from diverse entities (i.e., Homeland Security grants for EOC equipment needs or training; Tribal government partnerships for emergency services; invasive species management and treatment efforts)

Goal 4: Develop and complete natural hazards mitigation projects in a timely manner

Objectives:

Encourage public and business involvement in natural hazards mitigation projects

VII. Mitigation Strategies and Priorities

Types of Mitigation Actions

The mitigation planning regulations requires that each participating jurisdiction identify and analyze a comprehensive range of specific mitigation actions and projects to reduce the impacts of the hazards identified in the risk assessment. The emphasis is on mitigating the impacts or vulnerabilities identified in the risk assessment, not on the hazards themselves. The types of mitigation actions can be classified into the following types:

Local Plans and Regulations
Structure and Infrastructure Projects
Natural Systems Protection
Education and Awareness Programs

Furthermore, a set of evaluation criteria was developed to determine which mitigation strategies were best suited to address the identified problems in Benzie County.

The measure must be technically feasible.

The measure must be financially feasible.

The measure must be environmentally sound and not cause any permanent, significant environmental concerns.

The measure must be acceptable to those participating in the strategy and/or primarily affected by the strategy.

By anticipating future problems, the County can reduce potential injury, structure losses, loss of power, such as electric and gas, and prevent wasteful public and private expenditures. The County Infrastructure, Vulnerable Populations, and Hazard Maps in Appendix A can assist with the determining future problem areas.

Emergency Warning System Coverage

Mobile warning system: Benzie County uses the CodeRED Emergency Communications Network, which is an electronic high-speed outbound notification service available to the general public.

The FEMA Mobile App is also a publicly available mobile warning system providing real-time weather alerts, locations of emergency shelters, and allows for notifications to be sent to loved ones.

The National Weather Service may concurrently utilize their mobile warning notification system when deemed necessary in severe weather event situations to send phone notifications to users within signal of a cellular tower.

Radio warning system: NOAA Weather Radio All Hazards is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. National Weather Radio broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week. NWR requires a [*special receiver*](#) or scanner capable of picking up the signal. Broadcasts can be found on seven frequencies in the VHF band.

NOAA Weather Radio Frequencies
162.400 MHz (WX2 on marine radio)
162.425 MHz (WX4)
162.450 MHz (WX5)
162.475 MHz (WX3)
162.500 MHz (WX6)
162.525 MHz (WX7)
162.550 MHz (WX1)

Tornado/Severe Weather Systems: The CodeRED Emergency Communications Network is utilized for severe weather/tornado alerts.

Flood warning system: For dam failures/flooding downstream an active warning system is pre-determined utilizing geographic boundary information and the CodeRED Emergency Communications Network.

Website and Social Media Platforms: Benzie County's Office of Emergency Management maintains an active Facebook page where information pertaining to emergency awareness and prevention is posted. The Benzie County Office of Emergency Management webpage also provides multiple informational links and current postings from the Facebook page.

One of the links on the webpage is for "Smart911", a free, new service provided by Benzie County Central Dispatch to help someone when they call 9-1-1. Once a person has signed up, first responders will be aware of important information they have provided that will help them address the caller's emergency. This information - including medical issues, current location and even pets - can help Police, Fire and EMS locate and help them.

Shelters

The Benzie County Office of Emergency Management (OEM) maintains use agreements with the following organizations to utilize their facilities for temporary emergency shelters:

- Benzie Central Schools (1 in Benzonia Township, 1 in Village of Benzonia)
- Frankfort/Elberta Schools (2 in Frankfort, 1 in Crystal Lake Twp.)
- Two buildings at the United States Coast Guard Station (Small) Frankfort, 098 Coast Guard Road, Frankfort, MI 49632
- The Garden Theatre in Frankfort

The OEM also maintains "soft" agreements with municipalities to use their city, village or township halls as temporary shelter sites.

The Emergency Manger intends to renew Memorandums of Understanding need to be renewed with "GROW Benzie" in Blaine Twp. and "New Covenant" Christian Academy in Inland Township for emergency food provision services.

The Grand Traverse Band Tribe of Ottawa and Chippewa Indians maintains two underground tornado shelters on their property at Hoadley Road and Four Seasons Drive in Benzonia Township.

Benzie Bus can provide transportation of the public to emergency shelter sites. The Benzie Bus Main Office at 14150 US-31, Beulah, MI 49617 (Homestead Township) can also serve as a secondary Emergency Operations Center site if needed.

The American Red Cross – Northern Michigan Chapter can provide resources to create a long-term shelter if needed.

Mitigation Strategies

Strategies were developed based on discussions with local officials and a review of FEMA best practices for hazard mitigation. The Strategies Table is grouped according to purpose. Purpose types include: Awareness & Preparation; Shelters; Buildings, Roads and Dams; Utilities & Technology; and Environment & Natural Resources. The table also includes: a description of each strategy; what natural hazards they address; where the strategy applies; who is responsible for implementing the strategy; how the strategy will be implemented (what resources are available to help execute the strategy); when the strategy could feasibly begin; the level of priority; and what type of strategy it is. Strategies are intended to be action items completed during the 5-year timeframe in which the plan is active. Some long-term strategies extend beyond the 5-year timeframe due to feasibility or level of difficulty.

Appendix C provides a review of mitigation strategies included in the 2015 plan, their current status, and how they have or have not been incorporated into the 2023 plan. Note that the 2015 mitigation strategies were not given a priority level of "high", "medium", or "low", as they are in the 2023 plan. The 2015 strategies were simply listed under the "top five" natural hazards priority areas of Flooding, Coastal and Shoreline Erosion, Wildfire, Severe Winter Weather and High Winds.

Resources to Assist with Implementing the Strategies

To assist with the funding of the proposed natural hazards mitigation strategies, a "Resources Table" of potential financial assistance entities and programs to help fund the implementation projects of the Plan is provided. Other organizational resources are also provided to assist with education, outreach, and capacity efforts. Each potential resource is assigned a letter code, and the appropriate letters are listed in the "Resources" column of the Strategies Table.

The Resources Table and the Mitigation Strategies table are provided on the following pages.

Resources Table for Benzie County HM Strategies

ID	Resource	Description	Hazard Type	Website
A	Benzie County staff	Benzie County staff as appropriate	All hazards	https://www.benzieco.net/
B	Local government staff	All local units of government - employees, elected and appointed officials	All hazards	https://www.benzieco.net/residents_visitors/links/index.php
C	Local Emergency Services and Fire Departments	Almira Township Fire & EMS; Benzie County Central Dispatch; Benzie County EMS; Benzie County Sheriff's Office; Benzonia Township Fire; City of Frankfort Fire and Police Departments; Homestead Township Fire Department; Inland Township Fire Dept.; Thompsonville Fire & Rescue; USGG Station Frankfort, Sleeping Bear Dunes National Lakeshore Office (in Empire, Leelanau Township); MDNR Customer Service Center (in Grand Traverse County)	Severe winter weather; Thunderstorm, High Winds, Hail, Tornado, Lightning; Wildfire; Flooding; Extreme Temperatures; Public Health Emergency; Shoreline Hazards; Dangerous Currents	
D	Benzie Senior Resources	Benzie Senior Resources is a private, non-profit organization that provides programs and services for residents of Benzie County, Michigan who are age 60 and older. Services fall into the categories of Home Services, Health & Safety, Meals & Food, Social Connections, and Support Services.	Severe winter weather; Thunderstorm, High Winds, Hail, Tornado, Lightning; Flooding; Extreme Temperatures; Public Health Emergency	https://benzieseniorresources.org/
E	Benzie-Leelanau District Health Dept.	Provide programs and services such as: immunizations; community clinics; school health services; well and septic system inspections and permits; education about cleaning, monitoring and maintaining septic systems; septic or well repair financial assistance, the inspection and licensing of food service establishments, and emergency scenario preparedness and response training.	Severe winter weather; Thunderstorm, High Winds, Hail, Tornado, Lightning; Flooding; Extreme Temperatures; Public Health Emergency	https://www.bldhd.org/
F	Northern Michigan Community Action Association (NMCAA)	Weatherization Assistance Program and Emergency Home Repair Program for low- to moderate-income households. Provides food distribution via the following USDA programs: monthly food package to low-income senior citizens via the Commodity Supplemental Food Program (CSFP), and The Emergency Food Assistance Program (TEFAP) to low-income persons through a quarterly distribution.	Severe winter weather; Thunderstorm, High Winds, Hail, Tornado, Lightning; Flooding; Extreme Temperatures; Public Health Emergency	https://www.nmcaa.net
G	"MI HOPE" Grants (Michigan Housing Opportunities Promoting Energy Efficiency)	Program for up to \$25K to repair or replace roofs, doors, windows, insulation, heating/cooling systems, water heaters, security lighting, Energy Star appliances and electrical systems for eligible low-income residents.	Severe winter weather; Thunderstorm, High Winds, Hail, Tornado, Lightning; Flooding; Extreme Temperatures; Public Health Emergency	www.michigan.gov/mi-hope
H	Grand Traverse Regional Community Foundation	GTRCF supports a variety of community need areas, including youth, arts and culture, education, environment, and health and human services. We do this by promoting giving, engaging in collaborative leadership, supporting nonprofit organizations through meaningful grants and local students through scholarships, and building endowments that make a lasting impact for generations to come. Service area includes Antrim, Benzie, Grand Traverse, Kalkaska, and Leelanau Counties.	Invasive Species, Flooding, Extreme Temperatures, Public Health Emergency	https://www.gtrcf.org/
I	Grand Traverse Regional Land Conservancy	We work to educate, raise awareness and provide appropriate support throughout the Benzie and Northern Manistee Counties area for programs related to watershed issues, water levels, aquatic and shoreline stewardship, fish & wildlife, and recreational opportunities. We are committed to assisting in developing solutions to mutual watershed-related problems along with local, State and Federal governmental units.	Flooding, Invasive Species, Coastal Hazards, Public Health Emergency, Drought, Extreme Heat	https://www.gtrlc.org/
J	Groundwork Center for Resilient Communities	With roots firmly embedded in the pro-health, pro-environment, and pro-economy principles of a local food system, the Groundwork Food and Farming team creates markets for local farmers, and helps connect locally grown food to school children, food pantry clients and families across the state.	Public Health Emergency	https://www.groundworkcenter.org/food-farming/
K	Midwest Agriculture Climate Team	MAC-T members are Extension specialists and state climatologists from many of the states represented in the Midwest Climate Hub, and NOAA NWS climate and weather specialists. The goal of this team is to share expertise regionally, discuss impacts and opportunities as it relates to agriculture and outlooks, and maintain an open line of communication so when weather/climate events do occur, the Midwest agriculture community is set to respond. The team meets monthly during the growing season regularly, and as needed during the winter season.	Drought, Extreme Temperatures, Flooding, Severe Winter Weather, High Winds, Hail	https://www.climatehubs.usda.gov/hubs/midwest/topic/midwest-agriculture-climate-team-mac-t
L	NWS Climate Prediction Center	The U.S. Drought Monitor is a map released every Thursday, showing parts of the U.S. that are in drought. The map uses five classifications: abnormally dry (D0), showing areas that may be going into or are coming out of drought, and four levels of drought: moderate (D1), severe (D2), extreme (D3) and exceptional (D4).	Drought	https://www.cpc.ncep.noaa.gov/products/Drought/
M	National Fire Protection Association Firewise USA Program	Firewise USA Program: Each applicant must create a board/committee, complete a community wildfire risk assessment with a 3-year action plan to reduce ignition risk to homes, and complete annual educational and risk reduction actions identified in the plan.	Wildfire, Drought	https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Firewise-USA

N	National Fire Protection Association Community Wildfire Defense Grants	Communities can use these grants from the USFS in a variety of ways to reduce the wildfire risk to people and property. One key use is capacity building for wildfire mitigation. For example, communities can use the grants to support the implementation and enforcement of wildfire-related codes and standards; to train people to assess wildfire risk and implement effective mitigation measures; and to perform outreach to community members through programs like Firewise USA®. Communities that build these fundamentals—sound land use and building practices, a skilled workforce, and an educated public—will be better prepared for sustained and effective risk reduction and better equipped to take advantage of future federal grants that prioritize communities with codes in place.	Wildfire, Drought	https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire
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ID	Resource	Description	Hazard Type	Website
O	HMGP Post-Fire Assistance (PFA) grant program	This grant funds projects that make a community more resilient after a designated wildfire disaster. States and federally-recognized tribes affected by fires resulting in a Fire Management Assistance Grant (FMAG) declaration on or after October 5, 2018, are eligible to apply.	Wildfire, Drought	https://www.fema.gov/grants/mitigation/post-fire
P	Consumer's Energy Utility Services	Consumers Energy provides electrical and natural gas utility services. Energy through renewable energy sources is available. A power outage map is available to track outage locations.	All hazards except invasive species.	https://www.consumersenergy.com/outagemap
Q	Cherryland Electric Cooperative	Provides electric service in Benzie County to the townships of Almira, Colfax, Homestead, Inland, Weldon, and Joyfield. Their website also includes information on renewable energy programs and an interactive outage map.	All hazards except invasive species.	https://cherrylandelectric.coop/
R	Connected Nation Michigan	Connected Nation develops and provides the tools, resources, and methods that help states and communities create and implement solutions to their broadband and digital technology gaps. They assess and plan for the expansion of broadband access, adoption, and use. They empower people with technology skills and resources to improve their quality of life, and we develop public-private partnerships to bring technology access to targeted geographies and population.	All hazards except invasive species.	https://connectednation.org/michigan/
S	Great Lakes Shoreviewer Tool	View aerial imagery of Lake MI shoreline and associated risk levels for coastline, infrastructure/roads, and buildings.	Shoreline flooding and erosion	http://www.greatlakesshoreviewer.org/
T	Northwest Lower MI Coastal Resilience Atlas	Mapped coastal flooding and coastal erosion based on three future climate scenarios for communities adjoining Lake MI; areas of the shoreline population, by census tract, that are most vulnerable to extreme heat events.	Shoreline flooding and erosion, Extreme Heat	http://www.resilientmichigan.org/nw_atlas.asp
U	State-designated High Risk Erosion Areas: programs and maps	High risk erosion areas are those shorelands of the Great Lakes where recession of the landward edge of active erosion has been occurring at a long-term average rate of one foot or more per year, over a minimum period of 15 years.	Shoreline erosion	https://www.michigan.gov/egle/about/organization/water-resources/shoreland-management/high-risk-erosion-areas
V	State-designated Critical Dune Areas	Michigan's critical dune program protects the dune resource using alternative construction techniques to reduce the impacts of development on dunes and protects dune vegetation essential to dune preservation and stability. Earthmoving, vegetation removal, and construction activities within a critical dune area are regulated through a permit program.	Shoreline erosion	https://Michigan.gov/CriticalDunes
W	Michigan EGLE's Coastal Zone Management Program	A plethora of resources to improve coastal and climate resiliency through both planning and best management projects.	Shoreline flooding and erosion	https://www.michigan.gov/egle/about/organization/water-resources/coastal-management
X	Resilient Lakeshore Heritage Program	This grant program is administered by the Michigan State Historic Preservation Office. Funding for the program is provided by the Paul Bruhn Historic Revitalization Grant from the National Park Service to support the preservation of historic buildings in rural communities located along the Great Lakes statewide.	Shoreline flooding and erosion	
Y	Great Lakes Water Safety Consortium	A nonprofit community of BEST practice, connecting and serving safety experts & water enthusiasts, educating the public on safer ways to enjoy the water, and encouraging leaders to take bold action to make their shoreline safer for residents and visitors.	Coastal Hazards - dangerous currents	https://www.greatlakeswatersafety.org/
Z	EGLE's Wetlands Map Viewer	The WMV application was created for the Department of Environment, Great Lakes, and Energy to provide the public with quick and easy access to wetland spatial data.	Flooding, Drought, Extreme Temperatures	https://www.mcqi.state.mi.us/wetlands/mcqiMap.html

ID	Resource	Description	Hazard Type	Website
AA	FEMA Floodplain Management Resources for Local Government Officials	How to participate with the NFIP and tools and resources to provide higher standards for floodplain management.	Inland and coastal flooding	https://www.fema.gov/floodplain-management/manage-risk/local
BB	FEMA Flood Mitigation Assistance (FMA) Grant Program	FMA is a non-disaster, competitive grant program that provides funding to states, local communities, federally recognized tribes. Funds can be used for projects that reduce or eliminate the risk of repetitive flood damage to buildings insured by the National Flood Insurance Program. <ul style="list-style-type: none"> • \$800 million available in funding for FY22 • Application Period: September 30, 2022, to January 27, 2023 • Period of Performance: 3 Years • Cost-share: 25% non-federal • Severe Repetitive Loss (up to 100% federal) • Repetitive Loss (up to 90% federal) • Priorities are set each fiscal year 	Inland and coastal flooding	https://www.fema.gov/grants/mitigation/floods
CC	FEMA Building Resilient Infrastructure and Communities (BRIC) Grant Program	BRIC is a non-disaster grant program, providing funds on an annual basis for hazard mitigation planning and the implementation of mitigation projects prior to a disaster. The BRIC program guiding principles are supporting communities through capability- and capacity-building; encouraging and enabling innovation; promoting partnerships; enabling large projects; maintaining flexibility; and providing consistency. Funding has doubled for BRIC to \$2.295 billion for FY21. <ul style="list-style-type: none"> • Application Period: September 30, 2022 to January 27, 2023 • Period of Performance: 3 year from start date on Recipient's federal award • Cost-share: 25% non-federal • Economically disadvantaged rural communities are eligible for 10% non-federal • Priorities are set each fiscal year 	All hazards	https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities
DD	FEMA Hazard Mitigation Grant Program (HGMP)	HMGP is a post-disaster grant program, where funding is only made available under a Presidential major disaster declaration, in the areas of the State requested by the Governor. Federally-recognized tribes may also submit a request for a Presidential major disaster declaration within their impacted areas.	All hazards	https://www.fema.gov/grants/mitigation/hazard-mitigation
EE	Great Lakes Stream Crossing Inventory	Previously, individual inventories were conducted by partnership agencies, watershed organizations, and road agencies but were not readily accessible to stakeholders and did not contain comparable information. The newly developed protocol and datasheet are intended to promote consistent data collection, selection criteria for improvement projects, and selection of appropriate Best Management Practices for each project to benefit all stakeholders. Information gathered on the datasheet can and has been used to prioritize structure replacement and successfully seek funding.	Flooding & Erosion	https://great-lakes-stream-crossing-inventory-michigan.hub.arcgis.com/
FF	Conservation Resource Alliance	Current projects include: Wild Roots, a cost-share program offering native plants to property owners at a greatly reduced rate; and The River Care Program, which ensures that natural resource professionals maintain a consistent and prioritized action plan for each river in the organization's region. River Care professionals not only find and repair physical problems before they become worse, they also team with local agencies, residents, and interest group representatives for fact-based conversations. These cross-functional teams can speak openly and affect change in an agile, efficient and transparent way. CRA works in the 10-county northwest MI region, along with the southerly adjoining counties of Mason, Lake, Osceola, Oceana and Newaygo.	Flooding & Erosion; Invasive Species; Drought; Extreme Heat; Public Health Emergency	https://www.rivercare.org/
GG	State of MI: Resources and Best Practices to Prevent and Manage Invasive Species	Prevention tips and action steps to control or remove invasive species.	Invasive Species	https://www.michigan.gov/invasives/take-action
HH	EGLE's "NotMISpecies" webinar series	This webinar series explores how agencies, universities and locally led organizations are working together to protect Michigan's natural resources through the Michigan Invasive Species Program. If you are concerned about the impacts of invasive species or interested in the techniques used to control them, join us as we examine species-specific actions, innovations in research and technology, and programs designed to help communities prevent and manage harmful invasive species.	Invasive Species	https://www.michigan.gov/invasives/take-action
II	Michigan Invasive Species Grant Program	The Departments of Natural Resources, Environmental Quality and Agriculture and Rural Development work together to address strategic issues of prevention, detection, eradication, and control for both terrestrial and aquatic invasive species in Michigan. This program is designed to address strategic issues of prevention, detection, eradication and control for both terrestrial invasive species (TIS) and aquatic invasive species (AIS) in Michigan.	Invasive Species	www.michigan.gov/invasives/grants/misgp
JJ	Clean Boats, Clean Waters Program	Funding from the Michigan Department of Environment, Great Lakes, and Energy and the Great Lakes Restoration Initiative has enabled Clean Boats, Clean Waters to grow into a comprehensive aquatic invasive species boater outreach program. The program's mission is to prevent new aquatic invasive species introductions and limit their dispersal from water recreation activities through outreach and engagement. The program promotes understanding of boat cleaning practices and regulations through the distribution of educational materials, an online resource library, boat washing demonstrations, grants and partnerships.	Invasive Species	www.canr.msu.edu/clean_boats_clean_waters/index
KK	Michigan State University Extension (MSUE)	Resources available for: training elected and appointed officials, agriculture and food support programs, and natural resources protections.	Inland flooding, shoreline erosion; Invasive Species; Public Health Emergency	https://www.canr.msu.edu/outreach/
LL	MSUE's Michigan Inland Lakes Partnership	The purpose of the Michigan Inland Lakes Partnership (Partnership) is to engage state and local agencies, Native American Nations, outreach institutions (universities and other educational institutions), non-governmental organizations (NGOs), businesses, industries and citizens in a collaborative effort to ensure the quality, sustainability and ecological diversity of lakes, while considering society's needs. The Partnership will promote communication and cooperation between partners, communities and citizens interested in the management of Michigan's inland lakes, educating leaders, and strengthening stewardship efforts.	Inland flooding, shoreline erosion; Invasive Species	https://www.canr.msu.edu/michiganlakes/convention/

ID	Resource	Description	Hazard Type	Website
MM	USDA Natural Resources Conservation Service (NRCS)	The NRCS helps America's farmers, ranchers, and landowners conserve our nation's resources through voluntary programs and science-based solutions.	Drought; Extreme Temperatures; Invasive Species; Public Health Emergency	https://www.nrcs.usda.gov/
NN	Benzie Conservation District	The District's purpose is to foster the best use of land for the present and future benefits of the community, based on the land's capabilities and landowner's goals. Combating soil erosion, managing surface and groundwater quality and promoting the maintenance of the lands related resources and the aesthetic values are vital to the community's long range economic well being, from food and timber production to natural resources related industries and tourism. To these ends, the District strives to be a "gateway" to resource management information and service providers, so that citizens may manage their lands for a healthier Benzie County. District activities include cooperation in implementing federal, state, and local government programs, as well as other independent programs, such as conservation awareness, farmland preservation, forestry, and wildlife habitat enhancement.	Flooding, Shoreline Erosion; Invasive Species; Wildfire; Drought	https://www.benziecd.org/
OO	Northwest Michigan Invasive Species Network	A Cooperative Invasive Species Management Area (CISMA) serving Benzie, Grand Traverse, Leelanau & Manistee counties to manage populations of invasive species that threaten northwest Michigan's high-quality natural areas through terrestrial invasive plant management and outreach.	Invasive Species	https://www.habitatmatters.org/
PP	Crystal Lake Watershed Association	CLWA is a nonprofit (501c3) organization of concerned citizens committed to protecting the beauty and water quality of Crystal Lake and its surrounding environment. It engages in monitoring, education, and advocacy on behalf of the broad community for whom Crystal Lake is a vital economic, recreational, and aesthetic resource.	Flooding, Invasive Species, Public Health Emergency, Drought	https://crystallakewatershed.org/
QQ	Lower Herring Lake Association	The Lower Herring Lake Association is an organization committed to helping maintain the natural beauty, water quality and recreational opportunities in our watersheds and those of the surrounding area. They work to educate, raise awareness and provide appropriate support throughout the Benzie and Northern Manistee Counties area for programs related to watershed issues, water levels, aquatic and shoreline stewardship, fish & wildlife, and recreational opportunities. They are committed to assisting in developing solutions to mutual watershed-related problems along with local, State and Federal governmental units.	Flooding, Invasive Species, Public Health Emergency, Drought	https://www.lowerherringlakeassociation.org/
RR	Little Platte Lake Association	Their mission is to preserve the lake and its environs. Activities include aquatic invasive species surveying, management, and education, along with regulating lake levels, fisheries management, and public education on lake stewardship practices.	Flooding, Invasive Species, Public Health Emergency, Drought	http://www.littleplattelake.org/
SS	Ann Lake Property Owners Association	The purpose of ALPOA is to: Preserve Ann Lake as a natural resource and recreational area. Promote the education of all users of the lake about water quality and water safety on Ann Lake and the Platte River Watershed. Support issues which concern the welfare of Ann Lake. Promote the best interests of the membership in fiscal and civic matters.	Flooding, Invasive Species, Public Health Emergency, Drought	https://www.annlake.org/
TT	EPA's List of Federal Funding Sources for Green Infrastructure Projects		Extreme Heat, Flooding, Drought, Erosion	https://www.epa.gov/green-infrastructure/green-infrastructure-funding-opportunities

Rationale for Prioritizing the Strategies

The Benzie County Emergency Manager and Local Emergency Planning Committee considered factors like level of need, economic impact, ease of execution/level of effort, cost, and range of benefit (short term, long-term, small group/area, large group/area) when determining the level of priority for each strategy. In general, strategies were given either a high, medium, or low priority level based on the following rationale:

PRIORITY LEVEL	RATIONALE
HIGH	These strategies included critical infrastructure projects; they already had in place an enforcement standard; and had a high level of need and/or anticipated economic impact, future interoperability; and had a high probability of immediate benefit public health or safety if the hazard event were to occur.
MEDIUM	These strategies included education or planning efforts. The hazards addressed did not appear to have immediate impacts to public health or safety, but may have impacts to specific residents or visitors. If the action item pertained to an entity that was not at the table during discussion, we defaulted to “Medium” to respect that they may have a different interpretation of the priority which could not be identified at the current discussion.
LOW	Regarding foreseeable short- or long-term health and safety impacts (which may change within 5 years), the word “consider” was used in the action item. The probability of an event occurring in the geographic area is low, but not impossible, so it should be considered. The strategy’s priority level may also change based on natural events or time.

The key for the strategy types in the far right columns of the strategies table are as follows:

STRATEGY TYPES

1	Local Planning & Regulations
2	Building & Infrastructure Projects
3	Natural Systems Protection
4	Education & Awareness Efforts

BENZIE COUNTY HAZARD MITIGATION STRATEGIES		HAZARD TYPE										WHERE - Affected Locations or Groups	WHO - Responsible Parties (Lead entities are in bold font)	HOW - Resources	WHEN - Timeframe	PRIORITY LEVEL	STRATEGY TYPE			
		Severe Winter Weather	T-Storm, High Winds, Hail, Tornado, Lightning	Wildfire	Inland Flooding & Erosion	Coastal Flooding /Erosion, Dangerous Currents	Extreme Temperatures	Drought	Invasive Species	Public Health Emergency	1						2	3	4	
Awareness and Preparation	1	Incorporate the County Hazard Mitigation Plan's strategies into elements of County and local master plans.	X	X	X	X	X	X	X	X	X	Countywide	Benzie County; All local jurisdictions	A, B	Ongoing	High	X	X	X	X
	2	Continue to pursue interdepartmental cooperation and coordination of police, fire, rescue and EMS services to achieve community-wide coverage availability.	X	X	X	X	X	X	X	X	X	Countywide	Local Fire/EMS, County Sheriff, County EM	C	Ongoing	High	X			
	3	Continue and strengthen partnerships amongst local government agencies, businesses and non-profits to provide public education on hazard scenario preparedness and prevention.	X	X	X	X	X	X	X	X	X	Countywide			Ongoing	Med	X	X	X	X
	3a	Continue to inform the public about emergency events and shelter sites via utilization and promotion of the CodeRED mass notification system, NWS mobile and/or radio notifications, and social media.	X	X	X	X	X	X	X	X	X	Countywide	County EM; NWS	A, B	Ongoing	Med				X
	3b	Continue the preparedness practice of conducting the annual statewide tornado drill.		X								Countywide	County EM	A	Annually	Med	X			X
	3c	Continue to promote participation in Storm Spotter Training via partnership with the NWS.	X	X	X	X	X	X	X	X	X	Countywide	County EM	A, B, C	Annually	Med				X
	3d	Educate developers and property owners about best building practices to mitigate impacts of natural hazards	X	X	X	X	X	X	X	X	X	Countywide	Benzie County Building Dept.	A	Ongoing/ As needed	Med		X		X
	3e	Continue to share the County Road Commission's snow removal plan with communities	X									Countywide	Benzie County Road Commission	A	Ongoing	Med	X			X
	3f	Utilize resources offered by the Great Lakes Water Safety Consortium to increase beach safety awareness and incident prevention at public beaches		X			X					Lake Twp., Crystal Lake Twp., the City of Frankfort, the Village of Elberta, Gilmore Twp. and Blaine Twp.	Benzie County; GTRLC; NPS; Local jurisdictions	Y	Ongoing	Med				X
	3g	Per page 6 of the 2021 City of Frankfort Master Plan: define, improve and regulate the Lake Michigan Beach area for the safety and wellbeing of the public.		X			X					City of Frankfort	City of Frankfort	B, Y; City of Frankfort's Parks and Rec budget; MDNR rec grants	0-3 years	Med	X	X		
	3h	Per page 61 of the Village of Elberta's 2018 Master Plan: support ongoing efforts and explore opportunities to maintain, enhance, and improve the environment, accessibility, and amenities at the Village Beach.		X			X					Village of Elberta	Village of Elberta	B, Y; Village budget; MDNR rec grants	Ongoing; MNRTF Grant awarded to the Village in 2021	Med	X	X		
	3i	Investigate opportunities for joint scenario planning/training with the power utility companies and Benzie County Central Dispatch to help restore power more effectively.	X	X	X	X	X	X				Countywide	County EM/ 911 Dispatch	A, P, Q	3-5 years	Med	X			
	3j	Identify communities that have an interest in becoming a recognized Firewise USA® community. Each applicant must create a board/committee, complete a community wildfire risk assessment with three-year action plan to reduce ignition risk to homes, and complete annual educational and risk reduction actions identified in the plan.			X							Village of Lake Ann, Almira Twp.; Lake MI shoreline areas in Lake Twp., Crystal Lake Twp and Blaine Twp.	County EM., Local Fire Depts./First Responders, MDNR, NPS	C, M, N	0-5 years	Med	X			X
3k	Work with campgrounds to create areas of refuge involving imminent fire dangers at campgrounds, and establish evacuation routes.		X	X	X						Townships of Almira, Platte, Lake, Crystal Lake, Blaine, Benzonia, Weldon, Colfax, Inland and Homestead.	County EM., Local Fire Depts./First Responders, MDNR, NPS	A, C, O	0-5 years	Med	X			X	

BENZIE COUNTY HAZARD MITIGATION STRATEGIES		HAZARD TYPE								WHERE - Affected Locations or Groups	WHO - Responsible Parties (Lead entities are in bold font)	HOW - Resources	WHEN - Timeframe	PRIORITY LEVEL	STRATEGY TYPE						
		Severe Winter Weather	T-Storm, High Winds, Hail, Tornado, Lightning	Wildfire	Inland Flooding & Erosion	Coastal Flooding /Erosion, Dangerous Currents	Extreme Temperatures	Drought	Invasive Species						Public Health Emergency	1	2	3	4		
Awareness and Preparation	3l	Engage in public education efforts to improve neighboring resident awareness and understanding of National Park Service's wildfire management practices. The NPS maintains their "no extinguish" policy on wildfires on the Sleeping Bear Dunes National Lakeshore and NPS lands. NPS also continues to manage the park's wildfire risk by utilizing their wildfire and prescribed fire management programs.				X						Lake Township, Platte Township	NPS, EM, local fire depts., Lake Twp. government, Platte Twp. government	NPS - SBD budget	Ongoing/ As Needed	Med				X	
	3m	Reference LIAA's Northwest Michigan Coastal Resilience Atlas to identify and promote awareness of the impacts to public and private properties from "lucky", "expected" and "perfect storm" coastal flooding scenarios, as well as the predicted advancement of coastal recession.						X				Lake Twp. (particularly the Betsie Point Lighthouse and the Crystal Downs/ Michabou Shores residential developments), City of Frankfort, Village of Elberta, & Gilmore Crystal Lake & Blaine	County EM, Local Governments	B, T, VV	3-10 years; depends on lake levels	Med				X	
	4	Evaluate additional designated sites to temporarily store cleanup debris from downed trees after storm events.		X	X		X					Countywide	Community DPWs, EM, RC	A, B, C, P, Q	0-5 years	Low	X				
	5	Continue to develop Emergency Action Plans as needed for large public events.		X	X	X	X	X			X	Countywide	County EM	A	As needed	Med	X				
	6	Continue Benzie Senior Resources' provision of discounted snow plowing/home repair services, heating/utility/food delivery assistance to qualified seniors, and the "telephone reassurance" call service to check on homebound seniors.		X	X	X	X	X			X	Countywide	Benzie Senior Resources	D; BSR Budget	Ongoing	Med	X				
	7	Share LIAA's NW MI Coastal Resilience Atlas - Ch. 5 for maps of areas along the Lake MI shoreline where vulnerable populations are most at risk from extreme heat events - with Benzie Senior Resources, local charities/non-profits, emergency responders and local governments.							X			Lake Township, Crystal Lake Twp, City of Frankfort, Village of Elberta, Gilmore Twp., Blaine Twp.	County EM	A, B, C, D	0-3 years	Med				X	
	8	Ensure that County residents, particularly vulnerable populations, have access to healthy, affordable food options.													Ongoing	Med					
	8a	Create community gardens in urban locations and/or school locations to promote learning about growing local food, native pollinating plants, and provide access to fresh produce.								X	X	X	City of Frankfort; Villages	City of Frankfort; Villages; School Districts	H, J, KK	0 - 5 years	Med		X	X	X
	8b	Continue to provide and improve food assistance programs and emergency food programs to help communities prepare for unanticipated pandemics, but also increase year-round food accessibility.		X	X	X	X				X	Countywide	Benzie Senior Services; local food pantries; School Districts (school meal programs)	D, F	Ongoing	Med	X				
	8c	Food rescue programs, involving public/private partnerships between restaurants, hotels and other venues of large food production, can partner with local food pantries to make healthy food more widely available.		X	X	X	X				X	Countywide	Benzie Senior Services; local food pantries; School Districts (school meal programs)	D, H, J, KK	As needed	Med	X		X	X	
	9	Continue collaboration amongst the Benzie-Leelanau District Health Department with federal, state, and local partners to coordinate the responses pertaining to public health (i.e., COVID-19)					X				X	Countywide	County EM; BLDHD	A, B, E	Ongoing	High	X	X	X	X	
10	Continue to coordinate with the MDHHS for guidance via the State Pandemic Plan and information about new or emerging disease threats.									X	Countywide	County EM; BLDHD	E	Ongoing	High	X			X		
11	Maintain proper levels of PPE for healthcare workers and first responders, with additional supplies for long-term care facilities.									X	Countywide	County EM; local fire/EMS; Senior living facilities	A - E	As needed	Med	X					

BENZIE COUNTY HAZARD MITIGATION STRATEGIES		HAZARD TYPE								WHERE - Affected Locations or Groups	WHO - Responsible Parties (Lead entities are in bold font)	HOW - Resources	WHEN - Timeframe	PRIORITY LEVEL	STRATEGY TYPE					
		Severe Winter Weather	T-Storm, High Winds, Hail, Tornado, Lightning	Wildfire	Inland Flooding & Erosion	Coastal Flooding /Erosion, Dangerous Currents	Extreme Temperatures	Drought	Invasive Species						Public Health Emergency	1	2	3	4	
Awareness and Preparation	12	Identify flood-prone areas and any areas that have reported repetitive loss damages due to flooding on FIRMs. Pursue FEMA hazard mitigation assistance grants related to flood mitigation, such as innovative stormwater management solutions, property acquisition, structure demolition or relocation, dry flood proofing, structure elevation, or project scoping (engineering, environmental, feasibility, and/or benefit-cost analysis).					X	X				Almira Twp., Blaine Twp., Gilmore Twp., Village of Elberta, City of Frankfort, Crystal Lake Twp, and Lake Twp.	County EM, MI EGLE, local governments		As needed	Low	X	X	X	X
	12a	Reference LIAA's NW MI Coastal Resilience Atlas for a depiction of structures located within predicted storm scenarios and blufflines, as well as floodplain areas on current FIRMs.					X	X				Almira Twp., Blaine Twp., Gilmore Twp., Village of Elberta, City of Frankfort, Crystal Lake Twp, and Lake Twp.	County EM, Almira Twp., Blaine Twp., Gilmore Twp., Village of Elberta, City of Frankfort, Crystal Lake Twp, and Lake Twp.	S, T, AA	As needed	Low	X			X
	12b	Bluff erosion along Lake MI in Crystal Lake Twp. has impacted properties at Golf Lane & Ness Rds.						X				Crystal Lake Township	County EM, Crystal Lake Township	B, S-W, VV	0-2 years	Low	X	X		X
	12c	Pinewoods Subdivision off of Lake Ann Road has flooding issues due to a high ground water table.					X					Almira Township	County EM, Almira Township	A, B, AA-DD	As needed	Low	X	X	X	X
	13	Provide outreach to communities that do not currently participate in the National Flood Insurance Program about the benefits of doing so. (The NFIP provides flood insurance to property owners, renters and businesses, and having this coverage helps them recover faster when floodwaters recede. There is no cost for communities to participate.)					X	X				Townships of Inland, Colfax, Weldon, Joyfield, Blaine, Homestead, Benzonia, and Platte; Villages of Lake Ann, Honor, Benzonia, Elberta, and Beulah	County EM	S, T, AA	0-5 years	Low	X			X
	13a	Platte River Watershed communities					X	X				Villages of Lake Ann, and Honor; Townships of Inland, Homestead, Benzonia, and Platte		A, B, AA	0-5 years	Low	X			X
	13b	Blueberry Creek/Trout Pond area (off of US 31 west of Honor)					X	X				Benzonia Township		A, B, AA	0-5 years	Low	X			X
	13c	Betsie River Watershed (portions)					X	X				Townships of Inland, Colfax, Weldon, Joyfield, Benzonia; Villages of Benzonia, Beulah, Thompsonville		A, B, AA	0-5 years	Low	X			X
	13d	Crystal Lake Watershed (portions)					X	X				Villages of Beulah and Benzonia, Benzonia Twp.		A, B, AA	0-5 years	Low	X			X
	13e	Village of Elberta (have FIRMs issued for their community but is listed as not participating with NFIP; the Village intends to complete the correct local adoption process and inform FEMA and Benzie County Building Dept.)					X	X				Village of Elberta		A, B, AA	1 year	Low	X			X

BENZIE COUNTY HAZARD MITIGATION STRATEGIES		HAZARD TYPE								WHERE - Affected Locations or Groups	WHO - Responsible Parties (Lead entities are in bold font)	HOW - Resources	WHEN - Timeframe	PRIORITY LEVEL	STRATEGY TYPE					
		Severe Winter Weather	T-Storm, High Winds, Hail, Tornado, Lightning	Wildfire	Inland Flooding & Erosion	Coastal Flooding /Erosion, Dangerous Currents	Extreme Temperatures	Drought	Invasive Species						Public Health Emergency	1	2	3	4	
Awareness and Preparation	14	Promote education about the benefits of natural shoreline and streambank restoration; identify priority shoreline and streambank restoration sites.				X	X					Countywide	BCD, GTRLC	I, W, LL, NN, PP-SS, VV	Ongoing	Low	X	X	X	
	14a	Continue efforts by the Lower Herring Lake Association Board to promote natural shoreline restoration/ BMPs.				X				X		Blaine Township	Lower Herring Lake Association	NN, QQ	Ongoing	Low	X	X	X	
	15	Consider developing a drought communication plan and early warning system to facilitate timely communication of local drought conditions/outlook to officials, emergency responders, and the public.								X		Countywide	County EM, BCD/USDA-NRCS	K, L, MM	As needed	Low	X		X	
	16	Consider establishing an irrigation time/scheduling program or process so that all agricultural land gets the required amount of water. Through incremental timing, each area is irrigated at different times so that all water is not consumed at the same time. Spacing usage may also help with recharge of groundwater.								X		Countywide	County EM, BCD/USDA-NRCS	K, L, MM	As needed	Low	X			
	17	Consider implementing mandatory water conservation measures during drought emergencies, such as: •Developing an ordinance to restrict the use of public water resources for non-essential usage, such as landscaping, washing cars, filling swimming pools •Adopting ordinances to prioritize or control water use, esp. for emergency situations								X		Countywide	USDA-NRCS, local governments	B, K, L, MM	As needed	Low	X			
	18	Continue collaboration with MSUE to provide information on agriculture management and best practices in drought situations.								X		Countywide	County EM, MSUE, BCD/USDA-NRCS	KK, MM, NN	Ongoing	Low			X	X
Shelters	19	Support the provision of free technical assistance (through the Benzie Conservation District) such as the USDA-NRCS' Conservation Stewardship Program, resource assessment and monitoring, and determination of financial assistance for local farmers, ranchers and forest managers in the wake of a natural disaster.		X	X	X	X		X	X	X	Countywide	BCD/USDA-NRCS	NN, QQ	Ongoing	Low	X		X	X
	20	Increase collaboration between the Benzie County Office of Emergency Management with local communities and non-profits to ensure that adequate emergency shelters are available to the public, particularly for heating/cooling during extreme temperature days.		X	X	X	X	X			X	Countywide	County EM	A, B, C	Ongoing	Med	X			
	21	Provide local governments or public/private organizations information on funding sources for the installation of generators to enhance capabilities of emergency shelter locations.		X	X	X	X		X		X	Countywide; Blaine and Crystal Lake Townships have expressed the need for generators	County EM; Local Fire Depts.; Senior Centers; Municipal Offices	A, B, CC, DD	0-5 years	Med		X		X
	22	Evaluate the feasibility and need to construct storm shelters, such as concrete "safe rooms", at campgrounds, recreation areas, and mobile/modular home communities.		X	X	X	X		X			See hazard map for locations of campgrounds and mobile homes	County Building Dept., EM; local govts; private and public campground managers	A, B, CC, DD	0-10 years	Low		X		
	23	Continue to establish areas of refuge and evacuation routes from campgrounds, recreation areas, and other sites of large outdoor events.		X	X	X	X		X		X	See hazard map for locations of campgrounds and mobile homes	County EM; private and public campground managers; local fire depts.	A, B, C	Ongoing	Med	X	X		X
	24	Investigate the need to create signage in public parks/beaches that illustrate the nearest emergency shelter locations.		X	X	X	X		X			Countywide	County/local governments; MDNR; NPS	A, B, Y	0-5 years	Low				X
25	Maintain procedures to create quarantine areas in group living quarters, such as overnight shelters or assisted living facilities.									X	Countywide	Maples ALF; POM Hospital; other ALFs, shelters	A, E	Ongoing	Med	X				

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		Severe Winter Weather	T-Storm, High Winds, Hail, Tornado, Lightning	Wildfire	Inland Flooding & Erosion	Coastal Flooding /Erosion, Dangerous Currents	Extreme Temperatures	Drought	Invasive Species	Public Health Emergency	1						2	3	4	
26	Continue building code enforcement for new construction by following State of MI Building Code and applicable local zoning ordinances. Note: State code is based on International Code Council (ICC) with reference to the National Fire Protection Act (NFPA).	X	X	X	X	X	X				X	Countywide	Benzie County Building Dept.	A, B	Ongoing	High	X		X	
26a	Continue enforcement of applicable soil erosion statues, building codes and EGLE permitting requirements for new construction by verifying floodplains, EGLE-designated Critical Dune areas and/or High Risk Erosion Areas relative to new construction or site modification (assistance with this provided by Benzie Conservation District)				X	X						Countywide	County Building Dept., EGLE, BCD	A, B, S, U, V	Ongoing	High	X		X	
26b	Continue to enforce the Village of Benzonia's ordinance for steep slope protection (development is restricted on slopes greater than or equal to 15%) and removal of existing vegetation. Reconsider the fines for violation and pursue opportunities to provide education and awareness to property owners about issues with development on steep slopes.				X							Village of Benzonia	Village of Benzonia	Village fund	Ongoing	Med	X		X	X
26c	Per the Village of Elberta's 2018 Master Plan, protect development and preserve coastal features by siting new development away from areas prone to coastal flooding and erosion.				X							Village of Elberta	Village of Elberta	A, B, S-W, Z, AA	Ongoing	Med	X			
27	Suggest structural modifications (such as foundation anchoring and tie downs for mobile/modular homes) and tree management to reduce damage to structures from high winds.		X									Countywide	Benzie County Building Dept.; Local Fire Depts.; County EM	A, C	As needed	Med				X
28	Continue to promote the availability of low-cost residential weatherization and home improvement programs.	X	X	X	X	X				X	Countywide	Benzie Senior Services; NMCAA	A, B, D, F, G	Ongoing	Low		X		X	
29	Evaluate the need/potential for a reduced-cost program to install air conditioning in the homes of low-income senior citizens.			X		X				X	Countywide	Benzie Senior Services	A, C, H, G	3-5 years	Med		X			
30	Improve ventilation techniques in areas, facilities, or vehicles that are prone to crowding or that may involve exposure to contagion or noxious atmospheres.										X	Countywide	Local and county governments, schools, private venues.	A, B, E, H	As needed	Med	X	X		
31	Continue to pursue opportunities for brownfield and blight clean-up activities, including demolition and clearance of vacant, condemned structures, to remove actual and potential sources of land, water and air contamination and potential fire hazards.	X	X	X	X	X					X	Countywide	Benzie County Economic Development and Brownfield Redevelopment Authority; Local Governments	A, B	Ongoing	Med	X	X	X	X
32	Continue to enforce the Benzie County Septic Inspection and Property Transfer Ordinance to protect public health and prevent or minimize the degradation of groundwater and surface water quality from malfunctioning sewage treatment and disposal systems.				X	X					X	Countywide	Benzie-Leelanau Health Department	A, E	Ongoing	Med	X	X	X	

Buildings, Roads & Dams

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		Severe Winter Weather	T-Storm, High Winds, Hail, Tornado, Lightning	Wildfire	Inland Flooding & Erosion	Coastal Flooding /Erosion, Dangerous Currents	Extreme Temperatures	Drought	Invasive Species						Public Health Emergency	1	2	3	4		
Buildings, Roads & Dams	33	Continue maintenance of major dams in the county, with updated Emergency Response Plans on file and regular inspections completed by EGLE for dams with "High" or "Significant" downstream hazard potential.					X					X	Homestead Dam in Benzonia Township ("Significant" hazard potential)	MDNR Fisheries Division	A; MDNR Fisheries Division	3 years (next inspection due by end of 2026)	Med	X		X	X
	34	Continue efforts by the Lower Herring Lake Association Board to secure a five-year maintenance (excavation) permit filed jointly with EGLE and the USACE to ensure the Lake MI outlet can remain open to protect riparian shoreline and the property/homes from the ongoing blockages that occur, especially in winter.					X						Blaine Township	Lower Herring Lake Association	PP - their funding/staff	Ongoing	Med	X		X	
	35	Complete road infrastructure maintenance and improvements in areas of high flooding potential, such as upgrading aging stormwater abatement structures, or replacing undersized/aging culverts and bridges to improve river function and high volume streamflow.					X	X					Countywide	BCRC, MDOT, City, Villages, Townships	A, B, BB, CC	As needed and as transportation funding is available	High		X	X	
	35a	Beach erosion and road washouts on south side of Crystal Lake, at the end of Figg and Bellows Road; culvert/possible road washout at Thomas Rd., east of Bellows Rd.					X						Crystal Lake Township	Crystal Lake Twp.	A, B, BB, CC	5-10 years	High		X		
	35b	Lower Herring Lake flooding due to high Lake MI water levels in 2020, flooding yards/septic fields of homes along the lake and Herring Creek flooding near Buena Rd. Continue to impose temporary "no wake" zones on the lake when needed.					X						Blaine Township	Blaine Twp.	A, B, BB, CC	As needed	High		X		
	35c	Dirt road washouts on hilly roads, such as Weldon & Brownell; Valley Rd, N. of US 31					X						Homestead Township	BCRC	A, B, BB, CC	1-3 years	High		X		
	35d	Haze Road over the Platte River is due for rehabilitation of superstructure.					X						Homestead Township	BCRC	A, B, BB, CC	5+ years	High		X		
	35e	Dirt road washouts on north side of Crystal Lake on Hidden Hollow Drive and south side of Crystal Lake on Lake St. due to straight downward slopes. Washouts end up in ditches on trailways and in the lake. Install "green" stormwater management infrastructure.					X						Benzonia Township	BCRC	A, B, BB, CC	0-3 years, based on frequency and intensity of rain events	High		X	X	
	35f	Occasional high water/flooding along the North Branch Platte River and Gudemoos Road and along the north end of Little Platte Lake & Saffron Rd.					X						Platte Township	BCRC	A, B, BB, CC	5+ years	High		X		
	35g	Regular seasonal flooding issues with spring runoff/high ground water table along Betsie Valley Trail and other areas north of Main/Lindy Road. There is a culvert blocked under the railroad bed that holds the water back, causing flooding on roadways and possibly at the location of the new Dollar General store. This issue originates from a natural drain that runs into Thompsonville from Thurman Road in Colfax Twp. There are also seasonal water issues across Deer Track Trail toward the Betsie River with spring thaw/runoff and a high water table.					X						Village of Thompsonville; Colfax Twp.	Benzie County, MDNR, Village of Thompsonville, Colfax Twp.	A, B, BB, CC	0-5 years	High		X		
	35h	Replace undersized culverts to improve the form and function of the Platte River and mitigate flooding of developed areas in Benzonia Township and Homestead Twp. caused by ice jams.					X						Benzonia Twp. / Homestead Twp.	BCRC, Benzonia Twp. / Homestead Twp., MDNR	A, B, BB, CC, UU	0-10 years, as funding becomes available	High		X		
	35i	Replace undersized culverts with bridges to improve the form and function of the Betsie River and mitigate flooding at road crossings at Wallin Rd., Thompsonville Highway, and at road crossings north of Lindy Road caused by ice jams.					X						Colfax Twp., Village of Thompsonville, Weldon Twp.	BCRC; Village of Thompsonville, Colfax Twp., Weldon Twp.	A, B, BB, CC, UU	10+ years, as funding becomes available	High		X		
35j	Fewins Road over the Platte River is due for rehabilitation of superstructure and embankments.					X						Inland Township	BCRC	A, B, BB, CC	3-5 years	High		X			

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Buildings, Roads & Dams	35k	The CR-669 (Maple City Highway) double culvert over the Platte River will need a complete replacement in 10-15 years.					X					Inland Township	BCRC	A, B, BB, CC	10+ years, as funding becomes available	High		X		
	35l	The Lindy Road bridge over the Betsie River, just west of Haze Road in Weldon Township, is currently the most susceptible to failure and is due for replacement. The BCRC is pursuing funding for bridge rehabilitation.					X					Weldon Township	BCRC	A, B, BB, CC	3-5 years, possibly funded by bridge bundle fund request, TBA in October 2023	High		X		
	35m	The Haze Road bridge over the Betsie River in Weldon Township has been removed and will be permanently closed with abutments removed, as part of BCRC's most recent Bridge Bundling program funds.					X					Weldon Township	BCRC	A, B, BB, CC	0-3 years, possibly funded by bridge bundle fund request, to be announced in October 2023	Low		X		
	35n	Reynolds Road double culvert at the Betsie River, located north of Wallin Road in Colfax Twp., will be rebuilt as part of the BCRC's application for the State of MI Bridge Bundling program funds.					X					Colfax Township	BCRC	A, B, BB, CC	0-3 years, possibly funded by bridge bundle fund request, to be announced in October 2023	High		X		
	35o	Nostwick Rd. bridge crossing of Betsie River in Colfax Twp. is due for repair/replacement or re-route around crossing.					X					Colfax Township	BCRC	A, B, BB, CC	If there is leftover bridge bundle funding then immediately or 3-5 years	High		X		
	35p	Gorivan Road, located south of Heron/Mick Roads, floods sometimes along the east side of Upper Herring Lake. BCRC may choose to elevate the road with a few feet of fill from another ongoing road project. A complete rebuild of the road would require substantial funds.					X					Blaine Township	BCRC	A, B, BB, CC	10+ years	Low		X		
	36	Continue to regularly clean out plugged culverts (due to sediment deposits, beaver activity, invasive species, etc.)		X	X		X	X				X	Countywide	BCRC, MDOT, local governments (depends on the owner)	A, B	As needed	High	X		X

BENZIE COUNTY HAZARD MITIGATION STRATEGIES		HAZARD TYPE										WHERE - Affected Locations or Groups	WHO - Responsible Parties (Lead entities are in bold font)	HOW - Resources	WHEN - Timeframe	PRIORITY LEVEL	STRATEGY TYPE									
		Severe Winter Weather	T-Storm, High Winds, Hail, Tornado, Lightning	Wildfire	Inland Flooding & Erosion	Coastal Flooding /Erosion, Dangerous Currents	Extreme Temperatures	Drought	Invasive Species	Public Health Emergency	1						2	3	4							
Utilities & Technology	37	Continue work amongst the utility companies (Cherryland Electric, Consumers E.) to clear vegetation (particularly diseased or dead trees) along various road and utility right-of-ways to minimize power outages and road blockages from storm damage.		X	X		X	X				X					Countywide; Downed trees specifically noted as an issue along N. Pioneer Rd., south of Goose Rd. in Homestead Twp.	BCRC, MDOT, local fire, utility companies	P, Q	Ongoing	High	X		X		
	38	Continue to maintain effective communications practices between electric utility companies regarding power restoration. (County EM to share electrical outage maps on social media account.)		X	X	X	X		X								Countywide	Consumers Energy or Cherryland Electric; Benzie County EM	A, B, C, P, Q	Ongoing	High					X
	39	Promote opportunities to bury overhead utilities, such as during new construction or in areas regularly prone to power outages.		X	X	X			X								Countywide	Local government zoning; Consumers Energy or Cherryland Electric; Benzie County Building Dept.	B, P, Q	As needed	Low	X	X			
	40	Document occurrences of electrical interruptions during storms and collaborate with electric companies to improve the resiliency of the infrastructure in these areas.		X	X	X	X		X								Countywide	Citizen volunteers, Consumers Energy or Great Lakes Energy	B, P, Q	As needed	High	X				X
	41	Continue to maintain community water and/or sewer infrastructure at acceptable operating standards.					X						X				City of Frankfort, Villages of Elberta, Beulah, Honor, Thompsonville, and Benzonia	City of Frankfort, Villages of Elberta, Beulah, Honor, Thompsonville, and Benzonia	B	Ongoing	High	X		X		
	41a	Complete the major infrastructure projects (starting in the Spring of 2023) for the Village of Elberta: Replacing most of the service lines going into each home, replacing all of the circa 1935 water mains, and construction of a new well.					X						X				Village of Elberta	Village of Elberta	Village Funds	1-2 years	High		X			
	41b	Per the Village of Elberta 2017 Master Plan, plan for Village water, sewer and storm water drainage facilities to provide sufficient capacities needed to accommodate long-term needs.					X						X				Village of Elberta	Village of Elberta	Village Funds	Ongoing	High	X	X	X		
	41c	Install check valves on stormwater discharge locations in the City of Frankfort.					X						X				City of Frankfort	City of Frankfort	City funds	0-5 years	High		X	X		
	41d	Separate storm and sanitary sewer systems where applicable.		X	X		X	X					X				City of Frankfort, Villages of Elberta, Beulah, and Honor	City of Frankfort, Villages of Elberta, Beulah, and Honor	City or Village Funds; FEMA BRIC	As Needed	High	X	X	X		

BENZIE COUNTY HAZARD MITIGATION STRATEGIES		HAZARD TYPE								WHERE - Affected Locations or Groups	WHO - Responsible Parties (Lead entities are in bold font)	HOW - Resources	WHEN - Timeframe	PRIORITY LEVEL	STRATEGY TYPE						
		Severe Winter Weather	T-Storm, High Winds, Hail, Tornado, Lightning	Wildfire	Inland Flooding & Erosion	Coastal Flooding /Erosion, Dangerous Currents	Extreme Temperatures	Drought	Invasive Species						Public Health Emergency	1	2	3	4		
Utilities & Technology	41e	Identify the locations of where backup generators on wastewater pump chambers are needed to alleviate manual pumping/hauling in the event of a power outage, and apply for funding.	X	X		X	X					X	City of Frankfort, Villages of Beulah, Honor, Thompsonville, and Benzonia	City of Frankfort, Villages of Beulah, Honor, Thompsonville, and Benzonia	City or Village Funds; CC	As needed	High		X		
	41f	Continue to maintain the Village of Elberta's mobile back-up generator for use at the three water wells in case of a power outage, as well as a stationary generators at Well #1 and at the main Sanitary Sewer Lift Station at Lake St./M22.	X	X		X						X	Village of Elberta	Village of Elberta	Village Funds	Ongoing	High		X		
	42	Per the 2010 Village of Lake Ann Master Plan, Develop a stormwater management ordinance that requires stormwater BMPs including: <ul style="list-style-type: none"> • Eliminate direct stormwater discharge from village sewers & roads • Daylight village and road sewer pipe wherever possible • Install filter strips and other BMPs to filter discharges of contaminated runoff from roadway and village stormwater systems • Promote the use of rain gardens, rain barrels, cisterns or other stormwater collection devices. • Develop riparian setbacks standards • Set impervious surface limits for new development • Work with Benzie County and MDNR to develop residential septic system inspection and monitoring, assess groundwater conditions and develop water demand projections. • Conduct a study to evaluate the long-term impact of residential septic systems on water quality and conduct a cost-benefit analysis of constructing a sanitary sewer system. 										X	Village of Lake Ann	Village of Lake Ann	Village funds; BB - DD	Ongoing	Low	X	X	X	
	43	Per the 2020 Village of Benzonia Master Plan, continue to explore options to provide a sewer system, even if it is an alternative or unconventional arrangement.				X						X	Village of Benzonia	Village of Benzonia	B, CC	Ongoing	Med		X	X	
	43a	Continue evaluation of expanding the water/sewer service to out from the Village of Beulah to the Village of Benzonia and Benzonia Township, in an effort to mitigate ongoing issues with a high groundwater table affecting septic systems and water quality in the area.				X						X	Villages of Beulah and Benzonia, Benzonia Township	Villages of Beulah & Benzonia, Benzonia Township	B, CC	Ongoing	Med	X	X	X	
	44	Per the 2020 Inland Twp. Master Plan, encourage development of sewer and/or water systems necessary to prevent pollution of the township's water resources.				X						X	Inland Township	Inland Township	B, CC	0-7 Years	Low		X	X	
	45	Pursue the following strategies within the 2020 Weldon Township Master Plan as ways to mitigate issues with a high groundwater table/inland flooding: Continue to study the manner and cost of providing for public services; Examine ways in which Colfax Township, the Village and the Township could cooperate in providing for specific public services				X						X	Weldon Township	Weldon Township	B, CC	Ongoing/ 5+ Years	Med		X	X	
	46	Update and maintain Continuity of Operations (COOP) plans and alternative "remote work" schedules.										X	County Government and Local Government Agencies; Public Schools	County Government and Local Government Agencies; Public Schools	A, B	Ongoing	High	X			
47	Continue to expand the availability of high-speed internet service to allow for widely available remote work/learning.										X	Countywide	Benzie County, Local service providers; Connected Nation MI	A, B, R	Ongoing	High	X	X		X	

BENZIE COUNTY HAZARD MITIGATION STRATEGIES		HAZARD TYPE									WHERE - Affected Locations or Groups	WHO - Responsible Parties (Lead entities are in bold font)	HOW - Resources	WHEN - Timeframe	PRIORITY LEVEL	STRATEGY TYPE			
		Severe Winter Weather	T-Storm, High Winds, Hail, Tornado, Lightning	Wildfire	Inland Flooding & Erosion	Coastal Flooding /Erosion, Dangerous Currents	Extreme Temperatures	Drought	Invasive Species	Public Health Emergency						1	2	3	4
Environment & Natural Resources	48	Continue to monitor, treat and remove aquatic and terrestrial invasive species.								X	Countywide			Ongoing	Med				
	48a	Investigate alternative, effective and less expensive invasive species control measures, such as livestock grazing.								X	Countywide	NWMISN, MSUE, NRCS	II, KK, NN, OO	Ongoing	Med			X	X
	48b	Continue to utilize and implement the National Park Services' Great Lakes Invasive Plant Management Plan/Environmental Assessment for the Sleeping Bear Dunes National Lake Shore, which identifies strategies for park staff to manage terrestrial and emergent wetland invasive plants.								X	Lake Twp., Platte Twp.	NPS	NPS - SBD budget	Ongoing	Med	X		X	
	48c	Continue and improve collaboration regarding technical assistance, outreach and education about aquatic and terrestrial invasive species management.								X	Countywide		GG - SS	Ongoing	Med			X	X
	48d	Continue participation in EGLE's annual Great Lakes Aquatic Invasive Species "Landing Blitz" event at public boat launches, emphasizing the need to Clean, Drain, Dry boats whenever they come out of the water, and Dispose of any unwanted bait in the trash.								X	Countywide	Benzie Conservation District, MSUE, NW MI Invasive Species Network,	NN	Ongoing	Med			X	X
	48e	Promote MSUE's "Clean Boats, Clean Waters" comprehensive aquatic invasive species boater outreach program; apply for grant funding to communicate aquatic invasive species prevention information through outreach materials and in-person educational events to boaters.								X	Countywide	GTRLC, NRCS, MNR, NPS and/or lake & watershed associations	B, JJ, LL, NN - SS	Annually	Med	X		X	X
	48f	Continue to promote EGLE's "NotMISpecies" webinars and resources on invasives control and management								X	Countywide		HH, MM - SS	Ongoing	Med			X	X
	48g	Consider installing permanent boat wash stations at lake access points and and boot cleaning stations at trail access points.								X	Countywide		H, I, NN - SS	As needed	Med		X	X	X
	48h	Continue operation of the boat washing facility that CLWA installed at the public DNR Crystal Lake Boating Access Site, off Mollineaux Road and M-115 on the southern shore of the lake.								X	Benzonia Township	Crystal Lake Watershed Association	CLWA budget; volunteers	Ongoing	Med			X	X
	48i	Maintain the existing boot cleaning station next to the informational sign at the parking lot trailhead for the Elberta Dunes South Natural Area off of M-22.								X	Village of Elberta	GTRLC, Village of Elberta	Village funds; GTRLC funds; volunteers	Ongoing	Med			X	X
	49	Consider adoption of local ordinances that regulate activities to prevent the introduction of or the contribution to the spread of invasive species, such as prohibiting the use of invasive species in landscaping and/or vegetative riparian buffers, and permit treatment of existing infestations.								X	Countywide	Local jurisdictions		As needed	Low	X		X	
	50	Continue enforcement of local ordinances requiring that watercraft be washed before launching into Crystal Lake if they have recently been operated in other bodies of water.								X	Village of Beulah; Townships of Crystal Lake, Benzonia and Lake	Village of Beulah; Townships of Crystal Lake, Benzonia and Lake	Authorized local ordinance enforcement officers	Ongoing	Med	X		X	
	51	Continue implementation of the Crystal Lake Township Zoning Ordinance - ARTICLE XXII Environmental Provisions - which identifies and protects those areas of the Township that are considered to be environmentally sensitive to development, improvement, or any alteration of land use.				X				X	Crystal Lake Township	Crystal Lake Township	Authorized local ordinance enforcement officers	Ongoing	Med	X		X	
52	Continue enforcement of the Crystal Lake Watershed Overlay District zoning ordinance, applicable to the Village of Beulah, Benzonia Township, Crystal Lake Township and Lake Township.				X				X	Village of Beulah, Benzonia Township, Crystal Lake Township, Lake Twp.	Village of Beulah, Benzonia Township, Crystal Lake Township, Lake Twp.	Authorized local ordinance enforcement officers	Ongoing	Med	X		X		

BENZIE COUNTY HAZARD MITIGATION STRATEGIES		HAZARD TYPE								WHERE - Affected Locations or Groups	WHO - Responsible Parties (Lead entities are in bold font)	HOW - Resources	WHEN - Timeframe	PRIORITY LEVEL	STRATEGY TYPE							
		Severe Winter Weather	T-Storm, High Winds, Hail, Tornado, Lightning	Wildfire	Inland Flooding & Erosion	Coastal Flooding /Erosion, Dangerous Currents	Extreme Temperatures	Drought	Invasive Species						Public Health Emergency	1	2	3	4			
Environment & Natural Resources	53	Per p. 63 of the 2018 Village of Elberta Master Plan, consider zoning or other policies to regulate activities contributing to the spread of invasive species; educate landowners and developers on the importance of environmental conservation practice, such as low impact development, removal of invasive species, and conservation easements that contribute to preservation of natural systems; consider a community engagement/volunteer driven approach to invasive species removal.					X	X				X	Village of Elberta	Village of Elberta	Village operating funds	Ongoing	Med	X		X	X	
	54	Per p.74 of the 2020 Village of Benzonia Master Plan, include a requirement for sustainable design and low impact development (LID) practices in the zoning ordinance and/or design standards. Include but not limited to; innovative stormwater techniques, green roofs, pervious pavements, native landscaping and preservation of existing trees.					X		X			X	Village of Benzonia	Village of Benzonia	Village operating funds	Ongoing	Med	X	X	X		
	55	Per the Village of Elberta 2018 Master Plan, consider zoning changes that: establish minimum setbacks from and vegetative buffers around water bodies; minimize impervious surface coverage in new development; encourage or require innovative stormwater management systems that incorporate low-impact development features in order to minimize runoff and preserve water quality. Also consider the development and implementation of groundwater wellhead protection plans.					X							Village of Elberta	Village of Elberta	Village operating funds	Ongoing	Med	X	X	X	
	56	Per page 62 of the 2020 Weldon Township Master Plan: Encourage the use of pervious pavement where appropriate as a way to explore new opportunities to utilize alternative technologies					X							Weldon Township	Weldon Township	Township operating funds	Ongoing	Med		X	X	
	57	Per page E-17 of the Gilmore Twp. 2014 Master Plan, clean, dredge and remove invasives from the Betsie Bay.									X			Gilmore Township	Gilmore Township	FF, GG, II, NN, OO	Ongoing	Med			X	
	58	Continue to identify and prioritize sites for open space protection/preservation, green infrastructure and/or stormwater management, especially in areas prone to flooding or erosion.					X	X	X			X		Countywide	Benzie County; Local jurisdictions; Crystal Lake & Watershed Association, Grand Traverse Regional Land Conservancy , and the Benzie Conservation	A, B, I, NN	Ongoing	Med	X		X	
	59	Per the 2021 City of Frankfort Master Plan, enhance the City's green infrastructure (to help mitigate the urban "heat island" effect): • Utilize and maintain the list of appropriate trees for planting on public streets • Develop and implement maintenance standards and forestry procedures to ensure the long-term health of the City's street trees and provide these standards as information for residents to provide guidance for proper tree maintenance and optimal tree health • Work with residents, foundations, and other non-profit or funding agencies to create an endowed street tree fund, the sole purpose of which is to plant and maintain a full network of street trees throughout the City • Continue maintenance of a municipal tree nursery and maintain it in conjunction with local community partners to periodically provide nursery stock for the City					X		X					City of Frankfort	City of Frankfort	H, I	0-8 years	Med	X	X	X	X
60	Per the 2021 City of Frankfort Master Plan, work with MSUE to encourage native landscaping, rain gardens and creation of "backyard habitats" which will help enhance connections between larger natural areas; in parks and civic properties use rain gardens, rain barrels and overland drainage in lieu of underground stormwater drains where possible.					X		X					City of Frankfort	City of Frankfort	B, H, TT	0-8 years	Med		X	X	X	

VIII. Implementation

Hazard mitigation is any action taken before, during, or after a disaster to permanently eliminate or reduce the long-term risk to human life and property from hazards. Mitigation is an essential element of emergency management, along with preparedness, response, and recovery. Emergency management includes four phases: actions to mitigate a disaster, a community prepares for a disaster; responds when it occurs; and then there is a transition into the recovery process. The process is cyclical and mitigation measures are evaluated and adopted constantly. The evaluation improves the preparedness posture of the County for the next incident, and so on. When successful, mitigation will lessen the impacts of natural hazards to such a degree that succeeding incidents will remain incidents and not become disasters.

Plan Review, Monitoring, and Evaluation

This Plan is intended to be a resource for building coordination and cooperation within a community for local control of future mitigation and community preparedness. The County Board will lead the implementation of the Natural Hazards Mitigation Plan with assistance from the Emergency Services Coordinator and the Administration. The Benzie County Local Emergency Planning Committee (LEPC) is an inter-agency partnership and will collaborate to accomplish the goals and objectives of the Plan. The LEPC meets on a regular basis to carry out its duties and has expanded its role to function as the Natural Hazards Task Force. The Natural Hazards Task Force will be responsible for monitoring and implementing the mitigation plan. Staff support will be provided by the Benzie County Emergency Services Coordinator and will coordinate with the County Board of Commissioners.

The Natural Hazards Task Force will perform an annual review of the Benzie County Hazard Mitigation Plan and consider the list of mitigation strategies identified in the plan. The Task Force will identify projects that have been completed and identify new projects to be completed. The following agencies have been encouraged to actively participate in revising, updating, and maintaining the plan.

- Benzie County Government Staff
- City, Villages, and Township Government Staff
- Benzie Conservation District
- Benzie County Drain Commissioner
- Benzie County Road Commission
- Grand Traverse Band of Ottawa and Chippewa Indians
- Grand Traverse Regional Land Conservancy
- Grand Traverse Conservation District
- Northwest Michigan Invasive Species Network
- Networks Northwest
- Benzie-Leelanau District Health Department
- Michigan State University Extension
- Michigan Department of Environment, Great Lakes, and Energy
- Michigan Department of Natural Resources
- Michigan Department of Transportation
- National Park Service – Sleeping Bear Dunes National Lakeshore
- U.S. Coast Guard
- U.S. Environmental Protection Agency
- U.S. Army Corps of Engineers
- U.S. Department of Agriculture - Natural Resources Conservation Service
- Insurance Companies
- Real Estate Companies

In addition, the local units of government in Benzie County have indicated to the county emergency manager that they will follow the county's lead in identifying mitigation projects and developing grant applications to fund those projects. Land use issues associated with those projects (where applicable) will be handled by each jurisdiction that have an adopted Master Plan and regulate zoning in the project area.

Community planning services are provided by the professional staff of each municipality within the county. The respective planners assist communities in developing plans and zoning ordinances, provides resource information and technical assistance, and convenes communities to address land use issues of common interest.

Building permits and soil erosion permits are issued by the Benzie County Building Department. Permits related to water well and septic systems are issued by the Benzie-Leelanau District Health Department. The Benzie Conservation District

partners with Michigan's Department of EGLE to help implement the State of Michigan's Critical Dunes Protection laws. Before a permit is issued by EGLE for any construction or improvements to property in the Critical Dune Area, a written Vegetative Removal Assurance (VRA) must be issued, either by the local Conservation District in that area or another qualified provider.

Plan Integration

All local governments, state and federal agencies in Benzie County will consider integrating information from the hazard mitigation plan into their comprehensive and operations plans. All communities in Benzie County administer their own planning and zoning. As part of the education and outreach aspect of the hazard mitigation effort, the local units of government will be encouraged to adopt zoning regulations to minimize the effect of hazards.

All natural hazards mitigation planning could be pursued using Michigan Public Act 226 of 2003, the Joint Municipal Planning Act. This Act provides for joint land use planning by cities, villages, and townships, and allows two or more municipalities' legislative bodies to create a single joint planning commission to address planning issues. This tool helps with planning for the "big picture" issues such as natural hazards that cross jurisdictional boundaries.

The intent of this legislation is for local governments to consider the following:

- Individual units of government modifying their ordinances simultaneously to include language that would incorporate aspects of protection
- Developing an overlay zoning district that would cross jurisdictional boundaries which would be incorporated into existing independent units of government's zoning ordinances
- Forming a new joint (multi-jurisdictional) planning commission or zoning board
- Sharing zoning administration and enforcement activities

The following communities in Benzie County are partners in inter-governmental agreement that form Joint Planning Commissions with shared master plans and jointly administered zoning ordinances:

- The Village of Thompsonville and Colfax Township
- Benzonia and Platte Townships (The West Benzie Joint Planning Commission)
- Homestead and Inland Township

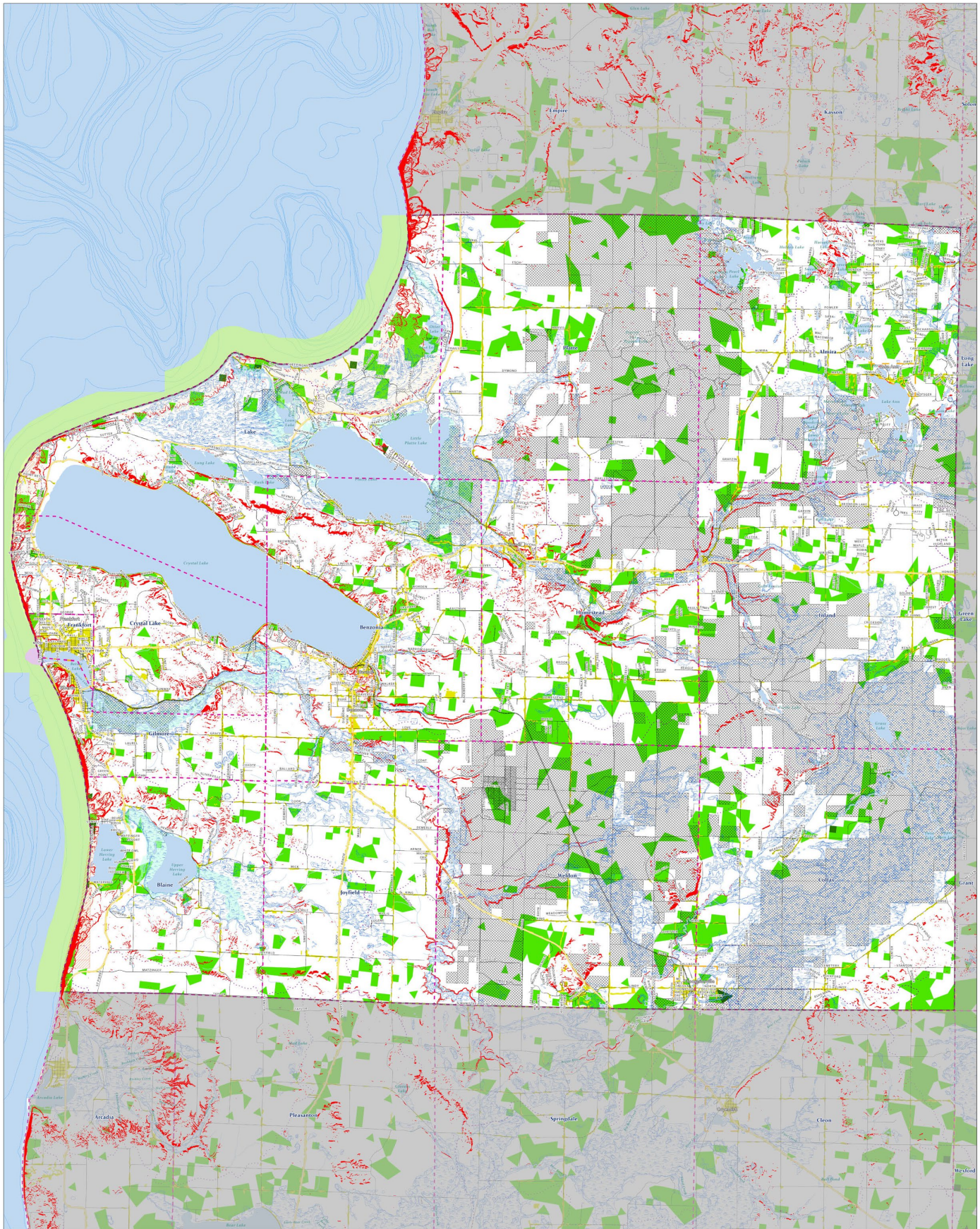
Five Year Plan Review and Update

The Stafford Act, as amended by the Disaster Mitigation Act of 2000, requires the Benzie County Hazard Mitigation Plan to be updated, adopted, and re-submitted for Federal Emergency Management Agency (FEMA) approval every five years. The plan will be reviewed by the Natural Hazards Task Force every five years in alignment with federal regulations. The update will include determining changes in the county, such as changes in development, an increase in exposure to hazards, an increase or decrease in the communities' capability to address hazards, addition and/or removal of mitigation actions and strategies, reviewing goals, and a change in federal or state legislation. Upon plan review and update completion, the plan will be sent to the State Hazard Mitigation Officer at the Michigan State Police for final review and approval in coordination with FEMA. When the plan has received an "approved pending adoption" status from FEMA, the Benzie County Board of Commissioners can review, approve, and adopt the plan, along with individual local units of government. In order to properly update the plan in the future, Benzie County will need to seek funding from appropriate state and/or federal agencies.

Continued Public Involvement

Benzie County is committed to keeping the public involved in the implementation and update of the Hazard Mitigation Plan. Copies of the plan will be available at the county libraries, county clerk's office, and all local government offices, and will be posted on the community websites and/or regional planning agency website. The Emergency Management Office will be responsible for keeping a record of public comments on the plan.

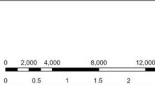
APPENDIX A: MAPS



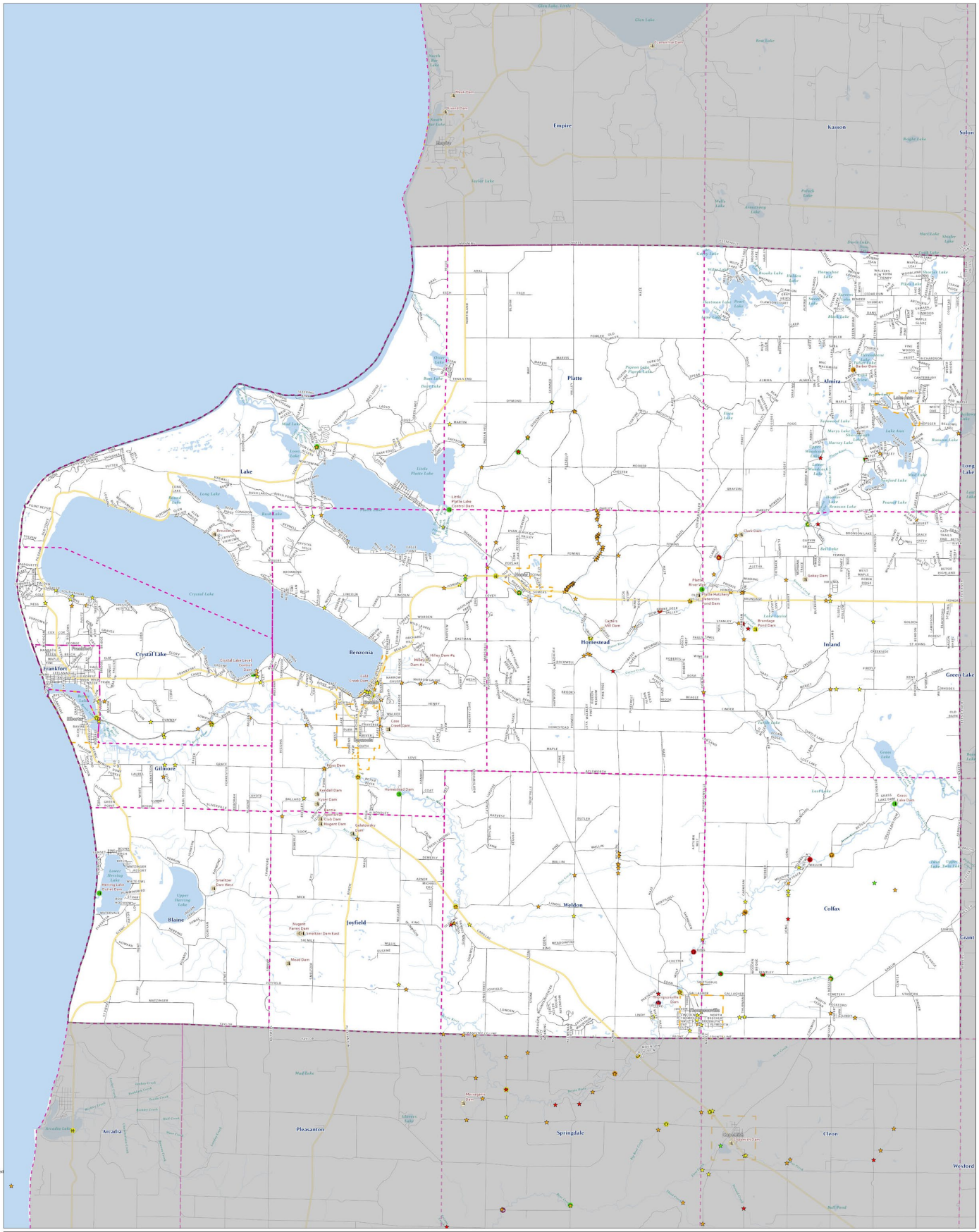
**Benzie County
Environmental Features**
2023 Hazard Mitigation Plan

- | | | | |
|-----------|----------------------------|----------------------|------------|
| Highways | Roads/Drains | High Hill Slopes | Flood Zone |
| Roads | Water Bodies | High Hill Slopes | 4 |
| Intersect | Post-1982 Wetlands | Critical Dunes | A |
| | Ballpark Contours | Slope 20% or Greater | W |
| | Unimproved Boundaries 1/2" | | |
| | 1/4" | | |

- Legend**
- | | |
|-----------------------------|-------------------|
| Developed Land | Public Land |
| High, Medium & Low Density | State |
| Pine Forest | County |
| Barren | Adjacent Counties |
| Soft Pine System White Pine | |
| Post | |

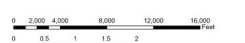


Benzie County Hazard Mitigation Planning Process
Map produced by Networks Northwest Community Development 2023.
Map data sources: State of Michigan, ESRI, NWCS, USGS, USGS
Networks Northwest
Talent / Business / Community



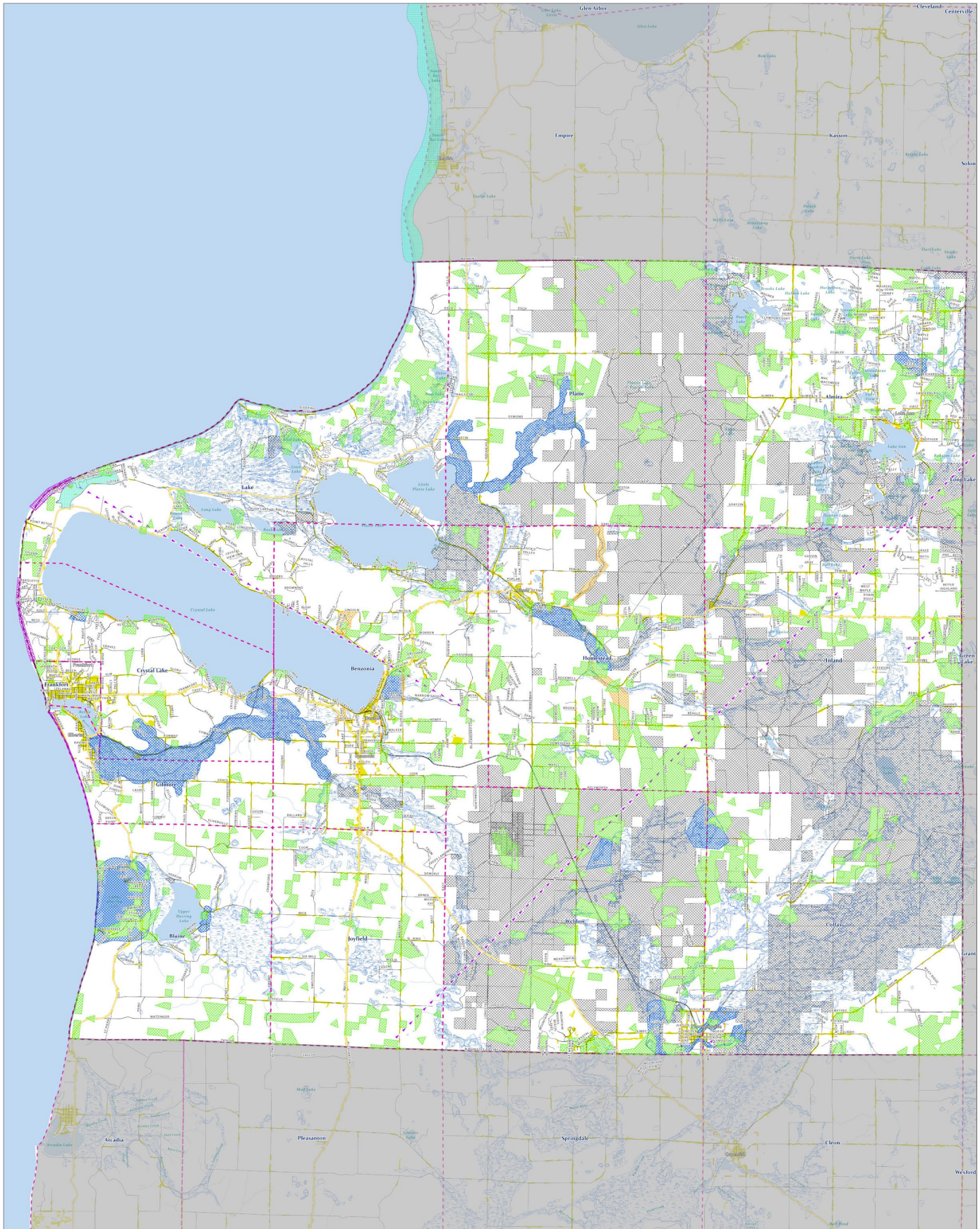
Benzie County Infrastructure
2023 Hazard Mitigation Plan

- | | | | | |
|--|--|--|---|---|
| <ul style="list-style-type: none"> — Highway — Road — Railroad — Rivers/Streams — Water Bodies | <p>Stream Crossings (CRA)</p> <ul style="list-style-type: none"> ★ None ★ Minor ★ Major ★ Severe ★ Unknown | <p>Bridge Condition Rating</p> <ul style="list-style-type: none"> ● Good ● Fair ● Poor ● Serious ● Critical ● Closed | <p>MI Dam Inventory Condition</p> <ul style="list-style-type: none"> ● Satisfactory ● Fair ● Poor ● Unsatisfactory ● Not Rated | <ul style="list-style-type: none"> ★ Village ★ City ★ Township Boundaries Benzie County Adjacent Counties |
|--|--|--|---|---|



Benzie County Hazard Mitigation Planning Process
Map produced by Networks Northwest Community Development 2022.
Map data sources: State of Michigan, ESRI, MGLS, USGS, USGS, NOAA, NOAA, NOAA

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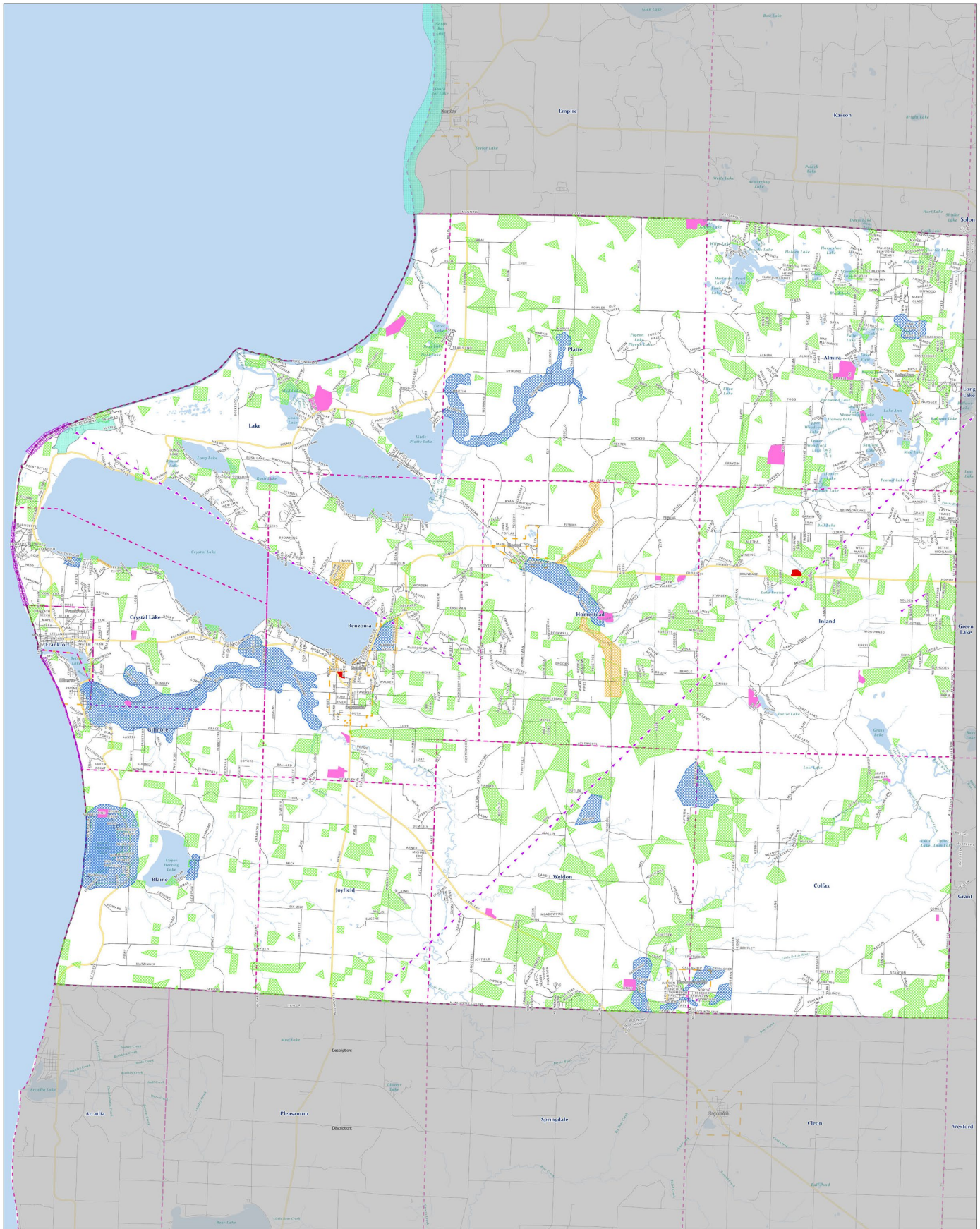
**Benzie County
Hazard Areas**
2023 Hazard Mitigation Plan

- Legend**
- Flood
 - Flood Wastout
 - Shoreline Erosion
 - Post-Fire Hazard Area
 - Invasive Species
 - Tornado Path
 - Highways
 - Roads
 - Airports
 - Railroad
 - Public Land
 - Developed Land
 - Part 303 Wetlands
 - High, Medium & Low
 - Township Boundaries
 - Villages
 - Cities
 - Benzie County
 - Adjacent Counties



Benzie County Hazard Mitigation Planning Process
 Map produced by Networks Northwest Community Development 2022.
 Map data sources: State of Michigan, USGS, NOAA, USGS,
 Benzie County Emergency Management

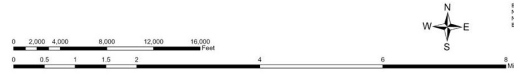




**Benzie County
Vulnerable Populations
& Hazard Areas**
2023 Hazard Mitigation Plan

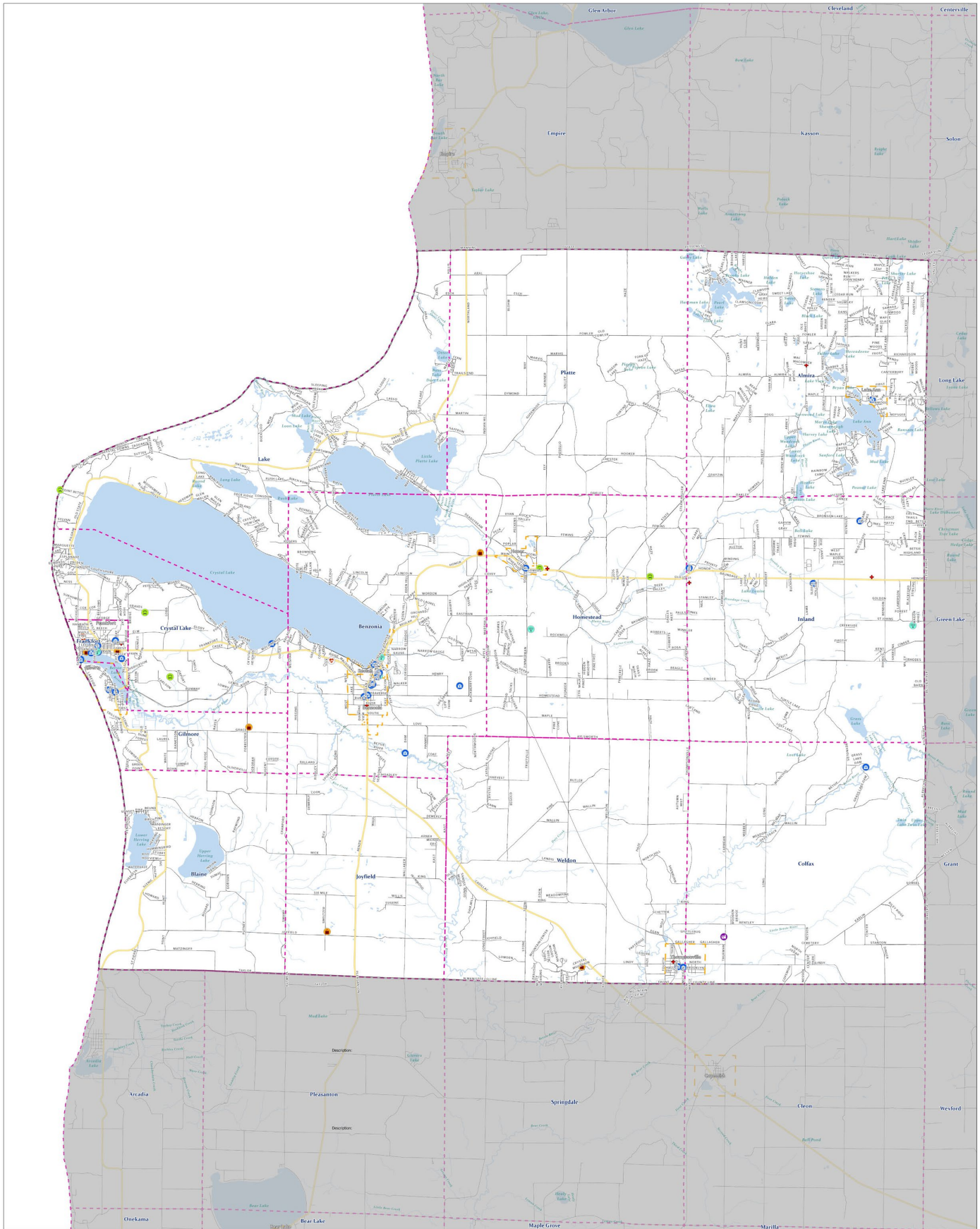
- Vulnerable Populations**
- Population Density
 - Mobile Home
- Hazard Areas**
- Flood
 - Road Without
 - Shoreline Erosion
 - Precipitated Hazard Area
 - Tornado Path
 - Invasive Species

- Legend**
- Highway
 - Roads
 - Railroad
 - Rivers/Streams
 - Water Bodies
 - Township Boundaries
 - Village
 - City
 - Benzie County
 - Adjacent Counties



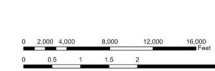
Benzie County Hazard Mitigation Planning Process
Map produced by Northwest Community Development 2022.
Map data sources: State of Michigan, USGS, NOAA, USGS,
Benzie County Emergency Management

**Networks
Northwest**
Talent / Business / Community



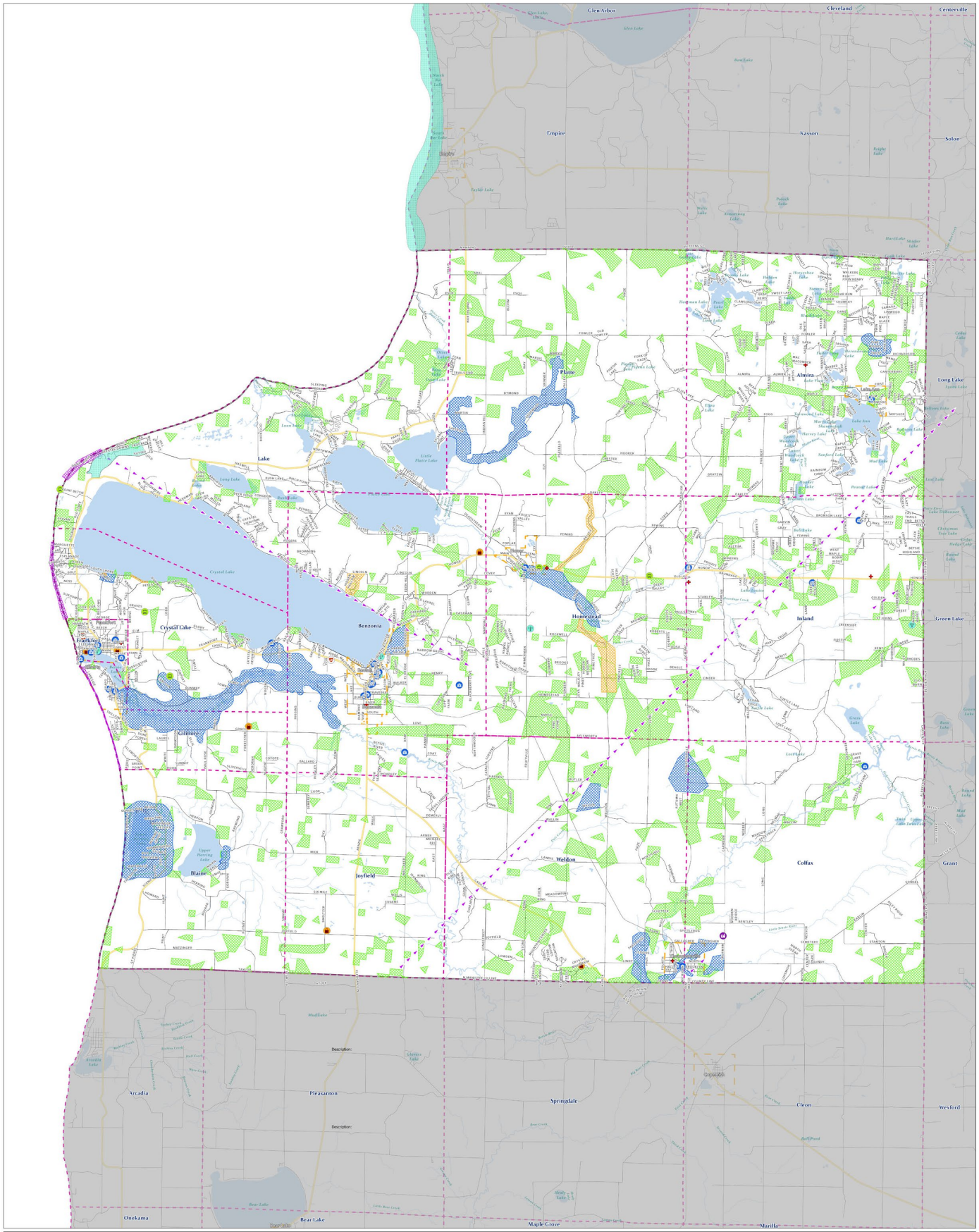
Benzie County
Critical Infrastructure
Points
 2023 Hazard Mitigation Plan

- Legend**
- Commercial
 - Communications
 - Energy Services
 - Energy
 - Governmental Facilities
 - Healthcare
 - Transportation
 - Highways
 - Roads
 - Railroad
 - Rivers/Streams
 - Water Bodies
 - Township Boundaries
 - Villages
 - Cities
 - Benzie County
 - Adjacent Counties



Benzie County Hazard Mitigation Planning Process
 Map produced by Networks Northwest Community Development 2022.
 Map data source: State of Michigan, DNR, WGS, USGS, NOAA,
 Benzie County Emergency Management

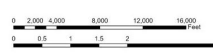
Networks Northwest
 Talent / Business / Community



**Benzie County
Critical Infrastructure
Points & Hazard Areas**
2023 Hazard Mitigation Plan

Legend

Flood	Commercial	Governmental Facilities	Highway	Township Boundaries
Road	Communications	Healthcare	Railroad	Villages
Shoreline Erosion	Emergency Services	Transportation	River/Streams	City
Fire Hazard Area	Seismic Hazard		Water Bodies	Benzie County
Tornado Path				Adjacent Counties



Benzie County Hazard Mitigation Planning Process
Map produced by Networks Northwest Community Development 2022.
Map data source: State of Michigan, USGS, NOAA, USGS,
Benzie County Emergency Management

APPENDIX B: COMMUNITY SURVEY RESULTS

Benzie County Hazard Mitigation Community Survey

Q1 Please indicate the organization you represent in Benzie County.

Answered: 44 Skipped: 0

#	RESPONSES	DATE
1	weldon township planning commission	1/6/2022 6:01 PM
2	Thompsonville Fire Department	12/11/2021 8:10 AM
3	Benzie County Central Dispatch	12/9/2021 12:43 AM
4	Homestead Township	12/4/2021 8:12 PM
5	Village of Beulah	12/2/2021 12:44 PM
6	Blaine Township	12/2/2021 11:07 AM
7	Weldon Township	12/2/2021 10:22 AM
8	Benzie County Sheriff's Office	12/2/2021 9:51 AM
9	Frankfort Police Department	12/2/2021 9:51 AM
10	City of Frankfort	12/2/2021 9:39 AM
11	Crystal Lake Township	12/2/2021 9:03 AM
12	Village of Beulah	11/5/2021 9:27 PM
13	American Red Cross Northern Michigan Chapter	11/1/2021 12:42 PM
14	Crystal Lake Township Planning Commission	10/28/2021 7:51 AM
15	Grand Traverse Band	10/25/2021 2:22 PM
16	Almira Township	10/25/2021 10:56 AM
17	Blaine Township	10/25/2021 10:18 AM
18	GTB MEMBER	10/22/2021 1:35 PM
19	EMS	10/22/2021 10:58 AM
20	Benzie County Office of Emergency Management	10/21/2021 1:31 PM
21	Homestead Township Fire Department	10/18/2021 1:32 PM
22	Benzie Conservation District	10/18/2021 9:37 AM
23	Village of Elberta	10/12/2021 4:52 PM
24	lake ann village	10/8/2021 11:46 AM
25	Benzie County Commissioners	10/8/2021 9:16 AM
26	Blaine Township	10/6/2021 10:49 AM
27	Benzie county	10/5/2021 3:52 PM
28	Inland Township	10/5/2021 2:44 PM
29	Inland Township	10/5/2021 1:35 PM
30	Benzonia Township	10/5/2021 12:55 PM
31	Crystal Lake Township	10/5/2021 12:31 PM
32	Benzie County Road Commission	10/5/2021 12:11 PM
33	Village of Beulah	10/5/2021 11:29 AM

Benzie County Hazard Mitigation Community Survey

34	Weldon Township	10/5/2021 11:20 AM
35	village gov.	10/5/2021 11:03 AM
36	Paul Oliver Memorial Hospital	10/4/2021 4:31 PM
37	Almira Township	10/4/2021 3:00 PM
38	Homestead township trustee	10/4/2021 1:25 PM
39	Homestead Township	10/4/2021 12:38 PM
40	Lake Township	10/4/2021 11:28 AM
41	Blaine Township	10/4/2021 11:08 AM
42	Benzie County Sheriff' Office	10/4/2021 10:38 AM
43	MSP Cadillac Post	10/4/2021 10:30 AM
44	Crystal Lake Twp Planning Commission	10/4/2021 10:16 AM

Benzie County Hazard Mitigation Community Survey

Q2 What is your role in this organization?

Answered: 44 Skipped: 0

#	RESPONSES	DATE
1	chairperson	1/6/2022 6:01 PM
2	Fire Chief	12/11/2021 8:10 AM
3	Deputy Directory / ECS Supervisor	12/9/2021 12:43 AM
4	Supervisor	12/4/2021 8:12 PM
5	Trustee on the village council, chair of village Parks and Recreation.	12/2/2021 12:44 PM
6	Clerk	12/2/2021 11:07 AM
7	Township Clerk	12/2/2021 10:22 AM
8	Undersheriff	12/2/2021 9:51 AM
9	Chief of Police	12/2/2021 9:51 AM
10	City Superintendent (Chief Administrative Officer)	12/2/2021 9:39 AM
11	Supervisor	12/2/2021 9:03 AM
12	Trustee and Chair, Law & Finance	11/5/2021 9:27 PM
13	Disaster Program Manager	11/1/2021 12:42 PM
14	Commissioner	10/28/2021 7:51 AM
15	Emergency Manager and Public Safety	10/25/2021 2:22 PM
16	Township Clerk	10/25/2021 10:56 AM
17	Clerk	10/25/2021 10:18 AM
18	Tribal Member	10/22/2021 1:35 PM
19	Director	10/22/2021 10:58 AM
20	Emergency Management Coordinator	10/21/2021 1:31 PM
21	Fire Chief	10/18/2021 1:32 PM
22	Executive Director	10/18/2021 9:37 AM
23	Village President	10/12/2021 4:52 PM
24	village president	10/8/2021 11:46 AM
25	elected official District 2	10/8/2021 9:16 AM
26	Supervisor	10/6/2021 10:49 AM
27	Commissioner District 7	10/5/2021 3:52 PM
28	Township Supervisor	10/5/2021 2:44 PM
29	Treasurer	10/5/2021 1:35 PM
30	Supervisor	10/5/2021 12:55 PM
31	Treasurer	10/5/2021 12:31 PM
32	Manager	10/5/2021 12:11 PM
33	Trustee, chair of village Parks and Recreation	10/5/2021 11:29 AM

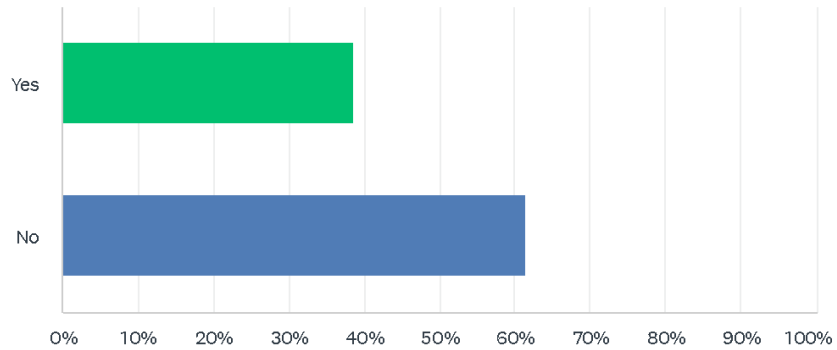
Benzie County Hazard Mitigation Community Survey

34	Treasurer	10/5/2021 11:20 AM
35	trustee	10/5/2021 11:03 AM
36	Manager - Safety, Security and Emergency Management	10/4/2021 4:31 PM
37	Zoning Administrator	10/4/2021 3:00 PM
38	Truste	10/4/2021 1:25 PM
39	Treasurer	10/4/2021 12:38 PM
40	Supervisor	10/4/2021 11:28 AM
41	Trustee and planning commission	10/4/2021 11:08 AM
42	I am the elected Sheriff	10/4/2021 10:38 AM
43	Assistant Post Commander	10/4/2021 10:30 AM
44	PC Chair	10/4/2021 10:16 AM

Benzie County Hazard Mitigation Community Survey

Q3 Are you familiar with the county's Natural Hazard Mitigation Plan?

Answered: 44 Skipped: 0

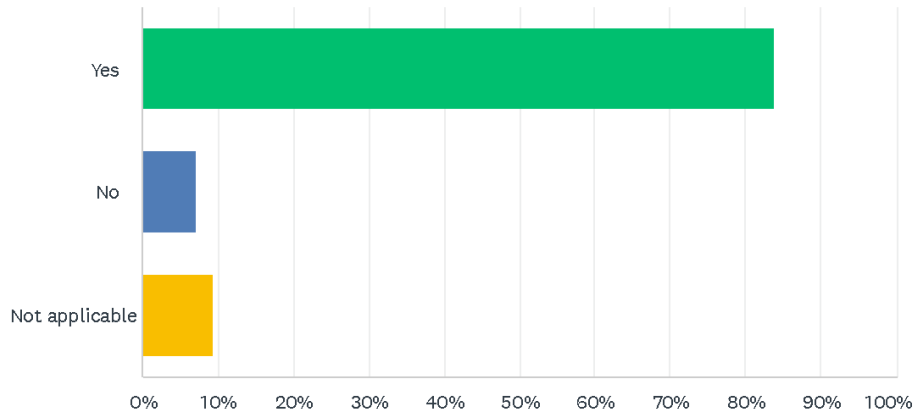


ANSWER CHOICES	RESPONSES	
Yes	38.64%	17
No	61.36%	27
TOTAL		44

Benzie County Hazard Mitigation Community Survey

Q4 Does the community you represent have an adopted Master Plan?

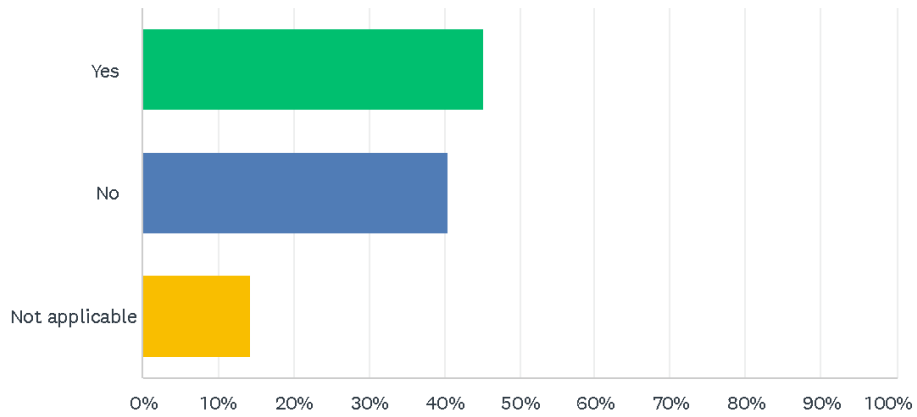
Answered: 43 Skipped: 1



ANSWER CHOICES	RESPONSES	
Yes	83.72%	36
No	6.98%	3
Not applicable	9.30%	4
TOTAL		43

Q5 Does the community you represent have an adopted Capital Improvements Plan?

Answered: 42 Skipped: 2

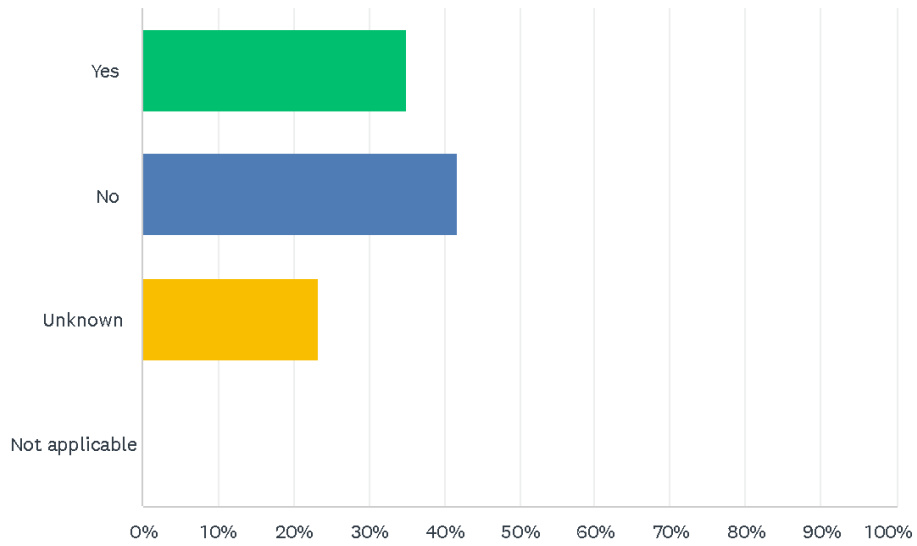


ANSWER CHOICES	RESPONSES	
Yes	45.24%	19
No	40.48%	17
Not applicable	14.29%	6
TOTAL		42

Benzie County Hazard Mitigation Community Survey

Q6 Has the community you represent experienced a significant natural hazard event within the last 10 years?

Answered: 43 Skipped: 1



ANSWER CHOICES	RESPONSES	
Yes	34.88%	15
No	41.86%	18
Unknown	23.26%	10
Not applicable	0.00%	0
TOTAL		43

Benzie County Hazard Mitigation Community Survey

Q7 If so, what was the nature of the event?

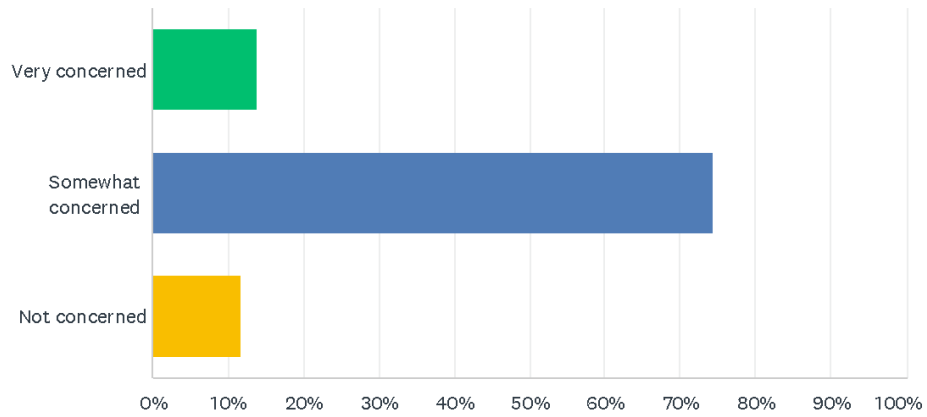
Answered: 29 Skipped: 15

#	RESPONSES	DATE
1	Snowmagedon of 2012. Straight line winds of August 2, 2016. There have been other various weather incidents since, but those are the two major ones that come to mind.	12/9/2021 12:43 AM
2	Much flooding and loss of shoreline along shores of Lower Herring lake.	12/2/2021 11:07 AM
3	None	12/2/2021 10:22 AM
4	Lakeshore erosion	12/2/2021 9:51 AM
5	None	12/2/2021 9:51 AM
6	Snow and wind storms causing significant tree damage. Flooding brought on by high water and groundwater.	12/2/2021 9:39 AM
7	unknown	11/1/2021 12:42 PM
8	Na	10/28/2021 7:51 AM
9	Snow storm 2012.	10/25/2021 2:22 PM
10	N/A	10/25/2021 10:56 AM
11	Flooding due to rising waters in Lake MI	10/25/2021 10:18 AM
12	Pandemic	10/22/2021 1:35 PM
13	Flooding in Frankfort/Elberta. Lake MI coastline in Benzie County.	10/22/2021 10:58 AM
14	flooding / erosion	10/21/2021 1:31 PM
15	Flooding, snow storm	10/18/2021 1:32 PM
16	snow	10/8/2021 11:46 AM
17	Na	10/6/2021 10:49 AM
18	Lake water levels, flooding and erosion	10/5/2021 3:52 PM
19	None	10/5/2021 1:35 PM
20	none	10/5/2021 12:31 PM
21	High water level - 2020	10/5/2021 12:11 PM
22	none	10/5/2021 11:20 AM
23	Unknown	10/4/2021 4:31 PM
24	NA	10/4/2021 3:00 PM
25	River ice over with large backup	10/4/2021 1:25 PM
26	High water levels.	10/4/2021 11:28 AM
27	Na	10/4/2021 11:08 AM
28	Extreme snow event 03/02/2012	10/4/2021 10:38 AM
29	High water, flooding	10/4/2021 10:16 AM

Benzie County Hazard Mitigation Community Survey

Q8 How concerned are you about future natural hazard events impacting your community?

Answered: 43 Skipped: 1



ANSWER CHOICES	RESPONSES	
Very concerned	13.95%	6
Somewhat concerned	74.42%	32
Not concerned	11.63%	5
TOTAL		43

Benzie County Hazard Mitigation Community Survey

Q9 What type of natural hazard events are likely to have the largest impact on your community, for example fire, flood, drought, illness outbreak, etc.?

Answered: 43 Skipped: 1

#	RESPONSES	DATE
1	illness outbreak	1/6/2022 6:01 PM
2	Wildland fire	12/11/2021 8:10 AM
3	I feel that high winds, tornados, and other weather events that cut power to homes and businesses could potentially have the largest impact. I believe that our grid is fragile enough to start with, and severe weather that impacts a large region of the county could see people without power for multiple days, which is especially dangerous in the winter time.	12/9/2021 12:43 AM
4	flooding	12/4/2021 8:12 PM
5	Illness outbreak, weather calamities and degradation of the natural environment.	12/2/2021 12:44 PM
6	Flood and Fire	12/2/2021 11:07 AM
7	Illness, fire	12/2/2021 10:22 AM
8	Lakeshore erosion and illness break out	12/2/2021 9:51 AM
9	Flood	12/2/2021 9:51 AM
10	Fire, Flood, Wnd and Erosion caused by flooding and wind.	12/2/2021 9:39 AM
11	Illness outbreak	12/2/2021 9:03 AM
12	Severe winter weather events	11/5/2021 9:27 PM
13	flood, fire, illness,	11/1/2021 12:42 PM
14	Pandemic	10/28/2021 7:51 AM
15	Flood, fire, illness outbreak.	10/25/2021 2:22 PM
16	unknown	10/25/2021 10:56 AM
17	Fire, Flood	10/25/2021 10:18 AM
18	Illness	10/22/2021 1:35 PM
19	Illness, floods, fires	10/22/2021 10:58 AM
20	flood/ erosion/ illness outbreak	10/21/2021 1:31 PM
21	Wildland Fire, Flooding, Heavy snow	10/18/2021 1:32 PM
22	I'm not very knowledgeable about these matters but I'd say fire and illness outbreak	10/18/2021 9:37 AM
23	possible flooding	10/12/2021 4:52 PM
24	fire	10/8/2021 11:46 AM
25	illness outbreaks, flooding, high winds downing power lines and tree damage	10/8/2021 9:16 AM
26	Fire, drought, illness	10/6/2021 10:49 AM
27	COVID, fire, and flooding	10/5/2021 3:52 PM
28	illness outbreak	10/5/2021 1:35 PM
29	Fire, heavy snow/snowstorms, wind damage	10/5/2021 12:55 PM
30	flood, high winds, illness	10/5/2021 12:31 PM

Benzie County Hazard Mitigation Community Survey

31	Flood	10/5/2021 12:11 PM
32	Illness outbreak	10/5/2021 11:29 AM
33	Tomado, fire	10/5/2021 11:20 AM
34	fire, flooding, landslide (we live at the base of an unstable hill filled with springs)	10/5/2021 11:03 AM
35	Water, Power, Weather, pandemic, ?	10/4/2021 4:31 PM
36	fire	10/4/2021 3:00 PM
37	Flood	10/4/2021 1:25 PM
38	Flood or Fire	10/4/2021 12:38 PM
39	High lake levels. High wind/winter storm events.	10/4/2021 11:28 AM
40	Tomado	10/4/2021 11:08 AM
41	I would day power outages in winter time. Maybe a tornado or heavy wind.	10/4/2021 10:38 AM
42	Severe weather	10/4/2021 10:30 AM
43	Flood	10/4/2021 10:16 AM

Benzie County Hazard Mitigation Community Survey

**Q10 Does your community have concerns about infrastructure (dams, bridges, utilities, etc.) and the potential for a hazardous event in the future?
Please describe.**

Answered: 40 Skipped: 4

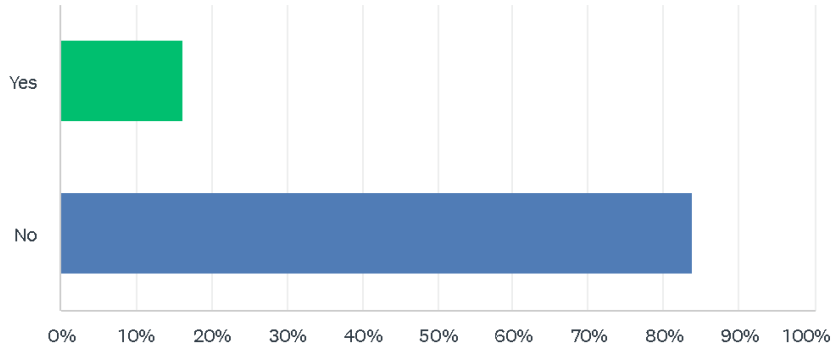
#	RESPONSES	DATE
1	no	1/6/2022 6:01 PM
2	No	12/11/2021 8:10 AM
3	Certainly utilities (power) is a concern, but roads in general are also a concern. If people are out of power, we would want them to go to a warming shelter. But if the roads are not passable, citizens may have difficulty getting to the shelters.	12/9/2021 12:43 AM
4	we have several bridges specifically related to the platte river, also potential power outages due to power lines, also limited availability to internet and heating sources	12/4/2021 8:12 PM
5	Hmmm, me personally, I'm concerned about my village of approximately 340 catering to several hundred thousand tourists a year and the dangers that can come with them.	12/2/2021 12:44 PM
6	Yes, concerns about dam integrity between Lake Michigan and Lower Herring Lake	12/2/2021 11:07 AM
7	We have a bridge that was taken removed and we have hoped that it would be replaced. We have residents that live on the other side of the river. Any emergency vehicles now have to go way out of their way to get to any residents or forest area on the other side of the former bridge location (Haze Road).	12/2/2021 10:22 AM
8	Yes, dams bridges etc in the event of a flood.	12/2/2021 9:51 AM
9	M-22 bridge over Bestie river.	12/2/2021 9:51 AM
10	Critical Infrastructure concerns include the water and sanitary sewer distribution systems. M-22 Bridge in Elberta.	12/2/2021 9:39 AM
11	Further bluff erosion	12/2/2021 9:03 AM
12	Sustained power outages will have a significant impact on our ability to sustain major DPW responsibilities.	11/5/2021 9:27 PM
13	unknown	11/1/2021 12:42 PM
14	Not too much	10/28/2021 7:51 AM
15	Flood and erosion and snow events.	10/25/2021 2:22 PM
16	unknown	10/25/2021 10:56 AM
17	Yes, somewhat concerned about structural integrity of the dam in Lower Herring Lake. Hasn't been a functioning dam in years, but if waters recede a lot it may be something to watch.	10/25/2021 10:18 AM
18	Unsure	10/22/2021 1:35 PM
19	Bridge issues, Frankfort Elberta causeway will flood over again. There are other aging bridges throughout the county as well.	10/22/2021 10:58 AM
20	yes - M22 bridge at Elberta vs water levels	10/21/2021 1:31 PM
21	Not sure	10/18/2021 1:32 PM
22	I don't know	10/18/2021 9:37 AM
23	We had some concerns on the M22 causeway when the water levels were really high in 2019-2020. Worries of washout. It could be a concern if and when the levels rise again.	10/12/2021 4:52 PM

Benzie County Hazard Mitigation Community Survey

24	no	10/8/2021 11:46 AM
25	NA	10/6/2021 10:49 AM
26	Bridges are old and some need to be replaced in the future	10/5/2021 3:52 PM
27	Bridges	10/5/2021 2:44 PM
28	No.	10/5/2021 1:35 PM
29	Just general concerns	10/5/2021 12:55 PM
30	none	10/5/2021 12:31 PM
31	The Platte and Betsie River both run through the county. BCRC currently maintains 17 bridges throughout the county (not counting bridges maintained by MDOT). Loosing a major bridge could have long term negative impacts to the county	10/5/2021 12:11 PM
32	un	10/5/2021 11:20 AM
33	unknown	10/4/2021 4:31 PM
34	utilities	10/4/2021 3:00 PM
35	No	10/4/2021 1:25 PM
36	unkown	10/4/2021 12:38 PM
37	no	10/4/2021 11:28 AM
38	No	10/4/2021 11:08 AM
39	power grid.	10/4/2021 10:38 AM
40	Shoreline erosion	10/4/2021 10:16 AM

Q11 Have you been involved in a natural hazard mitigation planning process before?

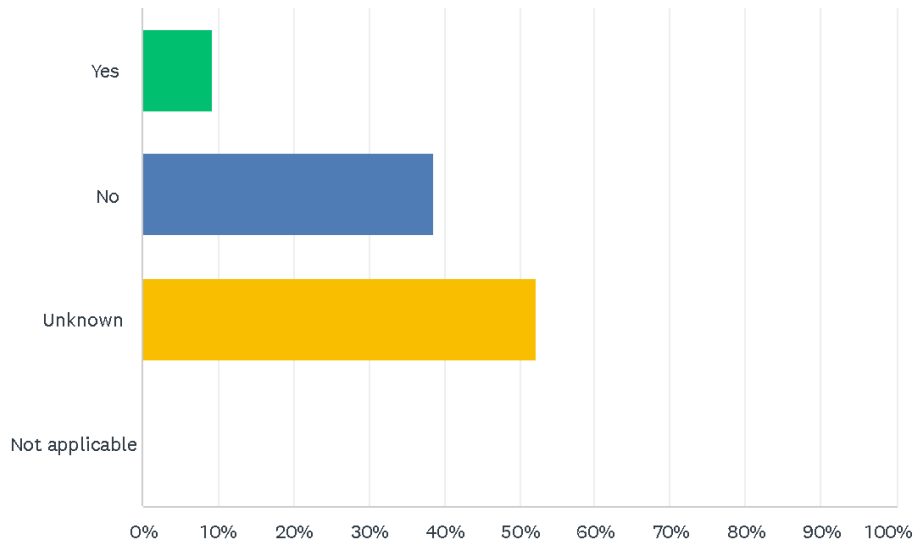
Answered: 43 Skipped: 1



ANSWER CHOICES	RESPONSES	
Yes	16.28%	7
No	83.72%	36
TOTAL		43

Q12 Has your community requested assistance for mitigation projects in the past?

Answered: 44 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	9.09%	4
No	38.64%	17
Unknown	52.27%	23
Not applicable	0.00%	0
TOTAL		44

Benzie County Hazard Mitigation Community Survey

Q13 If so, was your request granted and what type of project did the request include?

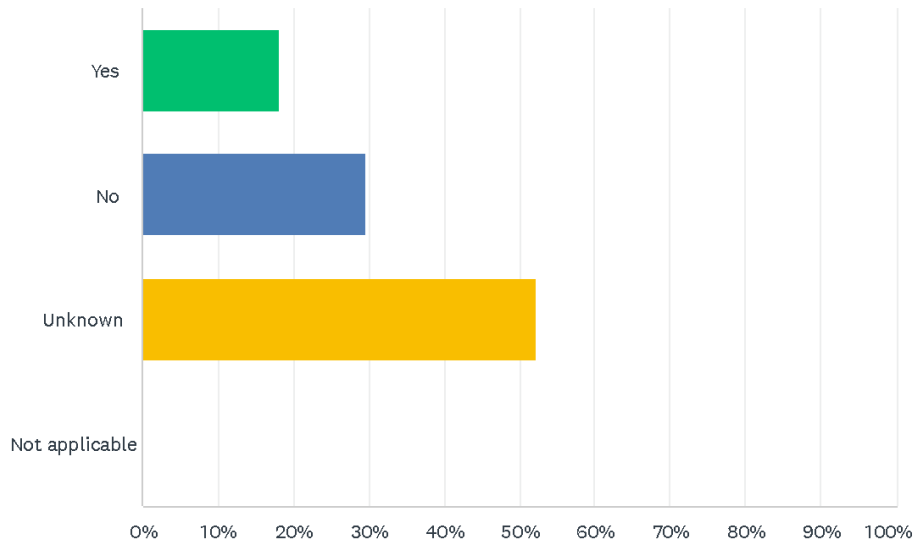
Answered: 25 Skipped: 19

#	RESPONSES	DATE
1	Replacing the bridge after the dam on the Betsie river went out	12/11/2021 8:10 AM
2	n/a	12/9/2021 12:43 AM
3	I believe the village of Beulah requested and received a grant to do significant work on the village water/sewer system. The water/sewer system is working well right now but, for how long will this be true, with all of our out-of-town visitors?	12/2/2021 12:44 PM
4	none	12/2/2021 10:22 AM
5	Unknown	12/2/2021 9:51 AM
6	none	12/2/2021 9:51 AM
7	na	11/1/2021 12:42 PM
8	Na	10/28/2021 7:51 AM
9	Unknown.	10/25/2021 2:22 PM
10	N/A	10/25/2021 10:56 AM
11	Don't know	10/22/2021 1:35 PM
12	na	10/22/2021 10:58 AM
13	in past - funds were received for private property flooding - land purchase	10/21/2021 1:31 PM
14	N/A	10/18/2021 1:32 PM
15	guardrail replacement project, federal safety grant	10/8/2021 11:46 AM
16	NA	10/6/2021 10:49 AM
17	Not sure	10/5/2021 3:52 PM
18	None	10/5/2021 1:35 PM
19	none	10/5/2021 12:31 PM
20	none	10/5/2021 11:20 AM
21	yes granted. Control water run-off from storm events	10/5/2021 11:03 AM
22	unknown	10/4/2021 4:31 PM
23	na	10/4/2021 3:00 PM
24	Unk	10/4/2021 1:25 PM
25	Na	10/4/2021 11:08 AM

Benzie County Hazard Mitigation Community Survey

Q14 Has your community considered mitigation strategies for potential or current hazards?

Answered: 44 Skipped: 0



ANSWER CHOICES	RESPONSES
Yes	18.18% 8
No	29.55% 13
Unknown	52.27% 23
Not applicable	0.00% 0
TOTAL	44

Benzie County Hazard Mitigation Community Survey

Q15 If so, please identify potential strategies you would like to explore in the near future.

Answered: 23 Skipped: 21

#	RESPONSES	DATE
1	I feel that joint planning and/or training with the utilities companies to help them restoring power to our citizens could be beneficial.	12/9/2021 12:43 AM
2	I am concerned about our freshwater environment—Crystal Lake, the Betsie and Platte Rivers and, not to mention Lake Michigan.	12/2/2021 12:44 PM
3	..	12/2/2021 10:22 AM
4	none	12/2/2021 9:51 AM
5	Better establish a resilient shoreline to overcome high water cycles that create erosion concerns. Install check valves on storm discharge locations.	12/2/2021 9:39 AM
6	Fire, further effects of pandemic	12/2/2021 9:03 AM
7	preparedness	11/1/2021 12:42 PM
8	Na	10/28/2021 7:51 AM
9	Underground utilities, erosion and floods.	10/25/2021 2:22 PM
10	N/A	10/25/2021 10:56 AM
11	Not sure	10/22/2021 1:35 PM
12	na	10/22/2021 10:58 AM
13	N/A	10/18/2021 1:32 PM
14	none	10/8/2021 11:46 AM
15	TBD	10/6/2021 10:49 AM
16	FEMA grants	10/5/2021 3:52 PM
17	None	10/5/2021 1:35 PM
18	none	10/5/2021 12:31 PM
19	none	10/5/2021 11:20 AM
20	unknown	10/4/2021 4:31 PM
21	na	10/4/2021 3:00 PM
22	Unk	10/4/2021 1:25 PM
23	Na	10/4/2021 11:08 AM

Benzie County Hazard Mitigation Community Survey

Q16 Is there any additional information you would like us to consider as we update the county's Natural Hazard Mitigation Plan?

Answered: 23 Skipped: 21

#	RESPONSES	DATE
1	No additional information.	12/9/2021 12:43 AM
2	none	12/2/2021 10:22 AM
3	No	12/2/2021 9:51 AM
4	Natural resiliency strategies to critical areas of our shoreline.	12/2/2021 9:39 AM
5	na	11/1/2021 12:42 PM
6	Na	10/28/2021 7:51 AM
7	Underground infrastructure for continual power and erosion control along waterways.	10/25/2021 2:22 PM
8	Unknown	10/25/2021 10:56 AM
9	Not now	10/22/2021 1:35 PM
10	na	10/22/2021 10:58 AM
11	None at this time	10/18/2021 1:32 PM
12	High water level - flooding information.	10/12/2021 4:52 PM
13	unknown	10/8/2021 11:46 AM
14	TND	10/6/2021 10:49 AM
15	No	10/5/2021 2:44 PM
16	NO.	10/5/2021 1:35 PM
17	none	10/5/2021 12:31 PM
18	no	10/5/2021 11:20 AM
19	unknown	10/4/2021 4:31 PM
20	na	10/4/2021 3:00 PM
21	No	10/4/2021 1:25 PM
22	Unknown	10/4/2021 11:08 AM
23	no	10/4/2021 10:38 AM

2015 Benzie County Natural Hazard Mitigation Plan Action Strategies and 2023 Status

Priority Areas and Action Strategies	Responsible Parties	Timeframe	2023 Status	Related Strategies in the 2023 Plan and Priority Level
2015 Priority Area 1: Flood Mitigation Strategies				
a. Reduce potential of flooding by identifying flood prone structures and raise foundations	FEMA EM Coordinator Private Land Conservancies or other Non-profit conservation organizations	1-3 years from adoption of the plan	Benzie County was awarded a 2015 FEMA Hazard Mitigation Planning Grant to assist in acquiring and demolishing a flood prone home at 4696 Frankfort Hwy. Work was completed between April 2016 and June 2019. Additionally, floodplain verification is required by the County Building Department for new builds and additions.	#12 (Low) #12a (Low) #26 (High) #26c (Medium)
b. Public education	County Planning, EM Coordinator County Soil Conservation District, Drain Commissioner Local Governments	1-3 years from adoption of the plan	The Benzie County Emergency Management utilizes its Facebook page to provide information about the status of current and expected hazard events, along with preparedness tips. For example, they posted "Flood Preparedness Quick Facts" on May 19, 2020, when the M-22 Betsie Lake causeway was reduced to one lane due to high water.	#3a (Medium) #3d (Medium) #13 (Low) #14 (Low)
c. Mapping of flood prone areas	FEMA EM Coordinator Drain Commissioner County Soil Conservation District MDEQ	1-3 years from adoption of the plan	Completed. FEMA completed a countywide Flood Insurance Study and Flood Insurance Rate Maps for Benzie County in 2020.	This strategy is no longer included in the 2023 plan.
d. Wetland protection	County Planning EM Coordinator County Soil Conservation District MI Department of Environmental Quality Townships, Villages Non-profit conservation organizations	2016	The Betsie River/Crystal Lake Watershed Management Plan (WMP) was completed in the spring of 2016. The WMP includes a number of priorities to preserve and improve the water quality of Crystal Lake, and will help guide CLWA's future actions. One of the significant recommendations includes the "preservation of existing wetlands and public education as to the function of wetlands." The WMP applies to all or part of every jurisdiction in Benzie County except for Platte Township and the Villages of Lake Ann and Honor.	#51 (Medium) #52 (Medium) #53 (Medium) #55 (Medium) #58 (Medium) #61 (Medium)
e. Enforcement of storm water and drainage control statutes and ordinances	County Planning County Building Inspector Emergency Management Coordinator Drain Commissioner County Soil Conservation District MI Department of Environmental Quality US Army Corps of Engineers	Ongoing	Temporary enforcement has been provided via the County Building Department enforcing soil erosion statutes/permits during construction. The Benzie-Leelanau District Health Department updated their Sanitary Code to require a minimum isolation distance of 50 feet between a septic tank/subsurface sewage disposal system from any surface water body, other surface water flooding or its highest flood plain elevation. The revised Code also requires a Time of Transfer evaluation of onsite water and sewage disposal systems. The Crystal Lake Watershed Overlay District ordinance continues to be administered by Benzonia, Crystal Lake, and Lake Townships and the Village of Beulah. The ordinance includes stormwater runoff control measures.	#26 (High) #26a (High) #26b (Medium) #32 (Medium) #52 (Medium)

Priority Areas and Action Strategies	Responsible Parties	Timeframe	2023 Status	Related Strategies in the 2023 Plan and Priority Level
2015 Priority Area 2: Shoreline Erosion Mitigation Strategies				
a. Public Education	County Planning Emergency Management Coordinator County Soil Conservation District Townships, Villages	1-3 years from adoption of the plan	The Friends of Point Betsie Lighthouse engage the community through educational programs that include the topic of shoreline protection. Educational programming provided by the Benzie Conservation District and Northern MI Invasive Species Network programs Additionally, Benzie County has created a Facebook page for Benzie County Emergency Management where information can be shared.	#3m (Medium) #12a (Low) #12b (Low) #14 (Low) #14a (Low)
b. Promote the relocation of structures	FEMA Emergency Management Coordinator County Planning MI Department of Environmental Quality U.S. Army Corps of Engineers Townships, Villages	2-5 years from adoption of the plan	Same as 1a in this table.	Same as 1a in this table.
c. Drainage control and placement of vegetation, utilizing native vegetation	County Conservation District Drain Commissioner County Planning Emergency Management Coordinator Townships, Villages	1-3 years from adoption of the plan	Educational programming provided by the Benzie Conservation District and Northern MI Invasive Species Network programs; mentioned in the 2017 Benzie County Master Plan update under Water Quality Improvement Objectives, page 51.	#8a (Medium) #53 (Medium) #54 (Medium) #55 (Medium) #60 (Medium)
d. Enforcement of soil erosion statutes/permits	County Soil Conservation District County Planning Emergency Management Coordinator MI Department of Environmental Quality U.S. Army Corps of Engineers	Ongoing	Ongoing. The Benzie County Building Department issues soil erosion permits and provides enforcement of the soil erosion statute for construction projects in all jurisdictions in the County.	#26 (High) #26a (High) #26b (Medium)
e. Enforcement of building codes	County Building Inspector	Ongoing	Ongoing. Floodplain verification is required by the County Building Department for new builds and additions. EGLE requires permits regarding new builds or additions in designated High-Risk Erosion Areas along Lake Michigan. The Benzie Conservation District (BCD) partners with EGLE to help implement the State of Michigan's Critical Dunes Protection laws. Before a permit is issued by EGLE for any construction or improvements to property in the Critical Dune Area, a written Vegetative Removal Assurance form must be issued by the BCD.	#26 (High) #26a (High) #26b (Medium)

Priority Areas and Action Strategies	Responsible Parties	Timeframe	2023 Status	Related Strategies in the 2023 Plan and Priority Level
2015 Priority Area 3: Wildfire Mitigation Strategies				
a. Public education, awareness, alertness – become a FIREWISE community	County Planning Department Emergency Management Coordinator Building Inspector Local Governments	1-4 years from adoption of the plan	No progress on Firewise USA program participation due to a lack of community interest/engagement. However, the County EM Facebook page is utilized to alert the public about high fire danger conditions and preventative measures to reduce the risk of fire.	#3a (Medium) #3j (Medium) #3l (Medium)
b. Work with campgrounds on a notification system regarding fire danger; create areas of refuge involving imminent fire dangers at campgrounds; and establish evacuation routes from campgrounds	Emergency Management Coordinator County Conservation District State/County Campground Managers Township, Village	1-3 years from adoption of the plan	No progress due to lack of time/resources of the County Emergency Manager to address.	#3k (Medium) #23 (Medium)
c. Develop new building and zoning codes	County Planning Department Emergency Management Coordinator Building Inspector Township, Village	1-3 years from adoption of the plan	No Progress. This strategy was deemed no longer applicable. The county implements the State of MI Building Code. Local governments are responsible for developing and revising their own zoning codes.	#3j (Medium) It was decided that a more effective wildfire mitigation strategy would be for local communities to participate in the Firewise USA program
d. Adjustments in the planning, design, and development process for area structure County Building Inspector	County Building Inspector County Planning Department Emergency Management Coordinator Township, Village	1-3 years from adoption of the plan	No Progress. This strategy is no longer applicable. The county implements the State of MI Building Code.	This strategy is no longer included in the 2023 plan.
e. Continue Building code enforcement for new construction	County Building Inspector	Ongoing	Ongoing. County Building Dept. continues to implement the State of MI Building Code, which includes requirements for Fire & Smoke Protection Features and Fire Protection Systems.	#26 (High)
Priority Area 4: Snow Load and Ice Build Up Mitigation Strategies				
a. Continue Building code enforcement for new construction	Building Inspector	Ongoing	Ongoing. County Building Dept. continues to implement the State of MI Building Code, which includes design requirements pertaining to snow load according to location in Michigan, as well as any required ice barrier applications to roofs.	#26 (High)
b. Public education	County Building Inspector County Planning Department Emergency Management Coordinator Townships, Villages	1-3 years from adoption of the plan	The Benzie County Office of Emergency Management maintains a Facebook page to inform the public hazardous weather conditions (relayed from the National Weather Service in Gaylord) and advice on how to be prepared for these events.	#3a (Medium) #3d (Medium)

Priority Areas and Action Strategies	Responsible Parties	Timeframe	2023 Status	Related Strategies in the 2023 Plan and Priority Level
2015 Priority Area 5: High Winds Mitigation Strategies				
a. Continue Building code enforcement for new construction	County Building Inspector	Ongoing	Progress: Ongoing. County Building Dept. continues to implement the State of MI Building Code, which includes requirements for wind resistance.	#26 (High)
b. Tree management by power companies	Emergency Management Coordinator Power Companies	Ongoing	Progress: Ongoing. Cherryland Electric Co-op and Consumers Energy continue to perform scheduled vegetative management in their right-of-way corridors.	#37 (High)
c. Create shelters for campground areas	Emergency Management Coordinator County Planning County Building Inspector Townships, Villages	2-5 years from adoption of the plan	No progress due to lack of time/resources of the County Emergency Manager to address.	#22 (Low)
d. Public education for structural elements and tree management	Emergency Management Coordinator County Building Inspector County Soil Conservation District Townships, Villages	1-3 years from adoption of the plan	Facebook page maintained for Benzie County Emergency Management posting of emergency notices/prevention & preparedness education.	#3a (Medium) #3b (Medium) #3d (Medium) #27 (Medium)
Other Strategies				
Work on a multi-hazard warning plan			Completed. The CodeRED Emergency Communications network service is now available for the County.	#3a (Medium)
Work with other governmental entities, organizations, businesses, and the public			Progress: In 2021 the State of MI awarded a \$5.1 million grant to the Friends of the Point Betsie Lighthouse to repair its shoreline protection system (the aging seawall and shoreline were damaged by high water levels.) In 2023 The Benzie County Board of Commissioners committed \$250,000 to the Friends' group toward the fundraising efforts for this project, which is estimated to cost between \$8 million and \$9 million.	#2 (High) #3 and #3a-3m (Medium)
Incorporate the Plan's natural hazards mitigation concepts, strategies, and policies into existing elements of Benzie County's Master Comprehensive Plan 2020.			Progress: The County Master Plan was updated in 2017. Hazard Mitigation Plan elements incorporated into master plan objectives related to Water Quality, Wetlands, Invasive Species, and Sensitive Lands.	#1 (High)

APPENDIX D: CONSIDERATION OF ALTERNATIVE STRATEGIES

Hazard Mitigation Alternatives Considered for Benzie County

A check mark indicates it was included in the list of mitigation strategies.

Sources of alternatives: Michigan State Police's 2019 Michigan Hazard Analysis and Hazard Analysis Supplement

Hazard Mitigation Alternatives for General Thunderstorm Hazards, Hail, and/or Lightning	
✓	Increased coverage and use of NOAA Weather Radio, and public early warning systems and networks.
✓	Buried/protected power and utility lines. (NOTE: Where appropriate: Burial may sometimes cause additional problems and costs in cases where eventual cable breakages are harder to locate and more expensive to repair.)
✓	Tree trimming and maintenance to prevent limb breakage and safeguard nearby utility lines. (Ideal: Establishment of a community forestry program with a main goal of creating and maintaining a disaster-resistant landscape in public rights-of-way.)
✓	Using structural bracing, window shutters, laminated glass in window panes, and impact-resistant roof shingles to minimize damage to public and private structures.
✓	Moving vehicles into garages or other covered areas. <i>(Advice to be provided in public outreach efforts.)</i>
✓	Installing lightning protection devices on the community's communications infrastructure and critical structures. More widespread use of lightning protection devices might also occur. <i>(Advice to be provided in public outreach efforts.)</i>
✓	Purchase of insurance that includes coverage for hail damage.
✓	Using surge protectors on critical electronic equipment. <i>(Advice to be provided in public outreach efforts.)</i>

Hazard Mitigation Alternatives for Tornadoes and Severe Winds	
✓	Increased coverage and use of NOAA Weather Radio, or comparable device-based notifications.
✓	Public early warning systems and networks.
✓	Tree trimming and maintenance to prevent limb breakage and safeguard nearby utility lines. (Ideal: Establishment of a community forestry program with a main goal of creating and maintaining a disaster-resistant landscape in public rights-of-way.)
✓	Buried/protected power and utility lines. (NOTE: Where appropriate. Burial may cause additional problems and costs when breakage or malfunction occurs, due to the increased difficulty in locating and repairing the problem.)
✓	Using appropriate wind engineering measures and construction techniques (e.g. structural bracing, straps and clips, anchor bolts, laminated or impact-resistant glass, reinforced entry and garage doors, window shutters, waterproof adhesive sealing strips, and interlocking roof shingles) to strengthen public and private structures against severe wind damage.
✓	Proper anchoring of manufactured homes and exterior structures such as carports and porches.
✓	Securing loose materials, yard, and patio items indoors, or where winds cannot blow them about. <i>(Advice to be provided in public outreach efforts.)</i>
✓	Construction of concrete safe rooms in homes and shelter areas in mobile home parks, fairgrounds, shopping malls, or other vulnerable public areas or event locations.

Hazard Mitigation Alternatives for the Extreme Temperatures Hazard	
✓	Organizing outreach to vulnerable populations during periods of extreme temperatures, including establishing and building awareness of accessible heating and/or cooling centers in the community, and other public information campaigns about this hazard.
✓	Increased coverage and use of NOAA Weather Radio.
✓	Provide and publicize designated heating and cooling centers within the community, where persons in need may go to obtain relief from outdoor temperatures.

Hazard Mitigation Alternatives for Winter Weather Hazards (Includes snowstorms, ice & sleet storms)	
✓	Increased coverage and use of NOAA Weather Radio.

✓	Tree trimming and maintenance to prevent limb breakage and safeguard nearby utility lines. (Ideal: Establishment of a community forestry program with a main goal of creating and maintaining a disaster-resistant landscape in public rights-of-way.)
✓	Buried/protected power and utility lines. (NOTE: Where appropriate. Burial may cause additional problems and costs in case of breakage, due to the increased difficulty in locating and repairing the problem.)
✓	Establishing heating centers/shelters for vulnerable populations.
✓	Home and public building design and maintenance to prevent roof and wall damage from "ice dams."
✓	Proper building/site design and code enforcement relating to snow loads, roof slope, snow removal and storage, etc.
	Agricultural activities to reduce impacts on crops and livestock.
	Pre-arranging for shelters for stranded motorists/travelers, and others.
	Using snow fences or "living snow fences" (rows of trees or vegetation) to limit blowing and drifting of snow over critical roadway segments.

Hazard Mitigation Alternatives for Fluvial (Riverine) Flooding	
✓	Floodplain management—planning acceptable uses for areas prone to flooding (through comprehensive planning, code enforcement, zoning, open space requirements, subdivision regulations, land use and capital improvements planning) and involving drain commissioners, hydrologic studies, etc. in these analyses and decisions.
✓	Acceptable land use densities, coverage and planning for particular soil types and topography (decreasing amount of impermeable ground coverage in upland and drainage areas, zoning and open space requirements suited to the capacity of soils and drainage systems to absorb rainwater runoff, appropriate land use and capital improvements planning) and involving drain commissioners, hydrologic studies, etc. in these analyses and decisions.
✓	Dry floodproofing of structures within known flood areas (strengthening walls, sealing openings, use of waterproof compounds or plastic sheeting on walls).
	Wet floodproofing of structures (controlled flooding of structures to balance water forces and discourage structural collapse during floods).
✓	Elevation of flood-prone structures above the 100-year flood level.
✓	Purchase or transfer of development rights – to discourage development in floodplain areas.
	"Floating" architectural designs for structures in flood-prone areas.
✓	Construction of elevated or alternative roads that are unaffected by flooding, or making roads more flood-resistant through better drainage and/or stabilization/armoring of vulnerable shoulders and embankments.
✓	Government acquisition, relocation, or condemnation of structures within floodplain or floodway areas.
✓	Employing techniques of erosion control within the watershed area (proper bank stabilization, techniques such as planting of vegetation on slopes, creation of terraces on hillsides, use of riprap boulders and geotextile fabric, etc.).
✓	Protection (or restoration) of wetlands and natural water retention areas.
✓	Higher engineering standards for drain and sewer capacity, or the expansion of infrastructure to higher capacity.
✓	Joining the National Flood Insurance Program (NFIP).
	Obtaining flood insurance. (Requires community participation in the NFIP.)
	Participation in the Community Rating System (CRS).

Hazard Mitigation Alternatives for Urban Flooding	
✓	Stormwater management—Adequate design, installation, maintenance, and monitoring of municipal storm sewer systems. Ordinances or amendments to assist in stormwater management (e.g. forbidding illicit

	discharges). Planning for and regulating areas prone to flooding (acceptable uses and development restrictions through comprehensive planning, code enforcement, zoning, open space requirements, subdivision regulations, purchased or transferred development rights, land use and capital improvements planning) and involving drain commissioners, hydrologic studies, etc. in these analyses and decisions.
	Homeowner's and rental insurance that includes coverage of damages and cleanup of sewer backflow impacts.
✓	Structural projects to channel water away from people and property (dikes, levees, floodwalls) or to increase drainage or absorption capacities (spillways, water detention and retention basins, relief drains, drain widening/dredging or rerouting, debris detention basins, logjam and debris removal, extra culverts, bridge modification, flood gates and pumps, wetlands protection and restoration).
✓	Higher engineering standards for drain and sewer capacity, or the expansion of infrastructure to higher capacity.
	Drainage easements (allowing the planned and regulated public use of privately owned land for temporary water retention and drainage).
✓	Installing (or re-routing or increasing the capacity of) storm drainage systems, including the separation of storm and sanitary sewer systems.
✓	Farmland and open space preservation.
	Elevating mechanical and utility devices above expected flood levels.
	Flood warning systems and the monitoring of water levels with stream gauges and trained monitors.
✓	Increased coverage and use of NOAA Weather Radio.
	Anchoring of manufactured homes to a permanent foundation in flood areas, but preferably these structures would be readily movable if necessary or else permanently relocated outside of flood-prone areas and erosion areas.
✓	Control and securing of debris, yard items, or stored objects (including oil, gasoline, and propane tanks, and paint and chemical barrels) in floodplains that may be swept away, damaged, or pose a hazard when flooding occurs. <i>(Advice to be provided in public outreach efforts).</i>
✓	Back-up generators for pumping and lift stations in sanitary sewer systems, and other measures (alarms, meters, remote controls, switchgear upgrades) to ensure clear drainage infrastructure.
✓	Detection and prevention/discouragement of illegal discharges into storm-water sewer systems, from home footing drains, downspouts and sump pumps.
✓	Increasing the function and capacity of sewage lift stations and treatment plants (installation, expansion, and maintenance), including possible separation of combined storm/sanitary sewer systems, if appropriate.
✓	Wetlands protection regulations and policies.
✓	Use of check valves, sump pumps and backflow preventers in homes and buildings.
✓	Acceptable land use densities, coverage and planning for particular soil types and topography (decreasing amount of impermeable ground coverage in upland and drainage areas, zoning and open space requirements suited to the capacity of soils and drainage systems to absorb rainwater runoff, appropriate land use and capital improvements planning) and involving drain commissioners, hydrologic studies, etc. in these analyses and decisions.
✓	Employing techniques of erosion control within the watershed area (proper bank stabilization, techniques such as planting of vegetation on slopes, creation of terraces on hillsides, use of riprap boulders and geotextile fabric, etc.).
✓	Protection (or restoration) of wetlands and natural water retention areas.
✓	Landslide mitigation ideas: Do not build houses, buildings, parks, or playgrounds close to steep slopes; install flexible pipe fittings to avoid gas and water line breakage.

Hazard Mitigation Alternatives for Dam Failures	
✓	Regular inspection and maintenance of dams.
✓	Garnering community support for a funding mechanism to assist dam owners in the removal or repair of dams in disrepair.

	Regulate development in the dam's hydraulic shadow (where flooding would occur if a severe dam failure occurred).
✓	Ensuring that dams meet or exceed the design criteria required by law.
✓	Public warning systems.
	Obtaining insurance.
✓	Increased coverage and use of NOAA Weather Radio
	Increased funding for dam inspections and enforcement of the Dam Safety Program (Part 315 of the Natural Resources and Environmental Protection Act) requirements and goals.
	Constructing emergency access roads to dams, where needed.
	Pump and flood gate installation/automation.

Mitigation Alternatives for Drought Hazard	
	Storage of water for use in drought events (especially for human needs during periods of extreme temperatures, and for responding to structural fire and wildfire events).
✓	Legislative acts, local ordinances, and other measures to prioritize or control water use.
✓	Encouragement of water-saving measures by consumers (including landscaping, irrigation, farming, lower priority lawn maintenance, and non-essential auto washing).
✓	Anticipation of potential drought conditions, and the preparation of drought contingency plans.
	Designs, for recreational and other water-related structures and land uses, that take into account the full range of water levels (of lakes, streams, and groundwater).
✓	Designs and plans for water delivery systems that include a consideration of drought events.
	Obtaining agricultural insurance.

Hazard Mitigation Alternatives for Wildfire Hazard <i>(Note: Many of these actions are included in the Firewise USA public education program on wildfire preparedness)</i>	
✓	Proper maintenance of property in or near wildland areas (including short grass; thinned trees and removal of low-hanging branches; selection of fire-resistant vegetation; use of fire resistant roofing and building materials; use of functional shutters on windows; keeping flammables such as curtains securely away from windows or

	using heavy fire-resistant drapes; creating and maintaining a buffer zone (defensible space) between structures and adjacent wild lands; use of the fire department's home safety inspections; sweeping/cleaning dead or dry leaves, needles, twigs, and combustibles from roofs, decks, eaves, porches, and yards; keeping woodpiles and other combustibles away from structures; use of boxed or enclosed eaves on houses; thorough cleaning-up of spilled flammable fluids; and keeping garage areas protected from blowing embers).
✓	Safe disposal of yard and house waste rather than through open burning. (<i>Advice to be provided in public outreach efforts</i>).
	Use of fire spotters, towers, planes.
✓	Use of structural fire mitigation systems such as interior and exterior sprinklers, smoke detectors, and fire extinguishers.
✓	Arson prevention activities, including reduction of blight (cleaning up areas of abandoned or collapsed structures, accumulated junk or debris, and lands with a history of flammable substances stored, spilled, or dumped on them).
✓	Public notification of fire weather and fire warnings.
✓	Prescribed burns and fuel management (thinning of flammable vegetation, possibly including selective logging to thin out some areas. Fuels cleared can be given away as firewood or made into wood chips for distribution.)
✓	Have adequate water supplies for emergency fire-fighting (in accordance with NFPA standards).
✓	The creation of fuel breaks (areas where the spread of wildfires will be slowed or stopped due to removal of fuels, or the use of fire-retardant materials/vegetation) in high-risk forest or other areas.
✓	Keeping roads and driveways accessible to vehicles and fire equipment—driveways should be relatively straight and flat, with at least some open spaces to turn, bridges that can support emergency vehicles, and clearance wide and high enough for two-way traffic and emergency vehicle access (spare keys to gates for properties should be provided to the local fire department, and an address should be visible from the road so homes can be located quickly).
✓	Enclosing the foundations of homes and buildings rather than leaving them open with their underside exposed to blown embers or materials.
✓	Safe use and maintenance/cleaning of fireplaces and chimneys (with the use of spark arresters and emphasis on proper storage of flammable items). Residents should be encouraged to inspect chimneys at least twice a year and clean them at least once a year.
✓	Proper maintenance and storage of motorized equipment that could catch on fire (from blown embers, etc.)
✓	Proper storage and use of flammables, including the use of flammable substances (such as when fueling machinery). Store gasoline, oily rags and other flammable materials in approved safety cans. Stack firewood at least 100 feet away and uphill from homes.
✓	Avoid building structures on hilltop locations, where they will be at greater risk from wildfires (also, hillsides facing south or west are more vulnerable to increased dryness and heat from sun exposure).
✓	Use of proper setbacks from slopes (outside of the "convection cone" of intense heat which would be projected up the slope of the hill as a wildfire "climbs" it).
✓	Obtaining insurance.

Hazard Mitigation Alternatives for Invasive Species

	Restrictions on the import and transport of species carriers.
	Adjustments to hunting, fishing, and other policies and regulations related to wildlife populations.
✓	Use of barriers to prevent invasive species travel.
✓	Use of competing species or other population control techniques.

Hazard Mitigation Opportunities for Public Health Emergencies

✓	Maintaining proper levels of PPE for healthcare workers and first responders, with additional supplies for long-term care facilities.
✓	Immunization programs to vaccinate against communicable diseases.
✓	Improving ventilation techniques in areas, facilities, or vehicles that are prone to crowding or that may involve exposure to contagion or noxious atmospheres.

✓	Maintaining community water and sewer infrastructure at acceptable operating standards.
✓	Providing back-up generators for water and wastewater treatment facilities to maintain acceptable operating levels during power failures.
✓	Demolition and clearance of vacant condemned structures to help prevent vermin infestation.
✓	Adequate community clinics and school health services.
✓	Brownfield and urban blight clean-up activities.
✓	Proper location, installation, cleaning, monitoring, and maintenance of septic tanks.
✓	Separation of storm and sanitary sewer systems.
	Spraying programs to properly control mosquito populations.
✓	Updated Continuity of Operations (COOP) plans and alternative "work from home" schedules.

APPENDIX E: PARTICIPATION TABLE

Benzie County 2023 Natural Hazard Mitigation Plan Participation Table

Participating Entity	Representative	Title	Survey	HM Kick Off Meeting 7/1/2021	LEPC Meeting 09/20/2021	LEPC Meeting 10/18/2021	LEPC Meeting 1/18/2022	LEPC Meeting 3/21/2022	BCRC Meeting 3/21/22	LEPC Meeting 04/12/22	LEPC Meeting 6/20/22
Benzie County Office of Emergency Management	Rebecca Hubers	Emergency Management Coordinator	X	X	X	X	X	X		X	X
	Jennifer Neal	Community Planner			X	X	X	X			
Networks Northwest	Stephanie Marchbanks	Community Planner				X	X	X	X		
	Frank Post	Contracted Employee		X		X					
	Rob Carson	Director of Community Development		X	X						
	Zach Vega	Community Planner		X							
Benzie County Board of Commissioners	Robert Roelofs	District 1									
	Art Jeannot	District 2	X								
	Karen Cunningham	District 3									
	Rhonda Nye	District 4									
	Tim Markey	District 5	X		X	X	X	X		X	X
	Evan Warseke	District 6									
	Gary Sauer	District 7	X		X	X	X				X
Benzie County	Kyle Rosa	Sheriff	X		X		X	X			X
	Greg Hubers	Undersheriff	X								
	Chad Hollenbeck	Benzie Bus Operations Manager									
	David Hanchett	Community Emergency Response Team (CERT)									
	Cory Ellis	911 Central Dispatch Director									
	Tom King	EMS Director	X		X	X	X	X		X	
	Jim Zimmerman	Building Inspector, Plan review, Soil Erosion									
	Tom Longanback	Equalization Director (former)					X				
	Katie Zeits	Administrator					X				
	Tammy Bowers	Clerk									
Benzie County Road Commission	Mike Johnson	Shop Foreman/Facility Mgr.			X	X		X		X	
Benzie-Leelanau District Health Department	Matt Skeels	Manager	X						X		
	Bobbi Scott	Emergency Preparedness Coordinator			X	X				X	
Manistee/Benzie Michigan Department of Health and Human Services	Eric Johnston	Director of Environmental Health									
	Joleen Peck	Dept. Analyst E					X	X			
American Red Cross - N. MI Chapter	Jennifer Savage	Director			X						
	Meghan Powers	Disaster Program Manager	X				X	X			
Paul Oliver Memorial Hospital	Fred Craigin	Manager of Safety, Security and Emergency Management	X		X	X	X	X		X	X
Benzie Conservation District	Tad Peacock	Executive Director	X								
Northwest Michigan Invasive Species Network	Audrey Menninga	ISN Coordinator									
Michigan Department of Natural Resources	Steve Cameron	Forest Fire Supervisor					X				
	Lt. Joe Molnar	Law Enforcement District, Customer Service Center									
Michigan State Police	Lt. Frank Keck	7th District Assistant Commander			X						
	Lt. Matt McCaul	Retired	X		X	X	X			X	
	Lt. Travis House	Commander of MSP Cadillac Post						X			
	Trevor Baesch	Trooper, MSP Gaylord Post									
	F/Lt Steve Porter	Commander of MSP Traverse City Post									
	Lt. Michael deCastro	Region 7 District Coordinator, EMHSD			X						
Graceland Fruit	Cody Allen	Human Resources Coordinator			X	X		X		X	
Smeltzer Orchards	Tim Brian	President				X	X			X	
Grand Traverse Band Tribe	Jolanda Murphy	Public Safety Department Manager	X	X	X	X	X	X		X	X
	Doris Winslow	Executive Assistant to the Tribal Manager									
	Tribal Member		X								
Almira Township	Tammy Clous	Clerk									
	Brad Drury	Fire Chief									
	Mark Roper	Supervisor									
	Mandy Gray Rineer	Trustee									
	Lori Horip	Trustee									
	Matt Therrien	Trustee									
Benzonia Township	Steve Adams	Fire Chief	X		X	X	X	X		X	X
	Diana Heller	Clerk									
	Jason Barnard	Supervisor & Zoning Administrator	X								
	Karen Burns	Treasurer	X								
Blaine Township	Jim Sheets	Trustee									
	Shiela Priest	Trustee									
	Paul E. Crandall	Supervisor	X								
	Walter Rohn	Trustee									
	Chuck Beale	Trustee									
City of Frankfort	Cyndi Sauer	Treasurer									
	Marjorie Rohn	Clerk	X								
	Joshua Mills	Superintendent	X								
	JoAnn M. Holwerda	Mayor									
	Daniel Walenta	Mayor Pro-tem									
	Brady Olsen	Councilmember									
	Mary Ann Short	Councilmember									
	Mackenzie Stratton	Councilmember									
	Christine Spence	Clerk/Treasurer									
	Mike Cederholm	Fire Chief									
Colfax Township	Rob Lozowski	Police Chief	X								
	Ron Seguin	Supervisor									
	DeAnn Mosher	Clerk									
	Barbara Hoselt	Treasurer									
	Shelley Greene	Trustee									
	Tom Bessey	Trustee									
	?	Community Member									

Participating Entity	Representative	Title	LEPC Meeting 7/18/22	LEPC Meeting 8/15/22	LEPC Meeting 10/17/22	LPT Meeting 10/27/22	LPT/LEPC Meeting 1/17/23	LPT/LEPC Meeting 2/21/23	LPT/LEPC Meeting 3/20/23	LPT/LEPC Meeting 4/17/23	Public Hearing 5/23/23	Almira Twp. 2/14/2022
Benzie County Office of Emergency Management	Rebecca Hubers	Emergency Management Coordinator	X	X	X	X	X	X	X	X	X	X
	Jennifer Neal	Community Planner	X	X	X			X	X			
Networks Northwest	Stephanie Marchbanks	Community Planner	X	X	X			X	X		X	
	Frank Post	Contracted Employee										
	Rob Carson	Director of Community Development										
	Zach Vega	Community Planner										
Benzie County Board of Commissioners	Robert Roelofs	District 1									X	
	Art Jeannot	District 2										
	Karen Cunningham	District 3									X	
	Rhonda Nye	District 4									X	
	Tim Markey	District 5		X	X	X	X	X	X	X	X	
	Evan Warseke	District 6									X	
	Gary Sauer	District 7	X	X	X						X	
Benzie County	Kyle Rosa	Sheriff	X		X		X		X	X		
	Greg Hubers	Undersheriff				X		X				
	Chad Hollenbeck	Benzie Bus Operations Manager				X						
	David Hanchett	Community Emergency Response Team (CERT)				X			X			
	Cory Ellis	911 Central Dispatch Director					X	X		X		
	Tom King	EMS Director	X	X	X	X	X		X	X		
	Jim Zimmerman	Building Inspector, Plan review, Soil Erosion										
	Tom Longanback	Equalization Director (former)										
	Katie Zeits	Administrator									X	
	Tammy Bowers	Clerk									X	
Benzie County Road Commission	Mike Johnson	Shop Foreman/Facility Mgr.	X			X	X	X	X			
	Matt Skeels	Manager										
Benzie-Leelanau District Health Department	Bobbi Scott	Emergency Preparedness Coordinator	X	X	X	X	X					
	Eric Johnston	Director of Environmental Health			X							
Manistee/Benzie Michigan Department of Health and Human Services	Joleen Peck	Dept. Analyst E		X	X							
	Jennifer Savage	Director										
American Red Cross - N. MI Chapter	Meghan Powers	Disaster Program Manager			X	X			X			
Paul Oliver Memorial Hospital	Fred Craigin	Manager of Safety, Security and Emergency Management		X			X	X	X			
Benzie Conservation District	Tad Peacock	Executive Director										
Northwest Michigan Invasive Species Network	Audrey Menninga	ISN Coordinator										
Michigan Department of Natural Resources	Steve Cameron	Forest Fire Supervisor										
	Lt. Joe Molnar	Law Enforcement District, Customer Service Center				X						
Michigan State Police	Lt. Frank Keck	7th District Assistant Commander										
	Lt. Matt McCaul	Retired	X	X								
	Lt. Travis House	Commander of MSP Cadillac Post										
	Trevor Baesch	Trooper, MSP Gaylord Post		X								
	F/Lt Steve Porter	Commander of MSP Traverse City Post					X	X				
Lt. Michael deCastro	Region 7 District Coordinator, EMHSD											
Graceland Fruit	Cody Allen	Human Resources Coordinator										
Smeltzer Orchards	Tim Brian	President										
Grand Traverse Band Tribe	Jolanda Murphy	Public Safety Department Manager	X		X		X	X		X		
	Doris Winslow	Executive Assistant to the Tribal Manager										
	Tribal Member											
Almira Township	Tammy Clous	Clerk										X
	Brad Drury	Fire Chief										X
	Mark Roper	Supervisor										X
	Mandy Gray Rineer	Trustee										X
	Lori Horip	Trustee										X
	Matt Therrien	Trustee										X
Benzonia Township	Steve Adams	Fire Chief		X	X	X	X	X	X	X		
	Diana Heller	Clerk										
	Jason Barnard	Supervisor & Zoning Administrator										
	Karen Burns	Treasurer										
	Jim Sheets	Trustee										
Blaine Township	Shiela Priest	Trustee										
	Paul E. Crandall	Supervisor										
	Walter Rohn	Trustee										
	Chuck Beale	Trustee										
	Cyndi Sauer	Treasurer										
City of Frankfort	Marjorie Rohn	Clerk										
	Joshua Mills	Superintendent										
	JoAnn M. Holwerda	Mayor										
	Daniel Walenta	Mayor Pro-tem										
	Brady Olsen	Councilmember										
	Mary Ann Short	Councilmember										
	Mackenzie Stratton	Councilmember										
	Christine Spence	Clerk/Treasurer										
	Mike Cederholm	Fire Chief				X	X	X	X	X		
	Rob Lozowski	Police Chief				X						
Colfax Township	Ron Seguin	Supervisor										
	DeAnn Mosher	Clerk										
	Barbara Hoselt	Treasurer										
	Shelley Greene	Trustee										
	Tom Bessey	Trustee										
	?	Community Member										

Participating Entity	Representative	Title	Input on Hazard Concerns and Mitigation Strategies										
			Crystal Lake Twp. 2/15/22	Joyfield Twp. 3/2/22	Lake Twp. 3/3/22	Homestead Twp. 3/7/22	Gilmore Twp. 3/8/22	Inland Twp. 3/14/22	Platte Twp. 4/6/22	Weldon Twp. 4/12/22	Benzonia Twp. 4/13/22	Colfax Twp. 4/13/22	Blaine Twp. 7/7/22
Benzie County Office of Emergency Management	Rebecca Hubers	Emergency Management Coordinator	X	X	X	X	X	X	X	X	X	X	X
Networks Northwest	Jennifer Neal	Community Planner											
	Stephanie Marchbanks	Community Planner											
	Frank Post	Contracted Employee											
	Rob Carson	Director of Community Development											
	Zach Vega	Community Planner											
Benzie County Board of Commissioners	Robert Roelofs	District 1											
	Art Jeannot	District 2											
	Karen Cunningham	District 3											
	Rhonda Nye	District 4											
	Tim Markey	District 5											
	Evan Warseke	District 6											
	Gary Sauer	District 7		X									
Benzie County	Kyle Rosa	Sheriff											
	Greg Hubers	Undersheriff											
	Chad Hollenbeck	Benzie Bus Operations Manager											
	David Hanchett	Community Emergency Response Team (CERT)											
	Cory Ellis	911 Central Dispatch Director											
	Tom King	EMS Director											
	Jim Zimmerman	Building Inspector, Plan review, Soil Erosion											
	Tom Longanback	Equalization Director (former)											
	Katie Zeits	Administrator											
Benzie County Road Commission	Tammy Bowers	Clerk											
	Mike Johnson	Shop Foreman/Facility Mgr.											
Benzie-Leelanau District Health Department	Matt Skeels	Manager											
	Bobbi Scott	Emergency Preparedness Coordinator											
Manistee/Benzie Michigan Department of Health and Human Services	Eric Johnston	Director of Environmental Health											
	Joleen Peck	Dept. Analyst E											
American Red Cross - N. MI Chapter	Jennifer Savage	Director											
	Meghan Powers	Disaster Program Manager											
Paul Oliver Memorial Hospital	Fred Craigin	Manager of Safety, Security and Emergency Management											
Benzie Conservation District	Tad Peacock	Executive Director											
Northwest Michigan Invasive Species Network	Audrey Menninga	ISN Coordinator											
Michigan Department of Natural Resources	Steve Cameron	Forest Fire Supervisor											
	Lt. Joe Molnar	Law Enforcement District, Customer Service Center											
Michigan State Police	Lt. Frank Keck	7th District Assistant Commander											
	Lt. Matt McCaul	Retired											
	Lt. Travis House	Commander of MSP Cadillac Post											
	Trevor Baesch	Trooper, MSP Gaylord Post											
	F/Lt Steve Porter	Commander of MSP Traverse City Post											
	Lt. Michael deCastro	Region 7 District Coordinator, EMHSD											
Graceland Fruit	Cody Allen	Human Resources Coordinator											
Smeltzer Orchards	Tim Brian	President											
Grand Traverse Band Tribe	Jolanda Murphy	Public Safety Department Manager											
	Doris Winslow	Executive Assistant to the Tribal Manager											
	Tribal Member												
Almira Township	Tammy Clous	Clerk											
	Brad Drury	Fire Chief											
	Mark Roper	Supervisor											
	Mandy Gray Rineer	Trustee											
	Lori Horip	Trustee											
	Matt Therrien	Trustee											
Benzonia Township	Steve Adams	Fire Chief											
	Diana Heller	Clerk									X		
	Jason Barnard	Supervisor & Zoning Administrator									X		
	Karen Burns	Treasurer									X		
	Jim Sheets	Trustee									X		
	Shiela Priest	Trustee									X		
Blaine Township	Paul E. Crandall	Supervisor											X
	Walter Rohn	Trustee											X
	Chuck Beale	Trustee											X
	Cyndi Sauer	Treasurer											X
	Marjorie Rohn	Clerk											X
City of Frankfort	Joshua Mills	Superintendent											
	JoAnn M. Holwerda	Mayor											
	Daniel Walenta	Mayor Pro-tem											
	Brady Olsen	Councilmember											
	Mary Ann Short	Councilmember											
	Mackenzie Stratton	Councilmember											
	Christine Spence	Clerk/Treasurer											
	Mike Cederholm	Fire Chief											
	Rob Lozowski	Police Chief											
Colfax Township	Ron Seguin	Supervisor											
	DeAnn Mosher	Clerk											
	Barbara Hoselt	Treasurer											
	Shelley Greene	Trustee											
	Tom Bessey	Trustee											
	?	Community Member											X

Participating Entity	Representative	Title	Via Local Government Meetings or Emails								
			Benzon Twp. 11/9/22	Almira Twp. 11/14/22	City of Frankfort 11/15/22	Blaine Twp. 12/1/2022	Village of Benzonia 12/5/2022	Joyfield Township 12/7/2022	Inland Township 12/12/2022	Weldon Township 12/13/2022	Crystal Lake Township 12/20/2022
Benzie County Office of Emergency Management	Rebecca Hubers	Emergency Management Coordinator	X	X	X	X	X	X	X	X	X
Networks Northwest	Jennifer Neal	Community Planner									
	Stephanie Marchbanks	Community Planner									
	Frank Post	Contracted Employee									
	Rob Carson	Director of Community Development									
	Zach Vega	Community Planner									
Benzie County Board of Commissioners	Robert Roelofs	District 1									
	Art Jeannot	District 2									
	Karen Cunningham	District 3									
	Rhonda Nye	District 4									
	Tim Markey	District 5									
	Evan Warseke	District 6									
	Gary Sauer	District 7									
Benzie County	Kyle Rosa	Sheriff									
	Greg Hubers	Undersheriff									
	Chad Hollenbeck	Benzie Bus Operations Manager									
	David Hanchett	Community Emergency Response Team (CERT)									
	Cory Ellis	911 Central Dispatch Director									
	Tom King	EMS Director									
	Jim Zimmerman	Building Inspector, Plan review, Soil Erosion									
	Tom Longanback	Equalization Director (former)									
	Katie Zeits	Administrator									
Benzie County Road Commission	Tammy Bowers	Clerk									
	Mike Johnson	Shop Foreman/Facility Mgr.									
Benzie-Leelanau District Health Department	Matt Skeels	Manager									
	Bobbi Scott	Emergency Preparedness Coordinator									
Manistee/Benzie Michigan Department of Health and Human Services	Eric Johnston	Director of Environmental Health									
	Joleen Peck	Dept. Analyst E									
American Red Cross - N. MI Chapter	Jennifer Savage	Director									
	Meghan Powers	Disaster Program Manager									
Paul Oliver Memorial Hospital	Fred Craigin	Manager of Safety, Security and Emergency Management									
Benzie Conservation District	Tad Peacock	Executive Director									
Northwest Michigan Invasive Species Network	Audrey Menninga	ISN Coordinator									
Michigan Department of Natural Resources	Steve Cameron	Forest Fire Supervisor									
	Lt. Joe Molnar	Law Enforcement District, Customer Service Center									
Michigan State Police	Lt. Frank Keck	7th District Assistant Commander									
	Lt. Matt McCaul	Retired									
	Lt. Travis House	Commander of MSP Cadillac Post									
	Trevor Baesch	Trooper, MSP Gaylord Post									
	F/Lt Steve Porter	Commander of MSP Traverse City Post									
	Lt. Michael deCastro	Region 7 District Coordinator, EMHSD									
Graceland Fruit	Cody Allen	Human Resources Coordinator									
Smeltzer Orchards	Tim Brian	President									
Grand Traverse Band Tribe	Jolanda Murphy	Public Safety Department Manager									
	Doris Winslow	Executive Assistant to the Tribal Manager									
	Tribal Member										
Almira Township	Tammy Clous	Clerk		X							
	Brad Drury	Fire Chief									
	Mark Roper	Supervisor					X				
	Mandy Gray Rineer	Trustee			X						
	Lori Horip	Trustee			X						
Benzonia Township	Matt Therrien	Trustee									
	Steve Adams	Fire Chief	X								
	Diana Heller	Clerk	X								
	Jason Barnard	Supervisor & Zoning Administrator	X				X				
	Karen Burns	Treasurer	X								
Blaine Township	Jim Sheets	Trustee	X								
	Shiela Priest	Trustee	X								
	Paul E. Crandall	Supervisor					X				
	Walter Rohn	Trustee					X				
	Chuck Beale	Trustee									
City of Frankfort	Cyndi Sauer	Treasurer					X				
	Marjorie Rohn	Clerk					X				
	Joshua Mills	Superintendent								X	
	JoAnn M. Holwerda	Mayor								X	
	Daniel Walenta	Mayor Pro-tem								X	
Colfax Township	Brady Olsen	Councilmember								X	
	Mary Ann Short	Councilmember								X	
	Mackenzie Stratton	Councilmember								X	
	Christine Spence	Clerk/Treasurer								X	
	Mike Cederholm	Fire Chief								X	
Colfax Township	Rob Lozowski	Police Chief									
	Ron Seguin	Supervisor									
	DeAnn Mosher	Clerk									
	Barbara Hoselt	Treasurer									
	Shelley Greene	Trustee									
	Tom Bessey	Trustee									
	?	Community Member									

Participating Entity	Representative	Title	Input on Hazard Concerns and Mitigation Strategies via Local Gover								
			Platte Township 1/3/2023	Lake Township 1/5/2023	1/5/2023 Email	Village of Lake Ann 1/30/2023	Village of Beulah 1/10/2023	Colfax Township 1/11/2023	Village of Thompsonville 1/16/2023	Village of Elberta 1/19/2023	Homestead Township 2/6/2023
Benzie County Office of Emergency Management	Rebecca Hubers	Emergency Management Coordinator	X	X	X	X	X	X	X	X	
Networks Northwest	Jennifer Neal	Community Planner									
	Stephanie Marchbanks	Community Planner									
	Frank Post	Contracted Employee									
	Rob Carson	Director of Community Development									
	Zach Vega	Community Planner									
Benzie County Board of Commissioners	Robert Roelofs	District 1									
	Art Jeannot	District 2									
	Karen Cunningham	District 3									
	Rhonda Nye	District 4									
	Tim Markey	District 5									
	Evan Warseke	District 6									
	Gary Sauer	District 7									
Benzie County	Kyle Rosa	Sheriff									
	Greg Hubers	Undersheriff									
	Chad Hollenbeck	Benzie Bus Operations Manager									
	David Hanchett	Community Emergency Response Team (CERT)									
	Cory Ellis	911 Central Dispatch Director									
	Tom King	EMS Director									
	Jim Zimmerman	Building Inspector, Plan review, Soil Erosion									
	Tom Longanback	Equalization Director (former)									
	Katie Zeits	Administrator									
Benzie County Road Commission	Tammy Bowers	Clerk									
	Mike Johnson	Shop Foreman/Facility Mgr.									
Benzie-Leelanau District Health Department	Matt Skeels	Manager									
	Bobbi Scott	Emergency Preparedness Coordinator									
Manistee/Benzie Michigan Department of Health and Human Services	Eric Johnston	Director of Environmental Health									
	Joleen Peck	Dept. Analyst E									
American Red Cross - N. MI Chapter	Jennifer Savage	Director									
	Meghan Powers	Disaster Program Manager									
Paul Oliver Memorial Hospital	Fred Craigin	Manager of Safety, Security and Emergency Management									
Benzie Conservation District	Tad Peacock	Executive Director									
Northwest Michigan Invasive Species Network	Audrey Menninga	ISN Coordinator									
Michigan Department of Natural Resources	Steve Cameron	Forest Fire Supervisor									
	Lt. Joe Molnar	Law Enforcement District, Customer Service Center									
Michigan State Police	Lt. Frank Keck	7th District Assistant Commander									
	Lt. Matt McCaul	Retired									
	Lt. Travis House	Commander of MSP Cadillac Post									
	Trevor Baesch	Trooper, MSP Gaylord Post									
	F/Lt Steve Porter	Commander of MSP Traverse City Post									
Graceland Fruit	Lt. Michael deCastro	Region 7 District Coordinator, EMHSD									
Smeltzer Orchards	Cody Allen	Human Resources Coordinator									
Grand Traverse Band Tribe	Tim Brian	President									
	Jolanda Murphy	Public Safety Department Manager									
	Doris Winslow	Executive Assistant to the Tribal Manager									
Almira Township	Tribal Member										
	Tammy Clous	Clerk									
	Brad Drury	Fire Chief									
	Mark Roper	Supervisor									
	Mandy Gray Rineer	Trustee									
	Lori Horip	Trustee									
Benzonia Township	Matt Therrien	Trustee									
	Steve Adams	Fire Chief									
	Diana Heller	Clerk									
	Jason Barnard	Supervisor & Zoning Administrator									
Blaine Township	Karen Burns	Treasurer									
	Jim Sheets	Trustee									
	Shiela Priest	Trustee									
	Paul E. Crandall	Supervisor									
City of Frankfort	Walter Rohn	Trustee									
	Chuck Beale	Trustee									
	Cyndi Sauer	Treasurer									
	Marjorie Rohn	Clerk									
Colfax Township	Joshua Mills	Superintendent									
	JoAnn M. Holwerda	Mayor									
	Daniel Walenta	Mayor Pro-tem									
	Brady Olsen	Councilmember									
	Mary Ann Short	Councilmember									
	Mackenzie Stratton	Councilmember									
	Christine Spence	Clerk/Treasurer									
	Mike Cederholm	Fire Chief									
Rob Lozowski	Police Chief										
Colfax Township	Ron Seguin	Supervisor							X		
	DeAnn Mosher	Clerk							X		
	Barbara Hoselt	Treasurer							X		
	Shelley Greene	Trustee							X		
	Tom Bessey	Trustee							X		
	?	Community Member									

Benzie County 2023 Natural Hazard Mitigation Plan Participation Table

Participating Entity	Representative	Title	Participation Meetings or Emails					
			2/8/2023 Email	Village of Honor 2/13/2023	2/13/2023 Email	2/16/2023 Email	6/6/2023 Email	6/30/2023 Email
Benzie County Office of Emergency Management	Rebecca Hubers	Emergency Management Coordinator	X	X	X	X	X	
Networks Northwest	Jennifer Neal	Community Planner						
	Stephanie Marchbanks	Community Planner					X	X
	Frank Post	Contracted Employee						
	Rob Carson	Director of Community Development						
	Zach Vega	Community Planner						
Benzie County Board of Commissioners	Robert Roelofs	District 1						
	Art Jeannot	District 2						
	Karen Cunningham	District 3						
	Rhonda Nye	District 4						
	Tim Markey	District 5						
	Evan Warseke	District 6						
	Gary Sauer	District 7						
Benzie County	Kyle Rosa	Sheriff						
	Greg Hubers	Undersheriff						
	Chad Hollenbeck	Benzie Bus Operations Manager						
	David Hanchett	Community Emergency Response Team (CERT)						
	Cory Ellis	911 Central Dispatch Director						
	Tom King	EMS Director						
	Jim Zimmerman	Building Inspector, Plan review, Soil Erosion				X		
	Tom Longanback	Equalization Director (former)						
	Katie Zeits	Administrator						
Benzie County Road Commission	Tammy Bowers	Clerk						
	Mike Johnson	Shop Foreman/Facility Mgr.						
Benzie-Leelanau District Health Department	Matt Skeels	Manager						
	Bobbi Scott	Emergency Preparedness Coordinator						
Manistee/Benzie Michigan Department of Health and Human Services	Eric Johnston	Director of Environmental Health						
	Joleen Peck	Dept. Analyst E						
American Red Cross - N. MI Chapter	Jennifer Savage	Director						
Paul Oliver Memorial Hospital	Meghan Powers	Disaster Program Manager						
Benzie Conservation District	Fred Craigin	Manager of Safety, Security and Emergency Management						
Northwest Michigan Invasive Species Network	Tad Peacock	Executive Director						
Michigan Department of Natural Resources	Audrey Menninga	ISN Coordinator						X
	Steve Cameron	Forest Fire Supervisor						
Michigan State Police	Lt. Joe Molnar	Law Enforcement District, Customer Service Center						
	Lt. Frank Keck	7th District Assistant Commander						
	Lt. Matt McCaul	Retired						
	Lt. Travis House	Commander of MSP Cadillac Post						
	Trevor Baesch	Trooper, MSP Gaylord Post						
	F/Lt Steve Porter	Commander of MSP Traverse City Post						
Graceland Fruit	Lt. Michael deCastro	Region 7 District Coordinator, EMHSD						
Smeltzer Orchards	Cody Allen	Human Resources Coordinator						
Grand Traverse Band Tribe	Tim Brian	President						
	Jolanda Murphy	Public Safety Department Manager						
	Doris Winslow	Executive Assistant to the Tribal Manager					X	
Almira Township	Tribal Member							
	Tammy Clous	Clerk						
	Brad Drury	Fire Chief						
	Mark Roper	Supervisor						
	Mandy Gray Rineer	Trustee						
	Lori Horip	Trustee						
Benzonia Township	Matt Therrien	Trustee						
	Steve Adams	Fire Chief						
	Diana Heller	Clerk						
	Jason Barnard	Supervisor & Zoning Administrator						
	Karen Burns	Treasurer						
Blaine Township	Jim Sheets	Trustee						
	Shiela Priest	Trustee						
	Paul E. Crandall	Supervisor						
	Walter Rohn	Trustee						
	Chuck Beale	Trustee						
City of Frankfort	Cyndi Sauer	Treasurer						
	Marjorie Rohn	Clerk						
	Joshua Mills	Superintendent						
	JoAnn M. Holwerda	Mayor						
	Daniel Walenta	Mayor Pro-tem						
	Brady Olsen	Councilmember						
	Mary Ann Short	Councilmember						
	Mackenzie Stratton	Councilmember						
	Christine Spence	Clerk/Treasurer						
	Mike Cederholm	Fire Chief						
Colfax Township	Rob Lozowski	Police Chief						
	Ron Seguin	Supervisor						
	DeAnn Mosher	Clerk						
	Barbara Hoselt	Treasurer						
	Shelley Greene	Trustee						
	Tom Bessey	Trustee						
	?	Community Member						

Participating Entity	Representative	Title	Survey	HM Kick Off Meeting 7/1/2021	LEPC Meeting 09/20/2021	LEPC Meeting 10/18/2021	LEPC Meeting 1/18/2022	LEPC Meeting 3/21/2022	BCRC Meeting 3/21/22	LEPC Meeting 04/12/22	LEPC Meeting 6/20/22
Crystal Lake Township	Amy Ferris	Supervisor	X								
	Richard Nielsen	Trustee									
	William Northway	Trustee									
	Brooke Trentham Popp	Treasurer	X								
	Julie VanMeter	Clerk (current)									
	Sondra Halliday	Deputy Clerk									
Gilmore Township	Sue Sullivan	Clerk (former)									
	Gregory Wright	Planning Commission Chair	X								
	Shannon Spencley	Clerk									
	Carl Noffsinger	Supervisor									
Homestead Township	Robin Rommell	Treasurer									
	Douglas Holmes	Trustee									
	Tim Markey	Fire Chief	X								
	Karen Mallon	Clerk									
	Dorene Strang	Community Member									
	Mike Mead	Trustee									
	Patricia Delorme	Treasurer	X								
Inland Township	Shannon Purchase	Trustee									
	Bess Butler	Trustee									
	Tia Kurina-Coolley	Supervisor	X								
	David Davis	Supervisor (current)									
	Paul Beechcraft	Supervisor (former)	X								
	Rose Wirth	Clerk (current)									
	Therese Zjellinski	Treasurer (current)									
Joyfield Township	Linda Wilson	Treasurer (former)	X								
	Mary Miller	Trustee									
	Sheri Poulisse	Trustee									
	Matt Emery	Supervisor									
	Patricia Daugherty	Treasurer									
	Jim Evans	Trustee									
Lake Township	Dodie Putney	Clerk									
	Mark Evans	Trustee									
	Ed Kowalski	Community Member									
	Anna Grobe	Clerk (current), Supervisor (former)	X								
Platte Township	Sally Casey	Trustee									
	Maryanne Goodman	Treasurer									
	Dotty Blank	Clerk (former)									
	Kyle Orr	Trustee									
	Paul Solem	Supervisor									
Village of Benzonia	Alison Michalak	Clerk									
	Cynthia Gottschalk	Treasurer									
	Daniel Haswell	Trustee									
	Robert Bollenger	Trustee									
	Sara Kirk	Zoning Administrator									
	Timothy Flynn	President									
	Maridee Cutler	Clerk									
	Toni Flynn	Treasurer									
	Chris Pritchard	Superintendent									
	Hazel Heyn	Trustee									
	John Hafer	Trustee									
	Village of Beulah	Bob French	Trustee								
Alexandra Herryman		Trustee									
Theresa Moss		Trustee									
Shane Myers		Trustee									
Jeri VanDePerre		President									
Dan Hook		President Pro-Tem	X								
Mark Heniser		Trustee									
Phil Downs		Trustee									
Village of Elberta	Annie Browning	Trustee	X								
	Margaret Lurnn	Treasurer									
	Dawn Olney	Clerk									
	Jeff Cypert	Superintendent									
	Jennifer S. Wilkins	President	X								
	Emily Votruba	Trustee									
Village of Honor	Ken Holmes	President Pro-Tem									
	Norma Corwin	Clerk/Treasurer									
	Teri Reisner	Deputy Clerk									
	Ken Bonney	DPW Superintendent									
	Mike Cederholm	Fire Chief									
	Jeff Sandman	President									
	Bill Ward	President Pro-Tem									
	Maryanne Goodman	Treasurer									
Village of Honor	Deb Reed	Clerk									
	Cheri K. Sessions	Deputy Clerk									
	Jake Leone	Street Administrator/Maintenance									
	Dallas Denoyer	Trustee									
	Dennis Sternburgh	Trustee									
	Andrew Smith	Trustee									

Participating Entity	Representative	Title	LEPC Meeting 7/18/22	LEPC Meeting 8/15/22	LEPC Meeting 10/17/22	LPT Meeting 10/27/22	LPT/LEPC Meeting 1/17/23	LPT/LEPC Meeting 2/21/23	LPT/LEPC Meeting 3/20/23	LPT/LEPC Meeting 4/17/23	Public Hearing 5/23/23	Almira Twp. 2/14/2022
Crystal Lake Township	Amy Ferris	Supervisor										
	Richard Nielsen	Trustee										
	William Northway	Trustee										
	Brooke Trentham Popp	Treasurer										
	Julie VanMeter	Clerk (current)										
	Sondra Halliday	Deputy Clerk										
	Sue Sullivan	Clerk (former)										
Gilmore Township	Gregory Wright	Planning Commission Chair										
	Shannon Spencley	Clerk										
	Carl Noffsinger	Supervisor										
Homestead Township	Robin Rommell	Treasurer										
	Douglas Holmes	Trustee										
	Tim Markey	Fire Chief										
	Karen Mallon	Clerk										
	Dorene Strang	Community Member										
	Mike Mead	Trustee										
	Patricia Delorme	Treasurer										
Inland Township	Shannon Purchase	Trustee										
	Bess Butler	Trustee										
	Tia Kurina-Coolley	Supervisor										
	David Davis	Supervisor (current)										
	Paul Beechraft	Supervisor (former)										
	Rose Wirth	Clerk (current)										
	Therese Zjellinski	Treasurer (current)										
Joyfield Township	Linda Wilson	Treasurer (former)										
	Mary Miller	Trustee										
	Sheri Poulisse	Trustee										
	Matt Emery	Supervisor										
	Patricia Daugherty	Treasurer										
	Jim Evans	Trustee										
Lake Township	Dodie Putney	Clerk										
	Mark Evans	Trustee										
	Ed Kowalski	Community Member										
	Anna Grobe	Clerk (current), Supervisor (former)										
Platte Township	Sally Casey	Trustee										
	Maryanne Goodman	Treasurer										
	Dotty Blank	Clerk (former)										
	Kyle Orr	Trustee										
	Paul Solem	Supervisor										
Village of Benzonia	Alison Michalak	Clerk										
	Cynthia Gottschalk	Treasurer										
	Daniel Haswell	Trustee										
	Robert Bollenger	Trustee										
	Sara Kirk	Zoning Administrator										
	Timothy Flynn	President										
	Maridee Cutler	Clerk										
	Toni Flynn	Treasurer										
	Chris Pritchard	Superintendent										
	Hazel Heyn	Trustee										
Village of Beulah	John Hafer	Trustee										
	Bob French	Trustee										
	Alexandra Herryman	Trustee										
	Theresa Moss	Trustee										
	Shane Myers	Trustee										
	Jeri VanDePerre	President										
	Dan Hook	President Pro-Tem										
	Mark Heniser	Trustee										
Village of Elberta	Phil Downs	Trustee										
	Annie Browning	Trustee										
	Margaret Lurnn	Treasurer										
	Dawn Olney	Clerk										
	Jeff Cypert	Superintendent										
	Jennifer S. Wilkins	President										
	Emily Votruba	Trustee										
Village of Honor	Ken Holmes	President Pro-Tem										
	Norma Corwin	Clerk/Treasurer										
	Teri Reisner	Deputy Clerk										
	Ken Bonney	DPW Superintendent										
	Mike Cederholm	Fire Chief										
	Jeff Sandman	President										
	Bill Ward	President Pro-Tem										
	Maryanne Goodman	Treasurer										
Village of Honor	Deb Reed	Clerk										
	Cheri K. Sessions	Deputy Clerk										
	Jake Leone	Street Administrator/Maintenance										
	Dallas Denoyer	Trustee										
	Dennis Sternburgh	Trustee										
	Andrew Smith	Trustee										

Participating Entity	Representative	Title	Input on Hazard Concerns and Mitigation Strategies												
			Crystal Lake Twp. 2/15/22	Joyfield Twp. 3/2/22	Lake Twp. 3/3/22	Homestead Twp. 3/7/22	Gilmore Twp. 3/8/22	Inland Twp. 3/14/22	Platte Twp. 4/6/22	Weldon Twp. 4/12/22	Benzonia Twp. 4/13/22	Colfax Twp. 4/13/22	Blaine Twp. 7/7/22		
Crystal Lake Township	Amy Ferris	Supervisor	X												
	Richard Nielsen	Trustee	X												
	William Northway	Trustee	X												
	Brooke Trentham Popp	Treasurer	X												
	Julie VanMeter	Clerk (current)													
	Sondra Halliday	Deputy Clerk													
	Sue Sullivan	Clerk (former)	X												
Gilmore Township	Gregory Wright	Planning Commission Chair													
	Shannon Spencley	Clerk						X							
	Carl Noffsinger	Supervisor						X							
	Robin Rommell	Treasurer						X							
	Douglas Holmes	Trustee						X							
Homestead Township	Tim Markey	Fire Chief													
	Karen Mallon	Clerk					X								
	Dorene Strang	Community Member					X								
	Mike Mead	Trustee					X								
	Patricia Delorme	Treasurer					X								
	Shannon Purchase	Trustee													
	Bess Butler	Trustee					X								
Inland Township	Tia Kurina-Coolley	Supervisor					X								
	David Davis	Supervisor (current)													
	Paul Beechraft	Supervisor (former)								X					
	Rose Wirth	Clerk (current)								X					
	Therese Ziellinski	Treasurer (current)													
	Linda Wilson	Treasurer (former)								X					
	Mary Miller	Trustee								X					
Joyfield Township	Sheri Poulisse	Trustee								X					
	Matt Emery	Supervisor		X											
	Patricia Daugherty	Treasurer		X											
	Jim Evans	Trustee													
	Dodie Putney	Clerk													
	Mark Evans	Trustee		X											
Lake Township	Ed Kowalski	Community Member		X											
	Anna Grobe	Clerk (current), Supervisor (former)			X										
	Sally Casey	Trustee			X										
	Maryanne Goodman	Treasurer			X										
Platte Township	Dotty Blank	Clerk (former)			X										
	Kyle Orr	Trustee													
	Paul Solem	Supervisor									X				
	Alison Michalak	Clerk													
	Cynthia Gottschalk	Treasurer													
	Daniel Haswell	Trustee													
Village of Benzonia	Robert Bollenger	Trustee													
	Sara Kirk	Zoning Administrator													
	Timothy Flynn	President													
	Maridee Cutler	Clerk													
	Toni Flynn	Treasurer													
	Chris Pritchard	Superintendent													
	Hazel Heyn	Trustee													
	John Hafer	Trustee													
	Bob French	Trustee													
	Alexandra Herryman	Trustee													
	Theresa Moss	Trustee													
Village of Beulah	Shane Myers	Trustee													
	Jeri VanDePerre	President													
	Dan Hook	President Pro-Tem													
	Mark Heniser	Trustee													
	Phil Downs	Trustee													
	Annie Browning	Trustee													
	Margaret Lumn	Treasurer													
	Dawn Olney	Clerk													
Village of Elberta	Jeff Cypert	Superintendent													
	Jennifer S. Wilkins	President													
	Emily Votruba	Trustee													
	Ken Holmes	President Pro-Tem													
	Norma Corwin	Clerk/Treasurer													
	Teri Reisner	Deputy Clerk													
Village of Honor	Ken Bonney	DPW Superintendent													
	Mike Cederholm	Fire Chief													
	Jeff Sandman	President													
	Bill Ward	President Pro-Tem													
	Maryanne Goodman	Treasurer													
	Deb Reed	Clerk													
	Cheri K. Sessions	Deputy Clerk													
Jake Leone	Street Administrator/Maintenance														
Dallas Denoyer	Trustee														
Dennis Sternburgh	Trustee														
Andrew Smith	Trustee														

Participating Entity	Representative	Title	Via Local Government Meetings or Emails										
			Benzonia Twp. 11/9/22	Almira Twp. 11/14/22	City of Frankfort 11/15/22	Blaine Twp. 12/1/2022	Village of Benzonia 12/5/2022	Joyfield Township 12/7/2022	Inland Township 12/12/2022	Weldon Township 12/13/2022	Crystal Lake Township 12/20/2022		
Crystal Lake Township	Amy Ferris	Supervisor											X
	Richard Nielsen	Trustee											X
	William Northway	Trustee											X
	Brooke Trentham Popp	Treasurer											X
	Julie VanMeter	Clerk (current)											X
	Sondra Halliday	Deputy Clerk											X
	Sue Sullivan	Clerk (former)											X
Gilmore Township	Gregory Wright	Planning Commission Chair											
	Shannon Spencley	Clerk											
	Carl Noffsinger	Supervisor											
	Robin Rommell	Treasurer											
Homestead Township	Douglas Holmes	Trustee											
	Tim Markey	Fire Chief											
	Karen Mallon	Clerk											
	Dorene Strang	Community Member											
	Mike Mead	Trustee											
	Patricia Delorme	Treasurer											
	Shannon Purchase	Trustee											
Inland Township	Bess Butler	Trustee											
	Tia Kurina-Coolley	Supervisor											
	David Davis	Supervisor (current)									X		
	Paul Beechraft	Supervisor (former)											
	Rose Wirth	Clerk (current)									X		
	Therese Zjellinski	Treasurer (current)									X		
	Linda Wilson	Treasurer (former)											
Joyfield Township	Mary Miller	Trustee									X		
	Sheri Poulisse	Trustee									X		
	Matt Emery	Supervisor								X			
	Patricia Daugherty	Treasurer								X			
	Jim Evans	Trustee								X			
	Dodie Putney	Clerk								X			
Lake Township	Mark Evans	Trustee											
	Ed Kowalski	Community Member											
	Anna Grobe	Clerk (current), Supervisor (former)											
	Sally Casey	Trustee											
Platte Township	Maryanne Goodman	Treasurer											
	Dotty Blank	Clerk (former)											
	Kyle Orr	Trustee											
	Paul Solem	Supervisor											
	Alison Michalak	Clerk											
Village of Benzonia	Cynthia Gottschalk	Treasurer											
	Daniel Haswell	Trustee											
	Robert Bollenger	Trustee											
	Sara Kirk	Zoning Administrator						X					
	Timothy Flynn	President						X					
	Maridee Cutler	Clerk						X					
	Toni Flynn	Treasurer						X					
	Chris Pritchard	Superintendent						X					
	Hazel Heyn	Trustee						X					
	John Hafer	Trustee						X					
	Bob French	Trustee						X					
Village of Beulah	Alexandra Herryman	Trustee						X					
	Theresa Moss	Trustee						X					
	Shane Myers	Trustee						X					
	Jeri VanDePerre	President											
	Dan Hook	President Pro-Tem											
	Mark Heniser	Trustee											
	Phil Downs	Trustee											
Village of Elberta	Annie Browning	Trustee											
	Margaret Lurnn	Treasurer											
	Dawn Olney	Clerk											
	Jeff Cypert	Superintendent											
	Jennifer S. Wilkins	President											
	Emily Votruba	Trustee											
Village of Honor	Ken Holmes	President Pro-Tem											
	Norma Corwin	Clerk/Treasurer											
	Teri Reisner	Deputy Clerk											
	Ken Bonney	DPW Superintendent											
	Mike Cederholm	Fire Chief											
	Jeff Sandman	President											
	Bill Ward	President Pro-Tem											
	Maryanne Goodman	Treasurer											
Village of Honor	Deb Reed	Clerk											
	Cheri K. Sessions	Deputy Clerk											
	Jake Leone	Street Administrator/Maintenance											
	Dallas Denoyer	Trustee											
	Dennis Sternburgh	Trustee											
	Andrew Smith	Trustee											

Participating Entity	Representative	Title	Input on Hazard Concerns and Mitigation Strategies via Local Govern									
			Platte Township 1/3/2023	Lake Township 1/5/2023	1/5/2023 Email	Village of Lake Ann 1/30/2023	Village of Beulah 1/10/2023	Colfax Township 1/11/2023	Village of Thompsonville 1/16/2023	Village of Elberta 1/19/2023	Homestead Township 2/6/2023	
Crystal Lake Township	Amy Ferris	Supervisor										
	Richard Nielsen	Trustee										
	William Northway	Trustee										
	Brooke Trentham Popp	Treasurer										
	Julie VanMeter	Clerk (current)										
	Sondra Halliday	Deputy Clerk										
	Sue Sullivan	Clerk (former)										
Gilmore Township	Gregory Wright	Planning Commission Chair										
	Shannon Spencley	Clerk										
	Carl Noffsinger	Supervisor										
	Robin Rommell	Treasurer										
Homestead Township	Douglas Holmes	Trustee										
	Tim Markey	Fire Chief										
	Karen Mallon	Clerk									X	
	Dorene Strang	Community Member										
	Mike Mead	Trustee									X	
	Patricia Delorme	Treasurer									X	
	Shannon Purchase	Trustee									X	
Inland Township	Bess Butler	Trustee									X	
	Tia Kurina-Coolley	Supervisor									X	
	David Davis	Supervisor (current)										
	Paul Beechraft	Supervisor (former)										
	Rose Wirth	Clerk (current)										
	Therese Ziellinski	Treasurer (current)										
	Linda Wilson	Treasurer (former)										
Joyfield Township	Mary Miller	Trustee										
	Sheri Poulisse	Trustee										
	Matt Emery	Supervisor										
	Patricia Daugherty	Treasurer										
	Jim Evans	Trustee										
	Dodie Putney	Clerk										
Lake Township	Mark Evans	Trustee										
	Ed Kowalski	Community Member										
	Anna Grobe	Clerk (current), Supervisor (former)		X								
	Sally Casey	Trustee		X								
	Maryanne Goodman	Treasurer		X								
Platte Township	Dotty Blank	Clerk (former)										
	Kyle Orr	Trustee		X								
	Paul Solem	Supervisor	X									
	Alison Michalak	Clerk	X									
	Cynthia Gottschalk	Treasurer	X									
	Daniel Haswell	Trustee	X									
Village of Benzonia	Robert Bollenger	Trustee	X									
	Sara Kirk	Zoning Administrator			X							
	Timothy Flynn	President										
	Maridee Cutler	Clerk										
	Toni Flynn	Treasurer										
	Chris Pritchard	Superintendent										
	Hazel Heyn	Trustee										
	John Hafer	Trustee										
	Bob French	Trustee										
	Alexandra Herryman	Trustee										
	Theresa Moss	Trustee										
	Shane Myers	Trustee										
	Village of Beulah	Jeri VanDePerre	President						X			
Dan Hook		President Pro-Tem						X				
Mark Heniser		Trustee						X				
Phil Downs		Trustee						X				
Annie Browning		Trustee						X				
Margaret Lumnn		Treasurer						X				
Dawn Olney		Clerk						X				
Jeff Cypert		Superintendent						X				
Village of Elberta	Jennifer S. Wilkins	President									X	
	Emily Votruba	Trustee									X	
	Ken Holmes	President Pro-Tem									X	
	Norma Corwin	Clerk/Treasurer									X	
	Teri Reisner	Deputy Clerk									X	
	Ken Bonney	DPW Superintendent									X	
Village of Honor	Mike Cederholm	Fire Chief									X	
	Jeff Sandman	President										
	Bill Ward	President Pro-Tem										
	Maryanne Goodman	Treasurer										
	Deb Reed	Clerk										
	Cheri K. Sessions	Deputy Clerk										
	Jake Leone	Street Administrator/Maintenance										
Dallas Denoyer	Trustee											
Dennis Sternburgh	Trustee											
Andrew Smith	Trustee											

Benzie County 2023 Natural Hazard Mitigation Plan Participation Table

Participating Entity	Representative	Title	Participation Meetings or Emails					
			2/8/2023 Email	Village of Honor 2/13/2023	2/13/2023 Email	2/16/2023 Email	6/6/2023 Email	6/30/2023 Email
Crystal Lake Township	Amy Ferris	Supervisor	X					
	Richard Nielsen	Trustee						
	William Northway	Trustee						
	Brooke Trentham Popp	Treasurer						
	Julie VanMeter	Clerk (current)						
	Sondra Halliday	Deputy Clerk						
	Sue Sullivan	Clerk (former)						
Gilmore Township	Gregory Wright	Planning Commission Chair						
	Shannon Spencley	Clerk						
	Carl Noffsinger	Supervisor						
	Robin Rommell	Treasurer						
Homestead Township	Douglas Holmes	Trustee						
	Tim Markey	Fire Chief						
	Karen Mallon	Clerk						
	Dorene Strang	Community Member						
	Mike Mead	Trustee						
	Patricia Delorme	Treasurer						
	Shannon Purchase	Trustee						
Inland Township	Bess Butler	Trustee						
	Tia Kurina-Coolley	Supervisor						
	David Davis	Supervisor (current)						
	Paul Beechcraft	Supervisor (former)						
	Rose Wirth	Clerk (current)						
	Therese Zielski	Treasurer (current)						
	Linda Wilson	Treasurer (former)						
Joyfield Township	Mary Miller	Trustee						
	Sheri Poulisse	Trustee						
	Matt Emery	Supervisor						
	Patricia Daugherty	Treasurer						
	Jim Evans	Trustee						
	Dodie Putney	Clerk						
Lake Township	Mark Evans	Trustee						
	Ed Kowalski	Community Member						
	Anna Grobe	Clerk (current), Supervisor (former)						
	Sally Casey	Trustee						
Platte Township	Maryanne Goodman	Treasurer						
	Dotty Blank	Clerk (former)						
	Kyle Orr	Trustee						
	Paul Solem	Supervisor						
	Alison Michalak	Clerk						
Village of Benzonia	Cynthia Gottschalk	Treasurer						
	Daniel Haswell	Trustee						
	Robert Bollenger	Trustee						
	Sara Kirk	Zoning Administrator						
	Timothy Flynn	President						
	Maridee Cutler	Clerk						
	Toni Flynn	Treasurer						
	Chris Pritchard	Superintendent						
	Hazel Heyn	Trustee						
	John Hafer	Trustee						
	Bob French	Trustee						
	Alexandra Herryman	Trustee						
Village of Beulah	Theresa Moss	Trustee						
	Shane Myers	Trustee						
	Jeri VanDePerre	President						
	Dan Hook	President Pro-Tem						
	Mark Heniser	Trustee						
	Phil Downs	Trustee						
	Annie Browning	Trustee						
	Margaret Lurnn	Treasurer						
Village of Elberta	Dawn Olney	Clerk						
	Jeff Cypert	Superintendent						
	Jennifer S. Wilkins	President			X			
	Emily Votruba	Trustee						
	Ken Holmes	President Pro-Tem						
	Norma Corwin	Clerk/Treasurer						
Village of Honor	Teri Reisner	Deputy Clerk						
	Ken Bonney	DPW Superintendent						
	Mike Cederholm	Fire Chief						
	Jeff Sandman	President		X				
	Bill Ward	President Pro-Tem		X				
	Maryanne Goodman	Treasurer		X				
	Deb Reed	Clerk		X				
	Cheri K. Sessions	Deputy Clerk		X				
Jake Leone	Street Administrator/Maintenance		X					
Village of Honor	Dallas Denoyer	Trustee		X				
	Dennis Sternburgh	Trustee		X				
	Andrew Smith	Trustee		X				

Participating Entity	Representative	Title	Survey	HM Kick Off Meeting 7/1/2021	LEPC Meeting 09/20/2021	LEPC Meeting 10/18/2021	LEPC Meeting 1/18/2022	LEPC Meeting 3/21/2022	BCRC Meeting 3/21/22	LEPC Meeting 04/12/22	LEPC Meeting 6/20/22
Village of Lake Ann	Craig Timm	President (former)	X								
	Dan Hawkins	President (current)									
	Christi Grant-Wagner	Trustee									
	Tammy Clous	Clerk									
	Mandy Gray-Rineer	Treasurer									
	Nick Beckwith	Trustee									
	Kyle Belton	Trustee/Streets Administrator									
Village of Thompsonville	Eugene Allen	President									
	Mary Wixon	Clerk									
	Deidra Pomranky	Treasurer									
	Florence Smith	Trustee									
	Brent Johnson	Trustee									
	Chelsea Willis	Trustee									
	Fran Griffin	Trustee									
	Michael MacGirr	Fire Chief	X								
Weldon Township	Ron Hitesman	Supervisor									
	Sally Bobek	Treasurer	X								
	Sue Meredith	Trustee									
	Scott Williams	Trustee									
	Fran Griffin	Clerk	X								
	Craig Meredith	Zoning Administrator (former)									
	Charles Kraus	Planning Commission Chair	X								

Participating Entity	Representative	Title	LEPC Meeting 7/18/22	LEPC Meeting 8/15/22	LEPC Meeting 10/17/22	LPT Meeting 10/27/22	LPT/LEPC Meeting 1/17/23	LPT/LEPC Meeting 2/21/23	LPT/LEPC Meeting 3/20/23	LPT/LEPC Meeting 4/17/23	Public Hearing 5/23/23	Almira Twp. 2/14/2022
Village of Lake Ann	Craig Timm	President (former)										
	Dan Hawkins	President (current)										X
	Christi Grant-Wagner	Trustee										
	Tammy Clous	Clerk										
	Mandy Gray-Rineer	Treasurer										
	Nick Beckwith	Trustee										
	Kyle Belton	Trustee/Streets Administrator										
Village of Thompsonville	Eugene Allen	President										
	Mary Wixon	Clerk										
	Deidra Pomranky	Treasurer										
	Florence Smith	Trustee										
	Brent Johnson	Trustee										
	Chelsea Willis	Trustee										
	Fran Griffin	Trustee										
	Michael MacGirr	Fire Chief										
Weldon Township	Ron Hitesman	Supervisor										
	Sally Bobek	Treasurer										
	Sue Meredith	Trustee										
	Scott Williams	Trustee										
	Fran Griffin	Clerk										
	Craig Meredith	Zoning Administrator (former)										
	Charles Kraus	Planning Commission Chair										

Participating Entity	Representative	Title	Input on Hazard Concerns and Mitigation Strategies											
			Crystal Lake Twp. 2/15/22	Joyfield Twp. 3/2/22	Lake Twp. 3/3/22	Homestead Twp. 3/7/22	Gilmore Twp. 3/8/22	Inland Twp. 3/14/22	Platte Twp. 4/6/22	Weldon Twp. 4/12/22	Benzonia Twp. 4/13/22	Colfax Twp. 4/13/22	Blaine Twp. 7/7/22	
Village of Lake Ann	Craig Timm	President (former)												
	Dan Hawkins	President (current)												
	Christi Grant-Wagner	Trustee												
	Tammy Clous	Clerk												
	Mandy Gray-Rineer	Treasurer												
	Nick Beckwith	Trustee												
	Kyle Belton	Trustee/Streets Administrator												
Village of Thompsonville	Eugene Allen	President												
	Mary Wixon	Clerk												
	Deidra Pomranky	Treasurer												
	Florence Smith	Trustee												
	Brent Johnson	Trustee												
	Chelsea Willis	Trustee												
	Fran Griffin	Trustee												
	Michael MacGirr	Fire Chief												
Weldon Township	Ron Hitesman	Supervisor										X		
	Sally Bobek	Treasurer										X		
	Sue Meredith	Trustee										X		
	Scott Williams	Trustee										X		
	Fran Griffin	Clerk										X		
	Craig Meredith	Zoning Administrator (former)										X		
	Charles Kraus	Planning Commission Chair												

Participating Entity	Representative	Title	Via Local Government Meetings or Emails								
			Benzon Twp. 11/9/22	Almira Twp. 11/14/22	City of Frankfort 11/15/22	Blaine Twp. 12/1/2022	Village of Benzonia 12/5/2022	Joyfield Township 12/7/2022	Inland Township 12/12/2022	Weldon Township 12/13/2022	Crystal Lake Township 12/20/2022
Village of Lake Ann	Craig Timm	President (former)									
	Dan Hawkins	President (current)									
	Christi Grant-Wagner	Trustee									
	Tammy Clous	Clerk									
	Mandy Gray-Rineer	Treasurer									
	Nick Beckwith	Trustee									
	Kyle Belton	Trustee/Streets Administrator									
Village of Thompsonville	Eugene Allen	President									
	Mary Wixon	Clerk									
	Deidra Pomranky	Treasurer									
	Florence Smith	Trustee									
	Brent Johnson	Trustee									
	Chelsea Willis	Trustee									
	Fran Griffin	Trustee									
	Michael MacGirr	Fire Chief									
Weldon Township	Ron Hitesman	Supervisor								X	
	Sally Bobek	Treasurer									
	Sue Meredith	Trustee								X	
	Scott Williams	Trustee								X	
	Fran Griffin	Clerk								X	
	Craig Meredith	Zoning Administrator (former)								X	
	Charles Kraus	Planning Commission Chair									

Participating Entity	Representative	Title	Input on Hazard Concerns and Mitigation Strategies via Local Govern								
			Platte Township 1/3/2023	Lake Township 1/5/2023	1/5/2023 Email	Village of Lake Ann 1/30/2023	Village of Beulah 1/10/2023	Colfax Township 1/11/2023	Village of Thompsonville 1/16/2023	Village of Elberta 1/19/2023	Homestead Township 2/6/2023
Village of Lake Ann	Craig Timm	President (former)				X					
	Dan Hawkins	President (current)				X					
	Christi Grant-Wagner	Trustee				X					
	Tammy Clous	Clerk				X					
	Mandy Gray-Rineer	Treasurer				X					
	Nick Beckwith	Trustee				X					
	Kyle Belton	Trustee/Streets Administrator				X					
Village of Thompsonville	Eugene Allen	President							X		
	Mary Wixon	Clerk							X		
	Deidra Pomranky	Treasurer							X		
	Florence Smith	Trustee							X		
	Brent Johnson	Trustee							X		
	Chelsea Willis	Trustee							X		
	Fran Griffin	Trustee							X		
	Michael MacGirr	Fire Chief							X		
Weldon Township	Ron Hitesman	Supervisor									
	Sally Bobek	Treasurer									
	Sue Meredith	Trustee									
	Scott Williams	Trustee									
	Fran Griffin	Clerk									
	Craig Meredith	Zoning Administrator (former)									
	Charles Kraus	Planning Commission Chair									

Benzie County 2023 Natural Hazard Mitigation Plan Participation Table

Participating Entity	Representative	Title	Committee Meetings or Emails					
			2/8/2023 Email	Village of Honor 2/13/2023	2/13/2023 Email	2/16/2023 Email	6/6/2023 Email	6/30/2023 Email
Village of Lake Ann	Craig Timm	President (former)						
	Dan Hawkins	President (current)						
	Christi Grant-Wagner	Trustee						
	Tammy Clous	Clerk						
	Mandy Gray-Rineer	Treasurer						
	Nick Beckwith	Trustee						
	Kyle Belton	Trustee/Streets Administrator						
Village of Thompsonville	Eugene Allen	President						
	Mary Wixon	Clerk						
	Deidra Pomranky	Treasurer						
	Florence Smith	Trustee						
	Brent Johnson	Trustee						
	Chelsea Willis	Trustee						
	Fran Griffin	Trustee						
	Michael MacGirr	Fire Chief						
Weldon Township	Ron Hitesman	Supervisor						
	Sally Bobek	Treasurer						
	Sue Meredith	Trustee						
	Scott Williams	Trustee						
	Fran Griffin	Clerk						
	Craig Meredith	Zoning Administrator (former)						
	Charles Kraus	Planning Commission Chair						

APPENDIX F: MEETING AND PUBLIC INPUT DOCUMENTATION

LEPC – Local Emergency Planning Committee Meeting Minutes for June 21, 2021

Location: Frank Walterhouse Board of Commissioners Room

Zoom meeting ID 826 2661 7284

Attendees:

Lt. Frank Keck – MSP (online)

Kyle Rosa – BCSO (present)

Rebecca Hubers – OEM / BCD (present)

Tim Markey – BOC (present)

Gary Sauer – BOC (present)

Steve Adams – BFD (online)

Tom King – Benzie EMS (present)

Jolanda Murphy – GTB EM (online)

Jennifer Savage – MDHHS (online)

Sandi Honigfort – POMH (online)

Meeting called to order at 2:01pm by Rebecca Hubers.

1. Roll Call – R. Hubers confirmed present the participants identified on Zoom and added them to the sign in sheet for record.
2. *Motion to approve the agenda as presented. Motion by Markey, second by Rosa. Motion carried.*
3. *Motion to approve the April 19, 2021, minutes as presented. Motion by King, second by Markey. Motion carried.*
4. Public Comments: No public comment at the time.
5. New Business:

Old Business:

- A. 2021 Hazard Mitigation Plan – We received notice that FEMA approved the application for Networks Northwest to assist with the planning for the eight Counties, requested back in early 2020. There is a kickoff event hosted by Networks Northwest on July 1, 2021 in-person or online in Traverse City.

Rebecca asked members to “pick apart” the 2015 plan to make sure we are adding to and projection concerns for the next five years. Suggestions for identifying hazards included:

- adding both upper and lower Herring Lakes to the flood prone area.
- Adding CSA and Ness Road to erosion areas (Lake Mi Shoreline)
- Add County Wide to the wildfire concern areas not specific to Almira.
- Add ice damming to the snow and ice concerns.

Additionally, Benzie County does not have a planning commission. The Building Department is mentioned several times in the document and so they should be included in the process. Eventually public and Townships will be included in the processes.

7. Board Member Comments:

Murphy: GTB working on their hazard mitigation plan as well. Government facilities to reopen to the public July 19.

Rosa: Planning for 4th of July festivities patrols and events.

R. Hubers: Benzie County Central Dispatch is again hiring for Emergency Communications Specialists.

King: Planning for 4th of July events.

Honigfort: Paul Oliver Memorial Hospital – continued management through declining COVID numbers. Seeing repeats of positives from May. Masks are still required in health care facilities. A lot of folks are disgruntled about that continued mandate in light of mask relief at other locations. There are still other MIOSHA mandates in place for health care facilities. Opening up more space for specialty clinic (wound care and pulmonary function) to provide a bigger variety of services to the area. Also planning on Ironman and July 4th events. Dealing with traffic flow issues with the M22 closure. Hospital currently in yellow status.

Savage: MDHHS is still working remotely until July 12. They are working on a new hybrid plan for providing services. From COVID the SOM has noted that alternate plans (remote work) are working well and saving money by using a smaller footprint. As lease contracts open up the SOM will be reviewing them to include Manistee in 2023 and Benzie later.

Project One Day is the newest goal of processing applications within 24 hours after interview. The project is expected to reduce errors and increase eligibility and will apply for multiple services.

Jennifer is not leaving she was temporary filling in for a different position.

No other roundtable member comments.

7. No additional Public Comments

8. NEXT MEEING: July 19, 2021.

9. *Motion to adjourn by Sauer, second by Markey – motion carried.*

Meeting adjourned 2:56pm

xxx- /rsh

Hazard Mitigation Plan Update Kick Off Meeting

July 1, 2021, 9:30 a.m.

Networks Northwest
600 East Front Street, Suite 205
Traverse City, MI 49686
Conference Room #2

Agenda

- I. Welcome
- II. Introductions
- III. Roles and Responsibilities
 - a. Federal Emergency Management Agency
 - b. Michigan State Police
 - c. Networks Northwest
 - d. County and Tribal Staff
 - e. Local Government Staff
 - f. Local Stakeholders
 - g. General Public
- IV. Communication
- V. The Process
 - a. Phase I – Obtain Public Input
 - b. Phase II – Complete Hazard Analysis
 - c. Phase III – Create Action Plan
 - d. Phases IV – Update Plans and Maps
 - e. Phase V – Facilitate Local Adoptions
- VI. Project Timeline
 - a. Period of Performance Expires: December 16, 2023
- VII. Next Steps

Hazard Mitigation Plan Update Kick Off Meeting

July 1, 2021, 9:30 a.m.

Networks Northwest
600 East Front Street, Suite 205
Traverse City, MI 49686
Conference Room #2

I. In-person meeting location information

The Networks Northwest main office has an attached parking garage with entrances from Front Street and Railroad Avenue. Enter the building on the second floor and access Conference Room #2 through the door on the right. The conference room is down the hall on the left, past the bathrooms.

II. Remote meeting attendance

Community Planning is inviting you to a scheduled Zoom meeting.

Topic: Hazard Mitigation Kick Off
Time: Jul 1, 2021 09:30 AM Eastern Time (US and Canada)

Join Zoom Meeting
<https://us02web.zoom.us/j/2319295012>

Meeting ID: 231 929 5012
One tap mobile
+16468769923,,2319295012# US (New York)
+13017158592,,2319295012# US (Washington DC)

Dial by your location
+1 646 876 9923 US (New York)
+1 301 715 8592 US (Washington DC)
+1 312 626 6799 US (Chicago)
+1 669 900 6833 US (San Jose)
+1 253 215 8782 US (Tacoma)
+1 346 248 7799 US (Houston)

Meeting ID: 231 929 5012
Find your local number: <https://us02web.zoom.us/j/2319295012>

Date:

Meeting Title:

	Name	Title/ Organization	Email	Phone #	Salary Fed Funded	Miles to Mtg	Miles from Mtg
1	Travis Baker	EM Director Wexford County	tbaker@wexfordcounty.org	231-306-2130	Yes	37 47	37 47
2	Brandy Martin	3rd Lt Commander Little River Ford	brandy.martin@clrbai-asst.gov	231-398-6818	NO	60	60
3	Matthew Sorensen	EM/911 Leelanau	msorens@leelanau.gov	231-256-8715	Yes	25	25
4	Zach Vega	comm. planner NWNW	zach.vega@networks.northwest.org	231			
5	Rob Carson	Networker Northwest	rob.carson@networks.northwest.org	2	Yes	45	45
6	Frank Post		Frank.Post@live.com	231-383-0553		64	64
7							
8							
9							
10							
11							
12							
13							
14							
15							

09:34:30 From Mike Sobocinski to Community Planning(Direct Message) : Mike Sobocinski, MSP/EMHSD - Position is federally funded and therefore not eligible for matching federal planning grant.

09:34:51 From Rebecca Hubers to Everyone : Rebecca Hubers - Benzie County Emergency Management / rhubers@benzieco.net / 231-882-0567

09:36:01 From PLANNING EMD to Everyone : Linda Hartshorne-Shafer, Missaukee County Planning/Emergency Management Director, planningemd@missaukee.org, 231-839-7264 Ext 3

09:36:08 From Manistee County to Community Planning(Direct Message) : Michael Machen/Deputy 911 Director/Emergency Manager/ \$59,000 mmachen@manistee911.org/231-723-9970/ Yes Federally Funded

09:37:43 From Mike Thompson to Everyone : Mike Thompson, Kalkaska County Emergency Management Coordinator, mthompson@kalso.org, 231.258.3319 ext. 2229

09:37:49 From Garrett Fairchild GTB Fire Dept to Everyone : Garrett Fairchild / GTB Fire Chief / garrett.fairchild@gtbindians.com / 231-534-7161

09:40:07 From Mike Sobocinski to Community Planning(Direct Message) : Is this introduction separate from my agenda item?

09:40:40 From JAMurphy to Everyone : Jolanda Murphy, Grand Traverse Band Emergency Manager, Jolanda.murphy@gtbindians.com, 231-534-7111

09:42:22 From Becky Oien to Everyone : Rebecca Oien, Grand Traverse Band, Tribal Manager, becky.oien@gtbindians.com 231-534-7136

09:44:12 From Rebecca Hubers to Everyone : my mic must not be working

10:01:22 From Manistee County to Community Planning(Direct Message) : Lisa Sagala, Manistee County Administrator \$84,,200 231-398-3501, lsagala@manisteecountymi.gov

10:02:49 From Manistee County to Community Planning(Direct Message) : Mike Szokola, Manistee County Planner, \$68,500 mszokola@manisteecountymi.gov, 231-398-3527

10:10:24 From Mike Sobocinski to Everyone : FEMA Map Service Center (access to NFIP flood map information): <https://msc.fema.gov/portal/home>

10:11:46 From Mike Sobocinski to Everyone : FEMA has an impressive new mapping resource called the National Risk Index, providing information by county or even census tract. Risks from natural hazards, social vulnerability, etc. <https://www.fema.gov/flood-maps/products-tools/national-risk-index>

10:14:31 From Mike Sobocinski to Everyone : The Michigan Hazard Analysis (2019) provides an overview of natural hazards throughout Michigan. You can search the document for your county's name to find local information more quickly (Ctrl F search function) https://www.michigan.gov/documents/msp/MHA_2019__full_update_natural_hazards_653708_7.pdf

10:38:03 From Rebecca Hubers to Everyone : I'm sorry I have to walk away now to attend another meeting - thank you



Benzie County Local Emergency Planning Committee (LEPC) Meeting Agenda

Meeting Date: September 20, 2021
Meeting Time: 2:00pm
Meeting Location: Benzie County Board of Commissioners Room – 448 Court Place,
Beulah MI.

Join Zoom Meeting

<https://us02web.zoom.us/j/87833331654?pwd=eUhTSE1BaERnVWZOYWJ0OEpGVDBPZz09>

Meeting ID: 878 3333 1654

Passcode: 381050

Dial by your location

+1 301 715 8592 US (Washington DC)

+1 312 626 6799 US (Chicago)

+1 929 205 6099 US (New York)

1. Roll Call
 2. Approval of Agenda
 3. Approval of Minutes of Prior Meeting June 21, 2021
 4. Public Comment
 5. New Business
 - A. Networks Northwest present for progress on County Hazard Mitigation Plan
 6. Public Comments
 7. Next Meeting: October 18, 2021
 8. Adjournment
- Approval Req'd
Approval Req'd



Benzie County Local Emergency Planning Committee Meeting Date:

Date: 9-20-21

PRINT NAME (First/Last)	TELEPHONE #	E-Mail	Organization/Position
R. Hubers.		\$28.004 fed funded.	EM/ 911
GARY SPURER			County Comm in
Mike Johnson		\$9.83.	Benzie Road Com
Rob Carson		fed funded.	NNW
Tim Markey			Hornsted Fire
Kyle Rosa			Benzie Co. Sheriff
Tom King	Zoom		BEMS.
Fred Craigen	Zoom		MHC.
Matt McCue	Zoom		MSP.
Bobbi Scott	Zoom		BLDHA.
Jen Savage	Zoom	fed funded.	MDHHS.
Steve Adams			Benzonia Fire
Jeffrey Neal	Zoom	fed funded.	NNW
Eady Allen	Zoom		Graveland Fire.
Jolanta Murphy	Zoom	fed funded	Grand Linn Fire Dept OET.
Michael De Castro	Zoom	fed funded.	MSP EMTS.

LEPC – Local Emergency Planning Committee Meeting Minutes for September 20, 2021

Location: Frank Walterhouse Board of Commissioners Room

Zoom meeting ID 878 3333 1654

Attendees:

Lt. Frank Keck – MSP (online)	Steve Adams – BFD (present)
Kyle Rosa – BCSO (present)	Tom King – Benzie EMS (online)
Rebecca Hubers – OEM / BCD (present)	Jolanda Murphy – GTB EM (online)
Tim Markey – BOC (present)	Jennifer Savage – MDHHS (online)
Gary Sauer – BOC (present)	Mike Johnson – BCRC (present)
Fred Craigin – MHC (online)	Matt McCaul – MSP (online)
Bobbi Scott – BLDHD (online)	Cody Allen – Graceland Fruit (online)
Michael de Castro – MSP-EMHSD (online)	

Meeting called to order at 2:02pm by Steve Adams.

1. **Roll Call** – R. Hubers confirmed present the participants identified on Zoom and added them to the sign in sheet for record. At least 6 members physically present to qualify a quorum.
2. **Agenda** - *Motion to approve the agenda as presented. Motion by Markey, second by Sauer. Motion carried. Noted 7. Accidentally deleted Added Board Member Comments above second public comment*
3. **Minutes** - *Motion to approve the June 21, 2021, minutes as presented. Motion by Markey, second by Rosa. Motion carried.*
4. **Public Comments** - No public comment at the time.
5. **New Business** -

A. Networks Northwest - 2021 Natural Hazard Mitigation

Guests Jennifer Neal – project manager (online) and Rob Carson – regional Director (present) introduced and provided the committee with the next steps toward completing the 2021 Natural Hazard Mitigation Plan. The plan helps the county look at current and past hazards and plan ahead for the next 5-10+ years of potential hazards. FEMA requires a lot of community interaction in developing the plan. NNW has been given a primary contact list for the “advisory team” which include all of the Benzie County LEPC and most of the LPT. Additionally, the Townships will be a separate added group of contacts. The members on both the LEPC and LPT give a broad inclusion of the Benzie County Community.

All persons reporting to meetings – including the LEPC and LPT that include discussion of the NHM plan building process need to Sign in at every meeting and provide (Rebecca – one time) an hourly wage amount (or a very good/ defensible approximate amount for salary or per diem members). Attendance at meetings will be recorded and help off set the matching cost of the grant with “in kind” service hours.

The next steps are data gathering, prioritizing hazards, goals and objectives, writing the plan, facilitating the meetings and public engagement. A survey (through Survey Monkey) will be coming to everyone shortly and run through October. Please fill out the survey with your input on natural hazard mitigation in Benzie County.

Data collected from the survey and planning process will be turned over to the County. Survey results will not be completely compiled by October 18 meeting.

6. **Old Business** - none

7. **Board Member Comments** -

Murphy: GTB working on COVID, community daily testing, vaccinations, and boosters.

Allen: Graceland Fruit has updated their entry key fobs to key cards and can provide them to emergency services. Rebecca stated she would relay this information to the acting Station 4 chiefs and make sure they have what they need to respond.

R. Hubers: Benzie County Central Dispatch still has two openings for Emergency Communications Specialists.

King: Ambulance build delayed by manufacturer until Spring

Savage: MDHHS has PPE for distribution to businesses/agencies (contact MDHHS). Staffing currently mandated to less than 20% in the building at the same time. Which puts the Benzie office at about 3 people, all others working remotely.

Rosa: BCSO has a revolving door of hiring, but hopefully gaining ground on full staffing.

Adams: Benzie/Manistee looking into another fire academy. All departments using Target Solutions for fire/EMS training. Local response has been fairly busy.

Markey: Looking forward to Ironman after action review. Would like to be notified of BCRC road closures in his response area.

Johnson: BCRC completing ditching and storm damage cleanup. Esch Road repave is delayed until next spring.

Sauer: BOC latest meetings have all been concerning masking in schools and health department mandates. Ongoing communication with a Department of Health meeting Wednesday 9/22 in Leelanau.

De Castro: Just checking in – reminder that the Hazard Mitigation Plan needs a patient process, to meet all the guidelines.

Craig: Sandra Honigfort will no longer be affiliated with MHC (gone about 4 weeks) so Fred will try to fill updates in when available. No issues with Ironman, kudos to the operations.

Scott: BLDHD update:

Dashboard #'s

- 2840 TTL cases for both counties through 9/17
- 85 active cases in Benzie county
- 1 Benzie County resident in hospital
- Benzie County 7.0% positivity rate; we know this is under reported due to home testing that is happening and not being reported.

Vaccine Clinics

- Tuesday's in Suttons Bay: 2-6
- Wednesday's @ Crystal Café: 2-6
- Have all 3 vaccines at our clinics and booster doses are being well received.

Vaccine Testing

- Suttons Bay: Mon & Thursdays 12-6
- Crystal Cafe: Tues & Fridays 10-3

General Announcements

- Received funds from the state of Michigan to add 3 school nurses to our team to work with schools and support families as they navigate the school year in a pandemic.

McCaul: MSP Lt. Keck promoted to Inspector; Matt is the acting Post Commander. Staffing = two probationary Troops moved up, but three Troopers on light duty.

No other roundtable member comments.

8. **Public Comment** - No additional Public Comments

9. **NEXT MEEING:** October 18, 2021.

9. **Adjournment** - *Motion to adjourn by Sauer, second by Markey – motion carried.*

Meeting adjourned 2:46pm

xxx- /rsh



Benzie County Local Emergency Planning Committee (LEPC) Meeting Agenda

Meeting Date: October 18, 2021
Meeting Time: 2:00pm
Meeting Location: Benzie County Board of Commissioners Room – 448 Court Place,
Beulah MI.

Join Zoom Meeting

<https://us02web.zoom.us/j/85408230358?pwd=NFI0Um1COFNLM0IETVhMUIl1VXFQdz09>

Meeting ID: 854 0823 0358

Passcode: 723863

One tap mobile

+19292056099,,85408230358#,,,,*723863# US (New York)

+13017158592,,85408230358#,,,,*723863# US (Washington DC)

Dial by your location

+1 929 205 6099 US (New York)

+1 301 715 8592 US (Washington DC)

+1 312 626 6799 US (Chicago)

1. Roll Call - body of 6 members need to be physically present for a quorum
2. Approval of Agenda
3. Approval of Minutes of Prior Meeting September 20, 2021
4. Public Comment
5. New Business
 - A. Networks Northwest - progress on County Hazard Mitigation Plan
 - B. Set 2022 Meeting Schedule

Approval Req'd
Approval Req'd

6. Old Business
7. Committee Member Round Table
8. Public Comments
9. Next Meeting: January (), 2022
10. Adjournment

LEPC – Local Emergency Planning Committee Meeting Minutes for October 18, 2021

Location: Frank Walterhouse Board of Commissioners Room

Zoom meeting ID 854 0823 0358

Attendees:

Steve Adams – BFD (present)

Tom King – Benzie EMS (present)

Rebecca Hubers – OEM/ BCD (present)

Tim Markey – BOC (present)

Mike Johnson – BCRC (present)

Bobbi Scott – BLDHD (online)

Jolanda Murphy – GTB EM (online)

Cody Allen – Graceland Fruit (online)

Matt McCaul – MSP (online)

Gary Sauer – BOC (present)

Fred Craigin – MHC (online)

Guests: Networks Northwest representatives: Stephanie Loria (online), Frank Post (present), Jennifer Neal (present)

Meeting called to order at 2:06pm by Steve Adams.

1. **Roll Call** – R. Hubers confirmed present the participants identified on Zoom and added them to the sign in sheet for record. At least 6 members physically present to qualify a quorum.
2. **Agenda** - *Motion to approve the agenda as presented. Motion by Sauer, second by Markey. Motion carried.*
3. **Minutes** - *Motion to approve the September 20, 2021, minutes as amended noting that Lt Frank Keck from MSP was not present online for this meeting. Motion by Markey, second by Sauer. Motion carried.*
4. **Public Comments** - No public comment at the time.
5. **New Business** -

A. Networks Northwest - 2021 Natural Hazard Mitigation

The Networks Northwest guests presented (via PowerPoint) the Benzie County Community Profile. Data on slides was discussed and notes taken for additional clarification and definitions needed.

A copy of the PowerPoint will be sent to members with the minutes.

In-Kind forms will need to be completed for every person (not federally funded) for every meeting. Forms are available at the meetings and attached for those that participated online. Online participants asked to complete sign and scan back to Rebecca for bookkeeping.

The natural mitigation Plan survey for community representatives was distributed. Completion of the survey and community involvement are critical components to the plan building. Commissioners are asked to spread the word during township interactions. Rebecca will send it out again. It was shared on social media, and it is on the Emergency Management page of the County Website. Discussion was had to extend the survey a few more weeks. It has an approximate 20% completion rate after two weeks.

There is no need for Networks Northwest to address the Committee monthly as they build and receive data – so there will be no additions to the meeting schedule and Networks Northwest/ Natural hazard Mitigation Plan will be on the January meeting Agenda.

B. Set the 2022 Meeting Schedule

*Motion by Markey, second by King to maintain the 2021 LEPC meeting schedule into 2022 with meetings every month on the third Monday at 2pm. and no meetings held in November or December.
Motion Carried*

Old Business - none

7. Board Member Comments -

McCaul: Replacement of Lt. Keck will be a lateral transfer process and interviews are scheduled.

Craig: Staffing still an issue relevant to COVID. Observations of increase psych admissions. Entry cards are still in process / there was a system transition

R. Hubers: Benzie County Central Dispatch still has two openings for Emergency Communications Specialists.

Murphy: GTB update via email – continuing Booster shots for eligible individuals and continuing Covid-19 testing. GTB working with Networks Northwest to update GTB NHMP. Our community survey is on GTB website and sent out by NIXLE.

Scott: BLDHD update provided via email

Dashboard #'s 10/7/2021 to 10/14/2021

- 74 total cases reported; Benzie 53 cases, Leelanau 21 cases
- 2 Benzie county resident is hospitalized; none for Leelanau county
- Benzie county 16.% positivity rate; Leelanau 5% positivity rate

Vaccine Clinics

- Tuesday's in Suttons Bay: 1-5
- Wednesday's @ Crystal Café: 1-5
- Have all 3 vaccines at our clinics and booster doses are being well received.

Vaccine Testing

- Suttons Bay: Mon & Thursdays 12-6
- Crystal Cafe: Tues & Fridays 10-3

General Announcements

- We have added 3 nurses to our Covid Case Management team. Each nurse is assigned to specific school districts in both counties. Nurses are providing guidance for testing and isolation/quarantining for families in an effort to keep as many kids as possible in school.

No other committee member comments.

8. Public Comment - No additional Public Comments

9. NEXT MEETING: January 17, 2022 at 2pm.

9. Adjournment - *Motion to adjourn by Markey, second by Sauer – motion carried.*

Meeting length for in-Kind form = 1.5hrs

Meeting adjourned 3:28pm

xxx- /rsh



Local Emergency Planning Committee Sign Up Sheet

Meeting Date: 10-18-21

PRINT NAME	TELEPHONE #	E-Mail	Organization/Position
✓ Mike Johnson	231-649-1875	bceshop@benzieood.net	BERC
✓ Gary Sawyer	231-651-0647	gsawyer@benzieood.net	BOC
✓ Tom King	231-383-5779	tking@benzieood.net	EMS
✓ Tim Murkey	231-871-1349	chieft@benzieood.net	Stonier local/BOC
Frank Post	231-383-7553	Frank_post@LINE.COM	Networks Northwest
Jennifer Neal	231-709-3204	jennifv.na.lentworksnorthwest.org	Networks Northwest
Fred Cravin		zoom.	POMH
✓ Matt McCaul.		Zoom	NSP.
✓ Stephanie Maria		Zoom	Networks Northwest
✓ Jolanda Murphy		Zoom	GTB
✓ Cody Allen		Zoom	Graceland Fruit.
✓ Bobby Scott		Zoom	BLDHD.
✓ Steve Adams	231-342-2837	btfd58@gmail.com	Benzoncia FID

BENTON COUNTY OFFICE OF EMERGENCY MANAGEMENT

Local Emergency Planning Committee Sign Up Sheet



Benzie County Local Emergency Planning Committee (LEPC) Meeting Agenda

Meeting Date: January 18, 2021
Meeting Time: 2:00pm
Meeting Location: Benzie County Board of Commissioners Room – 448 Court Place,
Beulah MI.

Join Zoom Meeting

<https://us02web.zoom.us/j/89768552257?pwd=YlBVY2o1amtRSThqcXliSnZVY0E4Zz09>

Meeting ID: 897 6855 2257

Passcode: 208664

Dial by your location

+1 929 205 6099 US (New York)

+1 301 715 8592 US (Washington DC)

+1 312 626 6799 US (Chicago)

1. **Roll Call** - body of 6 members need to be physically present for a quorum
2. **Approval of Agenda** **Approval Req'd**
3. **Approval of Minutes of Prior Meeting October 18, 2021** **Approval Req'd**
4. **Public Comment**
5. **New Business**

6. **Old Business**
 - A. **Networks Northwest - progress on County Hazard Mitigation Plan**

7. **Committee Member Round Table**
8. **Public Comments**
9. **Next Meeting: February 22, 2022** – at the Emergency Operations Center due to possible BOC/ Committee of the whole meeting conflict

10. **Adjournment**

LEPC – Local Emergency Planning Committee Meeting Minutes for January 18, 2022

Location: Frank Walterhouse Board of Commissioners Room

Zoom meeting ID 89768552257

Attendees:

Steve Adams – BFD (present)	Jolanda Murphy – GTB EM (online)
Tom King – Benzie EMS(present)	Tim Brian – Smeltzer Orchards (present)
Rebecca Hubers – OEM/ BCD (present)	Matt McCaul – MSP (online)
Tim Markey – BOC (present)	Gary Sauer – BOC (present)
Fred Craigin – MHC (online)	Steve Cameron - DNR Fire (present)
Kyle Rosa – BCSO (present)	Meghan Powers – ARC (online)
Jolene Peck – MDHHS (online)	Michael deCastro – MSPMHSD (online)
Tom Longanbach – Equalization (online)	Katie Zeits – Benzie Admin (present)

Guests: Networks Northwest representatives: Stephanie Loria (present), Jennifer Neal (online)

Meeting called to order at 2:00pm by Steve Adams.

- 1. Roll Call** – R. Hubers confirmed present the participants identified on Zoom and added them to the sign in sheet for record. At least 6 members physically present to qualify a quorum.
- 2. Agenda** - *Motion to approve the agenda as amended – adding HMEP application to New business. Motion by Markey, second by Sauer – motion carried*
- 3. Minutes** - *Motion to approve the October 18, 2021, by Rosa, second by Markey - motion carried*
- 4. Public Comments** - No public comment at the time.
- 5. New Business** -
 - A.** HMEP Grant Application due for LEPC Chair to sign. Provides funding to support Tier II reporting and additional LEPC costs based on number SARA Title III plans reviewed and renewed. *Motion by Markey second by Rosa for LEPC chair to sign 2022 HMEP grant application – Motion Carried*
- 6. Old Business** – Networks Northwest – progress on County Hazard Mitigation Plan
 - Hazard mitigation survey is closed – received 44 responses with lacking responses from Gilmore and Colfax.
 - Copy of the powerpoint presentation reviewed during the meeting is attached.
 - Rebecca to forward CIKA survey to NNM and Ask BCRC for a bridge list including MDOT.
- 7. Board Member Comments** -

Craigin-	(Audio a little hard to hear – may have missed something) Entry cards were provided for first responder access to POMH. Looking forward to Haz Mat trailer inventory / exercise.
Powers –	American Red Cross has a new volunteer from the Benzie County Area – Services continue to be provided when requested.
Rosa –	Thank you – appreciate the lockdown training – looking forward to expanding training.

Hubers - Networks Northwest to be back at March meeting – will reach out to townships regarding identifying critical infrastructure. SARA Plans will be reviewed in between planning.

No other committee member comments.

8. **Public Comment** - No additional Public Comments

9. **NEXT MEEING:** February 22,2022 – cancelled due to other County Meeting Conflicts.

Next meeting scheduled for March 21, 2022 at 2pm.

9. **Adjournment** - *Motion to adjourn by Rosa, second by Markey* – motion carried.

Meeting length for in-Kind form = 1 hrs. Meeting adjourned 3:14pm

xxx- /rsh



Local Emergency Planning Committee Sign Up Sheet

Meeting Date: 2/21/23

PRINT NAME	Email (if changed)	Organization/Position
PHL STEVE PERON		MSD TRAVELBASE CITY
GARY HUBERS	LAFR	BLSD ULS
ROBERT LOZOWSKI		PPD
MIKE JOHNSON		BERC
ROBORA S HUBERS	Feel.	DEM.
Steve Adams		Benzonia Township Fire Department
Michael Cederholm		Fire District #10
Paul Stowe	P	MBUR
Tim Markley		Homesstead Twp F.D. / Benzie Co
Jocunda Murphy		culture
Faye Carrigan		culture
Chad Oberbecker		culture
Larry Ellis		Central dispatch (in kind)



Benzie County Local Emergency Planning Committee (LEPC) Meeting Agenda

Meeting Date: March 21, 2022
Meeting Time: 2:00pm
Meeting Location: Benzie County Board of Commissioners Room – 448 Court Place,
Beulah MI.

Join Zoom Meeting

<https://us02web.zoom.us/j/81876224077?pwd=dTlTeFhidTg2OWxHZkVVGZHFibEgzdz09>

Meeting ID: 818 7622 4077

Passcode: 686210

Dial by your location

+1 929 205 6099 US (New York)

+1 301 715 8592 US (Washington DC)

1. **Roll Call** - body of 6 members need to be physically present for a quorum
2. **Approval of Agenda**
3. **Approval of Minutes of Prior Meeting January 18, 2022 (no February Mtg)** Approval Req'd
4. **Public Comment** Approval Req'd
5. **New Business**
 - A. **Platte River Off-Site Response Plan – review and accept** Approval Req'd
6. **Old Business**
 - A. **Networks Northwest - progress on County Hazard Mitigation Plan**
7. **Committee Member Round Table**
8. **Public Comments**
9. **Next Meeting: April 18, 2022 2pm.**
10. **Adjournment**

LEPC – Local Emergency Planning Committee Meeting Minutes for March 21, 2022

Location: Frank Walterhouse Board of Commissioners Room

Zoom meeting ID 81876224077

Attendees:

Steve Adams – BFD (present)	Tom King – Benzie EMS(present)
Rebecca Hubers – OEM/ BCD (present)	Travis House – MSP (online)
Tim Markey – BOC (present)	Fred Craigin – MHC (online)
Kyle Rosa – BCSO (present)	Meghan Powers – ARC (online)
Jolene Peck – MDHHS (online)	Mike Johnson – BCRC (present)
Cody Allen – Graceland Fruit (online)	

Guests: Networks Northwest representatives: Stephanie Loria (present), Jennifer Neal (online)
Courtney Hessel – GTB Brownfield (online)
Paul Stowe – MDNR Platte River Fish Hatchery (online)

Meeting called to order at 2:04pm by Steve Adams.

1. **Roll Call** – R. Hubers confirmed present the participants identified on Zoom and added them to the sign in sheet for record. At least 6 members physically present to qualify a quorum.
2. **Agenda** - *Motion to approve the agenda as presented. Motion by Rosa, second by Markey – motion carried*
3. **Minutes** - *Motion to approve the January 18, 2022, (no February meeting) by Markey, second by Johnson - motion carried*
4. **Public Comments** - No public comment at the time.
5. **New Business** -

A. Review and questions for Paul Stowe regarding the Platte River Fish Hatchery Off-Site Response Plan.

Fire tankers should not use fire hydrants on site – have not been tested and contain sediment. Fire tankers should seek water from the intake *above* the fill ponds. No other questions. Only updated changes to the contact information on the plan- no chemical, location or amount changes. *Motion by Markey second by Rosa to accept the off-site response plan for MDNR Platte River Fish Hatchery – Motion Carried*

6. **Old Business** – Networks Northwest – progress on County Hazard Mitigation Plan

Copy of the powerpoint presentation reviewed during the meeting is attached.

Rebecca still meeting with Townships for small group input. Rebecca to find recent rip current study results from NOAA.

7. **Board Member Comments** -

Craigin- MHC at code yellow status. Visitors still asked to mask, and long-term care still has higher masking and visitation regulations. Asked that responders with the new access cards to please try the cards once to make sure they work and report any issues. MHC Manistee will be undergoing renovations and ER is currently moving (follow signs).

- Powers – American Red Cross services continue to be provided when requested. Potentially acquiring an emergency response vehicle that can respond and support “canteen” food services and carry supplies. Scheduled to drop masking requirements April 1.
- Rosa – Down one Road Deputy with the movement from Lt. Lamerson’s retirement and accepting applications. One vacancy in Corrections.
- Markey - Homestead brush truck should be in service in about a week. Was notified that former Commissioner and Homestead Fire Chief Frank Walterhouse has passed away. Fire Department pancake breakfast on Sundays now through April 10, 8am-12pm.
- Johnson- Benzie County Road Commission will be dropping night scheduling starting April 1. Ryan Road has a serious washout that may require it to be closed east of Peckens. Official announcement will come from the BCRC.
- Adams - Fire Academy still in process – lost 1 Benzie student. Currently 16 potential firefighters still in the program. Graduation June 6.
Still waiting on quotes for Township building – but site clearing is underway.
- Hubers - April 4 BCD will be filling its 9th ECS position with a transfer from the Sheriff’s Office Corrections. Networks Northwest to be back at May meeting. Verified with Cody Allen Graceland Fruit two locations to be reviewed at April meeting.
- King - New ambulance next month – replacing old ambulance and not an addition to the fleet.

No other committee member comments.

8. **Public Comment** - No additional Public Comments
9. **NEXT MEEING:** April 18, 2022 at 2pm
10. **Adjournment** - *Motion to adjourn by Markey, second by Rosa – motion carried. Meeting length for in-Kind form = 1 hrs. Meeting adjourned 3:12m*

xxx- /rsh



Benzie County Local Emergency Planning Committee (LEPC) Meeting Agenda

Meeting Date: April 18, 2022
Meeting Time: 2:00pm
Meeting Location: Benzie County Board of Commissioners Room – 448 Court Place,
Beulah MI.

Join Zoom Meeting

<https://us02web.zoom.us/j/81248714023?pwd=eXF2VmQ4VzlxOU9jeTJRL1VxRIhKQT09>

Meeting ID: 812 4871 4023

Passcode: 013230

Dial by your location

+1 929 205 6099 US (New York)

+1 301 715 8592 US (Washington DC)

1. **Roll Call** - body of 6 members need to be physically present for a quorum
2. **Approval of Agenda**
3. **Approval of Minutes of Prior Meeting March 21, 2022** Approval Req'd
4. **Public Comment** Approval Req'd
5. **New Business**
 - A. **Graceland Fruit -x2 Site Response Plans – review and accept** Approval Req'd
6. **Old Business**
 - A. **Networks Northwest - progress on County Hazard Mitigation Plan**
7. **Committee Member Round Table**
8. **Public Comments**
9. **Next Meeting: May 16, 2022 2pm.**
10. **Adjournment**



Local Emergency Planning Committee Sign Up Sheet

Meeting Date: 4-18-22

PRINT NAME	Email (if changed)	Organization/Position
✓ Top KING		EMS
✓ Gary Situer		Comm
✓ Matthew McCaid		MSP
✓ Tim Markey		Kantwood Fire
✓ Steve Adams		Benzie Fire
✓ Kyle Rosa		Benzie Co. Sheriff
✓ Rebecca Hubers		EMJ
✓ Corey Allen		GraceLand
✓ Robb Scott		BLDHP
✓ Jolanda Murphy		GTB
✓ Fred Craigen J		POMH
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LEPC – Local Emergency Planning Committee Meeting Minutes for April 18, 2022

Location: Frank Walterhouse Board of Commissioners Room

Zoom meeting ID 812 4871 4023

Attendees:

Steve Adams – BFD (present)

Rebecca Hubers – OEM/ BCD (present)

Tim Markey – BOC (present)

Kyle Rosa – BCSO (present)

Cody Allen – Graceland Fruit (online)

Tom King – Benzie EMS(present)

Lt. Matthew McCaul – MSP (present)

Fred Craigin – MHC (online)

Bobbi Scott – BLDHD (online)

Jolanda Murphy – GTB (online)

Guests:

Meeting called to order at 2:00pm by Steve Adams.

1. **Roll Call** – R. Hubers confirmed present the participants identified on Zoom and added them to the sign in sheet for record. At least 6 members physically present to qualify a quorum.
2. **Agenda** - *Motion to approve the agenda as presented. Motion by Markey, second by Sauer* – motion carried
3. **Minutes** - *Motion to approve the minutes from March 21, 2022, by Markey, second by Rosa* - motion carried
4. **Public Comments** - No public comment at the time.

5. New Business -

- A. Review and questions for Cody Allen regarding the Graceland Fruit (both locations) Off-Site Response Plan.

Only changes include updates to staff positions and contact numbers and numbers of trained personnel at each site. No change in materials or facilities. *Motion to approve Graceland Fruit off-site response plans for reporting to the State by Markey, second by Rosa.* – motion carried

6. Old Business – Networks Northwest – progress on County Hazard Mitigation Plan

Rebecca still meeting with Townships for small group input. One more to attend.

Discussion on “field trip” recommendation considered by NNW. No immediate interest in an offsite field trip – most of the locations are known by committee members or able to be viewed individually.

7. Board Member Comments -

- Craigin- The HONU vaccination big orange trailer is “up front” at Paul Oliver Memorial hospital.
Region 7 conducting a surge drill on Thursday all MHC hospitals are participating.
MHC will be moving to a passive / self screening for visitors at all their hospitals.

- Hubers - Campus Active Shooter Integrated Response training August 2,3, 2022 at Frankfort Elberta Area High School.
- Search and Rescue initial Response training August 26, 2022
- Both training notices were sent out and pre-registration with the facilitating companies are required.
- King - Ambulance waiting on a couple more pieces of equipment before state inspection
- McCaul- Resident Trooper conversation – still in progress.
- B.Scott - Covid County numbers down currently – second booster available. Vaccination clinic one day a week at both offices, appointments and schedule are on the website.
- Honu walk in vaccination and testing (trailer) set up at Paul Oliver Memorial Hospital.
- Home testing kits available to the BLDHD offices.
- Murphy- GTB offering second booter shots and offering a weekly testing schedule. Meeting with Leelanau County as well regarding Hazard mitigation Planning – progress is about the same as Benzie County.

No other committee member comments.

8. **Public Comment** - No additional Public Comments
9. **NEXT MEEING:** May 16, 2022 at 2pm.
10. **Adjournment** - *Motion to adjourn by Markey, second by king* – motion carried. Meeting length for in-Kind form = .5 hrs. Meeting adjourned 2:23pm

xxx- /rsh



Benzie County Local Emergency Planning Committee (LEPC) Meeting Agenda

Meeting Date: June 20, 2022
Meeting Time: 2:00pm
Meeting Location: Benzie County Board of Commissioners Room – 448 Court Place,
Beulah MI.

Join Zoom Meeting

<https://us02web.zoom.us/j/82552030198?pwd=ajdxT3BENIVmWktZenplaHZnb3dDUT09>

Meeting ID: 825 5203 0198

Passcode: 778575

Dial by your location

- +1 929 205 6099 US (New York)
- +1 301 715 8592 US (Washington DC)
- +1 312 626 6799 US (Chicago)

1. **Roll Call** - body of 6 members need to be physically present for a quorum
2. **Approval of Agenda** Approval Req'd
3. **Approval of Minutes of Prior Meeting April 18, 2022** Approval Req'd
4. **Public Comment**
5. **New Business**
 - A. **AT&T Beulah Off-Site Response Plan – review and accept** Approval Req'd
 - B. **Smeltzer Orchards – Off Site Response Plan – review and accept** Approval Req'd
6. **Old Business**
 - A. **Networks Northwest - progress on County Hazard Mitigation Plan**
7. **Committee Member Round Table**
8. **Public Comments**
9. **Next Meeting: July 18, 2022 2pm.**
10. **Adjournment**

LEPC – Local Emergency Planning Committee Meeting Minutes for June 20, 2022

Location: Frank Walterhouse Board of Commissioners Room

Zoom meeting ID 825 5203 0198

Attendees:

Steve Adams – BFD (present)

Rebecca Hubers – OEM/ BCD (present)

Tim Markey – BOC (present)

Kyle Rosa – BCSO (present)

Tim Brian – Smeltzer Orchards (present)

Fred Craigin – MHC (online)

Jolanda Murphy – GTB (online)

Mike Johnson – BCRC (present)

Gary Sauer – BOC (present)

Guests:

Meeting called to order at 2:00pm by Steve Adams.

1. **Roll Call** – R. Hubers confirmed present the participants identified on Zoom and added them to the sign in sheet for record. At least 6 members physically present to qualify a quorum.
2. **Agenda** - *Motion to approve the agenda as presented. Motion by Sauer, second by Rosa* – motion carried
3. **Minutes** - *Motion to approve the minutes from April 18, 2022 (no May meeting), by Johnson, second by Sauer* - motion carried
4. **Public Comments** - No public comment at the time.

5. New Business -

- A. Review and questions for Rebecca (no AT&T representative at the meeting) regarding the AT&T Beulah sub-station Off-Site Response Plan.

Only changes include updates to staff positions and contact numbers. No change in materials or facilities. *Motion to approve AT&T Beulah off-site response plans for reporting to the State by Markey, second by Adams.* – motion carried

- B. Review and questions for Tim Brian regarding the Smelter Orchards Off-Site Response Plan.

No change in contact information, materials or facilities. *Motion to approve Smeltzer Orchards off-site response plans for reporting to the State by Rosa, second by Sauer.* – motion carried

Rebecca noted that these were the last two plans needed for approval and updating for 2022. Rebecca will forward the proper paperwork to the state for plan documentation.

6. Old Business – Networks Northwest – progress on County Hazard Mitigation Plan

Rebecca read the update from Jennifer Neal regarding full size map of sites and notes provided at the LEPC and from Rebecca's visits with townships. Blaine Township still needs to be visited; Rebecca has not been able to get her schedule to connect with their meeting schedule. Networks Northwest will have an update at for the next meeting.

7. **Board Member Comments -**

- Craigin- Munson Health care still in status yellow at the time of the meeting. ARES / CERT radio work is finished and running at POMH. Evacuation training @ long term care and still looking to Station 4 for Hazmat training with Decon. Trailer.
- Hubers - Campus Active Shooter Integrated Response training August 2,3, 2022 at Frankfort Elberta Area High School.
Search and Rescue initial Response training August 26, 2022
Both training notices will be resent.
- Murphy- GTB completing their AAR for COVID-19 response and working on pre-plans for events.
- Markey- Local Fire Academy had 5 Benzie County Graduates. Anticipated EMT training in the Fall.
- Rosa- Solid staffing numbers 1 Deputy on road patrol training and 2 Corrections Deputies in training. Currently working on July 4 planning for Frankfort and Beulah.
- Johnson- Clean up from weekend wind damage. Esch road still on hold due to protected bird nesting. Four openings for plow truck drivers (full time vacancies) CDL B/A preferred.
- Adams- in addition to fire academy graduation – station has been busy. Hands on training in Frankfort moving from Tuesday to Saturday, hoping for a good turnout.
- Brian- Smelter Orchards reports good healthy crops this year – anticipated busy time will be after July 4.

No other committee member comments.

8. **Public Comment** - No additional Public Comments

9. **NEXT MEEING:** JULY 18, 2022 at 2pm

10. **Adjournment** - *Motion to adjourn by Markey, second by Sauer* – motion carried.

Meeting length for in-Kind form = .5 hrs. Meeting adjourned 2:31pm

xxx- /rsh



Benzie County Local Emergency Planning Committee (LEPC) Meeting Agenda

Meeting Date: July 18, 2022
Meeting Time: 2:00pm
Meeting Location: Benzie County Board of Commissioners Room – 448 Court Place,
Beulah MI.

Join Zoom Meeting

<https://us02web.zoom.us/j/83053880864?pwd=S2dsb2Y1RE4vdUlvaVZNUEhTeUV5UT09>

Meeting ID: 830 5388 0864

Passcode: 980341

Dial by your location

+1 301 715 8592 US (Washington DC)

+1 312 626 6799 US (Chicago)

1. **Roll Call** - body of 6 members need to be physically present for a quorum
2. **Approval of Agenda**
3. **Approval of Minutes of Prior Meeting June 20, 2022** **Approval Req'd**
4. **Public Comment** **Approval Req'd**
5. **New Business**
 - A. **Debris Management – local entity communication**
 - B. **List of upcoming training and exercises**
6. **Old Business**
 - A. **Networks Northwest - progress on County Hazard Mitigation Plan**
7. **Committee Member Round Table**
8. **Public Comments**
9. **Next Meeting: August 15, 2022 2pm.**
10. **Adjournment**



Local Emergency Planning Committee Sign Up Sheet

Meeting Date: 7-18-22

PRINT NAME	Email (if changed)	Organization/Position
✓ <u>Kyla Rosa</u>		<u>Resnic Co. Sheriff</u>
✓ <u>Mike Johnson</u>		<u>BCRC</u>
✓ <u>Bobbi Scott</u>		<u>BLDHD</u>
✓ <u>Gary Sasser</u>		<u>Resnic Comm</u>
✓ <u>Mathew Pfeiffer</u>		<u>MSD</u>
✓ <u>Tom King</u>		<u>EMS</u>
✓ <u>Jennifer Neal</u>		<u>Networks North</u>
✓ <u>Jolanda Murphy</u>		<u>OTB</u>
✓ <u>Robbecca Hubers</u>		<u>oem/911</u>

LEPC – Local Emergency Planning Committee Meeting Minutes for July 7, 2022

Location: Frank Walterhouse Board of Commissioners Room

Zoom meeting ID 830 5388 0864

Attendees:

Rebecca Hubers – OEM/ BCD (present)

Mike Johnson – BCRC (present)

Kyle Rosa – BCSO (present)

Bobbi Scott – BLDHD (present)

Jolanda Murphy – GTB (online)

Tom King – BEMS (present)

Gary Sauer – BOC (present)

Matthew McCaul – MSP (present)

Guests: Jennifer Neal – online – Networks Northwest

Meeting called to order at 2:00pm by Rebecca Hubers.

1. **Roll Call** – R. Hubers confirmed present the participants identified on Zoom and added them to the sign in sheet for record. At least 6 members physically present to qualify a quorum.
2. **Agenda** - *Motion to approve the agenda as presented. Motion by Rosa, second by Sauer* – motion carried
3. **Minutes** - *Motion to approve the minutes from June 20, 2022, by Scott, second by King* - motion carried
4. **Public Comments** - No public comment at the time.

5. **New Business** -

- A. Debris management – Rebecca discussed the last presentation to the LPT regarding debris management asked the groups opinion for locations or if she should continue with asking for debris management input from the local communities. General opinion to seek input on debris management for local communities. Rebecca to make an effort to put herself on agendas at local township meeting reference debris management.
- B. List of upcoming training and exercises -

Campus Active Shooter integrated Response – Frankfort Aug 2, 3, 2022

Search and Rescue Initial Response – Honor August 26, 2022

Cherry Capital Airport full scale exercise August 10, 2022 (still looking for victims)

Leelanau County Active Shooter Response – Empire August 16, 2022

Mason County Active Assailant Response – August 25, 2022

Civilian Response to Active Shooter Events – Beulah September 8 or 9, 2022

Manistee County Law Enforcement Active Shooter Emergency Response September 6, 7, 2022

Please contact Rebecca for contacts of more details.

6. **Old Business** – Networks Northwest – progress on County Hazard Mitigation Plan

Group assisted with listings for vulnerable population areas and campgrounds to finish mapping. Networks Northwest to have partial draft ready for review in August so group can start to work on strategies.

7. **Board Member Comments -**

- Hubers - Listed trainings earlier. 911 to advertise for a new Director in later August for October hire. Two emergency Communication Specialists openings. Hubers to remain the Emergency Management Coordinator.
- Murphy- GTB - COVID vaccinations and testing by appointment. August 29-31 Run Hide Fight training for staff.
- King- Ambulance deer crashes. Nothing serious. One FT paramedic Opening.
- Rosa- Taking applications for one open corrections officer position
- Johnson- Esch Road repairs July 15- Late August.
- McCaul- Resident Troopers in place. Trooper Skorka CST covering several counties.
- Scott- Increase in outbreaks at LTC facilities over the last two weeks. Illness has been mild however some hospitalizations due to subsequent medical issues, not necessarily COVID symptoms that are admitting diagnosis.
- Antiviral and therapeutics along with high vaccination rates continue to keep systems from being overwhelmed. BLDHD daily average Munson census of 2-3 residents admitted. One death for Benzie County that will be reported out today/this week.

Covid testing POMH: Tuesdays and Fridays from 10am – 3pm and Lake Leelanau M/W/F from 10a – 2p

Covid vaccinations have vaccines for 6 months + available in both counties one day per week go to www.bldhd.org to schedule an appointment.

No other committee member comments.

8. **Public Comment** - No additional Public Comments

9. **NEXT MEEING:** August 15, 2022 at 2pm

10. **Adjournment** - *Motion to adjourn by Rosa, second by King* – motion carried.

Meeting length for in-Kind form = 1 hrs. Meeting adjourned 2:50pm

xxx- /rsh



Benzie County Local Emergency Planning Committee (LEPC) Meeting Agenda

Meeting Date: August 15, 2022
Meeting Time: 2:00pm
Meeting Location: Benzie County Board of Commissioners Room – 448 Court Place,
Beulah MI.

Join Zoom Meeting

<https://us02web.zoom.us/j/82118413614?pwd=T1VBUktrK0JuWjNWeIVjWHBJNEFHZz09>

Meeting ID: 821 1841 3614

Passcode: 385512

Dial by your location

+1 301 715 8592 US (Washington DC)

+1 312 626 6799 US (Chicago)

1. **Roll Call** - body of 6 members need to be physically present for a quorum
2. **Approval of Agenda** Approval Req'd
3. **Approval of Minutes of Prior Meeting July 18, 2022** Approval Req'd
4. **Public Comment**
5. **New Business**
 - A.
6. **Old Business**
 - A. **Networks Northwest - progress on County Hazard Mitigation Plan**
partial draft Hazard Mitigation Plan review, which will include the:
Introduction, Planning Process, Community Profile, and Hazard
Identification and Assessments.

discussions about desired goals and objectives, along with hazard
mitigation strategies and priorities.
7. **Committee Member Round Table**
8. **Public Comments**
9. **Next Meeting: September 19, 2022 2pm.**
10. **Adjournment**



Local Emergency Planning Committee Sign Up Sheet

Meeting Date: 8-15-22

PRINT NAME	Email (if changed)	Agency/Position
Rebecca Hubers		DEN/911
Tom Klyg		EMS
Gary Sauer		Commissioner
Bobbi Scott		BLD/HD
Fred Casagim		NHTC South
Tim Markey		Homesstead / BENZIE
Trevor Baesch		Michigan State Police
Steve Adams		Benzonia Fire Department
Lt Matt McCauro		MSP.
Joelen Peak.		MDHTS.
Jennifer Nease		Networks Northwest.

LEPC – Local Emergency Planning Committee Meeting Minutes for August 15, 2022

****Unapproved Draft ****

Location: Frank Walterhouse Board of Commissioners Room

Zoom meeting ID 821-184103614

Attendees:

Rebecca Hubers – OEM/ BCD (present)

Greg Hubers – BCSO (present)

Gary Sauer – BOC (present)

Bobbi Scott – BLDHD (present)

Fred Craigin – MHC South (online)

Steve Adams – Chair Benzonia Fire (present)

Tom King – BEMS (present)

Lt. Matt McCaul – MSP (online)

Joleen Peck – MDHHS (online)

Trooper Trevor Basch – MSP (present)

Tim Markey – Homestead Fire (present)

Guests: Stephanie Loria Networks Northwest & Jennifer Neal – online – Networks Northwest

Meeting called to order at 2:03pm by Steve Adams

1. **Roll Call** – R. Hubers confirmed present the participants identified on Zoom and added them to the sign in sheet for record. At least 6 members physically present to qualify a quorum.
2. **Agenda - Motion to approve the agenda as presented. Motion by Sauer, second by King** – motion carried
3. **Minutes - Motion to approve the minutes from July 18, 2022, by Scott, second by King** - motion carried
4. **Public Comments** - No public comment at the time.
5. **New Business - no new business – time allotted for Networks Northwest presentation of Hazard mitigation Plan status**
6. **Old Business** – Networks Northwest – progress on County Hazard Mitigation Plan

Partial plan draft review including the introduction, planning, process, community profile, hazard identification and assessment. Additional discussion regarding desired goals, objectives, and priorities.

Rebecca to get a “survey” of questions to discuss anticipated strategies with local communities to seek feedback.

Rebecca to also check with DNR PRD regarding Homestead Dam action plans and inspections

Webinar August 18 2pm from FEMA bridging planning to projects.

7. **Board Member Comments** -

Hubers - Posting is online for new 911 Director. Ironman scheduled for September 11 – social media output regarding route delays

G. Hubers- Welcome resident Troopers – their presence has already paid off.

Scott- Officially Still in a pandemic even though people may have forgotten or moved on.

COVID:

- There has been a slight increase in cases over the last two weeks including a small uptick in hospitalizations

LEPC – Local Emergency Planning Committee Meeting Minutes for August 15, 2022

****Unapproved Draft ****

Location: Frank Walterhouse Board of Commissioners Room

Zoom meeting ID 821-184103614

Attendees:

Rebecca Hubers – OEM/ BCD (present)

Greg Hubers – BCSO (present)

Gary Sauer – BOC (present)

Bobbi Scott – BLDHD (present)

Fred Craigin – MHC South (online)

Steve Adams – Chair Benzonia Fire (present)

Tom King – BEMS (present)

Lt. Matt McCaul – MSP (online)

Joleen Peck – MDHHS (online)

Trooper Trevor Basch – MSP (present)

Tim Markey – Homestead Fire (present)

Guests: Stephanie Loria Networks Northwest & Jennifer Neal – online – Networks Northwest

Meeting called to order at 2:03pm by Steve Adams

1. **Roll Call** – R. Hubers confirmed present the participants identified on Zoom and added them to the sign in sheet for record. At least 6 members physically present to qualify a quorum.
2. **Agenda** - *Motion to approve the agenda as presented. Motion by Sauer, second by King* – motion carried
3. **Minutes** - *Motion to approve the minutes from July 18, 2022, by Scott, second by King* - motion carried
4. **Public Comments** - No public comment at the time.
5. **New Business - no new business – time allotted for Networks Northwest presentation of Hazard mitigation Plan status**
6. **Old Business** – Networks Northwest – progress on County Hazard Mitigation Plan

Partial plan draft review including the introduction, planning, process, community profile, hazard identification and assessment. Additional discussion regarding desired goals, objectives, and priorities.

Rebecca to get a “survey” of questions to discuss anticipated strategies with local communities to seek feedback.

Rebecca to also check with DNR PRD regarding Homestead Dam action plans and inspections

Webinar August 18 2pm from FEMA bridging planning to projects.

7. **Board Member Comments** -

Hubers - Posting is online for new 911 Director. Ironman scheduled for September 11 – social media output regarding route delays

G. Hubers- Welcome resident Troopers – their presence has already paid off.

Scott- Officially Still in a pandemic even though people may have forgotten or moved on.

COVID:

- There has been a slight increase in cases over the last two weeks including a small uptick in hospitalizations

- COVID vaccines are available for all ages in both the Benzie and Leelanau County offices one day each week and appointments can be made through our website www.bldhd.org
- COVID testing is conducted in both Benzie and Leelanau Counties 2-3 days per week. No need to make an appointment but you do need to register through our website. There are also at home COVID test kits available in both offices, stop in anytime and pick those up.
- In anticipation of the release of variant specific COVID vaccines from both Pfizer and Moderna we are increasing our vaccine clinic appointment availability in mid-September. These clinics will include flu vaccines.

Childhood immunizations rates are down over the last few years as these too were impacted by COVID. There will be additional immunization clinics offered to all schools in both counties to give parents a convenient option to bring their children for vaccines.

Monkeypox:

- No confirmed cases in our jurisdiction however we have given a couple of vaccines for individuals that have qualified for them.
- Grand Traverse County HD is the regional hub for MPV vaccine, and we are working closely with them on distribution as needed.

Other happenings:

Working with Leelanau County Sherriff's department on safety training for our staff that conduct in-home visits for certain programs. That training will hopefully happen within the next couple of months.

Working with MSP on safety in our Benzie office. Trooper Skorka will be doing a walk through of the Benzie office this week and then coming back to conduct staff training at a later date that has not been set yet, but will hopefully be within the next 4-6 weeks.

No other committee member comments.

8. **Public Comment** - No additional Public Comments
9. **NEXT MEEING:** September 19, 2022
10. **Adjournment** - *Motion to adjourn by Sauer, second by G. Hubers* – motion carried.

Meeting length for in-Kind form = 1 hrs. Meeting adjourned 3:00 pm

xxx- /rsh



Benzie County Local Emergency Planning Committee (LEPC) Meeting Agenda

Meeting Date: October 17, 2022
Meeting Time: 2:00pm
Meeting Location: Benzie County Board of Commissioners Room – 448 Court Place,
Beulah MI.

Join Zoom Meeting

<https://us02web.zoom.us/j/89235435868?pwd=Z2Q1RmxUN0ZvSWIxa2NYOC9iRHoydz09>

Meeting ID: 892 3543 5868

Passcode: 741823

1. **Roll Call** - body of 6 members need to be physically present for a quorum
2. **Approval of Agenda** **Approval Req'd**
3. **Approval of Minutes of Prior Meeting August 15, 2022** **Approval Req'd**
4. **Public Comment**
5. **New Business**
 - A. **2023 calendar – LPT motion to combine (4th Thursday – 2pm)**
6. **Old Business**
 - A. **Networks Northwest - progress on County Hazard Mitigation Plan
Hazard Mitigation Plan review or strategies and maps. Along with
continued draft plan review**
7. **Committee Member Round Table**
8. **Public Comments**
9. **Next Meeting: dependent on agenda A - January(17 Tuesday or 26 LPT
Thursday), 2023**
10. **Adjournment**

LEPC – Local Emergency Planning Committee Meeting Minutes for October 17, 2022

****Unapproved Draft ****

Location: Frank Walterhouse Board of Commissioners Room

Zoom meeting ID 892 3543 5868

Attendees:

Rebecca Hubers – OEM/ BCD (present)

Kyle Rosa – BCSO (present)

Joleen Peck – MDHHS (online)

Bobbi Scott – BLDHD (present)

Steve Adams – Chair Benzonia Fire (present)

Jolanda Murphy – GTB (online)

Tom King – BEMS (present)

Gary Sauer – BOC (present)

Eric Johnston – BLDHD (online)

Tim Markey – Homestead Fire (present)

Meghan Power – ARC (online)

Guests: Stephanie Marchbanks Networks Northwest & Jennifer Neal – online – Networks Northwest

Meeting called to order at 2:00pm by Steve Adams

1. **Roll Call** – R. Hubers confirmed present the participants identified on Zoom and added them to the sign in sheet for record. At least 6 members physically present to qualify a quorum.
2. **Agenda** - *Motion to approve the agenda as presented. Motion by Markey, second by Rosa – motion carried*
3. **Minutes** - *Motion to approve the minutes from August 15, 2022, by Sauer, second by Markey - motion carried*
4. **Public Comments** - No public comment at the time.
5. **New Business** -
 - A. 2023 Calendar – follow up to first LPT motion to combine LPT/LEPC meeting dates (discuss dates). Sauer is unavailable on the fourth Thursday. *Motion by Markey, Second by Sauer of the combined meeting date being the Third Monday at 2pm. (altered for holidays in January and February and no meetings November and December) – to be presented to LPT for final approval.*
6. **Old Business** – Networks Northwest – progress on County Hazard Mitigation Plan

Presented with list of community strategies – alterations made. Rebecca to visit local communities with updated strategies to confirm jurisdictional collaboration and agreement.
6. **Board Member Comments** –

King -	Covid home test kits available
Hubers -	New 911 Director interviews and recommendations upcoming
Rosa -	new SRO Deputy approved. Staffing is solid.
Scott-	Covid testing and vaccinations (including Pediatric vaccines) available at both offices – check website

No other committee member comments.

8. **Public Comment** - No additional Public Comments
9. **NEXT MEEING:** January 17, 2023 (Tuesday) following the holiday
10. **Adjournment** - *Motion to adjourn by Sauer, second by King* – motion carried.

Power outage – effected online users.

Meeting length for in-*Kind form* = 1 hrs. Meeting adjourned 3:00 pm

xxx- /rsh

Benzie County LPT-Local Planning Team Meeting Minutes October 27, 2022

Zoom: Meeting ID 831-6722-7514

Meeting called to order by Tim Markey at 2:01pm

1. Attendees:

Rebecca Hubers-OEM/BCCD (present)

Mike Johnson – BCRC (present)

Tom King - BEMS (present)

Joe Molnar – MDNR-LED (online)

Greg Hubers – BCSO (present)

Chad Hollenbeck – Benzie Bus (online)

Steve Adams – BTFD (present)

Tim Markey – BOC/Fire Services (present)

Mike Cederholm – FFD (present)

Bobbi Scott – BLDHD (present)

Meghan Powers – ARC (online)

Rob Lozowski – FPD (present)

David Hanchett – CERT (online)

2. Agenda: Motion by Lozowski to approve the agenda as amended adding New Business c) Ebola Response Plan – Second by G. Hubers. *Motion carried.*

3. Minutes: Motion by Lozowski to approve the minutes from September 22, 2022 as presented Second by King. *Motion carried.*

4. Public Comment: No Public Comment

5. Introductions:

6. Roundtable:

Hanchett – CERT Basic training November 5-6 in Beulah

Johnson – BCRC seasonal work on track – Current staffing good to make it through winter. Interviews for foreman scheduled. BCRC Pits will be locked due to dumping and people ‘playing around’. Esch road is almost complete waiting on scheduled shoulder work.

Hollenbeck – Benzie Bus Weekend after hours 5p-1a will end after Halloween until New Year’s Eve for safe rides home. Trolley is put up for the season.

Molnar – Michigan Dept. Natural Resources New CO in Benzie County (Stowe) Another moving into the Leelanau vacancy. Salmon runs are about over and firearm deer season ramping up. Supporting three Great Lakes patrol Vessels in area.

Powers – Amer. Red Cross smoke alarms available for installation w/ education.

B. Scott – Benzie Leelanau District Health Department vaccines clinic through December and COVID testing in both counties until there is no more need – predicted June 2024. Information on times on the BLDHD website. Grand traverse County monitoring a low-risk Ebola notification.

G. Hubers – BCSO Thank you to MDNR for vessel support. Recent incident threat to Graceland Fruit - assessed and deemed “not feasible”. Good practice and making agencies aware.

Markey – Homestead Twp. / BOC there will be another interview for dispatch director because of a missed email. BOC still working on ARPA projects. Top survey results were housing, broadband, childcare.

Adams – Benzonia Twp Fire Dept. Benzonia Halloween 5-8 trunk or treat. Beulah 4-6. Working on Bureau of Fire Services allotments for training.

Cederholm – Frankfort Fire Dept. September 27 Decon trailer training and inventory with POMH. Will incorporate it into a Saturday training for longer opportunity with other depts.

R. Hubers – Central Dispatch Two full time openings for Emergency Communications Specialists.

Lozowski – FPD Frankfort Halloween 5-8. Discussions with the City regarding tower funding – ARPA Expenditure.

7. New Business:

- a. **2023 schedule to combine with LEPC** – One member of LEPC can not move to Thursdays LPT – looking for final discussion to move combined meetings to LEPC schedule. Motion Markey to combine LPT and LEPC meeting dates to third Monday of each month at 2pm with accommodations for state holidays when County office is closed – moving meeting to following Tuesday. No meetings in November or December. Second by Lozowski – *motion passed*. Rebecca to produce and share 2023 meeting calendar with minutes.
- b. **CIKR** – Rebecca provided a list of County critical infrastructure asked members to review and advise of facilities they want to see listed under the categories presented.
- c. **Ebola Response Plan (BLDHD)** Region 7 has response protocols with a team from CDC and MDHHS regarding traveler evaluation and monitoring. Persons traveling from Uganda to Michigan should self monitor and notify local health departments. Intra Steta movement should be followed with education, assesment, and monitoring daily

based on risk level and if symptomatic, seek treatment. Munson traverse city is the Tier II facility for the region. Frederick Township and Emmet County EMS is the designated transporting agency for special pathogens response. Pts being monitored are flagged for 21 days. Notifications would be made by health department to proper agencies. If call to 911 and transport needed Benzie EMS does own proper PPE for special pathogens response.

8. Old Business:

- a. Hazard Mitigation Plan – update from LEPC. Strategies list was shared and Rebecca to be reaching out to communities for localized “buy in”.
- b. Rescue Task Force training - Rebecca looking for RTF training vendors. Any suggestions?

9. Upcoming Trainings

- a. Basic CERT November 5-6
- b. Ice Rescue w/ USCG December 10 – Frankfort (no other details at this time)

10. Public Comments – no additional public comment

11. Next Meeting – Next meeting is January 17, 2022 (Tuesday due to Monday Holiday)

Adjournment – Motion to adjourn by Lozowski – Second by Markey – *Motion carried.*
Meeting adjourned at approximately 2:55pm.



Benzie County Local Emergency Planning Committee (LEPC) Meeting Agenda

Meeting Date: January 17, 2023
Meeting Time: 2:00pm.
Meeting Location: Benzie County Board of Commissioners Room – 448 Court Place,
Beulah MI.

Join Zoom Meeting

<https://us02web.zoom.us/j/86022024330?pwd=ZkdESEJva1hDaG5yYnFzMzVNOUlyZz09>

Meeting ID: 860 2202 4330

Passcode: 760898

Dial by your location

+1 301 715 8592 US (Washington DC)

+1 305 224 1968 US

1. **Roll Call** - body of 6 members need to be physically present for a quorum
****Nominate and Elect New Board (2yr term) – Chair/ Vice Chair/ Secretary**
2. **Approval of Agenda**
3. **Approval of Minutes of Prior Meeting October 17, 2022** **Approval Req'd**
4. **Public Comment**
5. **New Business**
 - A. Update membership on EMD-072
6. **Old Business**
 - A. Networks Northwest - progress on County Hazard Mitigation Plan – draft and strategies
7. **Committee Member Round Table**
8. **Public Comments**
9. **Next Meeting: February 21, 2023 – 2pm.**
10. **Adjournment**



Local Emergency Planning Committee Sign Up Sheet

Meeting Date: 1-17-23

PRINT NAME	Email (if changed)	Organization/Position
Rebecca Hubers		OEM
Mike Johnson		BOAC
Bobbi Scott		BUDHD
STEVE PORTER		MSD
Michael Cederholm		Frankfort Fire Dept.
Kyle Ross		Benzie Co. Sheriff
Tim Markey		Honeyland / Benzie Co.
Steve Adams		Benzonia Township Fire
Tom King		GMS
Joland Murphy	ZOOM	GITB
Fred Craig	ZOOM	MHC
CELLS.	ZOOM	911



Benzie County Local Planning Team (LPT) Meeting Agenda

Meeting Date: January 17, 2023
Meeting Time: 2:00pm / immediately following the LEPC meeting
Meeting Location: Benzie County Board of Commissioners Room – 448 Court Place,
Beulah MI.

Join Zoom Meeting

<https://us02web.zoom.us/j/86022024330?pwd=ZkdESEJva1hDaG5yYnFzMzVNOUlyZz09>

Meeting ID: 860 2202 4330

Passcode: 760898

Dial by your location

+1 301 715 8592 US (Washington DC)

+1 305 224 1968 US

1. **Roll Call** - body of 6 members need to be physically present for a quorum
****Nominate and Elect new Board (2yr term) – Chair/Vice Chair/ Secretary**
2. **Approval of Agenda** **Approval Req'd**
3. **Approval of Minutes of October 27, 2022** **Approval Req'd**
4. **Public Comment**
5. **Introduction of Guests**
6. **Discussion of Activities at the Agency Level (if additional from LEPC)**
7. **New Business**
 - a) Update membership LPT Worksheet from Publication 201
 - b) Mission / Direction of Benzie County LPT?
 - c) 2023 Draft of EOP – Traditional Function Based – to replace EAGs.
 - d) After Action Conversation – School “lockdowns”
8. **Old Business**
 - a) Hazard Mitigation Plan – update from LEPC
 - b) Rescue Task Force/ Mass Casualty vendor search and training 2023
9. **Upcoming trainings**
 - a) Ice Rescue on water with USCG – Saturday 1/21 Frankfort – time?
 - b) DTMB Interop conference March 7-9, 2023 Muskegon
 - c) Hazmat Ops refresher Saturday 3/25/23 9a-130p.
 - d) Homeland Security Training Conference May 9-11,2023 Grand Rapids
10. **Public Comments**
11. **Next Meeting: February 21, 2023 (Tuesday due to February Monday holiday)**
2pm – immediately following LEPC
12. **Adjournment**



Local Emergency Planning Committee Sign Up Sheet

Meeting Date: 2/21/23

PRINT NAME	Email (if changed)	Organization/Position
Phil Steve Parker		MSD TRAVELER CITY
GARY HUBERS	LAF	BLSD UL3
ROBERT LOZOWSKI		FPD
Mike Johnson		BERC
Roberta S Hubers	Ecol.	DEM.
Steve Adams		Benzonia Township Fire Department
Michael Cederholm		Fire Station #10
Paul Stowe	P	MBUR
Tim Markley		Homesstead Twp F.D. / Benzie Co
Jocunda Murphy		culture
Paul Garsner		culture
Chad Oberlander		culture
Lory Ellis		Central shops (in kind)



Benzie County Local Emergency Planning Committee (LEPC) Meeting Agenda

Meeting Date: February 21, 2023 (Tuesday – because of Monday Holiday)
Meeting Time: 2:00pm.
Meeting Location: Benzie County Board of Commissioners Room – 448 Court Place,
Beulah MI.

Join Zoom Meeting

<https://us02web.zoom.us/j/85690319031?pwd=Y2psS0c3bW50anplY1ZBcTdmdGQ2Zz09>

Meeting ID: 856 9031 9031

Passcode: 875315

Dial by your location

+1 929 205 6099 US (New York)

+1 301 715 8592 US (Washington DC)

1. **Roll Call** - body of 6 members need to be physically present for a quorum
2. **Approval of Agenda** **Approval Req'd**
3. **Approval of Minutes of Prior Meeting January 17, 2023** **Approval Req'd**
4. **Public Comment**
5. **New Business**
 - A. Platte River Hatchery DNR – Office Site Plan Approval **Approval Req'd**
 - B. HMEP grant application **Approval Req'd**
6. **Old Business**
 - A. Networks Northwest - progress on County Hazard Mitigation Plan – draft and strategies
7. **Committee Member Round Table**
8. **Public Comments**
9. **Next Meeting: March 20, 2022**
10. **Adjournment**

LEPC – Local Emergency Planning Committee Meeting Minutes for February 21, 2023

***Unapproved Draft

Location: Frank Walterhouse Board of Commissioners Room

Zoom meeting ID 856 9031 9031

Attendees:

Rebecca Hubers – OEM/ BCD (present)

Steve Porter – MSP TC (present)

Mike Johnson – BCRC (present)

Tim Markey – BOC (present)

Steve Adams – Chair Benzonia Fire (had to leave for fire call)

Jolanda Murphy – GTB (online)

Greg Hubers – BCSO (present)

Fred Craigin – MHC (online)

Michael Cederholm – FFD (present)

Guests: Paul Stowe MDNR, Rob Lozowski (LPT), Chad Hollenbeck (LPT) Stephanie Marchbanks and Jennifer Neal (Networks Northwest)

Meeting called to order at 2:00pm by Rebecca Hubers

1. **Roll Call** – R. Hubers confirmed the members present and the participants identified on Zoom were added them to the sign in sheet for record. At least 6 members physically present to qualify a quorum.
2. **Agenda - Motion to approve the agenda as amended – adding “C. EMD076a (standardized plan template) to New Business and B. Clean up In Kinds (1.17.23 and 10.17.22) to old business” by Markey, second by G. Hubers – Motion Carried.**
3. **Minutes - Motion to approve the minutes from January 17, 2023, by R. Hubers, second by Johnson - Motion Carried.**
4. **Public Comments** - No public comment at the time.
5. **New Business -**
 - A. *Motion for Approval of Platte River Hatchery Off-site response plan as presented (Mr. Stowe available for questions) (approved by Chief Pfof in an email) by Markey, second by Cederholm – Motion Carried*
 - B. *Motion for submission of HMEP application to State of Michigan with LEPC Chair to sign by Markey, second by G. Hubers – Motion Carried*
 - C. Rebecca noted that a new template for plan submission was created by the State of Michigan and New plans (not updates) will most likely look different following the template.
6. **Old Business –**
 - A. Networks Northwest – progress on County Hazard Mitigation Plan

Draft and maps presented by Stephanie. Reviewed pages with highlighted questions. Rebecca has one more community to present to so review of strategies scheduled for March meeting. Planning for May public hearing and letters being sent to local officials with a 2–4-week notice. Board asked to please review the plan, maps, and strategies for any other typos or clarity.
 - B. Missing In-Kind forms for previous meetings. Rebecca obtained missing signatures for In-Kind meeting forms. In-Kind documentation of time spent by board members on the hazard

mitigation plan, off-sets the amount due from the county for their grant match for the hazard mitigation plan project.

7. **Board Member Comments –**

Markey - Thanks to all for the assistance in working on the plan.

R. Hubers – Haz mat binders have been updated in EOC and Dispatch – all relevant information can be found by Fire Departments in their access through tier II Manager (paid for using the HMEP grant). Note that the Century Link facility at 19578 Maple St Lake Ann is now Brightspeed Lake Ann (parent company Brightspeed)

No other committee member comments.

8. **Public Comment** - No additional Public Comments

9. **NEXT MEEING:** March 20, 2022 – Monday

10. **Adjournment** – 3:01 pm *Motion to adjourn by Markey, second by G. Hubers* – motion carried.

Meeting length for in-Kind form = 1 hrs.

xxx- /rsh



Benzie County Local Planning Team (LPT) Meeting Agenda

Meeting Date: February 21, 2023 (Tuesday due to Monday Holiday)
Meeting Time: 2:00pm / **immediately following the LEPC meeting**
Meeting Location: Benzie County Board of Commissioners Room – 448 Court Place,
Beulah MI.

Join Zoom Meeting

<https://us02web.zoom.us/j/85690319031?pwd=Y2psS0c3bW50anplY1ZBcTdmdGQ2Zz09>

Meeting ID: 856 9031 9031

Passcode: 875315

Dial by your location

+1 929 205 6099 US (New York)

+1 301 715 8592 US (Washington DC)

1. **Roll Call** - body of 6 members need to be physically present for a quorum.
2. **Approval of Agenda**
3. **Approval of Minutes of January 17, 2023**
4. **Public Comment**
5. **Introduction of Guests**
6. **Discussion of Activities at the Agency Level (if additional from LEPC)**
7. **New Business**
 - a) 2023 Draft of EOP – Traditional Function Based – to replace EAGs.
 - b) Mass Fatality written plan and training – Exercise plan 2024?
8. **Old Business**
 - a) Hazard Mitigation Plan – update from LEPC
9. **Upcoming trainings**
 - a) Ice Rescue on water with USCG – Saturday 2/18/2023 10am.
 - b) Rescue Task Force (MMRMA – Tactical Encounters) 3/15&16/ 2023
 - c) Hazmat Ops refresher Saturday 3/25/23 9a-130p.
 - d) Homeland Security Training Conference May 9-11,2023 Grand Rapids
10. **Public Comments**
11. **Next Meeting: March 20, 2023 Immediately following LEPC**
12. **Adjournment**

Approval Req'd

Approval Req'd



Benzie County Local Emergency Planning Committee (LEPC) Meeting Agenda

Meeting Date: Monday March 20, 2023
Meeting Time: 2:00pm.
Meeting Location: Benzie County Board of Commissioners Room – 448 Court Place,
Beulah MI.

Join Zoom Meeting

<https://us02web.zoom.us/j/86991831626?pwd=a0hnS1AzeStEWjFwUXJGWVFCszBuZz09>

Meeting ID: 869 9183 1626

Passcode: 847533

Dial by your location

+1 646 931 3860 US

+1 929 205 6099 US (New York)

+1 301 715 8592 US (Washington DC)

1. **Roll Call** - body of 6 members need to be physically present for a quorum
2. **Approval of Agenda** **Approval Req'd**
3. **Approval of Minutes of Prior Meeting February 20, 2023** **Approval Req'd**
4. **Public Comment**
5. **New Business** **Approval Req'd**
 - A. AT&T Beulah Switch Office – Office Site Plan Approval
6. **Old Business**
 - A. HMEP grant application – submitted to MSP EMHSD
 - B. Networks Northwest - progress on County Hazard Mitigation Plan – draft and strategies
7. **Committee Member Round Table**
8. **Public Comments**
9. **Next Meeting: April 17, 2023**
10. **Adjournment**

LEPC – Local Emergency Planning Committee Meeting Minutes for April 17, 2024

***Unapproved Draft

Location: Frank Walterhouse Board of Commissioners Room

Zoom meeting ID 878 8777 8998

Attendees:

Rebecca Hubers – OEM/ BCD (present)

Michael Cederholm – FFD (online)

Tim Markey – BOC (present)

Jolanda Murphy – GTB (online)

Kyle Rosa – BCSO (present)

Tom King – BEMS (present)

Steve Adams – Chair BTFD (present)

Cory Ellis – BCCD (present)

Guests:

Meeting called to order at 2:04pm by Steve Adams

1. **Roll Call** – R. Hubers confirmed the members present and the participants identified on Zoom were added to the sign in sheet for record. At least 6 members physically present to qualify a quorum.
2. **Agenda** - *Motion to approve the agenda as presented by Markey, second by Rosa* – Motion Carried.
3. **Minutes** - *Motion to approve the minutes from March 20, 2023, by Markey, second by Ellis* - Motion Carried.
4. **Public Comments** - No public comment at the time.
5. **New Business** -
 - A. *Motion for Approval of Graceland Fruit (Main St. and Forrester Road) Off-site response plans as presented by Markey, second by King* – Motion Carried
 - B. Discussion of what kind of exercise Rebecca should bring forward for Summer 2024. Agreement on a school-related Mass Casualty exercise using the new Homestead Hills Elementary (to gain familiarity and check access) as well as test the recent rescue task force training. Consider a Haz Mat element to test the de-con capacity at POMH (not verified with POMH yet). Much more planning to do – but needed direction.
6. **Old Business** –
 - A. Members present completed the “homework” of identifying timetables and priorities for listed natural hazard mitigation strategies – information forwarded to Networks Northwest. (Notes and strategies table attached)
Public hearing for the Natural Hazard Mitigation Plan will be May 23, 2023, at the Board of Commission Meeting (approximately 9:15am)
7. **Board Member Comments** –

Murphy – GTB also working on hazard mitigation strategies – with public hearing upcoming.

Cederholm – Frankfort Fire received a grant for a drone and working on a taskforce for operation and training. Approves of the Graceland Plan

Ellis – Working on repairs for radios (a hard downtime today of approximately 30 minutes). The silver lining to the lightning strike is that the fried equipment was becoming outdated and will be updated. Working on CodeRed notification group for critical notifications from dispatch. Also working on back up location plans @ Gov. Center radio room.

Rosa – Sheriff's Office still finding issues to repair from lightning damage.

No other committee member comments for LEPC.

8. **Public Comment** - No additional Public Comments

9. **NEXT MEEING:** May 15, 2023 at 2pm. – Monday

10. **Adjournment** – 3:12pm *Motion to adjourn by Markey, second by Ellis* – motion carried.

Meeting length for in-Kind form = 1 hrs.

xxx- /rsh



Benzie County Local Emergency Planning Committee (LEPC) Meeting Agenda

Meeting Date: Monday May 15, 2023
Meeting Time: 2:00pm.
Meeting Location: Benzie County Board of Commissioners Room – 448 Court Place,
Beulah MI.

Join Zoom Meeting

<https://us02web.zoom.us/j/89635884633?pwd=L29JY3FuUzIRM2sxWkl1KzkrVUN5QT09>

Meeting ID: 896 3588 4633

Passcode: 080311

Dial by your location

+1 646 931 3860 US

+1 929 205 6099 US (New York)

+1 301 715 8592 US (Washington DC)

1. **Roll Call** - body of 6 members need to be physically present for a quorum
2. **Approval of Agenda** **Approval Req'd**
3. **Approval of Minutes of Prior Meeting April 17, 2023** **Approval Req'd**
4. **Public Comment**
5. **New Business** **Approval Req'd**
 - A. Smeltzer Orchards off-site response plan approval

6. **Old Business**
 - A. Networks Northwest - progress on County Hazard Mitigation Plan – final draft. Public Hearing May 23, 2022 @ BOC meeting 9am.

7. **Committee Member Round Table**
8. **Public Comments**
9. **Next Meeting: June 19, 2023**
10. **Adjournment**

I have been attending township meetings and seeking information from those communities identifying natural hazards. I still have more to do, but this is what I have so far:

Almira Township – meeting 2/14/22 6pm. Contributions made by: Brad Drury (Fire chief) Mark Roper (Twp. Supervisor) Tammy Clous (Twp. Clerk) Craig Timm (Lake Ann Village Pres) Matt Therrien (Twp. Trustee)

Hazard include: Electric substation @ Ole White and Almira Rd. + Lake Ann Camp has hundreds of campers every summer + Pinewoods subdivision off Lake Ann Road – regular ground water flooding area + Lake Ann Airport @ Maple City hwy. Exposed Natural Gas pipeline locations (Reynolds/Cedar run)

Crystal Lake Township – meeting 2/15/2022 7pm. (please see attached information from Township planner)

Joyfield Township – meeting date 3/2/2022 7pm. Contribution made by Ed Kowalski (community member)

Hazards include: many dead ash trees along road right-of-way (many roads – none specific) Known M22 was an issue during last wind storm.

Lake Township – meeting date 3/3/2022 7pm. Contribution made by Anna Grobe (Twp Supervisor) Fires in National Park and their “no extinguish policy”.

Homestead Township – meeting date 3/7/2022 6pm. Contributions made by Dorene Strang (community member) Mike Mead (Twp. Trustee) Karen Mallon (Twp. Clerk)

Hazards include: dirt road hill washouts (Weldon @ Brownell & Valley North of US31) + Platte River Ice Damming (wondering what other communities do for cost recovery ? Special Assessment to homes on the river?) + Wind Storms / Downed Trees and frequent extended power downtime.

Gilmore Township – Meeting date 3/8/2022 7pm. Contributions made by Carl Noffsinger (Twp Supervisor) Erosion along the Lake Michigan shoreline + concerns about beach access for emergency vehicles + high water near M22 (causeway) + the soundness of the steel wall along Betsie Lake in Elberta (vehicles buried?)

Inland Township – meeting date 3/14/2022 6pm. Contributions made by Paul Beechraft (Twp Supervisor) No known natural issues. New pipeline along US 31. Tree business that conducts burning - causes smoke to cross busy roadway.

Platte Township - Meeting date April 6, 2022 7pm, Contributions made by Paul Solem (Twp. Supervisor). Not a whole lot of identifiable natural hazard issues “sand drains”. Sometimes highwater and flooding issues of the Little Platte along Gudemous Road. And High water – Low ground areas on the north end of Little Platte Lake and Saffron Road

Weldon Township – Meeting date April 12, 2022 7pm. Contribution Craig Meredith (community member). Ice back ups mostly along the Little Betsie River crossing Wallin Rd. and Thompsonville Rd. Ice back ups along the main Betsie Rive worse north of Lindy Road. A in the village of Thompsonville has flooding issues North of Lindy from a natural drain that runs all the way from Thurman.

Benzonia Township – Meeting date April 13, 2022 3pm. Contributions made by Karen Burns (Twp Treasurer) and Jason Bernard(Twp. Supervisor) Dirt roads wash out on both the North side (Hidden

Hollow) and the South Side (Lake St) of Crystal Lake – downward slopes. Washouts end up in ditches on trailways and in Lake. High water area flooding could impact businesses/multi unit housing along US 31 between Narrow Gauge and Eldridge Rd. and on north side of US 31. toward Crystal Drive.

Colfax Township – meeting date April 13, 2022 7pm. Contribution from one male community member and I didn't get his name. Village of Thompsonville water issues following natural drain north of main/Lindy - flows from the north East, but there is a culvert blocked under the railroad bed that holds the water back – causing flooding on roadways and probably at the new location of the “dollar general”. Water issues across deer track trail toward river in spring (spring run off and high water table)

Almira Township

Regular Board Meeting Minutes

February 14, 2022

I. Supervisor m. Roper calls the meeting to order at 6 pm

II. Roper leads the Pledge to the Flag

III. Roll Call

Present: Matt Therrien, Mandy Gray Rineer, Lori Florip, Mark Roper, Tammy Clous

Absent: None

IV. Additions/Deletions to Meeting Agenda: *New Business F. Fire and EMS Building Repair*

V. Approval of Meeting Agenda

MG Rineer moves to approve the agenda as amended. T. Clous seconds. All ayes. Motion passes

VI. Approval of Consent Agenda

MG Rineer moves to approve the consent agenda as presented. T. Clous seconds. All ayes. Motion passes

VII. Treasurer's Report

Treasurer MG Rineer presents the Financial Report ending 01-31-2022.

VIII. Brief Public Input: *E. Bisler stated that the Almira Historical Society would be interested in the chairs from the townhall once we surplus them. Rebecca Hubers- Benzie County Emergency Manager- Presented a map for review for areas we feel may be hazardous areas.*

Public Hearing: Opened at 6:06 pm. The Salary Resolutions and Truth and Taxation were read and Proposed Budget was presented. Resolution 2-2022 #1 was offered by MG Rineer and supported by T. Clous; Roll Call Vote: Aye- Rineer, Clous, Florip, Therrien and Roper. Nay: None; Resolution 2-2022 #2 was offered by T. Clous and supported by M. Therrien; Roll Call Vote: Aye: Therrien, Florip, Clous and Roper; Nay: None; Abstain- Rineer; Resolution 2-2022 #3 was offered by MG Rineer and supported by M. Therrien; Roll Call Vote: Aye: Florip, Therrien, Rineer and Roper; Nay: None; Abstain: Clous; Resolution 2-2022 #4 was offered by MG Rineer and supported by M. Therrien; Roll Call Vote: Aye: Clous, Florip, Rineer and Therrien; Nay: None; Abstain: Roper. All Resolutions passed. Public Hearing Closed at 6:18 pm.

IX. County Commissioners

Commissioner Jeannot furnished a written report.

X. Dept. Heads

Chief Drury presents his report on paper and orally. The Fire/EMS Dept responded to 22 calls in January. This included 11 ambulance requests within the township, 2 motor vehicle accidents, 1chimney fire, 2 misc. incident, 2 assists to Inland Township, 1 assist to Homestead Township and 3 assists to Benzie County EMS. Updates were given on grants, training, vehicles and personnel as well.

Chairperson Bisler stated that the Recreational Resources Committee talked about the changes to the bylaws, updating the recreation plan and the walking path. Elmer let the Board know that he will be resigning his position on the committee after their February meeting.

XI. Village report: *President Timm stated that the Village has adopted their 2022-2023 Fiscal Year Budget. Kris Marks was appointed as the Park Administrator, nonmotorized signs have been order for the park, the council approved paving projects, tree trimming projects as well as moving of the Village Kiosk.*

XII. Guests None

XIII. Old Business

A. Mistwood Greens

Todd Millar sent an email update on the Quiet Title action. Will get clarification that all the parcels we acquired are cleared.

B. Master Plan

Update was given.

C. Committee Appointment

MG Rineer moves to appoint C.J. Sierzputowski to the Board of Review. T. Clous seconds. All ayes motion passed. T. Clous moves to reaffirm Barb Hood and Amber Pomper to the Board of Review. L. Florip seconds. All ayes, motion passed.

XIV. New Business

A. Audit

The Board has directed Rineer and Clous to reach out to at least three firms for bids.

B. Aquatic Species

MG Rineer moves to sign a three-year agreement with the Conservation District for \$1000.00 per year for the AISPP. M. Therrien seconds. Roll Call Vote: Clous-aye, Rineer-aye, Therrien-aye, Florip-aye and Roper-aye; motion passed.

C. Fire and EMS Resignation

MG Rineer moves to accept the resignation of Jerry Hendrix from the fire and EMS Department with regrets. T. Clous seconds. All ayes motion passed.

D. Recreational Resources Bylaw Amendment

T. Clous moves to adopt the amended Recreational Resources Bylaws. M. Therrien seconds. Roll Call Vote: Rineer-aye, Therrien-aye, Clous-aye, Florip-aye and Roper-aye; motion passed.

E. Village Kiosk

M. Therrien moves to allow the Village to put the kiosk on the Townhall Ramp. MG Rineer seconds. All ayes motion passed.

F. Fire and EMS Building Repairs

MG Rineer moves to accept the proposal from Archer for the Fire and EMS Building water damage repairs not to exceed \$3000.00. Roll Call Vote: Clous-aye, Florip-aye, Therrien-aye, Rineer-aye and Roper-aye; motion passed.

XV. Extended Public Input: None

XVI. Board Comments

L. Florip, MG Rineer and T. Clous all thank Elmer Bisler for all he has done. M. Roper Reminds all we need to start thinking about and discussing what we would like to do with the ARPA funds. He also states that the Health Department will be lifting its mask mandate this week.

XVII. Adjourn: Supervisor Roper adjourns the meeting at **7:15 pm**

Regular Meeting of the Crystal Lake Township Board

1651 Frankfort Highway, Frankfort MI 49635

February 15, 2022

Meeting was called to order by Supervisor Amy Ferris at 7:02 p.m.

Pledge of Allegiance was recited.

Roll Call: Ferris, Nielsen, Northway, Popp, and Sullivan were present, constituting a quorum.

Agenda:

Ferris moved to accept the agenda as amended to remove payroll packet #1 and to add IT after Buildings and Grounds. Northway supported. Roll was called: All ayes. Agenda accepted as amended.

Conflicts of Interest: There were no conflicts of interest declared.

Minutes:

- January 18, 2022, Special Public Budget Hearing

Ferris moved to accept the minutes of the January 18, 2022 Special Public Budget Hearing as presented. Popp seconded. All ayes. Minutes accepted as presented.

- January 18, 2022, Regular Board Meeting

Ferris moved to accept the minutes of the January 18, 2022 Regular Board Meeting as presented. Popp seconded. All ayes. Minutes accepted as presented

Correspondence:

- Ferris shared with the Board a communication from Betsie Valley Trail.
- Sullivan shared with the Board a letter regarding short term rentals to discuss later.

Commissioner Miller Report:

- Commissioner Miller shared that the Michigan Moonshot survey was finished. The results showed that a large number of residents are below FCC guidelines on internet speeds. The report on our broadband needs should be completed by April. Commissioner Miller talked with Spectrum to see what the cost would be to cover

everyone in Benzie County - \$14 million. Commissioner Miller also spoke with Representative Bergman who advised that there are Federal funds available and to get information to him.

- As of February 17, Frankfort-Elberta schools will lift their mask mandate. Masks still need to be worn on public transportation, such as busses.
- M-22 from the stoplight to Pilgrim will be upgraded and fixed later this year. One lane will be closed at a time, not a full road closure. The repairs will be paid for with State and Federal funds.
- Frankfort passed an amendment to have 1 or 2 First Responders available 24 hours a day and will soon have an interim Fire Chief.
- Ferris asked Miller about the vacancy at the Health Department. He shared that they are currently doing interviews. Ferris would like to see Dr. Kuiper stay in his position.

Public Comment:

- Rebecca Hubers, Emergency Manager and 911 Director for Benzie County shared with the Board a map that the local Emergency Planning Committee is working on. Every 5 years the Natural Hazard Mitigation protections need to be identified as a requirement of FEMA. She asked the Board to share areas of concern in the Township should a disaster happen.

Clerk's report:

- Sullivan presented the warrant report and asked if there were any questions.

Sullivan moved to accept the warrant report as presented. Popp seconded. Roll was called; All ayes. Warrant report was accepted.

- Payroll Services

Discussion was held whether or not the Township should outsource our payroll processing. Sullivan obtained quotes from a couple payroll businesses and the cost would be \$1,500-\$2,100 annually. Ferris felt this would lessen the burden on the Clerk and also create a checks and balances on Township accounts. Sullivan feels there is no need to spend the extra money and suggested changes that would make the Township more compliant with the audit report. If needed, Sullivan said this can be revisited after a year. The Clerk will be the only one to generate checks, have access to non-tax related checks, print checks, and sign checks first before forwarding to Treasurer.

Sullivan moved to retain the payroll process in house with the following changes:

- 1) Clerk will generate all checks and sign them first before forwarding to the Treasurer for review, signature, and distribution;
- 2) Further, Treasurer will continue to do direct deposits and government reports which Clerk will review and sign on a regular basis.

Popp seconded. Roll was called: Ferris, no; Nielsen, yes; Northway, yes; Popp, yes; Sullivan, yes. Motion was accepted.

Treasurer's Report:

- Popp presented the financial reports and asked the Board if anyone had any questions. Ferris asked if the Treasurer would be able to supply a more detailed report. Sullivan also would like to see more line-item type reporting. Popp stated that she does do a detailed report quarterly.

Committee Reports

Board of Review:

- Ferris shared with the Township Board a packet of information explaining the necessity to have flexibility in regard to the dates the Board of Review meetings.

Ferris moved to allow the Board of Review to have alternative dates to meet as long as they are in the same weeks as designated by the State of Michigan in the months of March, July and December. Popp seconded. All ayes. Motion was accepted.

- Ferris shared with the Township Board the corrected version of the Poverty Guidelines.

Ferris moved to accept the corrections to the Guidelines for Poverty. Northway seconded. All ayes. Motion was accepted.

- Ferris shared with the Township Board that the Board of Review Petitioner may be represented by a designee. The petitioner has to give written permission to allow the designee to represent them.

Ferris moved to accept that a Board of Review Petitioner may be represented by a designee. Popp seconded. All ayes. Motion was accepted.

Ferris shared the following Board of Review meeting dates:

- Board of Review, Tuesday, March 15, 2022, 9 am -3 pm;
- Wednesday, March 16, 2022, 3 p.m. - 9 p.m.; and
- Organizational Meeting on March 8, 2022 at 9 a.m. for one hour

Blight:

Ferris shared that she has been receiving numerous blight complaints and will discuss them with Grant Sowa.

Budget:

Ferris moved that the Board of Directors approve the General Appropriations Act for the General Fund, Cemetery Fund, Fire Fund, and the Road Fund. Sullivan seconded. Roll was called; all ayes. Motion was accepted.

Buildings and Grounds:

Ferris thanked the Treasurer for the work she did on a \$2,500 grant towards the ADA door. There are signatures needed on the back side of the grant. Ferris will sign and Sullivan will send that in.

Information Technology:

Sullivan shared that Chris at Eclipse would like to meet with the township and the county in regard to their role with the broadband expansion. She asked if Halliday, Popp, and Northway would join together to have a conversation with Chris and appropriate County representatives.

Sullivan also shared that Halliday has been looking into ways that the public could join into the meetings remotely. He is currently having discussions with Anavon Technology Group. Sullivan would like to see the township go even further and have our meetings available via video.

Planning and Zoning:

- Ferris reminded everyone that there will be Planning and Zoning meetings on February 23rd in regard to the Solar Ordinance amendments; and on February 24th a meeting concerning 2 variance requests by the campground for signage and extra buildings. The first meeting is at 7 p.m. and the second at 6 p.m. at the Township Hall.

Policy and Procedures:

- Discussion was held on Chapter 4 of the Policy and Procedures Manual. Popp shared her resolution on maintaining a fund balance of 225% of general fund expenditures. After discussion, the motion was withdrawn until further conversation is held.

Roads:

- The annual report of the Road Commission was shared.

Unfinished Business:

- Sullivan shared with the Board a resolution to obtain a debit/credit card for Township expenses and recurring obligations (such as website subscriptions). After discussion, this will be brought back to the Board after more detailed procedures are in place.
- Sullivan informed the board that all the questions she had in regard to the insurance policy renewal have been answered. She also said that we do need to look into cyber security at a future date.

Popp moved to pay the insurance bill in the amount of \$6,374. Sullivan seconded. Roll was called: all ayes. Motion was carried.

New Business:

- Betsie Valley Trail system is asking for a letter of support from the Township to the State to help them obtain funds for improving the trail.

Ferris moved to submit a letter in support to the Governor and State Legislators of Betsie Valley Trail's attempt to receive \$2 million from the American Rescue Plan Act for paving the remaining 12 miles of trail. Sullivan seconded. All ayes. Motion was carried.

- Ferris shared with the Board that we should send a letter to our State Legislators encouraging them not to take away local control over short term rentals.

Ferris moved that the Board of Crystal Township advise their State Representatives that we oppose any bills that would take regulations of rentals, especially short-term rentals, from local jurisdiction. Sullivan support. All ayes. Motion was carried.

- Discussion was held on the Open Meeting Act's requirements for public access and it was deferred to the IT people.

Public Comments: There was no public comment, but Board recognition for Rebecca Huber for her patience in staying through the full meeting.

Board Comments:

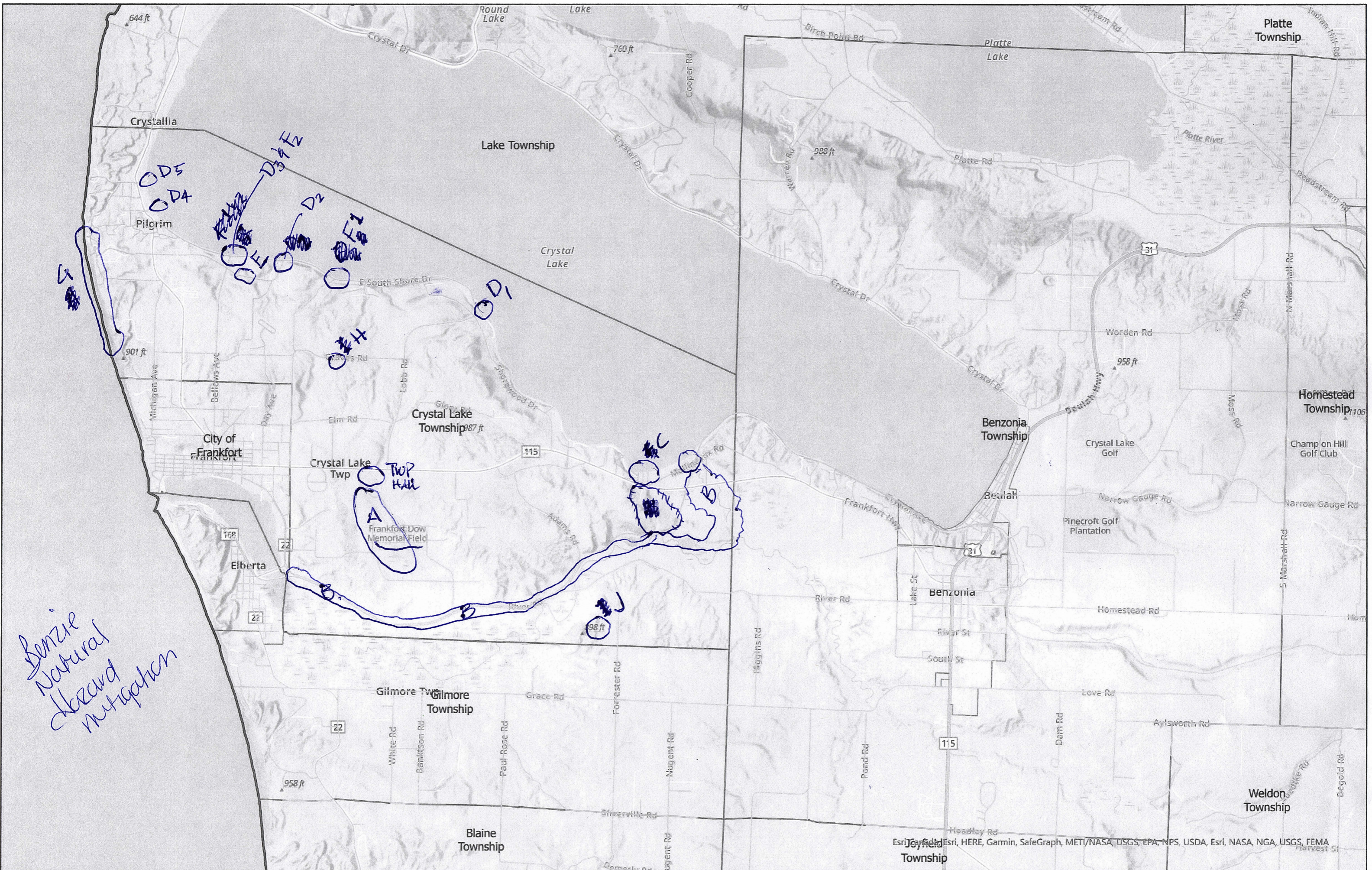
- Popp thanked Sue Sullivan for all of her hard work, going above and beyond.
- Popp reminded that Board that the final budget amendment will be presented next month.
- Popp also asked Ferris for the final Summer Newsletter by May.
- Nielsen would like to get public input from Township residents on what they feel we need to improve upon and Northway reiterated his concern that we consider using some of our unrestricted funds for such purposes.
- Ferris shared that the Benzie Conservation District will be asking for money at our next meeting.
- The Elberta Board of Directors will be considering a moratorium on development next Thursday meeting.
- Ferris also shared that if anyone is interested in participating in the Aquatic Group zoom meetings to contact her for information.
- Ferris will share with Kucera the mitigation map from Hubers for further input.

Meeting adjourned at 9:10 p.m.

Sue Sullivan, Clerk, and Sondra Halliday, Deputy Clerk, reporting.

Comment from Crystal Lake Twp Zoning Administrator
MAP POTENTIAL HAZARDS
March 2022

- A. Frankfort Dow Airport
 - 1. Plane crash at or near airport
 - 2. Maintaining operation in emergency situation
- B. Betsie River and Crystal Lake Outlet Flood Zone
- C. Boat Launching – Public Road Ends at Broadway, Linden & Vine Streets
- D. Boat Launching – Public Road Ends
 - 1. Public Road End at Lobb Road
 - 2. Public Road End at Thomas Road
 - 3. Boat Launch at Bellows Park
 - 4. Public Road End at Esplande Road
 - 5. Public Road End at Marquette Court
- E. Culvert & Possible Road Washout at Thomas Road east of Bellows
- F. Beach Erosion & Road Washout
 - 1. End of Figg Road
 - 2. End of Bellows Road
- G. Bluff Erosion along Lake Michigan at Golf Lane and Ness Roads
- H. Cell Phone Tower on Graves Road east of Figg
- I. Not Used
- J. Cell Phone Tower on Forrester Road near maximum elevation.



644 ft

760 ft

988 ft

901 ft

958 ft

98 ft

958 ft

Crystallia

Lake Township

Crystal Lake

Crystal Lake Township

Crystal Lake Twp

Twp Hall

Frankfort Dow Memorial Field

City of Frankfort

Elberta

Gilmore Township

Blaine Township

Benzonia Township

Benzonia

Joyce Township

Platte Township

Homestead Township

Weldon Township

OD5
ODA

D3
D2
D1

Benzie
Natural
Area
Mitigation

**Minutes of Regular Meeting of Joyfield Township
at Joyfield Township Hall
March 2, 2022
7:00 pm**

Members Present: Mark Evans, Matt Emery, Patricia Daugherty, and Dodie Putney.

Members Excused: Jim Evans.

The meeting was called to order at 7:00 p.m.

Moved by Putney to amend the Cemetery Expenses line item by increasing the line item by \$400 to a total \$9000. Seconded by Emery. Motion Carried.

Moved by Emery to approve the agenda adding Benzie County Road Commission Road Brine contract under new business. Seconded by Putney. Motion Carried

Moved by Emery to approve the consent agenda: regular Board meeting minutes of February 2, 2022, Treasurer's report, and monthly bills. Seconded by M. Evans. Motion Carried.

Public Input:

Rebecca Hubers, Benzie County Emergency Manager and 911 Director, stated that the County is updating their Natural Hazard Mitigation Plan. Has maps of Joyfield Township for review after the meeting and will accept any public input.

Reports:

Gary Sauer gave an update on County, Maples, and Road Commission activities.

A written zoning administrator's report from Betsy Evans was included in the Board packet.

Correspondence: Written correspondence was reviewed.

Old Business:

FY 2022/2023 General Appropriations Act: Moved by Emery to approve Resolution No. 5 of 2022, The FY2022/23 Joyfield Township General Appropriations Act as presented. Seconded by M. Evans. Ayes: Putney, Daugherty, M. Evans, and Emery. Nays: None. Excused: J. Evans. Motion Carried.

FY 2021/2022 Salary Resolutions: Moved by Emery to approve Resolutions 1 through 4 of 2022 establishing wages of elected officials as presented. Seconded by Daugherty; Ayes: Emery, Daugherty, M. Evans, Putney. Nays: None. Excused: J. Evans. Motion Carried. The Supervisor will receive \$5,500, the Clerk will receive \$9,500, the Treasurer will receive \$9,000 and the Trustees will receive \$2,000.

FY 2022/2023 Appointed positions compensation: Moved by Emery to approve the wages of appointed officials for FY 2022/23 as presented. Seconded by Putney. Ayes: Emery, M. Evans, Daugherty, Putney. Nays: None. Excused: J. Evans. Motion Carried.

Assessor's Contract: Emery stated the contract has been agreed upon by Amy DeHaan.

Cemetery Bids: Two bids were received for the cemetery maintenance; one from Signature Services and one from Hospenhal Outdoor Service. It was moved by Emery to accept the 2-year proposal from Signatures Services in the amount \$13,000 for two years. Seconded by Daugherty. Motion Carried.

New Business:

Poverty Exemption Resolution:

It was moved by Emery to approve the Joyfield Township Guideline Resolution for Poverty Exemption. Support by Daugherty. Ayes: Daugherty, M. Evans, Putney, Emery. Nays: None. Excused: J. Evans. Motion Carried.

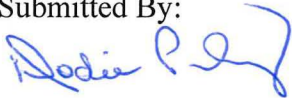
Letter from Road Commission about brining the 6.05 miles of dirt roads within the Township was received. The cost for the first brine is \$2543.65 and the second brine application in the amount of \$3,616.90. Moved by Emery to approve the first and second brine applications as quoted. Seconded by Daugherty. Ayes: Emery, M. Evans, Daugherty, Putney. Nays: None. Excused: J. Evans.

Public Input: None

Board Members Comments: Putney commented on potential changes to upcoming elections.

Moved by Emery to adjourn. Seconded by M. Evans. Motion Carried. Meeting adjourned at 7:30 pm

Submitted By:



Dodie Putney
Clerk

LAKE TOWNSHIP, BENZIE COUNTY

MONTHLY MEETING

March 3, 2022

Meeting: meeting called to order at 7:00 PM

The Pledge of Allegiance: recited by all.

Roll Call: Present: Sally Casey, Anna Grobe, Maryanne Goodman and Dotty Blank.

Absent: Kyle Orr

Minutes: February 3, 2022 Township Board Meeting minutes approved as presented.

Financial Reports: General Fund presented by Maryanne Goodman. **Motion by Maryanne Goodman, seconded by Sally Casey to approve the general fund report as read. Roll call vote: Ayes; Anna Grobe, Maryanne Goodman, Dotty Blank and Sally Casey. Nays; None. Absent: Kyle Orr.** Fire Fund presented by Maryanne Goodman. **Motion by Maryanne Goodman, seconded by Dotty Blank to approve the fire fund report as read. Roll call vote: Ayes; Maryanne Goodman, Dotty Blank, Sally Casey and Anna Grobe. Nays; None. Absent: Kyle Orr.**

Budget Amendment: General Fund budget amendments presented by Maryanne Goodman. **Motion by Maryanne Goodman, seconded by Sally Casey to approve the general fund budget amendments as presented. Roll call vote: Ayes; Dotty Blank, Sally Casey, Anna Grobe and Maryanne Goodman. Nays; None. Absent: Kyle Orr.**

Fire Fund budget amendment. **Motion by Maryanne Goodman, seconded by Sally Casey to approve the fire fund budget amendment as presented. Roll call vote: Ayes; Sally Casey, Anna Grobe, Maryanne Goodman and Dotty Blank. Nays; None. Absent: Kyle Orr.**

Payment of Township Accounts: Request for approval of General Fund checks #8751 through #8772 in the amount of \$12,981.61 for the purpose of paying Township accounts and EFPTS payment of \$2,232.18. Also, debit card purchase of \$135.96 for envelopes for assessment change notices and money market check #748 in the amount of \$77.61 for tax chargeback to County Treasurer. **Motion by Sally Casey, seconded by Maryanne Goodman, to approve the payment of township accounts as presented. Roll call vote: Ayes; Anna Grobe, Maryanne Goodman, Dotty Blank and Sally Casey. Nays; None. Absent: Kyle Orr.**

Request for approval of Fire Fund checks #1476 through #1479 in the amount of \$45,866.57. **Motion by Sally Casey, seconded by Maryanne Goodman to approve the payment of Fire Fund checks as**

presented. Roll call vote: Ayes; Dotty Blank, Sally Casey, Anna Grobe and Maryanne Goodman. Nays; None. Absent: Kyle Orr.

Additional Agenda items: None

Public comment on Agenda: None

Guests: Rebecca Hubers, Benzie County Emergency Manager informed the Board that the County is reviewing their National Hazard Mitigation Plan that needs to be update every five years. They will be looking at potential hazards throughout Benzie County. Rebecca stated she will stay after the meeting to answer anyone's questions.

Correspondence:

Incoming:

1. Newsletter from Benzie Senior Resources.
2. Letter from Michigan Township Participating Plan recruiting candidates for Board of Directors.
3. Statement of Intent from Benzie County Road Commission for Platte River Elementary School Property.
4. Letter from Mary and Jim Rogers concerning the Crystal Lake overly district.

Outgoing:

1. RFP for legal counsel sent to four firms, RFP was also published in the Record Patriot twice.

New Business:

1. Resolution #2022-03 Supervisor Salary. **Motion by Dotty Blank, seconded by Maryanne Goodman to adopt resolution #2022-03 to establish Township officer salary for the Supervisor in the amount of \$26,500 annually. Roll call vote: Ayes; Sally Casey, Anna Grobe, Maryanne Goodman and Dotty Blank. Nays; None. Absent: Kyle Orr.**

2. Resolution #2022-04 Clerk Salary. **Motion by Sally Casey, seconded by Anna Grobe to adopt resolution #2022-04 to establish Township officer salary for the Clerk in the amount of \$27,000 annually. Roll call vote: Ayes; Anna Grobe, Maryanne Goodman, Dotty Blank and Sally Casey. Nays; None. Absent: Kyle Orr.**

3. Resolution # 2022-05 Treasurer Salary. **Motion by Anna Grobe, seconded by Sally Casey to adopt resolution #2022-05 to establish Township officer salary for the Treasurer in the amount of \$27,000 annually. Roll call vote: Ayes; Dotty Blank, Sally Casey, Anna Grobe and Maryanne Goodman. Nays; None. Absent: Kyle Orr.**

4. Resolution #2022-06 Trustee Salary. **Motion by Maryanne Goodman, seconded by Anna Grobe to adopt resolution #2022-06 to establish Township officer salary for Trustees in the amount of \$3,000 annually. Motion rescinded.**

Motion by Maryanne Goodman, seconded by Anna Grobe to adopt resolution #2022-06 to establish Township officer salary for Trustees in the amount of \$4,000 annually. Roll call vote: Ayes; Maryanne Goodman, Dotty Blank, Sally Casey and Anna Grobe. Nays; None. Absent: Kyle Orr.

5. Road Brining Contract. **Motion by Dotty Blank, seconded by Maryanne Goodman to approve the contract with the Benzie County Road Commission to brine 2.90 miles of Township**

Roads at the amount of \$775.00 per mile with the Township share of the cost of \$1,219.27. A second brining, if necessary, must be approved by the Board at the cost of \$1,733.72. Roll call vote: Ayes; Dotty Blank, Sally Casey, Anna Grobe and Maryanne Goodman. Nays; None. Absent: Kyle Orr.

6. Request from Grand Traverse Conservation District for placement of garlic mustard dumpster. **Motion by Anna Grobe, seconded by Sally Casey that we approve the placement of a garlic mustard dumpster at the Township Hall, with the understanding the Township is reimbursed \$200.00 to offset our costs. Roll call vote: Ayes; Sally Casey, Anna Grobe, Maryanne Goodman and Dotty Blank. Nays; None. Absent: Kyle Orr.**

7. Resolution opposing HB 4722 regulating short term rentals. Crystal Lake Township sent a copy of their resolution they recently passed and copies of letters sent to Jack O'Malley and Kurt Vanderwall opposing HB 4722. Board will work on resolution wording for Lake Township.

Old Business:

1. Boat storage at road ends in Platte Lakes Resort Sub. Use of legal counsel for variance compliance. The Board decided to wait to see if we get any response to our RFPs for new legal counsel.

County Updates: Commissioner Art Jeannot submitted his written report from the County Commission which covered County Administration, Special Millage requests, EMS and the Maples.

Township Departments:

Planning Commission: No report

Zoning Administrator: Written report submitted on zoning activities for February, 2022.

Assessor: Written report submitted, finished printing and mailing assessment change notices, preparing reports and documents for March Board of Review.

Park Committee: No report.

Supervisor: No report.

Public Comment:

Meeting Adjourned: 7:42 pm.
5 in Attendance

Dotty Blank, Clerk

Homestead Township Regular Board Meeting March 7, 2022

A regular meeting of the Homestead Township Board was called to order at 6:01pm by Supervisor Tia Kurina-Cooley.

Pledge of Allegiance was said.

PRESENT BY ROLL CALL: Mike Mead, Tia Kurina-Cooley, Pat Delorme, Karen Mallon, Bess Butler

APPROVAL OF AGENDA: Discussion held regarding agenda item for Budget Hearing as that "special meeting" was not published. Motion by Cooley to approve agenda with change of Special Meeting – Budget Hearing including the General Appropriations Act being removed from the agenda and moving Approve Pay Schedule and Budget Amendments to New/Old Business. Adding Conservation District request for Support and Road Commission 2022 Brining Approval to New/Old Business. Support: Butler. All ayes; no nays. Motion carried.

Motion by Delorme to move the Special Meeting – Budget Hearing to the April 4, 2022, Regular Board Meeting. Support: Cooley. All ayes; no nays. Motion carried.

Clerk to post Special Meeting – Budget Hearing in the Benzie County Record Patriot the week of March 22nd and 28th.

PUBLIC COMMENT:

John Brasaski, Enforcement Officer requested an updated Noise Ordinance. Clerk to provide.

Avis Swiley of the Betsie Valley Trail presented information on the 12-mile paving project. They will be applying for grants for the paving but requesting a resolution from the Board to support the paving project.

APPROVAL OF MINUTES:

Motion by Delorme to approve the February 7, 2022, Regular Board meeting minutes with corrections. Support: Cooley. All ayes; no nays. Motion carried.

Motion by Cooley to approve the February 23, 2022, Special Budget Hearing meeting minutes as presented. Support: Delorme. All ayes; no nays. Motion carried.

CORRESPONDENCE: Correspondence from the Road Commission and Par Plan were presented.

REPORTS:

Zoning Administrator: ZA not present. Written report submitted.

Assessor: Written and submitted.

Parks: HARP presentation. Bids to break ground on phase 1 will be opened on March 10, 2022. This is for the gravel parking area only. HARP requesting resolution from the Township to submit a Recreation Passport Grant for the picnic/shelter area. Funding in the amount of \$187,500.00. Resolution seeking \$37,500.00. Other matching funds will come from USDA.

Fire Department: Fire Chief not present. Written and submitted

County Commissioner: County Commissioner not present.

Treasurer: Written and submitted.

Clerk: Written and submitted.

Motion by Cooley to accept reports as presented. Support: Mallon. All Ayes; No Nays. Motion carried.

FINANCE:

General Fund: Motion by Cooley to approve APs for GF. Support: Delorme. Roll Call: Mallon – yes; Mead – yes; Cooley – yes; Delorme – yes, Butler – yes. Motion carried.

Fire Department Operations: Motion by Cooley to approve APs for Fire Operations, with additions presented. Support: Delorme. Roll Call: Delorme – yes; Mallon – yes; Mead – yes; Cooley – yes; Butler – yes. Motion carried.

Fire Department Equipment: Motion by Cooley to approve APs for FDE. Support: Delorme. Roll Call: Mallon – yes; Mead – yes; Butler – yes; Cooley – yes; Delorme – yes. Motion carried.

NEW/OLD BUSINES:

Resolutions – The following resolutions were presented to the Board and voted upon:

03072022-1 – Platte River Park

Resolution presented by Cooley. Ayes: Mead, Cooley, Delorme Butler, Mallon. Nays: none. Resolution approved.

03072022-2 – Betsie Trail Paving Project

Resolution presented by Cooley. Ayes: Mead, Cooley, Delorme Butler, Mallon. Nays: none. Resolution approved.

03072022-3 – Poverty Exemption Extension

Resolution presented by Cooley. Ayes: Mead, Cooley, Delorme Butler, Mallon. Nays: none. Resolution approved.

03072022-4 – Poverty Exemption Income Guidelines

Resolution presented by Cooley. Ayes: Mead, Cooley, Delorme Butler, Mallon. Nays: none. Resolution approved.

03072022-5 – Meeting Dates for Fiscal Year 2022-2023

Resolution presented by Cooley. Ayes: Mead, Cooley, Delorme Butler, Mallon. Nays: none. Resolution approved.

Charter Fee Discussion – Discussion held on Township’s ability to charge fees through Charter Cable. No action taken. This item is closed from further Board discussion.

Bid Discussion – Discussion held on bid presented by Johnson’s Complete Construction A-Z. Motion by by Mallon to accept the bid from Johnson’s Complete Construction A-Z for repairs to the Township Hall and Concession Stand in the amount of \$7,500.00. Support – Mead. Roll Call: Cooley – yes; Delorme – yes; Butler – yes; Mallon – yes; Mead – yes. Motion carried. Clerk to send award letter to Nathan Johnson.

Fire Protection Agreement – Motion by Mallon to accept the 2022-2023 Fire Protection Agreement between Platte Township and Homestead Township for Fire Services. Roll Call: Delorme – yes; Butler – yes; Mallon – yes; Mead – yes; Cooley – yes. Motion carried. Clerk to send signed agreement to Platte Township.

Benzie Conservation District – Benzie Conservation District has presented a 3-year agreement to the Board for financial support in the amount of \$500.00 per year ending December 2024. Motion by Delorme to accept the Benzie Conservation District Agreement for financial support. Roll Call: Delorme – yes; Butler – yes; Mallon – yes; Mead – yes; Cooley – yes. Motion carried. Clerk to send signed agreement to Benzie Conservation District.

2022 Brining Agreement – Motion by Cooley to accept Road Commission Brining Agreement for first and second brining as needed. Support: Delorme. Roll Call: Butler – yes; Mallon – yes; Mead – yes; Cooley – yes, Delorme – yes. Motion carried. Clerk to send signed agreement to the Benzie County Road Commission.

Budget Discussion:

Budget Amendments: Supervisor and Clerk will work together to resolve budget amendments.

Resolutions – The following budget related resolutions were presented to the Board and voted upon:

03072022-6 – Supervisor’s Annual Salary

Resolution presented by Cooley. Ayes: Mead, Cooley, Delorme Butler, Mallon. Nays: none. Resolution approved.

03072022-7- Trustee’s Annual Salary and Meeting Pay

Resolution presented by Cooley. Ayes: Mead, Cooley, Delorme Butler, Mallon. Nays: none. Resolution approved.

03072022-8 – Treasurer’s Annual Salary

Resolution presented by Cooley. Ayes: Mead, Cooley, Delorme Butler, Mallon. Nays: none. Resolution approved.

03072022-9 – Clerk’s Annual Salary

Resolution presented by Cooley. Ayes: Mead, Cooley, Delorme Butler, Mallon. Nays: none. Resolution approved.

03072022-10 – Establishing 2022-2023 Millages

Resolution presented by Cooley. Ayes: Mead, Cooley, Delorme Butler, Mallon. Nays: none. Resolution approved.

03072022-11 – Establishing 2022-2023 Depositors

Resolution presented by Cooley. Ayes: Mead, Cooley, Delorme Butler, Mallon. Nays: none. Resolution approved.

PUBLIC COMMENT:

Rebecca Hubers, Benzie County Emergency Manager presented information to the Board regarding the County’s Emergency Management Plan and Natural Hazard Mitigation project. Hubers seeking input from the Board regarding natural disaster in the Township that she could present to the EMP Commission.

Motion by Cooley to Adjourn Regular Board Meeting at 8:25 pm. Support: Delorme. All ayes. Motion carried.

I hereby certify that the minutes contained herein are the draft minutes of the March 7, 2022, Regular Board meeting. Signed herein by the Homestead Township Clerk, Karen Mallon on this the 12th day of March 2022.

Respectfully Submitted:



Karen Mallon, Clerk

INLAND TOWNSHIP BOARD MEETING

March 14, 2022

19668 Honor Hwy., Interlochen

Call to Order by Supervisor Beechraft

Pledge of Allegiance was recited

Roll Call Present: Supervisor Beechraft, Clerk Wirth, Treasurer Wilson, Trustee Miller and Trustee Poulisse

Public Comment received from Rebecca Hubers; Doug Parshall

Approval of Meeting Agenda:

Motion by Wilson to approve meeting agenda as amended, 2nd by Poulisse

Ayes – All Nays – None Motion carried

of Consent Agenda

- Minutes from February 14, 2022
- Financial Reports
- Prepaid Bills/Tax Account : #1451231 -14539, 2701 – 2713, Electronic 9 & 10 = \$466,389.23
- Payroll: # 1000327 – 1000350, EFT 19 = \$13,317.99
- Unpaid Bills: # ~~14506~~ — 14540-14555=\$4452.95
- Approval to allow Supervisor and Treasurer to balance the budget prior to March 31, 2022
- Approval to ~~all~~ allow the Clerk and Treasurer to pay end of year bills prior to March 31, 2021
- Budget Amendments

Motion by Wilson to approve consent agenda with additions and minus minutes, 2nd by Wirth

Roll Call: Ayes – Wilson, Wirth, Poulisse, Miller and Beechraft Nays – None Motion carried

Motion by Miller to approve minutes with corrections, 2nd by Wilson

Ayes – All Nays – None Motion carried

Reports:

1. County Commissioner – Commissioner Warsecke gave report of previous meeting and upcoming events
2. Fire Chief – Chief Pfof gave February statistics and reported Fire fighter Waddell graduated.
 - a. **Electric quote** - switch for diesel fuel pump

Motion by Miller to approve the switch up to \$350 from Alpine Electric, 2nd by Poulisse

Roll call: Ayes – Miller, Poulisse, Wilson, Wirth and Beechraft Nays None Motion carried

6:15 p.m. Recess Board Meeting and Open Public Hearing for 2022 – 2023 Budget

We will be approving .7499 mills for township operations, 1.9163 mills for fire department operations, .9749 mills for fire equipment and .9894 for local roads.

Supervisor went over the proposed budget for fiscal year 2022 – 2023.

Public Comment was received from Phil Cochran asked, “What is ARPA?” Supervisor responded American Recovery Plan Act.

6:28 p.m. close public hearing

3. Parks & Recreation – ~~draft minutes attached~~ Clerk Wirth gave report of committee meeting with the quotes for a disc golf course for the Lake Ann Park presented by Rudy Bishop who will also do the installation at no cost.

Motion by Beechraft to approve disc golf package presented with funds to come out of the general park fund, 2nd by Miller

Roll call: Ayes – Wilson, Wirth, Poulisse, Miller and Beechraft Nays None Motion carried

4. Fire Association – draft minutes attached
5. Inland Planning Commission – Trustee Miller reported no meetings and March meeting is cancelled
6. Zoning/Blight Administrator – Blight letters went out
7. Event Committee – Anthony Dutt reported there will be no Easter event. Next meeting March 23 @ 6
8. Board Member Reports - None

Old Business:

1. Permit fees

Motion by Wilson to approve the Land Use Permit fee schedule as amended including home roadside stands, 2nd by Wirth

Roll call: Ayes – Poulisse and Wilson Nays – Miller, Wirth and Beechraft Motion denied

Motion by Beechraft to have Sherri and Mary get with Sara and come back next month, 2nd by Wilson

Ayes – All Nays – None Motion carried

New Business

1. Resolution 2022-05 Poverty Resolution

Motion made by Miller to approve Resolution 2022-05 Poverty Exemption Act as presented, 2nd by Beechraft.

Roll call: Ayes – Wirth, Miller, Beechraft, Poulisse and Wilson Nays None

Supervisor declared the resolution adopted as presented

2. Resolution 2022-06 General Appropriations Act

Motion by Wilson to approve Resolution 2022-06 General Appropriations Act as presented, 2nd by Poulisse

Roll call: Ayes – Poulisse, Wilson, Beechraft, Wirth and Miller Nays none Motion carried

Supervisor declared the resolution adopted as presented

3. Clean up day

Motion by Beechraft to approve cleanup day for May 7 from 7 a.m. – 11 a.m., pay for it, newsletter and mailings that go along with it, 2nd by Poulisse

Roll call: Ayes – Wilson, Wirth, Poulisse, Miller and Beechraft Nays None Motion carried

4. Brine

Motion by Wilson to approve Road Commissions quote for brining one time at \$4889.69, 2nd by Poulisse

Roll call: Ayes – Poulisse, Wilson, Beechraft, Wirth and Miller Nays none Motion carried

5. Publish 2022 -23 meetings

Motion by Beechraft to approve publishing 2022-2023 meeting dates with new time change, 2nd by Wilson

Roll call: Ayes – Poulisse, Wilson, Beechraft, Wirth and Miller Nays none Motion carried

6. Bendon Furnace/air condition

Motion by Miller to approve \$11,350.00 for Kirks plumbing to make changes needed for the furnace and air conditioning, 2nd by Poulisse.

Roll call: Ayes – Wirth, Miller, Beechraft, Poulisse and Wilson Nays None Motion carried

Motion by Beechraft to do it as quick as we can and pay it this fiscal, 2nd by Miller

Roll call: Ayes – Poulisse, Wilson, Beechraft, Wirth and Miller Nays none Motion carried

7. Blight letter was reviewed
8. Burn Ord review will review and bring back any changes next month
9. Office computers – Clerk and Treasurers computers need upgraded

Motion by Wilson to approve purchase of 2 computers as presented, 2nd by Miller
Roll call: Ayes – Poulisse, Wilson, Beechraft, Wirth and Miller Nays none Motion carried
Motion by Beechraft to spend up to \$1000.00 to upgrade MS version, 2nd by Poulisse
Roll call: Ayes – Poulisse, Wilson, Beechraft, Wirth and Miller Nays none Motion carried

Public Comment

Any Other Business to come before the Board

Motion by Beechraft to have Linda, Dayton and Rose work on security, 2nd by Wilson
Ayes – All Nays None Motion carried
Motion by Beechraft to approve daytime staffing for fire department April 1, 2022 – March 31, 2023, 2nd by Poulisse
Roll call: Ayes – Wirth, Miller, Beechraft, Poulisse and Wilson Nays none Motion carried

Adjournment

Ayes – All Nays None Motion carried
Motion by Wilson to adjourn meeting, 2nd by Poulisse
Meeting adjourned at 7:43 p.m.

Paul A. Beechraft, Supervisor Date

Rose A. Wirth, Clerk Date

**WELDON TOWNSHIP
REGULAR MEETING**

April 12, 2022

**Tuesday
7:00PM**

The meeting was called to order by R. Hitesman, Supervisor, at 7:00PM.
The Pledge of Allegiance was given.

ATTENDANCE: Ron Hitesman, Supervisor X; Fran Griffin, Clerk X; Sally Bobek, Treasurer X; Sue Meredith, Trustee X; Scott Williams, Trustee X.

GUESTS: Kellye Jelemensky, John Jelemensky, Chuck Kraus, Craig Meredith, Vicki Schwartz, Katelyn Zeits, Rebecca Hubers, Ashley Lindstrom, Gary Stevens, Becky Sharp, Phyllis Kladder, Rebecca Parmer

CHANGES/APPROVAL OF THE AGENDA: R. Hitesman made the motion to approve the agenda with changes requested by S. Bobek to add the Garden Shed to New Business and S. Meredith asked for the refrigerator to be added to New Business. S. Bobek seconded. All ayes.

APPROVAL OF MINUTES: S. Bobek made the motion to approve the minutes of the March 8, 2022, Budget Hearing and the minutes of the Regular Meeting, March 8, 2022. S. Meredith seconded. All ayes.

TREASURER'S REPORT: S. Bobek commented on the County Tax Collection report. ARPA report for April 2022 has been submitted. S. Williams motioned to accept the Treasurer's report. S. Meredith seconded. All ayes.

GUEST INPUT (up to 3 minutes per guest): Rebecca Hubers, Benzie County Emergency Management Director and 911 Director was introduced by R. Hitesman. Ashley Lindstrom reported on her new Whistle Stop Day Care Center next door to the Township Hall. They expect 30-50 children 8 weeks to 12 years old. The zoning is good. The septic system needs to be updated. Opening planned for September 2022. Katie Zeits, County Administrator, spoke on the ARPA reporting, MSU Extension, collecting broadband data April 26 at 1:30PM., and the Wage and Salary Employee Survey. It will be used for internal use at the County. She also said there is Federal and State money to be used for extending natural gas (DTE) up the highway from the southeast to the Village of Thompsonville. C. Kraus, Weldon PC Chairman, spoke on the Parks and Recreation plan and asked the Township to consider assisting the Village of Thompsonville by paying half of their cost (\$4500/Networks Northwest) for a Village Parks and Recreation plan. Discussion. The Clerk will request Eugene Allen attend one of the Township meetings. R. Hubers spoke on the County Hazard Mitigation Plan. They are working on a map and are asking anyone with knowledge of flood areas, small culverts, dead ash trees, historic weather events in certain areas to let her office know. G. Sauer gave his report on the County. BCRC bridge repairs include Lindy Rd, Nostwick Rd and Reynolds Rd. Haze Road is not included. Platte

River school building close of sale expected end of June. Health Department Acting Director is Dan Thornell. Betsie Valley Trail grants helping to repair trestle bridge at Mesick. The Maples using more space for memory care patients. Homestead Hills Elementary School should be ready September 2023. Ironman Competition route has been changed. Veteran's plaque update.

REPORTS:

ZONING ADMINISTRATOR: on file

DAY USE PARK: Report is on file. R. Hitesman will look into pricing for the picnic table that has been approved by the DNR. C. Meredith said pricing for the closer for the DUP restroom is \$150-\$600.

PLANNING COMMISSION: C. Kraus stated there was a Public Hearing at 7:00PM on April 4, 2022, regarding the Zoning Ordinance and Map corrections prior to the regular PC meeting. At the regular, PC meeting the Commission voted to approve recommending to the Township Board to accept the changes as submitted. PC does not need to submit to Benzie County Planning Commission since one does not exist. It was, however, sent to the County by the consultant and by mail by the Township Clerk. We will wait 30 days for any response. Discussion. Township Board may vote on it at its May 2022 meeting. PC next meeting will be July 11, 2022.

LIQUOR INSPECTOR REPORT: R. Hitesman reported that Crystal Mountain will have their Beer and Brats festival this year. Report on file.

ASSESSOR'S REPORT: Assessor's report is on file. S. Bobek stated that MTA will have the assessing information on the website next year.

BUDGET REPORT: Budget ok currently.

SUPERVISOR COMMENTS: R. Hitesman has been in contact with the DNR about the two triangular pieces of property adjacent to the Day Use Park. Waiting to hear back. Looking into Grants. Will be shopping for an approved picnic table for the Park.

CLERK COMMENTS: GFL contract for the spring and fall Cleanup Days needs to be signed. Board approved completing the Village Water Survey (backflow preventer). BOR March 2022 report has been received. The November 8, 2022, meeting date needs to be changed due to the Election being held at the Hall on that date. Board decided on November 1, 2022.

UNFINISHED BUSINESS: ARPA monies discussion: Generator, Carpeting, Wall Partition in outer room for secure storage. A. Lindstrom offered the use of their generator at the Day Care Center next door if needed. Veteran's Memorial (ordered 8/2016)- It is available and will be installed when the weather breaks--tabled. Short-Term Rentals--tabled. Nuisance Ordinance amendments tabled. House Plaque-S. Williams stated that he

and G. Stevens are working on it. Sally and Chris Bobek used their anchors and straps to tie down the garden shed last winter. They are getting ready for the camping season and need their items back. She will contact Rob Aldrich to let him know the items needed to tie the shed down are available at Tractor Supply.

NEW BUSINESS: S. Bobek made the motion to reappoint Sue Meredith to the Planning Commission (Board Rep). F. Griffin seconded. All ayes. Iron Fish helping with Cleanup Day discussed. Scheduling does not work for them for Saturdays. R. Hitesman made the motion to approve the Crystal Mountain Fire Works display permit for New Year’s Eve December 31, 2022. S. Bobek seconded. All ayes. State Unclaimed Property Report to State discussed. S. Bobek will file the report. Discussion to replace the refrigerator and microwave. F. Griffin made the motion to replace the broken refrigerator and microwave. R. Hitesman seconded. Roll call: R. Hitesman, S. Bobek, S. Williams, S. Meredith, F. Griffin—all ayes. Clerk reported on an issue with the bill from Quickbooks—double bill for payroll program. QB will credit for the Basic Payroll program.

BILLS: April 12, 2022

R. Hitesman made the motion to pay the bills. S. Williams seconded. All ayes.

(Between Meetings)

EFPTS14 (3-15-2022) IRS 941 Fed Tax	779.50
Cherryland Electric-March	70.91
ATI Consulting-website	400.00
Jane Hitesman-BOR	210.00
Marian Mayer-BOR	210.00
Chris Bobek-BOR	280.00

EFPTS15 IRS 941 qtr.	846.40
Board Pay	3600.00
Planning Commission	650.00
Assessor Pay	1572.00
Julie Lonn	50.00
AFLAC	321.43
Acentek	219.51
Village of Thompsonville-water	456.00
VISA	1685.02 (credit due 381.60 QB)
Cherryland Electric	68.26
Craig Meredith-PLOW/DUP/ZA	520.00
Gary Stevens-nuisance enf	200.00
Pioneer Group	420.75
Rebecca Parmer	500.00
State of Michigan SUW tax 3/2022 qtr	684.03

ATI Consulting-web corrections/clerk computer iss.	150.00
Fran Griffin-mileage-rubber stamps/inv correction	39.78
Craig Meredith-reimburse cert mail, rubber stamp	28.23
Sally Bobek-reimburse for stamps	58.00
Republic Services	171.00
Carol Merrill-reimburse supplies	75.05
TOTAL.....	\$ 14,265.87

CORRESPONDENCE: Networks Northwest newsletter Mar 2022, BVDL Board Minutes Feb 2022, JPC Public Hearing Notice, Housing North March newsletter, SEEDS newsletter, Benzie Area Historical Society notice of coming events, Great Lakes Design Update spring newsletter, Par Plan News, April 2022.

PUBLIC COMMENT: K. Jelemensky told Katie Zeits, County Administrator, that she will be contacting her about the County wage survey. She also stated that she is unhappy being billed for her FOIA request for her survey. She stated that the Board receives AFLAC and a retirement. S. Williams spoke about a State Land cleanup, particularly tires. DNR will dispose of tires from State land for nothing, see Adopt-A-Forest program.

ADJOURNMENT: S. Bobek made the motion to adjourn. S. Williams seconded. All ayes.

Meeting adjourned at 8:15PM.

**Respectfully submitted:
 Fran Griffin
 Weldon Township Clerk**

BENZONIA TOWNSHIP BOARD

Approved:

REGULAR MEETING

April 13, 2022

Meeting called to order by Supervisor Barnard at 3:00 PM.

Present: Barnard, Burns, Sheets, Priest and Heller

Absent: none

Staff: Nye

Absent:, Adams, Hahn, Wilkinson, Haase

Guests: 3

Supervisor led the Pledge of Allegiance.

Motion by Sheets to approve the agenda as presented, Priest seconded. All ayes, motion carried.

Motion by Sheets to approve the minutes from regular meeting of March 9, 2022, special meetings on January 25th, and March 17, 2022. Supported by Priest, all ayes, motion carried.

TREASURERS REPORT: Report submitted by Burns, with comments on transferring some money into Michigan Class, but would be available to the township at several days' notice. Priest made a motion to accept the report with Sheets supporting, all ayes, motion carried.

CLERKS'S REPORT:

The Clerk presented a Profit and Loss statement for both the General and Fire Funds for the month of March 2022 along with payables. Motion by Priest to accept report and pay the bills, seconded by Sheets. Roll call vote, all ayes, motion carried.

SUPERVISOR'S REPORT:

Supervisor Barnard presented his report with a summary on the progress on the new building, and after consulting with several professionals on the situation and concerns about inflation for the price of the new project, it was decided to take a break on the project and see how the construction area progresses in the coming months. Board of Review was held for 2022 with 57 petitions being heard. The supervisor also presented information on a collaboration with four other local municipalities on an effort to fund a sewer feasibility study in the Benzonia Area. It

was suggested that we use our 2022 marijuana proceeds to help off set our portion, which would be \$40,000.00. After a discussion, a motion was made by Sheets to join with the County, Village of Benzonia and the Village of Beulah to help fund the sewer feasibility study, with a bid not exceed \$100,000.00 Supported by Priest. After a roll call vote, motion passed.

STAFF REPORTS:

1. FIRE CHIEF: Prior to leaving on vacation, Chief Adams submitted his report, which is attached. For the month of March, a total of 39 calls for service included 6 for Fire, 33- for Medical at 33 for the month and 137 for yearly total. Chief Adams reported that Ryan Merrill has resigned form the fire department. Sheets made a motion, supported by Priest to accept Ryan Merrill's resignation, Motion passed. Chief Adams also reported that the four probationary firemen have been moved to permanent status and will receive compensation according.
2. Cemetery Sexton: No report.
3. Township Attorney: No report.
4. Commissioners Report: Commissioner Nye reported conversations have begun at the County level to consider what to do with the ARPA funds that will make the most impact in the county. She also reported that she will be running for reelection with opposition.
5. Zoning Administrator: 14 permits have been submitted, up from ten from last month. Sara Ross of the planning commission is working on a new project at the corner of Marshall & Homestead Roads, multi-use.

BRIEF PUBLIC COMMENT: Those speaking were: Dan Hook of the Village of Beulah on the Sewer project, Rebecca Hubers representing Benzie County EMS-911 addressing the flood plain in the county, Bob French for the village of Benzonia with interest in the sewer study.

COMMUNICATION: None

PENDING BUSINESS: Website updates, BS&A, FOIA rates. Burns and Heller brought up the subject of replacing our accounting software program with BS & A. The whole project is estimated to cost approximately \$40,000.00. Burns made a motion to purchase the BS & A software for accounting and payroll for the township not to exceed \$40,000.00. A roll call vote was taken with all voting AYE, motion passed. They will be visiting other municipalities who use the same software.

COMMITTEE REPORTS:

- Cemetery: The sexton will be opening the cemetery soon and the porta potty will be ordered.
- Parks: The park will open the second week in May and the bathrooms should be fully operational with running water. The estimates on the walking trail will be starting soon with a meeting of the Park Committee happening next week.
- Building and Grounds: No report
- Fire Department: No report

- Township Roads: **No report**
- Community Activities: Clean up day will be Mary 7, 2022 from 7am – 11am.
- Finance: **Budget amendments presented on the 2022-2023 budget. Burns made motion for Fire and General fund budget amendments. Priest seconded. Roll call vote, all ayes, motion passed.** Sheet attached.
- Personnel: No report
- Policy: No report
- ZBA: No report
- Blight: Sheets reported he was waiting for two reply letters.
-

NEW BUSINESS: None

EXTENDED PUBLIC COMMENT: None

Motion to adjourn made by Sheets, Supported by Priest.
Supervisor adjourned the meeting at 4:25P.M.

Submitted by:

Diana L. Heller, Clerk

MEETING HIGHLIGHTS:

- ❖ **Supervisor called for a “wait & see” on the new fire barn project**
- ❖ **A motion was made on contributing \$40,000.00 to the area sewer feasibility study with four other municipalities. All ayes, motion passed**
- ❖ **Ryan Merrill’s resignation from the fire department was accepted by the Board.**
- ❖ **A motion was made to research and purchase BS & A accounting software, up to \$40,000.00 for the package. Motion passed.**
- ❖ **Budget amendments were presented by the Treasurer on the 2022-2023 budget which are attached to the minutes.**

Blaine Township Board Meeting

Approved Minutes as Amended July

7, 2022

7:30 PM at the Blaine Township Hall

- A. Meeting was called to order at 7:30 PM by Paul Crandall, Supervisor.
- B. Pledge of Allegiance was recited.
- C. Roll Call to record attendance: Paul Crandall, Present, Chuck Beale, Trustee, Present, Walt Rohn, Trustee, Present, Marjorie Rohn, Interim Clerk, Present, Cyndi Sauer, Treasurer, Present.
- D. M. Rohn made a motion to accept the agenda as modified to introduce Chief Cedarholm of the Frankfort Fire Department under Section G subsection 1. Seconded by W. Rohn. Vote: Ayes: All. Motion Carried.
- E. Public Comment: Rebecca Hubers stated that are going to be Natural Hazzard Mitigation Plans in the future.
- F. Crandall made a motion to approve the minutes of June 2, 2022. as Presented. Seconded by: W. Rohn. Vote: Ayes: All. Motion Carried.
- G. Introduction of County Administrator, Katelyn Zeits. Ms. Zeits gave her introduction and stated her door was always open to us. The County agreed to pay ½ of the mailing costs for the second mailing of assessments (The assessor is responsible for paying the other half.)
 1. Introduction of Chief Cedarholm of the Frankfort Department. The Chief gave a brief introduction and stated their next meeting would be in October. Supervisor Crandall attended their last meeting in June.
- H. Assessors Report:
 1. Audit action pan for Treasury. Crandall read aloud from the Michigan Townships Associations', Authorities and Responsibilities of Michigan Townships handbook regarding a Corrective Audit Action Plan. Crandall went over the shortcomings and cited the resolutions to any problems. Crandall made a motion that we adopt Resolution 3 Adoption of Hardship Exemption Policy. Seconded by W. Rohn. Roll Call Vote: Crandall Yes. Beale Yes. Sauer Yes. W. Rohn Yes. M. Rohn Yes. Motion

Carried. Crandall made a motion that we adopt Resolution R-4 2022 Waiver of Penalties for Failure to File Property Transfer Affidavits. Seconded by W. Rohn. Roll Call Vote: Crandall Yes. Beale Yes. Sauer Yes. W. Rohn Yes. M. Rohn Yes. Motion Carried. Crandall to submit this Corrective Action Plan to the Michigan State Tax Commission.

- I. Treasurers Report: Mrs. Sauer gave the report (attached).
- J. Clerk's Report:
 1. Bills to pay: The Claims Paid and Summary of Receipts for June were read aloud. There was a voided check (#7436) due to clerks' error. Crandall made a motion to void checks # 7432 and 7445 payable to Amy DeHaan for postage expenses in the amounts of \$909.93 and \$1108.85. Seconded by W. Rohn. Roll Call Vote: Crandall Yes, Beale, Yes. Sauer, Yes. W. Rohn, Yes. M. Rohn. Yes. Motion carried. Clerk to send message to Ms. DeHaan requesting an itemized statement of expenses to clear the confusion about postage expenses. Crandall made a motion to reissue a paycheck to Ms. DeHaan as she had stated that she had lost her March check and requested that the March check be reissued. Seconded by W. Rohn. Roll Call Vote: Crandall, Yes. Beale, Yes. Sauer, Yes. W. Rohn, yes. M Rohn, Yes. Motion Carried. Treasurer Sauer stated she would contact the bank and get a "stop payment" issued on that check and a second check would be issued to Ms. DeHaan in the same amount.
 2. Crandall made a motion to approve payment of bills with the exception of those noted above. Seconded by W. Rohn. Roll Call: Crandall Yes. Beale Yes. M. Rohn, Yes. W. Rohn, Yes. Sauer, Yes. Motion Carried.
 3. Budget Amendments:
 - a. Crandall stated that there is a need for a Porta-Potty at the White Owl from July through October of this year. The cost will be \$120.00 per month (per Tim Elliott).
 4. Crandall made a motion that we amend the budget to allow for this expense. Seconded by W. Rohn. Roll Call Vote: Crandall, Yes. Beale, Yes. Sauer, Yes. W. Rohn, Yes. M. Rohn, Yes. Motion Carried. Crandall to assist clerk in this endeavor.

5. Status Report on ARPA administration: Sauer reported that we have received our second payment from them.
6. Clerk Election Training Status. Training is underway. The Accuracy test has been set for July 21, 2022 at 7:00 PM at the Hall. Legal notices have been sent to the Record Patriot for publication as required by law.
7. Cemetery Co-ordination: Clerk reported that she received an envelope from Mr. Wilkinson showing the date of burial of a deceased individual. He sent an email showing a burial certificate but clerk was unable to print it in the form he sent. Crandall to assist clerk with this.
8. Surety Bonds and Insurance Coverage Selections: We have 5 officers who are insured (Surety Bonds) in the amount of \$75,000.00 each. The Townships' property is also insured. Clerk will be looking into Workers Compensation (previously insured through the Michigan Municipal League). Since we employ people the only ones who need Workers Comp insurance would be the elected or appointed people who work out of the Hall.

K. Other Reports:

1. County Commissioner, Gary Sauer gave his report regarding activities in the county. He also presented a packet printed by the County Administrator.
2. Planning Commission: Chair, Dave Long gave his report and included the announcement that the Rick Pringle Taste of Blaine Annual Picnic will be held on August 14, 2022. He asked that people be at the Pavilion at 3:30 to help set up.
3. Zoning Board of Appeals: Crandall stated he would talk to Bruce Longstreet to see if he can attend some of the meetings.

- L. Correspondence: There were considerable conversations back and forth with the Insurance carrier regarding the question of liability in the event the sexton was injured while working at the cemetery. The answer is that the liability extends to who pays him. Since he is employed by either the family or the funeral home and is paid by them, he is not our employee. He is an independent contractor and stated he has his own insurance and

bond. Clerk requested he forward that paperwork to me. Benzie Conservation District has requested funding from Blaine Township in the amount of \$1000.00 per year for three years, (May 2022 – Dec 2024). This MOU (Aquatic Invasive Species Program) needs to be approved by the Board and signed and dated by the Supervisor. Clerk will see if we budgeted for this and bring back before the board in August. We received a Public Notice from the state saying that Tad Peacock is requesting to build a boardwalk through a wetland at the Hinkle Nature Preserve. This boardwalk will be 1,576' x 2' and will also have a 10' x 10' platform. A Zoning Permit has been issued to Andre and Jane Borrello for conversion of a garage to a dwelling at 5309 Gorivan Road. Another permit has been issued to Bill and Deanna Goodband for a modular home and crawl space, landings for front and rear doors, a 24' x 36' garage and end deck. A zoning permit has been issued to Christ Hellner at an address to be determined on Sumac Trail for a single-family home, garage, deck and patio. A zoning permit has been issued to Steve Nugent for a pole barn to be located at 4441 Demerly Rd. These permits will be filed in the Clerks' office under "Permits." We received a request to install a Porta-Potty at Boo Hoo View. No action taken.

M. Old Business: Resolved under Assessor Report.

N. New Business: Clerk requested permission from the Board to get a door knob with a key to go on the Supply Room and a shelving unit to house paper, envelopes and other office supplies. She agreed to get prices and bring back to the Board at the next meeting.

Beale to get language together for an ad in the newspaper asking for bids for upgrading the Township Hall (White Owl). Clerk will contact newspaper with ad information to be published in the next issue.

O. Meeting adjourned at 9:20 PM.

The next Board meeting will convene at 7:30 PM 4 August 2022 at the White Owl Township Hall.

Respectfully submitted: Marjorie Rohn, Interim Clerk.



BENZIE Hazard Mitigation - township contacts - round 1

Rebecca Hubers <rhubers@benzieco.net>
To: Jennifer Neal <jennifer.neal@networksnorthwest.org>
Cc: Stephanie Loria <stephanie.loria@networksnorthwest.org>, Rebecca Hubers <rhubers@benzieco.net>

Mon, Jul 18, 2022 at 7:30 AM

Good afternoon,

Sorry for my delay – I have several projects going and some are not by choice.

Attached is a google map of Pinewoods private drive AKA pinewoods subdivision.

I will discuss the campsites and the boat launches with the rest of the team – today

Since those discussions they have put a dollar general in that drainage area in the village of Thompsonville. Not sure if they will still have the same concerns next spring or if it will force a change in water flow. We can bring this up today as well.

Blaine Townships comments:

Meeting attended = July 7, 2022 at 2pm

During high water years – back flooding from Lake Michigan into lower Herring Lake – causing saturated septs and yards on east shore along with Herring creek flooding near Beuna road.

Most of the culverts in the township have been upsized.

Supervisor asked if building tornado shelters was allowable (unknown – directed to buildings dept)

Clerk asked if there was ever an option for a generator to consider the Township Hall as an emergency shelter.

Rebecca S. Hubers

Rebecca S. Hubers

Benzie County Emergency Management Coordinator

Benzie County Central Dispatch Director

448 Court Place – Suite 134

Beulah, MI 49617

Phone: 231-882-0567

Fax: 231-882-0568

e-mail rhubers@benzieco.net

web site: http://www.benzieco.net

Facebook: BenzieOEM

Twitter: @BenzieCountyOEM



WEATHER WARNING Click to learn more about receiving emergency alert messages from Benzie County Office of Emergency Management

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From: Jennifer Neal <jennifer.neal@networksnorthwest.org>
Sent: Thursday, July 14, 2022 8:15 AM
To: Rebecca Hubers <rhubers@benzieco.net>
Cc: Stephanie Loria <stephanie.loria@networksnorthwest.org>
Subject: Re: BENZIE Hazard Mitigation - township contacts - round 1

Hi Rebecca,

[Quoted text hidden]

[Quoted text hidden]



pinewoods subdivision .png
42K

BENZONIA TOWNSHIP BOARD

Approved:

REGULAR MEETING

November 9, 2022

Meeting called to order by Supervisor Barnard at 3:00 PM.

Present: Barnard, Burns, Sheets, Priest and Heller

Absent: none

Staff: Nye, Adams, Haase

Absent: Hahn, Wilkinson

Guests: 3

Supervisor led the Pledge of Allegiance.

Motion by Burns to approve agenda as presented, Priest seconded. All ayes, motion carried.

Motion by Sheets to approve the minutes from regular meeting of October 12th, 2022, supported by Burns, all ayes, motion carried.

TREASURERS REPORT: Report submitted by Burns. Milage for Fire Operations passed. Heller made a motion with support of Sheets to accept the report. All ayes.

CLERKS'S REPORT:

The Clerk presented a Profit and Loss statement for both the General and Fire Funds for the month of October 2022 along with payables. Approval to include second DC Plumbing invoice. Motion by Burns to accept report and pay the bills, seconded by Priest. Roll call vote, all ayes, motion carried.

SUPERVISOR'S REPORT: Supervisor mentioned job well done on the election. Fire ops milage passed, will need to decide percent to levy. Special meeting will be required. Assessing dept may have to have a computer that is open to general public, more to come. Park closed and winterized. Jason to provide a list of website needs to Jim Stamm so he can give us an estimate before a final decision is made.

STAFF REPORTS:

1. FIRE CHIEF: Chief Adams reports for the month of September a total of 41 calls for service. Of which 8 were Fire, 33 for Medical, bringing YTD total to 450. 2nd annual Trunk or Treat on Oct 31st was a success. Chief Adams stated annual ladder tests completed and all units passed. Hose tests to be completed next.
2. Cemetery Sexton: No report.
3. Township Attorney: No report.

4. Commissioners Report: Commissioner Nye thanked everyone as she was reelected for another term. The Benzie Leelanau health department offered Dan Thorell, the interim public health officer, the full-time position. He has accepted and finalization of his contract is in the works. BLDHD has announced changes to the Point of Sale inspection process. There will be public hearings in Benzie on Nov 21st and in Leelanau on the Nov 28th 2022. At the BOC meeting Sheriff Rosa spoke highly of the School Resource Officer programs. State jail inspection has been completed and there was compliance in all areas. 24/7 road patrol efforts in progress. 1.5 million in ARPA funds committed to broadband efforts. An open access model will be used to make this a private/public partnership. New 911 director Cory Ellis has been hired.
5. Zoning Administrator: 52 permits issued YTD, few pending. The next Planning Commission meeting is December 1st 2022 at 6pm. The draft master plan should be ready to approve at that time.

BRIEF PUBLIC COMMENT: Resident asked to confirm if fire milage was for construction or operations... it's for operations. Second resident asked for confirmation if all will be levied. proposal stated up to 2.5 mils. Supervisor and board will be getting clarification on process.

COMMUNICATION: Rebecca Hubers, The County wide hazard mitigation plan draft has been sent to the townships and is ready for their review. Hubers will not be 911 supervisor any longer but will still be an advocate for updating the communications systems.

PENDING BUSINESS: Website updates, BS&A, FOIA rates.

COMMITTEE REPORTS:

- Cemetery: Porta john to be removed. Handicap one to be put at the dog park for winter.
- Parks: Awaiting status update from AJs excavating on walking trail.
- Building and Grounds: Fire barn was power washed and area trimmed behind it.
- Fire Department: No report
- Township Roads: No report
- Community Activities: Karen Burns is working on newsletter for December billing cycle.
- Finance: No report
- Personnel: No report
- Policy: No report
- ZBA: 1 variance granted and 1 appeal with original decision upheld.
- Blight: progress started on Walker St, Fairway Dr - items removed except wading pool, Eden Hill – machinery removed but lawn not done, Platte Rd - communications ceased, Narrow Gauge still no response, will work on next step.

NEW BUSINESS: General election update: 2614 registered voters. Election day we had 778 in person voters and 902 absentee ballots for a total of 1680 votes cast. Lots of new faces, new registrants, a few issues to correct but everyone got to vote!

EXTENDED PUBLIC COMMENT: Veterans service Friday the 11th at 1pm at Veterans Memorial Park.

Motion to adjourn made by Sheets, supported by Burns.
Supervisor adjourned the meeting at 4:00 P.M.

Submitted by:

Diana L. Heller, Clerk

MEETING HIGHLIGHTS:

- Fire department operations milage passed.
- Rebecca Hubers provided County wide Hazard Mitigation plan draft update.
- Blight officer gave update on Fairway Dr, Walker St, Narrow Gauge and Eden Hill Rd properties.
- Clerk reported on outcome of General Election.

Almira Township

Regular Board Meeting Minutes

November 14, 2022

I. Supervisor Roper **calls the meeting to order at 6 pm** at the Almira Township Hall 19639 Maple Street, Lake Ann

II. **Pledge to the Flag Recited**

III. **Roll Call**

Present: Mandy Gray Rineer, Lori Florip, Tammy Clous, Mark Roper. Matt Therrien was excused.

IV. **Additions/Deletions to Meeting Agenda:** Under New Business add: E. Property Tax Collection Resolution, and F. Deputy Assessor.

V. **Approval of Meeting Agenda:** *Motion by Rineer, supported by Clous, to approve the meeting agenda as amended. All ayes, Therrien excused, motion passed.*

VI. **Approval of Consent Agenda**

Motion by Rineer, supported by Florip, to approve the consent agenda as presented. All ayes, Therrien excused, motion passed.

VII. **Treasurer's Report**

Treasurer MG Rineer presents the Financial Report end of October-2022. Winter taxes are being prepared.

VIII. **Brief Public Input:** Jerry Morse thanked the Fire Chief for the great Trunk or Treat event held at the Fire Station on Halloween, Jerry thanked the Clerk and election workers on the great job done on election day. He also commented on the tour bus that got stuck turning right off of Reynolds Road onto Maple Street.

IX. **County Commissioners**

Commissioner Art Jeannot thanked all the Clerks for the great work they did on the election. He reported that the County Commissioners had previously discussed 24-hour Road Patrol and asked the Sheriff's Department to present a plan for 24-hour road patrol since the Commissioners only approve the Department's overall budget. The Sheriff's Department presented a three-year plan which could be in place by spring of 2023. Other topics the Commissioners discussed were housing project guidelines, broad band, and ARPA funds. Art also informed the Board that Tom Longanbach, County Equalization Director, is retiring next month. Art asked if there were any questions.

X. **Dept. Heads:** Recreational Resources Committee Chairperson Jerry Morse updated the Board that the November 16th Committee meeting was being rescheduled to November 30th. He also reported that all the benches for the disc golf course have been installed and thanked everyone who helped with that project. Morse also stated that the Recreation Plan rough draft should be ready at the end of November.

Chief Drury reported that for the month of October, the Department responded to 31 calls for service, including: 24 ambulance requests in Almira Township, 1 road hazard, 1 smoke investigation, 1 smoke alarm assist, 1 welfare check, 1 injury accident, 1 county call in Frankfort, and 1 MABAS deployment to Menominee County.

XI. Village report: Three new members were elected to the Village Council, a President and two Trustees.

XII. Guests: Jamie Martin, Treasurer of Horse North Rescue, asked the Board to submit a Tribal grant application in the amount of \$8,000.00 for this organization. Rebecca Hubers, Benzie County Emergency Manager, discussed a National Mitigation Plan she is presenting to the Governmental entities in the County. There will be public input sessions later in the plan process. Rebecca also stated that work is being done to get an 800megahertz radio tower in the Frankfort area to help with emergency communications.

XIII. Old Business

A. Mistwood Greens: A default Judgement has been rendered so further discussion will be taking place.

B. Master Plan: Board members are to review the Master Plan copy and send updates, questions, to Clerk Clous and she will send all concerns to Mathew in one email.

XIV. New Business

- A. Horse North Tribal Grant:** *Motion by* Rineer, supported by Clous, to be the administrative entity applying for the 2% Tribal Grant in the amount of \$8,000.00 on behalf of Horse North Rescue. Roll call vote was as follows: Clous, aye; Rineer, aye; Florip, aye; Roper, aye; Therrien excused, all ayes, motion passed.
- B. Beach Willow Tree:** Discussion took place about the condition of the willow tree since the recent high winds. *Motion by* Clous, supported by Florip, to have the willow tree removed, have the brush chipped, have the wood hauled, have the area raked and cleaned up by A-1 Professional Tree Service. Roll call vote was as follows: Rineer, aye; Florip, aye; Clous, aye; Roper, aye; Therrien was excused, all ayes, motion passed.
- C. Board of Review Resignation:** Amber Pomper had submitted her resignation from the Board of Review. *Motion by* Rineer, supported by Florip, to accept the resignation of Amber Pomper from the Board of Review. All ayes, Therrien excused, motion passed.
- D. Document Shredding:** Discussion about document shredding took place and information from Profile was reviewed. Consensus of the Board was to annually get documents ready to be shredded as needed and pay once a year for the shredding services.
- E. Property Tax Collection Resolution:** *Motion by* Rineer, supported by Florip, to rescind Resolution #1-0406. Roll call vote was as follows: Florip, aye; Clous, aye; Rineer, aye; Roper, aye; Therrien excused, all ayes, motion passed. *Motion by* Rineer, supported by Clous, to adopt Resolution 11-2022 #1. Roll call vote was as follows: Clous, aye; Rineer, aye; Florip, aye; Roper, aye; Therrien excused, all ayes, motion passed.
- F. Deputy Assessor:** Discussion took place for additional help that would be needed, including field work. *Motion by* Rineer, supported by Florip, to appoint Sueanne Muha

as deputy assessor to help as needed at a pay rate of other deputy positions in the township. Roll call vote was as follows: Rineer, aye; Florip, aye; Clous, aye; Roper, aye; Therrien excused, all ayes, motion passed.

XV. Extended Public Input: None

XVI. Board Comments: Rineer stated that the retiring assessor will be missed. She also thanked all the election workers for their work. Clous also thanked the election workers for all their help before and during the election. She stated that the election went well. Roper stated that he thought all of the Benzie County clerks did a great job on the election. Roper would like to have a special meeting in December to discuss the ARPA funds. Start thinking about other budget items that would be need to be in the next budget which will start being discussed in January.

XVII. Adjourn: *Supervisor adjourns the meeting at 6:45 pm*

Regular Council Meeting
Tuesday, November 15, 2022
412 Main Street – City Hall
Frankfort, MI 49635 (231) 352-7117

Meeting called to order by Mayor Holwerda at 5:00 p.m.

Pledge of Allegiance

Roll Call: Holwerda, Olsen, Short, Stratton and Walenta

Also Present: Chief Cederholm, Joshua Mills, and Christine Ward Spence. Excused: Chief Lozowski

Members of the Public: 12

Request to Appear Before Council:

- a) Rebecca Hubers, Benzie County Emergency Manager, presented the groundwork for the Hazard Mitigation Plan for Benzie County. The City of Frankfort Master Plan will be part of this plan. Of the information presented, it was asked to please confirm or modify those items assigned to the city and resubmit to Ms. Hubers by January 2023.

Ms. Hubers also discussed the emergency communications issue for Frankfort and the surrounding areas. Due to the topography, there is limited use of the 8000 MHz radios. A repeater system was installed as a temporary attempt to fix the issue. There is a flat space adjacent to the water tower that could accommodate the mono pole tower at the cost of 1.9 to 2.2 million dollars. Ms. Hubers was not asking for monetary assistance but rather a commitment for the space and building from the city to allow this tower. Mayor Holwerda asked if other locations were considered as possible sites. Ms. Hubers replied that during testing of locations, the location near the water tower was the best choice. She added that this tower will not only benefit the city but also the north and south shore of Crystal Lake where the coverage is limited.

- b) Tim Maylone, CEO of Cherry Capital Communications, was introduced to the city council by Benzie County Commissioner Andy Miller. For some time, Mr. Miller has been active in bringing fiber internet to the county. The county promoted a MERIT study which found large areas with no coverage as well as individuals who were not receiving the coverage assumed due to lack of infrastructure. Mr. Maylone presented and discussed a handout outlining his objective to provide Benzie “Internet for All.” He explained the potential routes for improvements, outlined current infrastructure and explained “What is Next.”

Public Input – General (3 Minutes): None

Correspondence:

- 1) M22 Rentals LLC – Maureen & Douglas Hatfield; Thank you to Chief Cederholm and Staff with a donation to the department.
- 2) Lawrence Elku – Thank you to Chief Cederholm for his assistance at their home on Platte Lake.
- 3) Don Ellsworth – Congratulations to Christine Spence on her appointed position as Clerk/Treasurer.

- 4) Charter Communication – Announced a new channel; Fox Weather HD.
- 5) Frankfort Area Community Land Trust – Fundraising Campaign. Mayor Holwerda added that the Finance Committee will discuss at their next meeting and will make a recommendation to the city council, probably in December.

Approval of Minutes:

Motion by Holwerda, seconded by Walenta approve the meeting minutes of the regular meeting of 10/18/2022 and the special meeting of 10/31/22 with corrections.

RC: Yeas: All Nays: None Motion CARRIED

Approval of Bills:

Motion by Short, seconded by Holwerda to approve prepaid vouchers #55882 - #55922 & #55988 HRA #8274 - #8290 and EFT #52 in the amount of \$283,110.97 of which \$33,262.81 for tax distribution, \$12,640.00 for Capital Outlay Project, and \$211,329.60 for Principal & Interest Payments. Payroll voucher #38663 - #38763 and EFT #390 - #399 in the amount of \$129,579.14 of which \$64,775.55 for wages, \$21,553.38 for employee/retiree benefits, \$19,980.92 for federal tax deposits, \$20,824.02 for MERS and \$2,445.38 for employee deductions.

RC: Yeas: All Nays: None Motion CARRIED

Motion by Stratton, seconded by Walenta approving voucher #55966 payable to Brady Olsen in the amount of \$40.25 as mileage reimbursement.

RC: Yeas: Holwerda, Short, Stratton, Walenta Nays: None Abstain: Olsen
Motion CARRIED

Motion by Olsen, seconded by Short approving vouches #55923 - #55965 and #55967 - #55987 in the amount of \$272,767.61.

RC: Yeas: All Nays: None Motion CARRIED

Council Member Reports:

a) Holwerda

Finance: Next meeting is set for December 15th at 8:30 a.m.

Grant Committee: This committee did not meet but Mr. Mills has submitted a letter of intent to apply for funds to replace galvanized lead leads.

Tree Board: This committee met and has been getting ready for winter. They discussed areas for more tree planting and those that need to be replaced.

DDA: The authority discussed off season marketing and Christmas decorations.

b) Olsen

Public Safety: This committee met to discuss the proposed golf cart ordinance. Chief Cederholm and Chief Lozowski were unable to attend. Officer Jewell attended and gave insight of a patrolman. The ordinance is with the lawyer for fine tuning.

Recreation Board: The board has not met in 2 months; however, now with the season change there should be more time. Ms. Short inquired on the status of the land swap. Mr. Mills stated he was waiting for some direction. Mr. Olsen shared that the committee is not interested in the property for a dog park as it is mostly wet land. Ms. Short asked Mr. Mills to notify Luedtke Engineering Company that the land swap is no longer an option.

Airport Authority: The authority met and there was not much to report as the season has changed. tree trimming has not started but due to at any time.

c) Short

Personnel: This committee did not meet.

Planning Commission: Ms. Short was not available for the meeting but referred to the committee reports.

Fire Advisory: Ms. Short referred to Chief Cederholm's report.

d) Stratton

Water/Sewer Committee: This committee did not meet.

Marina Authority: This committee did not meet.

Housing Commission: MSHDA has expressed concerns that the project is too close to the wastewater treatment plant. Mr. Mills noted land north of Gateway Village or on Beech Street near the well house may be alternative sites.

e) Walenta

BLUA: The treatment plant is ready for winter.

Commissioner's Report – Mr. Andy Miller

Mr. Miller was excited to announce 24hr, 7 days a week road patrol with at least two deputies per shift, discussed workforce housing, broadband presentation for fiber services and reminded the public of the 23rd annual Toys for Tots drive at Papano's in Beulah.

Department Reports:

Clerk/Treasurer – Ms. Spence wished Greg Walton a happy sixth anniversary with the city. On November 8th, 774 of the 1136 registered voters participated in the election which was a 68.13% voter turnout. This is 1.22% increase over the last gubernatorial election in 2018. Thank you to the election workers who did a fantastic job during this busy, long day. The millage proposal passed for the fire department and will be reflected on the summer 2023 tax bill. Both mileages expire in December 2023. A renewal millage ballot wording will need to be presented for council approval in July 2023 to be on the November 2023 ballot. As of the end of October, the city's portion of taxes

collected was at 95%. Jordin continued to collect on past due and delinquent personal property taxes. I discussed the OPEB report with Jefferson Solutions. OPEB stands for Other Post-Employee Benefits, meaning the amount the city is required to set aside to pay for future health care costs for retired employees. As noted in my report, the representative was unaware of changes that had been made for spousal coverage upon retirement. At fiscal year end of June 30, 2021, the city's OPEB liability was \$703,439. After adjustments, the fiscal year end June 30, 2022, is potentially improved to \$592,564. Of this amount, the city has \$188,454 in a reserve account held by MERS making the funded ratio 31.80%. This percentage is low but does reflect an improvement. After Anderson, Tackman and Company can review the OPEB report, we will need to schedule the annual presentation. Like previous years, to accommodate schedules, this presentation will most likely be a special meeting and must be held before the end of the calendar year. As of October 31st, all enterprise funds were in a positive balance.

Superintendent – Mr. Mills updated the end of the capital improvement project and the issue with the MRI Unit at Paul Oliver Memorial Hospital regarding the crown of the roadway. Ms. Short shared her memory of having to walk Park Avenue in the road to school. She expressed how nice the new sidewalks are on Park Avenue. Mr. Mills discussed the recent paving projects of Hall, 11th, and George Street and gave an update on the damage to the back of City Hall and streetlight damage. The DPW is transitioning from leaves to snow, soon to be installing Christmas decorations. Mr. Mills asked for volunteers to help decorate Main Street and the tree in Rotary Park. Mayor Holwerda asked if something could be placed on the website asking for volunteer. Mr. Mills noted the letter of intent that was submitted to EGLE to be considered for potential funds coming from ARPA funding from the federal government through the State of Michigan. The purpose of the funding would involve water and sewer main upgrades as well as street improvements. The multi-phase project has an estimated cost of +/- 5.8 million dollars.

Chief of Police – Chief Lozowski was excused from the council meeting and the mayor summarized his report.

Fire Chief – Chief Cederholm opened with a thank you to the voters for their support for the millage that was approved earlier this month. Chief noted business and training meetings for the month. He is asking for a request for proposal from three electrical contractor companies to change the lighting at the station over to LED and discussed options in repairing the faded sign on the building. Also, all but one of the ladders passed the recent annual inspection. More individuals are expressing interest in the Knox Box system. Chief Cederholm met with his officers to discuss his expectations, assignment of tasks for the Fire Station Software program, future development of a proficiency exam for all members and had a hardline discussion regarding members who have not made any attempt to attending training, runs and business meetings. He also discussed cost recovery and how this program is not what it seems. Of the total claims of \$16,179.93, the city has received only \$68389 from Fire Recovery USA. Chief Cederholm noted a thank you from Lawrence Elkus of Platte Lake and encouraged anyone to see the thank you banners in the department from the elementary school students. He discussed the grants he has and hopes to apply for with the approval of the council. Chief Cederholm attending the Benzie County EMS Advisory Council, Benzie County Fire/EMS Association Chiefs meeting, Fire Board, Village of Elberta meeting and Blaine Township meeting. Chief completed the Fire Prevention/Safety month at the Frankfort-Elberta Area Schools. 100 – 150 people attended the Fire Department Open House where members demonstrated vehicle extrication.

In Lake Township, the chief met with a few residents on Woodland Drive with the heavy rescue rig regarding lane width and he met with Mr. Rick Frank regarding the Park Ridge PUD on Sutter Road. In Crystal Lake Township, the chief continues to make his weekly visits to the Dollar General to ensure that public and fire safety is being observed. In Blaine Township, the chief attended the meeting and answered questions from the public and the board. In the month of October, there were 19 fire runs with a response of 100%. There were 56 EMS runs with a response of 96% due to back-to-back calls in opposite directions in the county. As of this meeting, runs are at 730 compared to last year's total volume run number of 578 in 2021. Lastly, Chief Cederholm thanked his team for their devotion to the department during the recent storm.

Old Business:

a) Short-term Rental Ordinance

Mayor Holwerda updated that she met with Mr. Mills, Ms. Spence and City Attorney, Ross Hamersley to discuss the ordinance. The ordinance is still being reviewed by the attorney.

b) Plaque – Frankfort Poem

Mayor Holwerda will be passing on this request to the Oliver Arts Center or process through other avenue.

New Business:

a) Board Appointment

Motion by Holwerda, no second needed to reappoint Rich Devon to the Tree Board for a one-year term set to expire on 06/18/2023, Alma Penfold-House to the Local Officers Compensation Committee set to expire on 09/25/2025 and appoint Eric Metty to complete the term of Mike Smith ending 07/21/2025 on the Housing Commission.

RC: Yeas: All Nays: None Motion CARRIED

b) Lake Michigan Beach Architecture Proposal

Mr. Mills presented the proposal from Cornwell Architects for Architectural Design Services.

Motion by Stratton, seconded by Walenta to accept the proposal from Cornwell Architects for Architectural Design Services associated with the proposed Lake Michigan Beach restroom at a cost of \$31,400.

RC: Yeas: All Nays: None Motion CARRIED

c) Grand Traverse Band of Ottawa and Chippewa Indians 2% Allocations Grants

The agenda item covers three departments in the city that would like to submit grant applications. The Police Department wishes to submit for three (3) Stalker Radar speed indication display at a cost of +/- \$13,500.00, the Fire Department wishes to submit for twenty-five (25) Lightweight Fire Helmets at a cost of +/- \$10,000.00 and the Parks and Recreation Department wishes to submit for the purchase of two (2) Expression Swings at a cost of +/- \$4,800.00.

Motion by Short, seconded by Stratton to approve the grant requests as presented.

RC: Yeas: All Nays: None Motion CARRIED

Public Input – Agenda Items Only (3 Minutes)

- 1) Luigi Manzari and Marlene Davenport, 508 Michigan Avenue. The couple volunteered to help with Christmas decorations.
- 2) Alma Penfold-House, 221 Michigan Avenue. Ms. House asked if the Police Department had provided figures on what had been stolen in the city. With the absence of Chief Lozowski, the council was not able to answer her question.
- 3) Jay White, 448 Bridge Street. Mr. White thanked Commissioner Miller for his 2-year of service to the community and for his support for the need for housing and the Frankfort Community Area Land Trust. Mr. White also wanted to make sure that Mr. Mills was aware of a blight grant through Benzie County and perhaps this could be used to take down the Lion Club building. Lastly, he thanked the finance committee for their consideration.
- 4) Todd Bruce, 810 Leelanau Avenue. Mr. Bruce expressed his concern with the city's deer population. Mayor Holwerda acknowledged that this has been an issue for a very long time. In the city, hunting is not allowed within 450 feet of any residence. The next step would be to have the city contact the DNR to discuss options. Lastly, Mr. Bruce loves the new sidewalks making us a walkable city. He questioned repairs and repairs of existing sidewalks. Mr. Mills noted its on the focus for next year.

Adjournment:

Motion by Olsen, seconded by Stratton to adjourn the meeting at 6:47 p.m.

RC: Yeas: All Nays: None Motion CARRIED

JoAnn M. Holwerda
Mayor

Christine Ward Spence
Clerk/Treasurer

Blaine Township Board and
Blaine Township Planning Commission
Joint Meeting
Unapproved Minutes
December 1, 2022

7:30 PM at the Blaine Township Hall

- A. Meeting was called to order at 7:30 PM by Paul Crandall, Supervisor.
- B. Pledge of Allegiance had been recited at the PC portion at 7:00 PM.
- C. Roll Call to record attendance: Crandall: Present. Chuck Beale, Trustee: Absent. Walt Rohn, Trustee: Present, Marjorie Rohn, Clerk: Present. Cyndi Sauer, Treasurer: Present.
- D. M. Rohn made a motion to accept the agenda as presented. Seconded by Sauer. Vote: Ayes: All. Motion Carried.
- E. Public Comment: Dave Long stated the election computer needs to be replaced.
- F. Crandall made a motion to approve the minutes of November 3, 2022 as presented. Seconded by: W. Rohn. Vote: Ayes: All. Motion Carried.
- G. Treasurers Report: Attached.
- H. Clerk's Report:
 - 1. Correspondence: Max Bankston has agreed to plow the Hall parking lot on an on-call basis for \$50.00 per trip. Zack Gilbert was not paid for plowing last year so there is a check to be approved for \$400.00 in the "Payment of Bills" section. Gilbert charged the same as Bankston will charge. Jim Bishop went to the cemetery to look at the exposed wiring. The well is working and he will fix the wiring problem if the Board approves the \$1,000.00 estimate. An application for a zoning permit has been approved by Josh Mills for an outbuilding (11' x 12') located at 4754 Joyfield Road, Frankfort, MI 49635 on property owned by Jon Manrow and Lisa Richter. Clerk advised the AT&T bill had not arrived and requested authorization to pay this bill when it arrives. Roll call

- vote: Crandall, Yes. Sauer, Yes. W. Rohn, Yes. Beale, Absent. M. Rohn, Yes.
2. Bills to pay (attached) everyone has a copy (read aloud). Crandall made a motion to approve payment of bills. Seconded by W. Rohn. Roll Call: Crandall Yes. Beale, Absent. M. Rohn, Yes. W. Rohn, Yes. Sauer, Yes. Motion Carried.
 3. Budget Amendments: None
 4. Roll Call to Approve Budget Amendment? Not necessary. Crandall, Yes. Beale, Absent. M. Rohn, Yes. W. Rohn, Yes. Sauer, Yes. Motion Carried.
 5. Status Report on ARPA administration: Mr. Long is the point person to discuss the Hall remodel while Beale is out of town. There are some dry hydrants in Blaine and there may be some materials that need to be purchased out of ARPA funds.
 6. Election Administration Update: A copy of the election results for Blaine township is in the packets and additional copies are on the table for anyone who wants one. The Electronic Poll Book computer crashed at the 102nd voter on election day. The County Clerk and the County Administrator tried to revive it, but to no avail. We must have a new computer by the next election because the State dictates election results must be transmitted electronically. Clerk will check with the State and see what they recommend and report back.
- I. Other Reports:
1. Hazard Mitigation – Rebecca Hubers. FEMA requires that a plan to mitigate hazards (such as identifying flood prone areas). Ms. Hubers will send information to the Board.
 2. County Commissioner gave report. Gary Sauer gave a report on county happenings including a report that The Maples has staffing shortages.
 3. Planning Commission Chair:
 - a) a. Presentation to the Township Board. Mr. Long reported that the Zoning Enabling Act requires a joint meeting between the Township and Planning Commission once each year.

- b) i. Introduction. Long stated that each member of the Planning Commission does a lot of work during the year and it is done from the heart. A chart of Capital Evaluation was presented.
- c) ii. PC Goals: Polly Gillison outlined four goals of the Commission. 1). Work with GTRLC to improve the view from M-22 turn-outs. 2). Monitor invasive species in Upper and Lower Herring Lakes. 3). Monitor condition of Township roads, track paving and make recommendations for BCRC 1 mil paving projects. 4). Develop a Capital Budget Plan for recommendation to the Board.
- d) iii. Capital Recommendations for 2023: Marjorie Rohn stated that there are three recommendations from the Commission. 1). Parking lot lighting – this is a safety issue. A cost estimate from Jim Bishop is attached (\$12,800.00). 2). Replace folding chair dolly (this is dangerous as it is tall and heavy and very wobbly). Also included is the recommendation to replace two tables and 10 chairs every year. Estimated cost: \$960.00. 3). Sealing the parking lot. Discussion was held whether this is necessary.
For 2024: 1). HVAC addition to Hall to prevent the floor from sweating and becoming dangerous. 2). Replace 2 tables and 10 chairs (estimated cost \$700.00). 3). Paint outside of the White Owl.
- e) iv. Amendments PC is currently working on: Long stated that there are 3 Amendments that are being considered at the present time. 1). Shipping Containers need to be defined and an amendment of Article 3 by adding 3.24 limiting their duration. Discussion was held concerning the current square footage allowed for auxiliary buildings and whether one could conceal one from sight by partial burial and increase the square footage that is currently allowed. 2). Amendments to correct issues related to the Zoning Board of Appeals. Amendments are necessary to avoid the confusion regarding appeals to that board when an application for a permit is denied by the Zoning Administration. 3). Amendment to change Small Solar Energy System from Special Land Use to Accessory Use.

This amendment would reduce the permit cost significantly. We hope to have all amendments ready for a Public Hearing in March, 2023.

- f) v. Township Roads: Mike Pringle stated that the Blaine Township roads are evaluated annually and the PC ranked the order of preference to be repaired as follows: 1. Gorivan Road based on the poor condition and the traffic load. 2. Johnson Road based on the poor road condition and the rate of deterioration. 3. Putney Road based on the condition and traffic load. Pringle presented the Board with a list of paved Township roads, County Roads, Township roads that are unpaved, when they were paved (if paved), the life expectancy of the asphalt and the estimated cost to pave.
- g) vi. What does the Board want the PC to be working on 2023? The Board requested estimates on parking lot lighting, product information on a moss eradicator for the Hall roof, continue with the amendment procedure and draft any new ordinances that need to come before the Board.
- 4. Fire Chief: Mike Cedarholm: Not present.
- 5. ZBA Chair: Bruce Longstreet stated he has been working with Long and Bryan Graham (township attorney) on wording of the ZBA ordinances. Once these ordinances, training must be scheduled.
- J. Old Business: None
- K. New Business: None
- L. Meeting adjourned at 9.25 PM.

Next board meeting will convene at 7:30 PM 5 January, 2023 at the White Owl Town Hall.

Respectfully submitted: Marjorie Rohn, Clerk.

MINUTES OF THE REGULAR NOVEMBER MEETING
OF THE VILLAGE OF BENZONIA
Monday, December 5, 2022 @ 6:00 p.m.

PRESENT:

PRESIDENT: Flynn
COUNCIL: Heyn, Hafer, French, Herryman, Moss,
Myers
CLERK: Cutler
TREASURER: Flynn
SUPERINTENDENT: Pritchard
ASST SUPERINTENDENT: Cline
ZONING ADMINISTRATOR: Kirk
PUBLIC: Rhonda Nye, County Commissioner; Ken
Mlcek
ABSENT: Misner

CALL TO ORDER: The Regular Meeting of the Benzonia Village Council was called to order at 6:00 p.m. by President Flynn.

ATTENDANCE TAKEN BY COUNCIL MEMBER HEYN

PLEDGE OF ALLEGIENCE

REAPPOINTMENT, TREASURER, CLERK, ZONNING ADMINISTRATOR
Hafer moves supported by Heyn to re-appoint Toni Flynn to the Treasurers position for a four-year term beginning November 21, 2022 – November 20, 2026. Roll Call: French, Heyn, Herryman, Moss, Hafer, Flynn. Nays – None. Motion Carried.

Heyn moves supported by French to re-appoint Maridee Cutler to the Clerks position for a four-year term beginning November 21, 2022 – November 20, 2026. Roll Call: French, Heyn, Moss, Hafer, Herryman, Flynn. Nays – None. Motion Carried.

Heyn moves supported by Hafer to re-appoint Sara Kirk to the Zoning Administrators position for a four-year term beginning November 21, 2022 – November 20, 2026. Roll Call: Herryman, Heyn, French, Moss, Hafer, Flynn. Nays – None. Motion Carried.

APPOINTMENT OF COUNCIL MEMBER

French moves supported by Hafer to appoint Shane Myers to fill the remaining term on the vacant Council Member position for a two-year term beginning December 5, 2022 – November 20, 2024. Roll Call: Moss, Hafer, Herryman, French, Heyn, Flynn. Nays: None. Motion Carried.

APPROVAL OF AGENDA:

Addition of the Meeting Dates for 2023 added as #6

**Hafer moves, supported by French, to approve the agenda as amended. Ayes: All
Nays: None. Motion Carried.**

APPROVAL OF THE MINUTES:

1. November 7, 2022 Regular Council Meeting Minutes – One change noted to correct Herryman to Herryman. **Heyn moves, supported by Hafer, to approve the November 7, 2022 Regular Council Meeting Minutes as presented. Ayes: All, Nays: None, Motion Carried.**
2. October 27, 2022 Special Meeting Minutes – **Hafer moves, supported by French, to approve the Special Meeting Minutes as presented. Ayes: All, Nays: None, Motion Carried.**

PUBLIC COMMENT: None

ACTION ITEMS:

- Rebecca Hubers, County Emergency Manager presented the County Hazard Mitigation Plan and asks that the Council members review the entire list and provide input, but specifically if you can search for your community in the affected jurisdiction column and (1) see that the strategy is relevant to your community and (2) confirm that the strategy is something that you are “on board with”, because you are already doing it as part of your regular operations (ordinances, planning etc.) or your community plans to progress in that direction and you are not opposed to keeping it on the list. She asks that the members fill out the “In Kind” document and return to your Clerk to compile and forward that would be helpful to the process. Would love to get information back to her by the end of January 2023.
- Road Repair Letter – Discussion took place regarding a letter to repair the road in front of an Adult Foster Care Home within the Village. Home was located and the road was repaired in front of the mailbox.
- Resignation Letter – Council received a resignation letter from Council Member Misner on November 15th. **French moves supported by Heyn to accept her resignation as of November 15, 2022. Ayes: All Nays: None. Motion Carried.**
- Bills List – **Heyn moves, supported by French to approve payment of the bills for the month of November 2022 in the amount of \$48,759.87. Roll Call: Heyn, Myers, Moss, Hafer, Herryman, French, Flynn. Nays – None. Motion Carried.**
- Treasurer’s Report – Treasurer presented the November Treasurers Report. **French moves, supported by Hafer to accept the Treasurer’s Report as presented. Ayes: All Nays: None. Motion Carried.**

Treasurer reports that the Water Fund could manage two additional payments to the 98 Bonds, suggests that the Council consider payments of \$15,000/each. Two bonds, total = \$30,000. **French moves, supported by Heyn to pay and**

additional \$15,000 on each 98 Bond. Roll Call: French, Heyn, Herryman, Moss, Hafer, Myers and Flynn. Nays: None. Motion Carried.

- Meeting Dates for 2023 – Council discussed meeting dates for 2023 and will continue with the first Monday of the month, unless it is a Holiday, then will fall to the following Monday. **Hafer moves, supported by Moss to set the 2023 Meeting dates. Ayes: All Nays: None. Motion Carried.**

UNFINISHED MATTERS:

- President Flynn:
With the resignation of Misner a new person needs to be added to the Personnel Committee. **French moves, supported by Heyn to add Hafer to the Personnel Committee. Ayes: All Nays: None. Motion Carried.**
- With the resignation of Jake Cline, legally the Village needs to have a backup operator for emergencies. The Personnel Committee will discuss at the next meeting scheduled on December 8, 2022.
- With the addition/resignation of new/old council members the need to appoint council members to various seats is needed.
 - a. Open seat on the Equipment Committee will be filled by Council Member Myers
 - b. Open seat on the Planning Committee will be filled by Herryman
 - c. Open seat on the Parks Committee will be filled by Moss

CORRESPONDENCE:

Crystal Lake Business Association payment – Hafer moves, supported by French to continue the relationship between CLBA, and pay for dues. **Roll Call: Heyn, Moss, Hafer Herryman, Myers, French, Flynn. Nays – None. Motion Carried.**

SUPERINTENDENT/ASSISTANT REPORT:

- Written report submitted and will be made part of the Regular December 2022 Minutes.

COMMISSIONER REPORT:

County Commissioner Nye – Reports on County business:

- New 911 Director named – Cory Ellis
- New Preliminary Expansion Plans for building 911 center
- Ed Hoogterp-Drain Commissioner is applying for an EGLE Dam Risk Reduction Grant in the amount of \$200,000 looking for 10% match from the County.
- Tom Longanbach – Equalization Director retiring
- New Commissioner will be taking the position of Andy Miller
- New Unified Sanitary Code for the BLDHD has been introduced

ZONING ADMINISTRATOR REPORT:

- Written report submitted and will be made part of the Regular December 2022 Minutes.
- Review of report was given.

FINAL PUBLIC COMMENT

- Rebecca Hubers thanks the superintendent and assistant superintendent for always helping out.

NEW BUSINESS:

- None.

French moves, supported by Hafer to adjourn meeting at 7:28 p.m. Ayes – All. Nays – None. Motion Carried.

Respectfully Submitted,

Maridee Cutler,
Village Clerk

DRAFTED: December 12, 2022

APPROVED: January 2, 2023

Minutes of Regular Meeting of Joyfield Township

at Joyfield Township Hall

December 7, 2022

7:00 pm

Members Present: Matt Emery, Patricia Daugherty, Jim Evans, and Dodie Putney.

Members Excused: Mark Evans

The meeting was called to order at 7:00 p.m.

Moved by J. Evans to approve the agenda. Seconded by Emery. Motion Carried

Moved by Emery to approve the consent agenda, regular Board meeting minutes of November 2, 2022, Treasurer's report, and adding the payment of Clifford Simmers to the list of monthly bills in the amount of \$144.00 (check #5458) Seconded by J. Evans. Motion Carried.

Public Input – None.

Benzie County Natural Hazard Mitigation Plan: Rebecca Hubers presented the County's Natural Hazard Mitigation Plan. Asking the Township to review Joyfield Township to see if 1) the strategy applies to our jurisdiction and 2) if it does apply, is it something that the Township is onboard with and is already doing or planning to do in the future.

Reports:

Gary Sauer gave an update on County, Maples, and Road Commission activities.

A written zoning administrator report from Betsy Evans and the Planning Commission annual report was placed in the Board packet.

Correspondence: Written correspondence was reviewed.

Old Business:

Blight Action – Emery contacted the attorneys; it is in the Township's best interest to collect as much information as possible prior to involving attorneys.

New Business:

Emery stated that Kurt Kruger's term on the Planning Commission will be expiring December 31, 2022.

Moved by Emery to reappoint Kurt Kruger to the Planning Commission for a three-year term. Seconded by J. Evans. Motion Carried.

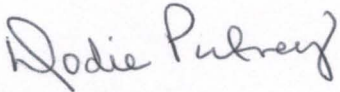
Moved by Putney to make payment of \$500 to the Benzie Historical Society and contract for services with the Benzonia Library for \$500. Seconded by Daugherty. Motion carried. (check numbers 5459 and 5460)

Public Input – None.

Board Members Comments: Putney gave an update on the recount for Proposals 2 and 3. Joyfield Township is not included in the recount process. Putney also reported that it looked like the Presidential primary election will be moved from March to February which would resolve a March Board of Review meeting conflict with future Presidential primary elections.

Moved by Emery to adjourn. Seconded by J. Evans. Motion Carried. Meeting adjourned at 7:16 p.m.

Submitted By:



Dodie Putney
Clerk

INLAND TOWNSHIP BOARD MEETING

December 12, 2022

19668 Honor Hwy., Interlochen

Call to Order by Supervisor Davis

Invocation by Nellie Thomas

Pledge of Allegiance was recited

Roll Call Present: Supervisor Davis, Clerk Wirth, Treasurer Zielinski, Trustee Miller and Trustee Poulisse

Public Comment* 5:02 p.m. received from Jim Clark, Rosemarie Swartout end 5:09 p.m.

Approval of Meeting Agenda: **Motion** by Miller to approve the meeting agenda as presented with the additions, 2nd by Poulisse. Ayes – All Nays – None Motion carried

Approval of Consent Agenda

- Minutes from November 14, 2022 & closed session for November 14, 2022
- Financial Reports
- Prepaid Bills/Tax Account: 14831-14838= \$1,653.28; 2769= \$37.86
- Payroll: 1000618-1000654= \$16,308.62
- Unpaid Bills: #14839-14852=\$21,318.71
- Budget Adjustments/Budget Amendments

Motion by Poulisse to approve the consent agenda with the additions of the closed session and unpaid bills 14839 – 14852 totaling \$21,318.71, 2nd by Miller

Roll call Ayes – Wirth, Poulisse, Zielinski, Miller & Davis Nays – None Motion carried

Guest: Rebecca Hubers, Emergency Management Coordinator arrived at about 5:30 and gave report after the event committee regarding the Hazardous Mitigation Policy for the county

Reports:

1. County Commissioner – Commissioner Warsecke gave report for last month's commissioners meeting
2. Fire Chief – Chief Pfost gave report regarding last month's calls (222 calls this yr. compared to 212 last yr.). Reporting software needs to be replaced in part to cost increase and would like the board to consider the purchase of software from Emergency Networking for cost savings.

Motion by Miller to purchase from Emergency Networking their package that is presented here for a total of \$3585.00 from the new equipment fund, 2nd by Poulisse

Roll call Aye – Wirth, Poulisse, Zielinski, Miller & Davis Nays – None Motion carried

3. Parks & Recreation – report given by Clerk Wirth stating there is a meeting December 24. Supervisor Davis stated he has applied for grants for the play ground and one for the additions of various courts and pavilions to the park

4. Fire Association - Clerk Wirth gave the report and asked the board to approve the purchase of ice cream from Schwan's per FD member requests

Motion by Poulisse that the fire association be allowed to use the township credit card to purchase ice cream from Schwan's online and when the monthly credit card bill comes in that their portion be paid by the fire association out of their fund, 2nd by Davis

Roll call Ayes – Zielinski, Wirth, Poulisse, Miller & Davis Nays – None Motion carried

5. Inland Planning Commission – Trustee Miller stated no meeting last month ~~turned time of to~~ the IPC chair ~~to give~~ gave a report regarding a meeting attended at Green Lake Township on marijuana issues/ordinances

6. Zoning/Blight Administrator - ZA Weller gave last month's report

7. Event Committee – Rosemarie Swartout gave report and stated no meetings December & January.

Chair dolly cost was taken out of the wrong fund.

Motion by Wirth that we to reimburse the event committee \$272.09 from Bendon Hall fund for the cost of the chair dolly, 2nd by Poulisse

Roll call Ayes – Poulisse, Zielinski, Miller, Wirth & Davis Nays – none Motion carried

8. Board Member Reports

Clerk Wirth reported on the election voting results from November

Old Business: None

New Business

1. Cemetery trees – removal of trees in Stagecoach and Inland Cemeteries

Motion by Miller to approve the Parshall's tree removal, stump grinding as presented for a total of \$6690.00 from the cemetery fund to start in the spring, 2nd by Poulisse

Roll call Ayes – Poulisse, Wirth, Zielinski, Miller & Davis Nays – none Motion carried

~~Ayes – All Nays – None Motion carried~~

2. Board of Review appointments – tabled until January meeting

3. Fire Chief Credit card – would like approval for one because of the travel, training, etc. that is required

Motion by Davis to get Dayton a credit card on the current account, 2nd by Poulisse

Roll call Ayes – Wirth, Miller, Zielinski, Poulisse & Davis Nays – None Motion carried

4. Investments – Treasurer handed out information regarding possible investment of township monies, **the need to get fdic.**

5. Bendon Hall – sale of the property and email from the event committee

Motion by Davis to allow the supervisor to proceed with the all aspects of putting Bendon Hall up for sale & the proceedings from said sale to be used for new building, 2nd Wirth

Roll call Ayes – Wirth, Davis Nays – Poulisse, Zielinski, Miller Motion failed

Motion by Poulisse that the Supervisor be authorized to speak to a realtor and or appraiser of the possible sale and allow the board to review that information before proceeding, 2nd by Miller

Ayes – All Nays – None Motion carries

6. Clerk expenditures – purchase of election and office supplies

Motion by Poulisse to allow the clerk to purchase election supplies as noted for a total of \$507.49 from the election fund and township office supplies \$289.92 from the clerk's fund, 2nd by Davis

Roll call Ayes – Poulisse, Zielinski, Wirth, Miller & Davis Nays – None

7. 2023 Road projects – Supervisor reported he will be attending January 11 Road meeting and sent a list of roads for Inland township that they would like to work on


Public Comment* 7:09 p.m. was received from Ron Thomas, Rosemarie Swartout 7:21 p.m.

Any Other Business to come before the Board – N/A

Adjournment

Motion by Poulisse to adjourn the meeting, 2nd by Miller

Meeting adjourned at 7:22 p.m.



David Davis, Supervisor Date 11/10/23



Rose A. Wirth, Clerk Date 11/10/2023

*Public comment: Any person wishing to address the Board may do so one – time per public comment period. Please provide name. This is a comment/input option: the Board is not required to comment or respond to presenters. Silence or non-response from the Board should not be interpreted as disinterest or disagreement by the Board. Comments shall be addressed to the chair and not individual board members or others in the audiences.

**WELDON TOWNSHIP
REGULAR MEETING
December 13, 2022
Tuesday
7:00PM**

The meeting was called to order by R. Hitesman, Supervisor, at 7:00PM.
The Pledge of Allegiance was given.

ATTENDANCE: Ron Hitesman, Supervisor X; Fran Griffin, Clerk X; Sally Bobek, Treasurer ABS; Sue Meredith, Trustee X; Scott Williams, Trustee X.

GUESTS: Gary Sauer, Chuck Kraus, Craig Meredith, Phyllis Kladder, Becky Sharp, Jon Stimson, Rebecca Hubers, Karyn Thorr, Maree Mulvoy, John Melcher, Charles Sayer

CHANGES/APPROVAL OF THE AGENDA: R. Hitesman stated that K. Jelemensky asked to be removed from the agenda. S. Williams motion to approve the agenda with the correction. R. Hitesman seconded. All ayes.

APPROVAL OF MINUTES: R. Hitesman motioned to approve the November 1, 2022, Regular Meeting minutes. S. Williams seconded. All ayes.

TREASURER'S FINANCIAL REPORT: S. Meredith motioned to approve the Treasurer's November and December 2022 reports. S. Williams seconded. All ayes.

GUEST INPUT (up to 3 minutes per guest): Rebecca Hubers, County Emergency Management Coordinator spoke on the Natural Hazard Mitigation Plan. She will email the info to us for feedback. A public hearing will be scheduled sometime in February/March. An 800 MHz tower is being planned for a location in Frankfort to service law enforcement in the Benzie County area. G. Sauer stated that the County approved the Health Department Septic Code. A grant of \$52,000 for child dental care has been received. BCRC prototype truck evaluation has been completed. Issues with the Platte River School building. May decide to demolish. Village of Thompsonville is having issues with their water. Still monitoring. T. Longanbach has retired. Training is under way for a new Equalization manager. Karen Thorr, Crystal Mountain, spoke on the affordable housing project and background. Jim Stimson, HomeStretch explained the handout.

REPORTS:

ZONING ADMINISTRATOR: S. Williams asked Zoning Administrator about calls for smaller lot sizes. Discussion. Zoning report on file.

DAY USE PARK: on file.

PLANNING COMMISSION: no meeting.

LIQUOR INSPECTOR REPORT: on file.

ASSESSOR'S REPORT: on file. September, October, and November reports are on file. Wyatt Crawford is now Certified Assessor per R. Hitesman.

BUDGET REPORT: Clerk requested budget amendment to move \$395.00 from Contingency 890.000 to Miscellaneous 299.955. R. Hitesman motioned to approve the budget amendment. S. Williams seconded. All ayes.

SUPERVISOR COMMENTS: BOR meeting was held today. R. Hitesman made the motion to appoint Marian Mayer, C. Bobek, Jane Hitesman as BOR members for 2 years and Marlene Smith as the alternate. S. Williams seconded. All ayes. R. Hitesman made a motion to adopt a Resolution For Poverty Exemption for 2023 Assessments with a limit of \$2000.00. S. Williams seconded. R. Hitesman, F. Griffin, S. Williams, S. Meredith-all ayes. Resolution passed. BOR training is needed for Marlene Smith. Other BOR members are good in training until next year. C. Merrill/ Assessor sent a letter of resignation. She is retiring. She has been working with Wyatt Crawford. R. Hitesman made the motion to accept C. Merrill's resignation and appoint Wyatt Crawford as our Assessor. F. Griffin seconded. All ayes.

CLERK COMMENTS: Notice was received from Municipal Underwriters Insurance that they will not cover PFC and PFAS issues in the future. The Village of Thompsonville has been having trouble with their water meeting EGLE requirements. December 20th at 2:00PM is the date set for packing candy for the fire truck.

UNFINISHED BUSINESS: Fee for use of the Township Hall was tabled. Water hookup change tabled until spring. Nuisance Ordinance amendment tabled. House Plaque-tabled.

NEW BUSINESS: none

BILLS: November 1, /December 13, 2022

Bills To Be Approved/Paid by Weldon Township—December 13, 2022

<u>November Bills Between Nov and Dec meetings-post audit</u>	
EFPTS22 IRS 941 Tax. 4 rd qtr	878.24
Blarney Castle	385.43
VISA	386.78
City of Traverse City-Hazmat	395.00
Cherryland Electric	135.56
Pioneer Press	154.80
Sally Bobek-reimburse	45.61
Election Pay	1315.00
Carrie Aldrich-reimburse mileage	15.21
Figura Law	240.00
Glen Lake Electric	<u>3925.00</u>
Total Bills paid post-audit between Nov and Dec Meetings	\$7876.63

December Bills:

Bills Paid by Weldon Township—December 13, 2022

EFPTS23 IRS 941 Tax. 4 rd qtr	877.82
Board Bills	3600.00
Assessor	1572.00
Julie Lonn	50.00
VISA	369.24
Cherryland Electric	43.39
Pioneer Press	96.75
Blarney Castle	252.91
ElectionSource	900.00
ATI Consulting	72.00
Benzie County Clerk	316.63
Acentek	222.12
Apex Software	235.00
Robert Aldrich	50.00
Carrie Aldrich	50.00
AFLAC	321.43
Craig Meredith DUP/ZA	400.00
Fran Griffin-reimburse	104.66
BOR Pay	70.00

TOTAL PAYMENT AMOUNT FOR: December 13, 2022 \$ 9603.95

R. Hitesman made the motion to pay the bills. S. Meredith seconded. All ayes.

CORRESPONDENCE: BVDL Board Minutes, Networks Northwest newsletter Nov and Dec, Housing North newsletter Nov/Dec, SEEDS newsletter, FOIA requests, MTA short-term rentals bill 4722 communication, Benzie County Road Comm Proposed Road Projects and meeting dates, Benzie County Road Comm Financial Summary for 2022.

PUBLIC COMMENTS: S. Meredith asked why Colfax Township has several roads on the BCRC list of projects and Weldon Township has none. Discussion.

ADJOURNMENT: F. Griffin made the motion to adjourn. S. Williams seconded. All ayes.

Meeting adjourned at 8:08PM

**Respectfully submitted:
Fran Griffin
Weldon Township Clerk**

Regular Meeting of the Crystal Lake Township Board

1651 Frankfort Highway, Frankfort MI 49635

December 20, 2022

Meeting was called to order by Supervisor Amy Ferris at 7:00 p.m.

Pledge of Allegiance was recited.

Roll Call: Nielsen, Popp, Northway, Ferris, and VanMeter were present, constituting a quorum.

Agenda:

- Ferris moved to accept the agenda (12.20.22) as amended:
 - Below Financials add the clerk's FOIA request update
 - Under Unfinished Business add Capital Improvements and Mileage Reimbursement

Northway supported. All ayes. Agenda accepted as amended.

Conflicts of Interest: There were no conflicts of interest declared.

Minutes:

- November 15, 2022, Regular Board Meeting

Ferris moved to accept the minutes of the November 15, 2022 Regular Board Meeting as presented. Popp supported. All ayes. Minutes accepted.

Correspondence:

- Correspondence was shared from Race Director Joel Gaff of Ironman 70.3 Michigan. He hoped to have the 2023 road use approval resolution on the agenda for the Board meeting in January or February. Northway and Ferris will work on the resolution and present it at the January 17, 2023 Board meeting.
- Correspondence was shared from Nancy Bennett, Director of the Grants and Community Services Division of the Michigan State Police, regarding the 2023 Asset Forfeiture Report. Every county, township, city, and village as well as every state of Michigan department is required to file a report online, even if there are no forfeitures to report. Ferris will contact the County for further information on submission of this report.

County Commissioner Andrew Miller's Report: Commissioner was not in attendance. No report.

- Guest Speaker Rebecca Hubers, Emergency Management Coordinator of Benzie County, presented the draft of the Benzie County Natural Hazard Mitigation Strategies. She asked the Township Board to peruse areas of concern within our jurisdiction as well as the county, verifying the information applies to our township. Any objections from the Board members to items listed will be shared at the January 2023 meeting. Rebecca will follow up with an email in about a month, so we can share our corrections/objections.
- Rebecca also informed the Board the county is working with state officials, Rep. Roth and Senator Bumstead, to acquire funding for an 800mhz radio tower to be placed in Frankfort. The location was determined based on topography of the area and the need for improvement and efficiency of communication.

Public Comment: There were no public comments.

Financials:

- Discussion was held regarding the maintenance expense of the cemeteries. Nielsen felt we should restrict burials to CLT, taxpaying residents as the maintenance costs to the township will continue to grow. Ferris felt we provide a service to our local community and shared that non-residents do pay a premium.
- Popp moved the warrant report be approved for payment, as amended, which reflected the addition of two invoices from the sexton, \$2,331.36 and \$9,325.00. The unconfirmed amount for sexton services of \$7,750.00 included in the report was changed to the new figure of \$11,730.67. VanMeter supported. Roll was called. All ayes. Warrant report was approved.
- Popp shared the financial reports and asked for questions. There were none.

Clerk's Report

- VanMeter updated the Board regarding an election FOIA request. Currently, the state is fulfilling partial recount petitions filed on Proposal 2 and Proposal 3. She will be unable to respond to the FOIA request until the state has certified the election.

Committee Reports

Airport:

- Popp shared the Airport Reports. There was no discussion.

Assessing:

- Ferris shared with the Board the Assessing Report from Jill Brown, which highlighted CLT assessing items as well as the State of Michigan's 2023 Procedural Changes Bulletin.

Ferris moved to accept the March 17, 2020 resignation of Tom Kucera from the Board of Review and accept Bruce Walton, former alternate, as a permanent member. Nielsen supported. Roll was called. All ayes. Motion carried.

Ferris moved, commencing April 1, 2020, that Crystal Lake Township shall in perpetuity automatically adopt the annually updated and published Federal Poverty Guidelines for setting minimum income figures when considering a poverty exemption, or until that time the CLT Board deems otherwise. Northway supported. Roll was called. All ayes. Motion carried.

Ferris moved to appoint Elaine Walton as an alternate to the Board of Review. Northway supported. Roll was called. All ayes. Motion carried.

Ferris shared an email from Tom Kucera and discussed the issue regarding the public beach near the Mollineaux Road area. Nielsen would like to have a monthly update from the attorney on this issue. VanMeter needed clarification of the clerk's role in researching the ordinances. Ferris will discuss further with Kucera.

Enforcement Update:

- There are continued complaints regarding blight issues at the Jaworski, Rommell, and Robotham properties. Fire Chief Cederholm shared that EMS will only approach the Rommell property with law enforcement there first. Discussion on how to proceed as fines are ineffective. Planning Commission Chairman Greg Wright noted the Township does not have a blight ordinance just a junk ordinance.

Buildings and Grounds:

- Brian Halliday shared with the Board the following proposed projects for 2023:
 - New highway signage at cemeteries
 - Network security – need to provide laptops for Board members, CLT use only. Also suggested CLT get its own domain server.
 - Key lock box was purchased for all keys within township
 - Remove and fill old well pit
 - Replace entry doors—paint new doors and wood trim prior to installation
 - Create storage area and an absentee voter counting board room in basement
 - Have a forester, possibly from MSU Extension Service, evaluate trees in North Cemetery
 - Add two, pole-mounted lights on the perimeter of the township hall parking lot
 - Interpretive signage at cemetery

Cemeteries:

- Ferris shared the proposed amendments to the sexton's burial fee schedule for 2023. Popp hoped when the current sexton contract expires at the end of 2023, the Township can solicit for a new sexton. Ferris will provide a spreadsheet with new fees, so numbers may be entered into QuickBooks.

Ferris moved to accept the adjusted fee schedule for the sexton. Northway supported. Roll was called. All ayes. Motion carried.

Fire and First Responders:

- Chief Cederholm shared the current activities of the fire department. The first responders have been doing ladder training. In January, they will do cold water training. Cederholm also shared figures from the run report. As of today, there have been a total of 802 runs compared to 578 runs the entire year 2021.

Roads:

- Nielsen shared the financial report from the Benzie County Road Commission whose fiscal year ended September 30, 2022.
- Nielsen would like a letter on the Crystal Lake Township letterhead sent to the Road Commission listing the roads we would like crack-sealed in 2023. Popp will prepare this.
- Nielsen feels discussion should be held regarding Township roads that will need repair or be replaced in the future. May need to revisit the road millage with possibility of it being included on the November 2024 ballot.

Unfinished Business:

- Ferris moved that beginning January 1, 2023, mileage reimbursement rate will be increased to 63 cents per mile driven. Popp supported. Roll was called. All ayes. Motion carried.
- Ferris explained and shared with the Board the proposed wages for 2023-2024.
- Ferris presented the draft budget for 2023-2024. She indicated the positions of Building and Grounds and IT were combined as Support Staff. The new line item was included in the clerk's section of the budget under office assistant. Popp suggested a better location for the line item would be General Government Control, Personnel Services. Ferris will include the 2023-2024 proposed budget on the January 2023 agenda. She suggested holding the special budget hearing prior to the February Board meeting at 6:30 p.m. or 6:45 p.m. Final additions/corrections will be made at the March Board meeting prior to passage of the 2023-2024 budget.
- Popp moved to adopt the 2023 Regular Board Meeting schedule and the official schedule of holidays. VanMeter supported. Roll was called. All ayes. Motion carried.

New Business: There was no new business.

Public Comments: There were no public comments.

Board Comments: There were no Board comments.

Meeting adjourned at 8:30 p.m.

Judy VanMeter, Clerk, and Sondra Halliday, Deputy Clerk, reporting.

PLATTE TOWNSHIP

BENZIE COUNTY

11935 FOWLER ROAD

HONOR, MICHIGAN 49640

PLATTE TOWNSHIP QUARTERLY METING

January 3, 2023 7 P.M.

2022-2023

3rd quarter Oct Nov Dec

The meeting was called to order by Supervisor Solem at 7:00 p.m., followed by the Pledge of Allegiance.

BOARD PRESENT: Supervisor Solem, Trustee Bollenberg, Treasurer Gottschalk, Trustee Haswell and Clerk Michalak

PUBLIC PRESENT: 10 residents; County Commissioner- Art Jeannot, Benzie County Emergency Manager- Rebecca Hubers, - Toby Dunne- Dispatch Manager Benzie Bus.

MINUTES

A MOTION by Haswell, support by Michalak to accept minutes from 2nd quarter; motion carried all ayes.

PUBLIC INPUT

Toby Dunne- Benzie Bus update. In 2022 over 23,000 work transport rides, 22,000 school rides, 40,000 trips for seniors, and 5000 health transport rides were provided. The fare to ride is \$3.00 one way, \$1.50 for seniors, and \$15.00 for a health transport.

Rebecca Hubers- Benzie Emergency Manager gave an update of the Natural Hazard Mitigation plan. A new Emergency communication tower will be installed near Frankfort to serve the western area of the County that currently has poor reception.

Art Jeannot gave his quarterly report to all present. Highlights include additional funding to provide 24-hour road patrol, hiring of a school resource officer, and a central dispatch director. Meeting dates for the Benzie Board of Commissioners are 2nd and 4th Tuesday of each month at 9 am and 1:30 pm. A copy of his report is available on file at the hall.

COMMUNICATIONS-

1. Haz Mat- The City of Traverse City provides Hazardous Material clean up to Platte Township at an annual fee of \$395.00
2. Solar Outreach Supervisor reports that consumers energy is interested in setting up solar farms and has expressed interest within Platte Township.

REPORTS-

1. **Well and Septic-** none
2. **Fire report-** none
3. **WBJPC-** Trustee Bollenberg gave an update of the planning commission activities. Next meeting is Thursday, January 5 at 6pm.

Road Commission-

Supervisor reports that the next meeting of the local road committee is scheduled for January 11 at the Road commission office. Valley Road to the Leelanau County line is scheduled for improvement in 2023.

OLD BUSINESS-

1. Charter Communications- Supervisor reports the quarterly franchise fee was received in the amount of \$467.00.
2. The Survey of the Township Hall property has been completed.
3. The Parking lot is scheduled for Spring, 2023. We should have a public address system in place for the Annual meeting in March.

NEW BUSINESS

1. - Salary consideration- The board discussed the current salaries and all agreed to propose increases to all board members. A **MOTION** by Haswell, **SUPPORT** by

Bollenberg to raise each members' salary by \$1000 for fiscal year 2023-2024; motion carried, all ayes roll call vote. The proposed increases will be presented to the residents for approval at the annual meeting on March 18, 2023.

2. The Ironman 2023 race will be held on September 17, 2023 using the same course as 2022. A **MOTION** by Michalak, **SUPPORT** by Solem to approve the #2023-1 performance resolution as agreed by all Board members, all ayes roll call vote.
3. Budget amendment- The clerk explained that there are overages in 4 budget departments and proposed amending the 2022-2023 budget to comply with state mandates. The amendments are as follows: Move \$4000 from the cleanup day funds to the Board line, increase Elections by \$1000, increase roads by \$2100, and increase the Morgan School by \$500. A **MOTION** by Michalak, **SUPPORT** by Gottschalk to amend the budget as stated and increase the budget by \$3600; Motion carried, all ayes voice vote.
4. 2023 calendar and meeting times- A **MOTION** by Michalak, **SUPPORT** by Solem to accept the meeting dates as presented and to change meeting times to 6pm for all regular meetings, and change the Annual meeting time to 12 noon; motion carried, all ayes, voice vote.

BOARD ROUNDTABLE - Bollenberg inquired about the trustees separate e mail address. Clerk has the g mail addresses and will send. Supervisor states we could use ARPA funds to replace the furnace system.

CLERK'S OPERATING STATEMENT

A **motion** by Haswell, **support** by Gottschalk to accept the clerk's operating statement as presented. Voice vote, motion carried, all ayes.

TREASURER'S OPERATING STATEMENT

A **motion** by Haswell, **support** by Bollenberg to accept the Treasurer's operating statement as presented. Voice vote, motion carried, all ayes.

APPROVAL OF BILLS

A **motion** by Solem, **support** by Haswell to approve the bills for the 3rd quarter as presented. Voice vote, motion carried, all ayes.

Board Roundtable- The members discussed the need to lower the hall's energy consumption by adding insulation, replacement windows, and an economic heat system.

Motion to adjourn by Trustee Haswell, support by Bollenberg

All ayes, motion carried. Meeting adjourned at 8:47 pm

*Respectfully submitted by:

Alison Michalak, clerk

LAKE TOWNSHIP
MONTHLY MEETING
January 5, 2023

Meeting: meeting called to order at 7:00 PM

The Pledge of Allegiance: recited by all.

Roll Call: Present: Sally Casey, Kyle Orr, Maryanne Goodman and Anna Grobe.

Select a moderator for the meeting: Motion by Maryanne Goodman with support by Sally Casey to nominate Anna Grobe. Ayes; all. Nays; none.

Minutes: December 1, 2022 Township Board meeting minutes approved as presented.

Financial Reports: General Fund presented by Maryanne Goodman. **Motion by Maryanne Goodman, seconded by Sally Casey to approve the general fund report as read. Roll call vote: Ayes; Anna Grobe, Sally Casey, Maryanne Goodman and Kyle Orr. Nays; None.**

Fire Fund presented by Maryanne Goodman. **Motion by Maryanne Goodman, seconded by Kyle Orr to approve the fire fund report as read. Roll call vote: Ayes; Maryanne Goodman, Sally Casey, Kyle Orr and Anna Grobe. Nays; None.**

Budget Amendment: None

Payment of Township Accounts: Request for approval of General Fund checks #9083 through #9105 in the amount of \$16,580.34 for the purpose of paying Township accounts, a debit card payment of \$179.90 for the purchase of salt for the parking lot and an EFPTS payment of \$1,785.92. **Motion by Sally Casey, seconded by Kyle Orr, to approve the payment of Township accounts as presented. Roll call vote: Ayes; Kyle Orr and Anna Grobe, Sally Casey and Maryanne Goodman. Nays; None.**

Request for approval of Fire Fund checks #1506 through #1507 in the amount of \$267.21. **Motion by Kyle Orr, seconded by Sally Casey to approve the payment of Fire Fund checks as presented. Roll call vote: Ayes; Anna Grobe, Sally Casey, Maryanne Goodman and Kyle Orr. Nays; None.**

Additional Agenda items: None

Public comment on Agenda: None

Guests:

Rebecca Hubers, Emergency Management. Gave an overview of the how data was collected for the draft Natural Hazard Mitigation Strategies from the community.

Mike Cerderholm gave an overview of the calls from the last year. A good portion of the calls were for slips and falls. Rebecca commented that utilizing SMART 911 is a useful tool for the public to sign up for. This would give 911 a way to reach out to family members and possibly neighbors in the event of an emergency.

Correspondence:

Incoming:

1. Newsletter from Benzie Senior Resources.
2. Email from Joel Gaff, Ironman requesting to be on the February agenda.
3. Three letters of interest for the open Supervisor position.
4. Newsletter from John Roth.
5. Frankfort Fire Dept. Report.
6. Benzie County Road Commission year-end report.

Outgoing:

1. Thank you letter sent to Riverside Canoe for their donation and matching funds for the Township Park

New Business:

1. Introduction of the new Deputy Clerk, Penny Georgevich.
2. Schedule the Budget workshop. Workshop will be held on Wednesday January 18 at 10:00.
3. Discussion of the scheduling a special meeting for interviews for the open Supervisor position. Meeting is scheduled for Thursday January 26 at 6:00.
4. Authorization of individuals who will be allowed to sign checks for all Township accounts, as well as the Michigan Class accounts. **Motion by Maryanne Goodman, seconded by Sally Casey to authorize the following individuals to be signers on all Township accounts and the Michigan Class accounts: Madeline M. Bitzan-Powell, Maryanne T. Goodman, Anna Grobe and Penny Georgevich. Ayes; Kyle Orr, Sally Casey, Anna Grobe and Maryanne Goodman. Nays; none.**

Old Business:

1. Distribution of ARPA funds. Discussion on how we would like to have funds directed. We would need to report on how we commit our funds by 12-31-2024 and we would need to spend the funds by 12-31-26. Possibly advertise for petitions from organizations on contributions. Also, possibility of combining funds with the County to allow for more matching funds from the State for projects. Both Rebecca and Mike mentioned that the County needs a new tower for the radios that are used by emergency services. Currently a repeater (internet based) is used and coverage can be spotty during the summer with increased internet use and because of the topography of the county.

County Updates:

Commissioner Art Jeannot submitted his written report from the County Commission which covered Public Safety, Housing, Human Resources, Economic Development and Drain Commission. Commissioner Karen Cunningham, newly elected County Commissioner introduced herself and looks forward to being a part of the Township.

Township Departments:

Planning Commission: Special meeting scheduled for January 19 at 6:30 to meet Josh Mills and continue discussion on the Master Plan and other issues that are presented.

Zoning Administrator: Written report submitted on zoning activities for December, 2022.

Assessor: Gunnar submitted a written report, he has made physical inspection on properties with finalized permits, open permits will be inspected in spring of 2023.

Park Committee: No report

Supervisor: No report

Public Comment: Clean up days have been scheduled for June 17 and August 19. It was mentioned that the DNR has a program that will recycle fiberglass boats.

13 in Attendance

Meeting adjourned at 8:21 PM

Anna Grobe, Clerk

Village of Beulah
7228 Commercial Street, PO Box 326
Beulah, MI 49617
231-882-4451

The Village of Beulah met in a regular meeting on Tuesday, January 10, 2023, at 7:00 p.m. by President Jeri VanDePerre at the Village Hall 7228 Commercial Street, Beulah, Michigan.

Present: Trustees Browning, Downs, Heniser, Hook and VanDePerre

Excused: Trustee Loll

Staff Present: Superintendent Cypert, Treasurer Lumm, Clerk Olney

Public Present: Commissioner Rhonda Nye, Vicki Carpenter, Keith and Marsha Behm, Jessica Carland, Theresa MacGirr, Brian Edinger, Rebecca Hubers

Conflict of Interest by any council member: None

Agenda: Motion by Downs, seconded by Browning, to approve the agenda as amended, adding Zoning Administrator Contract; move EGLE Violation Notice to W/S report from Superintendent Report and add New Business #2 Fireworks Contract. Ayes: Browning, Downs, Heniser, Hook and VanDePerre Nays: None Motion carried.

Minutes: Motion by Hook, seconded by Downs, to approve the budget minutes of December 13, 2022 as presented. Ayes: Browning, Downs, Heniser, Hook and VanDePerre Nays: None Exc: Loll Motion carried.

Motion by Browning, seconded by Heniser, to approve the regular meeting minutes of December 13, 2022 as presented. Ayes: Browning, Downs, Heniser, Hook and VanDePerre Nays: None Exc: Loll Motion carried.

Bills:

Motion by Downs, seconded by Browning, to approve payment of the bills for December 2022 as presented. Roll call. Ayes: Browning, Downs, Heniser, Hook and VanDePerre Nays: None Exc: Loll Motion carried.

Public Comment on Agenda Items – None

Communication to Council:

Commissioner Nye reported that Bob Roelofs was elected Chair and she was elected Vice Chair; held their regular meeting today; discussion was held regarding evening meetings – decided to use You Tube live for the commissioner meetings; Goal Setting will be the discussion at their next meeting.

ZA Carland and Tim Cypher, proposed new ZA:

Motion by Hook, seconded by Browning, to accept the contract for Zoning Administration and Planning Services as presented.

Mr. Cypher introduced himself and gave his experience.

Roll call. Ayes: Browning, downs, Heniser, Hook and VanDePerre Nays: None Exc: Loll Motion carried. Thank you addressed to Coury for his service as Zoning Administrator; he will stay on to assist Tim in getting acclimated.

Rebecca Hubers, Emergency Management Coordinator, provided the Benzie County Draft Natural Hazard Mitigation Strategies Plan; asks the council to review the Affected Jurisdictions column where it relates to

Village of Beulah and let her know if those are still proper and should remain as stated; asks for response to the information before the end of February, 2023.

Jessica Carland, Benzie Transportation Authority 2022 Annual Report, she reported that they have made some staffing changes – she is now the new Executive Director; have new non-emergency health rides; text to ride; expanding the health ride; 3rd party scheduling software. Thank you to all for your continued support.

Treasurer's Report – Margaret Lumm reported that Quarterly transfers have been completed for Q4; created a new library account and NPS grant match funds; working on fiscal year end reports.

Motion by Heniser, seconded by Downs, to accept the Treasurer's report for December 2022 as presented. Roll call. Ayes: Browning, Downs, Heniser, Hook, Loll and VanDePerre Nays: None Motion carried.

Committee Reports:

Trustee : Water/Sewer – President VanDePerre reported on the Violation Notice dated 12/22/2022; these are items that need to be worked on.

Trustee Hook: Law/Finance – No Report.

Trustee Browning: Buildings/Grounds – next planning commission meeting will be Tuesday, January 17 at 4:00 p.m. at the Village Hall; will talk with Dan about having the spoils hauled away.

Trustee Heniser: Parks & Recreation – presented the 2023 Dock Rules & Regulations – added #13 that authorizes the release of contact number to the dock mate; rate increase is 10%; waiting on confirmation on the cancellation of the cable at the RV park; spoke regarding Cherry Capital Cycle Bike grants – thing about what we could request.

Motion by Heniser, seconded by Downs, to approve and adopt the 2023 Dock Rules & Regulations for the Village of Beulah as amended, with a 10% increase in fee. Roll call. Ayes: Browning, Downs, Heniser, Hook and VanDePerre Nays: None Exc: Loll Motion carried.

Trustee Loll: Streets & Sidewalks – Excused

Trustee Downs: Equipment – reported

Superintendent Cypert: reported that the snowstorm kicked our butts; we will clean-up yards in the Spring; Brodie ~~passed~~ received his permit to get his CDL; Jeff received his sewer license, so he is in charge of the lagoons; well 4 has been repaired; still on schedule to get parts for the new truck; next week we will haul large snow piles; expect the generator for the lift station in February.

Street Sweeper: Has a quote for street sweeper from Bell Equipment for one month, and would propose to split with Village of Benzonia and each use for two weeks; waiting for a response from them. There is also a quote for one week rental starting May 1, 2023; will bring back to see if Benzonia would like to partner, if not, then would request the one-week rental.

Mower: Presents quote from Gillison's for tractor, no down payment needed; just need a signature.

Motion by Downs, seconded by Browning, to accept the quote from Gillison's Variety in the amount of \$86,197.52 for mower and sidearm mower, authorizing the President to sign. Roll call. Ayes: Browning, Downs, Heniser, Hook and VanDePerre Nays: None Exc: Loll Motion carried.

Old Business: None

New Business:

1. Clem request for RV Park deposit reimbursement: Motion by Heniser, seconded by Browning, to approve reimbursement of \$1,000 to Gary and Sonia Clem for cancellation of the RV Park reservation for the 2023 season. Roll call. Ayes: Browning, Downs, Heniser, Hook and VanDePerre Nays: None Exc: Loll Motion carried.
2. Fireworks Permit: Motion by Browning, seconded by Downs, to approve the permit for fireworks for the 2023 Winter Fest as presented. Ayes: Browning, Downs, Heniser, Hook and VanDePerre Nays: None Exc: Loll Motion carried.

8:00 p.m. Public Input

Theresa MacGirr, 127 Benzie Blvd, commented regarding the vehicle towing; stated she will take this to court; stated there are no signs to say what parking is; very disappointed, especially with no snow.

Brian Edinger, Marshall Road, stated that you need signs regarding No Parking inside the Village.

Vicki Carpenter, Crystal Avenue, stated regarding Winter Fest, that the DNR requires 5 inches of ice for the fireworks so they are looking at other options for a place to hold them; they will have a chili cook-off contest; BTA has supported us with the Haunted Bus and other items as well.

Marcia Behm, 112 N Benzie Blvd, stated that you need to use a microphone system, it is very hard to hear.

8:08 p.m. Public Input Closed

Next meeting: February 14, 2023 at 7:00 p.m. at the Village Hall.

Motion by Downs, seconded by Heniser, to adjourn at 8:09 p.m. Ayes: Browning, Downs, Heniser, Hook and VanDePerre Nays: None Exc: Loll Motion carried.

Pam Sudney, Office Manager
For Dawn Olney, Village Clerk

Lake Ann Village Council
Minutes from Regular Meeting on
January 10, 2023

I. Call to Order

President Hawkins calls the meeting to order at 6:00pm in the Almira Township Hall 19639 Maple Street, Lake Ann, MI 49650.

II. Pledge of Allegiance

III. Roll Call

Present: C. Grant-Wagner, T. Clous, D. Hawkins, MG Rineer, N. Beckwith and K. Belton. V. Edwards excused.

IV. President's Remarks: Thank you to all who are in attendance. Thank you to C. Grant-Wagner, MG Rineer and T. Clous for their help over the last month. We will be paying for the Road Paving Project that the Road Commission allowed us to defer payment of this coming fiscal year. Winter fest will not be happening this year. L. Florip should be presenting on Short Term Rental policies at the February Meeting. There is an MML Training on January 21 for new council members to attend from 8:30 until noon. Will be seeking permission to approach the United Methodist Church about trash dumpster placement. He was contacted by Rotary Charities to continue attending their Virtual meetings on behalf of the Village. The first Community Coffee will be tomorrow morning at 7:30 at the Red Door Coffee shop.

V. Additions/Changes to Agenda

Add New Business D. February 14, 2023 ARPA Public Hearing E. Park Christmas light schedule F. Approval of MML Training Fee G. Appoint Council Member to the Planning Commission H. June 22, 2023 5K Run I. Set tree replacement schedule J. Approach United Methodist Church about dumpster.

VI. Approval of Agenda

C. Grant-Wagner moves to approve the agenda as amended. N. Beckwith seconds. All ayes; motion passed. V. Edwards excused.

VII. Approval of Consent Agenda

C. Grant-Wagner moves to approve the consent agenda. K. Belton seconds. Upon Roll Call Vote: K. Belton-aye, N. Beckwith-aye, C. Grant-Wagner-aye, D. Hawkins-aye and V. Edwards- excused; motions passed.

VIII. Accept the Treasurers Report

C. Grant-Wagner moves to approve the consent agenda. K. Belton seconds. C. Grant-Wagner-aye, N. Beckwith-aye, K. Belton-aye, D. Hawkins-aye and V. Edwards-excused; motion passed.

IX. Correspondence/Announcements: None

X. Guest Presentations

A. County Commissioner Bob Roelofs:

Presented list of the County Commissioner Committee Appointments. Benzie County Road Commission and Benzie County EMS were fully staffed during the snow event.

B. County Emergency Manager Rebecca Hubers:

Natural Hazardous Mitigation Strategy Presented.

C. Benzie Bus John Morse:

Presented the Benzie Bus Annual Report for 2022

XI. Citizens Participation: None

XII. Unfinished Business:

A. Discuss Village 2023 Goals

2023 Goals were presented and discussed. G. Grant-Wagner moves to adopt the list of goals. K. Belton seconds. All ayes; motion passed. V. Edwards excused.

XIII. New Business:

A. Presentation of the Fiscal Year 2023-2024 Budget

Draft budget was presented.

B. Discuss ARPA Funds

See New Business D.

C. Discuss Status of Ordinance

See New Business J.

D. February 14, 2023 ARPA Public Hearing

C. Grant-Wagner moves to hold a Public Hearing on ARPA Funds at the February 14, 2023 Council Meeting. N. Beckwith seconds. All ayes; motion passed. V. Edwards excused.

E. Park Christmas Light Schedule

C. Grant-Wagner moves to extend the white Christmas light on until the end of March. K. Belton seconds. All ayes; motion passed. V. Edwards excused.

F. Approval of MML Training Fee

This was completed with the approval of the Consent Agenda (Payment of Bills).

G. Appoint Council Member to Planning Commission

D. Hawkins moves to appoint K. Belton as the Village Council Planning Commission Representative. K. Belton seconds. All ayes; motion passed. V. Edwards excused.

H. June 22, 2023 5K Run

D. Hawkins moves to move forward with the organization and permits of the event on Thursday, June 22, 2023 at 6:30pm for a 5K run with a kid's quarter (1/4) mile fun run. N. Beckwith seconds. All ayes; motion passed. V. Edwards excused.

I. Set Tree Replacement Schedule

D. Hawkins moves to set aside a minimum of \$1500.00 for tree trimming/replacement from Metro Funds. C. Grant-Wager seconds. All ayes; motion passed. V. Edwards excused.

J. Approach United Methodist Church about dumpster

C. Grant-Wagner moves to allow D. Hawkins to approach United Methodist Church about possible dumpster location solution. N. Beckwith seconds. All ayes; motion passed. V. Edwards excused.

XIV. Citizen Participation: J. Morse recommended that the Council make sure the organizer of the 5K is someone who has organized this type of event before. He suggested Asa Kelly the local school Cross Country Coach. K. Marks welcomes back D. Hawkins to the Council and welcomes Nick and Kyle. Thanked the Council for the draft budget increases in the Park budget. Also sought guidance on the trash receptacle project. D. Hawkins moves to authorize K. Marks to order the trash receptacles. K. Belton seconds. All ayes; motion passed. V. Edwards excused.

XV. Council Comments: None

XVI. Adjournment:

C. Grant-Wagner moves to adjourn the meeting at 7:38pm. N. Beckwith seconds. All ayes; motion passed. V. Edwards excused.

DRAFT

Colfax Township Meeting

January 11, 2023

Colfax Township Hall

Meeting Called to Order: at 19:01 by Supervisor Seguin.

Pledge of Allegiance

Attendance: Present: Trustee Besey, Supervisor Seguin, Clerk Mosher, Treasurer Hoseit, Trustee Greene
Absent: None

Agenda: Mosher motions to approve agenda with addition of 11C: Ordinance Amendment re: Residential in Commercial Zoning Areas. Seguin seconds. No opposition, motion carries.

Public Comment: None

Guests: Rebecca Hubers, Benzie County Emergency Management Coordinator: written and verbal presentation provided. Requested Board to review Benzie County Natural Hazard Mitigation Strategy and provide input, welcomes communication by email, phone, etc.

County Commissioner's Report: Absent

Meeting Minutes: Motion by Seguin with support by Hoseit to approve December 14, 2022 minutes with correction of changing "joint planning" to "zoning." No opposition, motion carries.

Treasurer's Report: Motion to approve December's Treasurer's Report by Greene seconded by Seguin, no opposition, motion carries. Mandatory say at the hall is Feb 28th 9a-5p, will be at the hall on Feb 14 as well.

Campground Report: Closed. Worl's Bridge to be replaced in 2024 or 2025 with traffic to be rerouted to enter off Cinder Road.

Clerk's Report: Payroll not printed, will be printed after meeting with approval.

Supervisor's Report: None.

Blight Report: No action.

Zoning Administrator Report: Verbal and written report provided.

Joint Planning Commission Update: Verbal and written report provided.

Library: Written Report available for review, no action.

Unfinished Business:

A). Audit 2020/2021: Completed, budget meets requirements however many areas with room for improvement.

B). BOR training: Larry Sevegney, Sandy Sevegney and Liz Kalis. Mosher motions to appoint all three to serve on BOR, Seguin seconds. Roll: Ayes: Seguin, Besey, Greene, Mosher, Hoseit. Nays: none.

C). Zoning Ordinance Amendment: Greene requests rescind of prior motion as this has not been published yet. Motion to rescind by Mosher, Greene seconds. Motion by Mosher second by Greene to approve amendment, with Greene to publish, allowing amendment to go into affect. Roll Call: Ayes: Mosher, Besey, Hoseit, Greene, Seguin. Nays: None. Motion Carries.

New Business:

A). Budget Review: Reviewed by Board. No action necessary.

B). Pay Pending Bills: Bills reviewed. Motion to pay all bills as presented by Greene, to include payroll, second by Hoseit. No opposition, motion carries.

C). MTA's Expo at GT Resort: Upcoming educational opportunities for information only.

Correspondence: Mosher asks Greene about AirBNB in Pelon's old house, Greene to look into.

Greene states there is a Citizen Planner program available for planning commission members and there is a reimbursement program available. Greene to add June 10th Clean Up Day to website.

Meeting adjourned: Motion by Seguin, second by Besey to adjourn at 1957. No opposition, motion carries.

Next meeting: Wednesday, February 8, 2023 - 7:00pm

Respectfully Submitted,

DeAnn Mosher, Clerk
Colfax Township

DRAFT

Village of Thompsonville Regular Council Meeting January 16, 2023

Meeting was called to order at 7:00pm by President Eugene Allen-thanked everyone for coming and for allowing us to postpone the meeting from last week.

Pledge to flag performed.

Members Present: Fran Griffin, Deidra Pomranky, Eugene Allen, Flo Smith, Brent Johnson, Chelsea Willis, Mary Wixson.

Members Absent: Dennis Smith & vacant seat

Guests: Tim Windrim, Jim Franke, Mike MacGirr, Ken Pasanski, Gary Sauer, Craig Meredith, Shelley Greene, Rebecca Hubers, Shanee Williams.

Minutes: Flo made a motion to approve. Chelsea 2nd. Motion carried.

Agenda: Chelsea made a motion to approve. Flo 2nd. Motion carried.

Rebecca Hubers: Emergency Manager Coordinator for Benzie County-they are rewriting the Natural Hazard Mitigation Plan. She has met with Weldon and Colfax previously. They are generating a list of strategies. If there is anything on list that doesn't apply anymore let her know by Feb or if what she gave us looks good let her know that as well by Feb.

Gary Sauer: gave update on the meetings he attended for the month. Crystal Mountain wants to build housing for their workers on the property they own by the airport. They are working on getting 24/7 road patrol. Gary updated on the roads the Road Commission is going to work on this year. Graceland wants to build 60 houses and partner with Habitat for Humanity.

Treasurer's Report: Flo made a motion to approve. Brent 2nd. Motion carried.

Ambulance: they submitted 2 more requests for \$5,200 for the grant. That leaves us \$1,400 of grant money to use. Medicare is changing their reporting system. They want to know every penny we spend and where we send the money too. Jim & Mary will get together on this.

Water: project-engineers are working on design. Aiming for an April bidding-it's all depending upon the quiet title work. We are in violation again for the disinfection byproduct. We aren't low enough yet to bring our annual average down. We will be sending out another letter. It will be worded differently this time. It was suggested that we get our wells cleaned to see if the byproducts are coming from our wells or the aquaphor. If it still doesn't pass after cleaning the wells then it would be our aquaphor. We received 2 bids for the cleaning. Raymer-\$36,500 and Peerless Midwest-\$44,120. We are also going to continue flushing hydrants. If it ends up being our aquaphor, we won't be able to put our new wells in that same aquaphor. Raymer's bid is for all 3 wells and we only need 2 done so it is actually \$25,000. Flo made a motion to accept Raymer's bid to clean the 2 wells for \$25,000. Brent 2nd. Motion carried.

Community Center: Mary & Chelsea would like to finish out the cleaning and rentals for the month of Jan and give the money to Dena's family. Fran made a motion to approve the proposal. Flo 2nd. Motion carried. Eugene has someone who might be interested in taking it on.

Fire: run volume was down some last year.

Maintenance: Mary is working with Elaine on getting Copemish paid for their plowing. Tim bought a new shelving unit that he can take pieces from and use to fix the sander on the truck. It only cost \$100 instead of \$700 for the actual part.

Parks: Recreation Plan-hopefully they will come to our meeting next month. Matt Cook is working on it.

Personnel: need another council member. Eugene suggested we run an ad in the paper and split the dpw and the water apart. Run an ad for 2 weeks.

Zoning: mini storage units are going on Corey Brown's property on Industrial Drive

JPC: Ashely Lindstrom received approval for ramp & a stoop. Greg Kraft is president, Eric Petit is vice president and Shelley is secretary of JPC. Need to get together the wish list of projects over \$2,500. Brent to get form from Shelley, add his wishes, give form to the rest of the council for their input and then give to Shelley at the February meeting. Financials-Mary mentioned that per both auditors Colfax is supposed to be the ones handling the finances for the JPC. Mary is willing to hand them over to Colfax. Flo Smith made a motion to adopt Ordinance No. 01162023-an amendment to the zoning ordinance. Brent 2nd. Roll call—Fran Griffin, Flo Smith, Brent Johnson, Chelsea Willis all voted yes. No votes against. Motion carried. It will be effective 8 days after it is published unless someone files a petition against it. The ad will run next Weds.

Beautification: Eugene has someone with a design to replace the flower station on the corner of 669 and Thompson.

Clerks Report: Cherryland-rates are going up. DTE has submitted their application and they have approval from everyone that they needed to get approval from.

Budget: Chelsea made a motion to approve the amendments as presented. Fran 2nd. Motion carried.

Bills: Flo made a motion to pay the bills. Chelsea 2nd. Motion carried.

New Business: Budgets need to be to Mary by the end of February. We need to make a decision on the amount we will charge for water at next month's meeting.

Adjournment: Chelsea made a motion to adjourn. Brent 2nd. Motion carried. Meeting adjourned at 8:03 pm.

Respectfully Submitted,

Mary Wixson

Mary Wixson/Clerk

Minutes

Regular Meeting of the Elberta Village Council

401 First Street | ELBERTA, MI 49628

January 19, 2023 @ 7pm

Call to Order and Pledge: 7:00 pm

Roll Call: Jen Wilkins - PRESENT | Emily Votruba - PRESENT | Ken Holmes – PRESENT | Ryan Fiebing - ABSENT
(One council seat vacant)

Audience: Norma Corwin (Clerk/Treasurer), Teri Reisner (Deputy Clerk), Beth Roethler, Kari MacDonald, Mike Cederholm (Fire Chief), Rebecca Hubers, Cathy Anderson, Kristi Mills, and Ken Bonney (DPW Superintendent)

Minutes and Agenda Approval

- **Motion** by Holmes **to approve the January 10, 2023, Special Council Meeting Minutes.** Seconded by Votruba with change: line 30 in New Business 1 from "siting" to "citing." ALL AYES. **Motion Passed.**
- **Motion** by Votruba **to approve the January 19, 2023, Regular Meeting Agenda.** Seconded by Wilkins with the addition of section title "Correspondence." ALL AYES. **Motion Passed.**

Inquiry of Conflict on Agenda Items: None

Correspondence

- Rebecca Hubers, Emergency Manager – DRAFT Natural Hazard Mitigation Strategies Update. Hubers will send a follow-up email seeking input. Draft is available to view on County website.
- Jessica Carland, Benzie Bus – Year End Report
- Unemployment Insurance Agency Redetermination for former treasurer Mary Kalbach

Brief Public Comment on Agenda Items

- Cathy Anderson (Elberta resident) asked Council to add an agenda item in which newly reappointed trustee Ryan Fiebing and Council apologize for the fact that he/that position was not on the November ballot as is required of officials appointed to elected seats. Re: Agenda item 8: Wilkins's and anyone's access to the office outside open hours should be contingent on adoption of a PII (personally identifiable information) policy, and no one who is not bonded and insured should have access.
- Kari Macdonald Panther Parents (see Agenda 4). Macdonald described Panther Parents' work to support FEAS student activities and the Spring Fling fundraiser

Approval of Bills

- **Motion** by Votruba **to approve the Check Register in the amount of \$84,034.70** (includes December expenses; December meeting was canceled). Seconded by Wilkins.
ROLL CALL – Votruba AYE | Holmes AYE | Wilkins AYE. All AYES – Motion passed.

Financial Reports

- Rev/Exp sheet reviewed; no comments.

New Business

1. **Traffic Control Order #2023-01 Ironman 2023 Event**
Motion by Votruba **to approve and permit the Village President, DPW, and Clerk/Treasurer to sign and submit the 2023-01 Traffic Control Order for the September 17, 2023 Ironman Event to the MDOT Permit Gateway.** Seconded by Holmes.
ROLL CALL – Votruba – AYE | Holmes – AYE | Wilkins – AYE – ALL AYES. Motion passed.
2. **MDOT Request and Order to Close State Highway for Ironman 2023**
Motion by Votruba **to approve and permit the Village President to sign and submit the MDOT Request and Order to Close State Highway for the September 17, 2023 Ironman Event to the MDOT Permit Gateway.** Seconded by Holmes.
ROLL CALL – Votruba – AYE | Holmes – AYE | Wilkins – AYE. All AYES. Motion passed.

DRAFT

- 3. **Betsie Valley Trail Representative** – Per Gary Sauer, Betsie Valley Trail Management Council is made up of a representative from each community. Meetings are held on the 1st Tuesday of the month at 4:30 pm at the Government Center in Beulah. Meetings are April – October. Those interested should contact the office.
- 4. **Frankfort Elberta Area Schools (FEAS) Panther Parents Request to Rent the Life Saving Station at a Deeper Discounted Rate than the Resident Rental Discount**
Motion by Votruba **to table until February meeting pending more information.** Seconded by Wilkins. **All AYES. Motion passed.**
- 5. **General Fund, Major Street Fund and Local Street Fund Budget Amendments**
 - (a) **Motion** by Votruba **to approve the General Fund Budget Amendment as presented** (see attached). Seconded by Wilkins.
ROLL CALL – Votruba – AYE | Holmes – AYE | Wilkins – AYE. All AYES. Motion passed.
 - (b) **Motion** by Votruba **to approve the Major Streets Fund Budget Amendment as presented** (see attached). Seconded by Wilkins.
ROLL CALL – Votruba – AYE | Holmes – AYE | Wilkins – AYE. All AYES. Motion passed.
 - (c) **Motion** by Votruba **to approve the Local Streets Fund Budget Amendment as presented** (see attached). Seconded by Wilkins.
ROLL CALL – Votruba – AYE | Holmes – AYE | Wilkins – AYE. All AYES. Motion passed.
- 6. **BS&A Software Proposal**
Council discussed advantages of the accounting/billing software, used by Benzie County and most other local entities. **Motion** by Votruba **to approve the Village President to sign the BS&A software proposal for the total amount of \$51,925.00 to be spread over 3 fiscal years: first payment of \$17,280.00 due before the end of this fiscal utilizing ARPA funds. Second payment of \$7,780.00 due fiscal year 2024, and final payment of \$26,865 due fiscal year 2025. Funding will be sought through State Treasury.** Seconded by Wilkins.
ROLL CALL – Votruba – AYE | Holmes – AYE | Wilkins – AYE. All AYES. Motion passed.
- 7. **2022 Flex Hours Payment Request from Roberta Benedict**
Motion by Votruba **to table pending further communication from Roberta Benedict in writing.** Seconded by Wilkins. **All AYES. Motion passed.**
- 8. **Permission for President to Have Access to Village Office**
Motion by Votruba **to rescind Village President's temporary solo access to the office because it's no longer necessary.** Seconded by Wilkins. **All AYES. Motion passed.**
- 9. **2023 Pro Tempore and Committee Appointments Assigned** (see attached)

Reports to Council

- County Commissioner** – Sauer / Verbal Report
- Planning Commission** – Fiebing / Verbal Report Master Plan survey ready soon; responses due end of March
- Parks & Recreation Commission** – Wilkins / No Meeting until May
- DPW** – Bonney / Verbal Report, See Personnel Reports
- Clerk/Treasurer** – Corwin / Verbal Report
- LSS** – K. Mills / Verbal Report
- Zoning Administrator** – J. Mills / See Report
- BGFAC** – Wilkins & Votruba / See Report
- BLUA** – Wilkins & Holmes / Verbal Report
- Frankfort Fire and Rescue Report** – Cederholm / See Report & Verbal Update
- Personnel & Policy** – Holmes (DPW), Votruba (Office) / See Report
- Water/Sewer Committee** - Wilkins & Holmes / No Meeting

Extended General Public Comment

DRAFT

- Cathy Anderson: Because BS&A software is cloud-based, contract should include a monthly report on logins with IP addresses and devices listed; implement new policy that only Village-owned devices be used to access the software; use of a personal device to result in immediate termination and potential criminal prosecution. Alleged unspecified ethical concerns in the hiring of the deputy clerk; entire Village council and office staff should take an ethics class. Unauthorized background checks at the Village office are illegal.

Announcements

Public hearing for Fiscal Budget February 16, 2023, at 7:00 pm; a new trustee application rec'd from Barb Wirtz.

Adjournment: 8:30 pm by Jennifer Wilkins

Draft Minutes prepared and posted by
Teri Reisner, Deputy Clerk
Emily Votruba, Trustee

General Fund (101) Budget Amendment

January 19, 2023, Village of Elberta Regular Council Meeting

\$17,280 is needed in 101-265-92500 to cover the first payment on BS&A Software. The \$17,280 will come out of the remaining ARPA Funds in the Community Building and Waterfront Park. Total ARPA Funds are \$38,910.

101-751-77500 Maintenance/Materials. Take \$2000 of the remaining \$2,280 and put into 101-265-92500 Computer Services

101-751-93000 Repairs/Maintenance. Take \$780 of the remaining \$1,356 and put into 101-265-92500 Computer Services

101-266-93000 Repairs/Maintenance. Take \$14,500 of the remaining \$14,923 and put into 101-265-92500 Computer Services

Equaling \$17,280 being moved to line item: 101-265-92500 Computer Services for the Office. I have applied for funding for the remainder of the BS&A Proposal.

And

101-100-85100 Schooling/Training. Take \$300 of the remaining \$1,440 and put it into 101-265-72600 Office Supplies to cover expenses for the rest of the fiscal year.

101-721-70200 Wages (Code Enforcer). Take \$500 of the remaining \$1,096 and put it into 101-265-90000 Services/Printing to cover printer ink.

101-266-77500 Maint./Materials. Take \$200 from the remaining \$510 and put it into 101-265-90200 Publishing to cover the Zoning Amendment ad and the Fiscal Budget ad.

101-100-85100 Schooling/Training. Take \$1000 of the remaining \$1,140 and put it into 101-528-80350 Trash Carts to cover expenses for the remainder of the fiscal year.

101-765-77500 Maint./Materials. Take \$1000 of the remaining \$2,162 and put into 101-850-80400 Attorney Fees to cover expenses for the remainder of the fiscal year.

101-721-85100 Schooling/Training. Take \$300 of the remaining \$1,317 and put into 101-336-92100 to cover utilities for the remainder of the fiscal year.

Major Streets (202) Budget Amendment

January 19, 2023, Village of Elberta Regular Council Meeting

202-463-93000 Repairs/Maintenance. Take \$2,500 of the remaining \$83,206 and put into 202-463-81400 Equipment Paybacks

202-463-93000 Repairs/Maintenance. Take \$2,500 of the remaining \$80,706 and put into 202-478-81400 Equipment Paybacks

And

Local Streets (203) Budget Amendment

January 19, 2023, Village of Elberta Regular Council Meeting

203-463-93000 Repairs/Maintenance. Take \$2,500 of the remaining \$16,267 and put into 203-463-81400 Equipment Paybacks

203-463-93000 Repairs/Maintenance. Take \$2,500 of the remaining \$13,767 and put into 203-478-81400 Equipment Paybacks

These Amendments will put enough funds into Equipment Paybacks to cover expenses for the 3rd and 4th quarter reporting.

Village of Elberta
2023 Pro Tempore and Committee Appointments

Pro Tempore: Emily Votruba

Committees/Commissions:

Planning Commission: (Second Wednesday of the month at 5:30pm)

Chair, Janet "Jen" Kennedy

Council Trustee, Ryan Fiebing

Michael Murphy

Bill Shaw

*Vacant seat

Parks and Rec Commission: (7pm Second Thursday of the month from May to Nov.)

Chair, Grace Williams

VP, Brett McGregor

Secretary, Jen Wilkins (unless another Council Trustee wants to join)

Bill Soper

*Vacant seat

Budget, Finance, Audit & Grant Committee: (First Tuesday of the month at 9am)

Chair, Jen Wilkins

Council Trustee, Emily Votruba

Clerk/Treasurer, Norma Corwin

Deputy Clerk, Teri Reisner

*Vacant seat

Personnel & Policy Committee: (Office at 9am, DPW at 2pm)

Chair, Jen Wilkins

(Office Personnel & Policy) Council Trustee, Emily Votruba

(DPW Personnel) Council Trustee, Ken Holmes

*Vacant seat

*Vacant seat

Water & Sewer Committee: (Meet as needed)

Chair, Jen Wilkins

Council Trustee, Ken Holmes

DPW Superintendent

Clerk/Treasurer, Norma Corwin

Village Engineer, Ken Mlcek

Homestead Township
Regular Board Meeting
February 6, 2023

A regular meeting of the Homestead Township Board was called to order at 6:04pm by Supervisor Tia Kurina-Cooley.

Pledge of Allegiance was said.

PRESENT BY ROLL CALL: Mike Mead, Tia Kurina-Cooley, Karen Mallon, Shannon Purchase, Pat Delorme.

APPROVAL OF AGENDA: Request to add Fire Protection Agreement with Platte Township to the agenda and appointment of Planning Commission member. Motion by Cooley to approve agenda with additions. Support: Purchase. All ayes; no nays. Motion carried.

APPROVAL OF MINUTES: Motion by Cooley to approve the January 3, 2023, Regular Board meeting minutes and January 28, 2023 Special Meeting. Support: Mallon. All ayes; no nays. Motion carried.

PUBLIC COMMENT: None

BENZIE BUS: Doreen Strang presented 2022 Benzie Bus Annual Report. Ridership has returned to normal since COVID.

CORRESPONDENCE: 32nd District Office of Jon Bumstead in now open. DTE project has submitted application.

REPORTS:

Zoning Administrator: Written report submitted. Park and Rec Masterplan uploaded. Submission prior to deadline did not happen. Township will need to hold a new Public Hearing specific to the Park and Rec Masterplan. Trust fund grants are not open to the township this year.

Assessor: No report submitted. Assessor not present.

Parks: Township Park is open to the community.

Platte River Park – bids were opened by HARP board. Only 2 bids were received and State wants 3. Beckett and Raeder to handle bidding issue. MDOC will need to approve entrance and trust fund grant monies could be used for this.

Planning Commission: January 16, 2023 meeting cancelled no business presented. Public hearing was held on January 28, 2023.

County Commissioner: Markey advises that Commissioners working on a Meeting Room Usage Policy. Committee appointment bylaws being reviewed. Brianne Lindsay promoted to Director of Equalization. New carpeting has been installed at the county building. 2023 goals being set by the commissioners and the county administrator.

Fire Department: Written report received. Walk through done of the new housing project in Honor. Training dates have been moved to Saturdays. Search and Rescue training is slated. February 18, 2023 Ice Water Training hosted by the US Coast Guard. Insurance at the old Platte River Elementary School is needed for public functions. This would be a hold harmless waiver.

Treasurer: Written and submitted.

Clerk: Written and submitted. Clerk reiterated that the Clerk's Office will take lead with the Treasurer's office to balance accounts. Accounts were in balance in September/October of 2022. Two accounts are out of balance. There may be deposits made that were not reported to the Clerk's office. This will have to be resolved by the end of February prior to the BS&A transition.

Motion by Cooley to accept reports as presented. Support: Mead. All Ayes; No Nays. Motion carried.

FINANCE:

Motion by Cooley to approve APs for GF, FD and P&R with additional invoices as presented. Support: Mallon. Roll Call: Mallon – yes; Mead – yes; Cooley – yes; Delorme – yes; Purchase. Motion carried.

NEW/OLD BUSINES:

Natural Hazard Mitigation Plan: Rebecca Hubers Benzie County Emergency Management Director updated the Board on the strategies presented and asked for input from the Board. Asked the Board to especially look at page 5 pertaining to extreme weather because of the historical problems in the township with ice damming.

Clean-up Days: Scheduled clean up days provided by GFL are May 20, 2023 from 8am – Noon, and September 16, 2023 from 8am – Noon. These are solid dates. Clerk requests that residents be allowed to make multiple trips to take advantage of the clean-up. Cooley to remove single trip restriction on the postcard.

Cooley motion to approve Clean Up Dates. Support Mallon. Roll call: Cooley – yes; Delorme – yes; Purchase -yes; Mallon – yes; Mead – yes. Motion carried.

Budget Discussion: Materials presented to be reviewed by the Board. Public hearing scheduled for the proposed budget for Wednesday, February 22, 2023 at 5:30pm.

Platte River Park Bids: Tabled.

Fire Protection Agreement with Platte Township: Motion by Cooley to approve Fire Protection Plan for FY 2023-2024 with Platte Township. Support: Purchase. Roll call: Delorme – yes; Purchase – yes; Mallon – yes; Mead – yes; Cooley – yes. Motion carried.

Agreement signed at the meeting and will be presented immediately to Platte Township.

Planning Commission: One letter of interest received for the open Planning Commission spot. Motion by Cooley to appoint John Hancock to the Planning Commission. Support: Mallon. Roll call: Delorme – yes; Purchase – yes; Mallon – yes; Mead -yes; Cooley – yes. Motion carried.

PUBLIC COMMENT: None.

Motion by Cooley to Adjourn Regular Board Meeting at 7:12 pm. Support: Mallon. All ayes. Motion carried.

I hereby certify that the minutes contained herein are the draft minutes of the February 6, 2023, Regular Board meeting. Signed herein by the Homestead Township Clerk, Karen Mallon on this the 8th day of February 2023.

Respectfully Submitted:


_____, Karen Mallon, Clerk

Minutes 2-13-2023

VILLAGE OF HONOR Regular Council Meeting Minutes

February 13, 2023

Meeting Called to Order by President Sandman at 6:00pm.

Pledge of Allegiance: Recited.

Roll Call: Council- Smith, Ward, Sandman, Denoyer, Sternburgh; present

Staff- Goodman, Reed, Sessions, Leone; present.

Comments on Agenda: None.

Approval of Agenda: Addition of 'New Business f. ZBA training.' Addition of 'New Business g. Street signs.' Delete 'Approval of Budget Meeting Minutes'. Motion by Ward/Denoyer to approve amended agenda; all ayes, motion passed.

Approval of Minutes: Motion by Sternburgh/Smith to approve January 9, 2023 Regular Council Meeting minutes as presented; all ayes; motion passed.

Guests/Presentations:

Rebecca Hubers, Benzie County EMS Coordinator presented the Natural Hazard Mitigation Plan. This plan is updated every five years. She requests the Council check through the draft and let her know if we need to make changes.

Jessica Carland, Executive Director, Benzie Bus presented their annual report and updated the Council on ridership and vehicle upgrades. She will get the Village updated fliers for interested residents.

Zoning Administrator: Rosemary Naulty, verbal report. No new LUP's issued.

Planning Commission: Rosemary Naulty, verbal report given. Presented the Planning Commission annual report. The True North project is working through some permitting issues with the State, but still plan to begin construction in the next couple of months. Planning Commission is looking into the short-term rental ordinance, and is continuing revision of the Master Plan. ZBA held their annual meeting on 2/13/23, officers elected were: Chairperson; Jeff Sandman, Vice-Chair; Bill Ward, Secretary; Andrew Smith.

County Commissioner/Fire Chief: Tim Markey reported the County jail will be housing 20 inmates from Grand Traverse County. Commissioners are working through committee appointments. Their meetings are now live-streamed on you-tube.

Township Fire Department training has moved to Saturdays. They will be serving pancake breakfasts March 12 through April 2. There is no charge, but donations will be accepted. Fire Chief Markey reported he was pleased with the firewall construction on the Homestretch Housing apartments.

Treasurer's Report: Motion by Ward/Sternburgh accept financial reports as presented. Roll Call: Ayes; Sandman, Sternburgh, Ward, Denoyer, Smith. Nays; none. Motion passed.

Submission of Bills/Checks: Presented by Deb Reed. Motion by Ward/Sternburgh to approve bills as presented. Roll Call: Ayes; Denoyer, Ward, Sandman, Smith, Sternburgh. Nays; none. Motion passed.

Correspondence:

Incoming: None

Outgoing: None.

Old Business:

1. None.

New Business:

424. Motion to authorize President to sign WWTP draw #8 in the amount of \$22,424.73 made by Denoyer/Ward. Roll Call: Ayes; Ward, Smith, Denoyer, Sandman, Sternburgh. Nays; none. Motion passed.

425. Village parking ordinance. Discussion regarding previous parking ordinance and any changes or updates needed for new ordinance, such as limiting parking hours in some areas and reiterating no overnight parking throughout the Village. Ward will research and bring parking information and possible ordinance to council at the March meeting.

426. Village noise ordinance. Brief discussion and decision to leave ordinance #10 as is at this time.

427. Emergency purchases discussed. Leone had to use his personal account for down payment on furnace parts/repairs. Council discussed the issue and it was agreed at this time to have Leone contact President Sandman for direction on any future emergency purchases. Leone also requested funds to purchase shelving for shop area. Motion by Ward/Sandman to approve up to \$650 for shelving. Roll Call: Ayes; Smith, Ward, Sandman, Denoyer, Sternburgh. Nays; none. Motion passed.

428. Village website. Council discussed the village website. President Sandman would like to see possible upgrades, and he will look into possible changes/upgrades and will bring information for further discussion to the March meeting.

429. ZBA training. Naulty strongly encourages the ZBA members to take the Citizen Planner course offered by MSU extension. Council approved reimbursement of \$250 each for five people upon successful completion of course (four ZBA members and one P/C member). Motion by Sandman/Sternburgh. Roll Call: Ayes; Smith, Ward, Sandman, Denoyer, Sternburgh. Nays; none. Motion passed.

430. Street signs. Discussed during NB b. Parking Ordinance, not needed.

Reports:

1. Maintenance Report – Durkee, written report submitted. Sewer construction is going well, and nearing completion. MRWA conference is in March and he is requesting funds of \$360 each plus expenses for both Jake and himself to attend. Equipment is running well. Jake has begun painting the walls and cleaning out the shop area. Motion by Ward/Sternburgh to authorize up to \$800 for attendance at MRWA conference. Roll Call: Ayes; Denoyer, Sandman, Smith, Sternburgh, Ward. Nays; none. Motion passed.
2. Street Administrator – Durkee, written report submitted. Nothing new to report. Parking signs were discussed earlier.
3. Ordinance Officer – None.
4. Park Committee – Reed, no report.
5. Sewer Committee – Ward, Andrew Smith has created a power point on the sewer system.
6. Budget Committee – Sandman, no report.

General Discussion: Council will look into video screening options to possible show power point on sewer system at an upcoming meeting.

Public Input: Treasurer gave update on construction project funds. Resident brought concerns regarding snow removal from sidewalks. He has seen people walking on US-31 because the sidewalks are snow-covered. He suggests the Village come up with a snow removal plan for the walks along US-31. There was some general discussion on this matter. Another resident suggested the council consider alternative billing cycle on sewer rates for any future rate changes. Noted the recent increase has been hard on sewer customers.

Announcements: None.

Adjournment: Motion by Ward/Denoyer to adjourn meeting at 7:21pm. All ayes; motion carried.

AFFIDAVIT OF PUBLICATION


STATE OF MICHIGAN
County of Benzie

Crystal Van Buren, being duly sworn, deposes and says that she is one of the editors, publishers, representatives of the Benzie County Record Patriot, a newspaper published and circulated in said County of Benzie, and the annexed notice was duly printed and published in the said newspaper on the following dates:

April 26, 2023

NOTICE OF AVAILABILITY of
Draft Hazard Mitigation
Plan and
Public Meeting for Input on
the
Draft Hazard Mitigation Plan

Benzie County is in the process of updating its Hazard Mitigation Plan in accordance with the Disaster Mitigation Act of 2000. There will be a public meeting following the public review period at 9:00 am on May 23, 2023. The meeting will be at the Frank Walterhouse Board of Commissioners Room, Benzie County Government Center, 448 Court Place, Beulah, Michigan 49617. Public comments are requested either in person by a representative at the public meeting; by mail at PO Box 506, Traverse City MI 49685; or by email at stephanie.marchbanks@networksnorthwest.org. The draft plan is available for review on Benzie County's website and Networks Northwest's website.



Crystal Van Buren

Subscribed to and sworn to me this 26th day of April 2023.



Notary Public: Denise M. Favreau
State of Michigan, County of Benzie
My Commission Expires: July 16, 2028
(Acting in the county of Benzie)

**NOTICE OF AVAILABILITY
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BENZIE COUNTY BOARD OF COMMISSIONERS

448 COURT PLACE – BEULAH, MI 49617 – (231) 882-9671
www.benzieco.net

MEETING AGENDA

May 23, 2023

Frank F. Walterhouse Board Room, Governmental Center, Beulah, Michigan

Join Meeting

Please click the link below to join the webinar:

www.youtube.com/@BenzieCounty

PLEASE TURN OFF ALL CELL PHONES OR SWITCH THEM TO VIBRATE

9:00 a.m.

CALL TO ORDER

ROLL CALL

INVOCATION AND PLEDGE OF ALLEGIANCE

TRIBUTES PRESENTED BY BOARD CHAIR:

National EMS week, May 21 – 27, 2023

APPROVAL OF AGENDA

APPROVAL OF MINUTES – Regular 5/9/23; Closed 5/9/23

PUBLIC HEARING: Hazard Mitigation Plan

PUBLIC COMMENT

FINANCE –

A) Approval of Bills

ELECTED OFFICIALS & DEPT HEAD COMMENTS

ACTION ITEMS –

A) Consider accepting the 2021/2022 audit

B) Adopt Benzie County Strategic Priorities and Goals, to include discussion requested by Commissioner Cunningham.

C) Consider adopting the Cyber Incident Policy

D) Consider adopting the Personnel File Policy

E) Consider adopting the Bomb-Swatting Threat Policy

F) Consider adopting the Fraud Policy

G) Consider adopting the Tobacco-Smoke Free Policy

H) Consider adopting the Adoption and Administration Policy

I) Consider adopting the Disciplinary Action Policy

J) Consider adopting the Nepotism Policy

K) Consider entering into a contract for Equalization Fieldwork services.

L) Approve copy machines and service agreements with Netlink for Sheriff's Office

M) Approve 2% tribal grant application for full body scanner

COMMISSIONER REPORTS –

COUNTY ADMINISTRATOR'S REPORT – Katie Zeits

STUDY SESSION - 5/9/23 - None

COMMITTEE APPOINTMENTS -

UNFINISHED BUSINESS –

NEW BUSINESS –

PRESENTATION:

9:30 a.m. Closed Session to discuss strategy and negotiation of the FOPLC Deputy collective bargaining unit, as authorized by MCL 15.268(c).

10:00 a.m. Terry VanderCook, Networks Northwest, present annual report, and services provided to Benzie County

PRESENTATION OF CORRESPONDENCE

PUBLIC COMMENT

ADJOURNMENT

Times Subject to Change

Memorandum



To: Board of Commissioners

From: Katie Zeits, County Administrator *Katie Zeits*

Date: May 17, 2023

Subject: **Public Hearing for Hazard Mitigation Plan**

Benzie County has been working with Networks Northwest for some time to update its hazard mitigation plan. On Tuesday, Stephanie Marchbanks of Networks Northwest and Emergency Management Coordinator Rebecca Hubers will be present to answer any questions the Board may have.

Due to the large size of this plan, below is a link to download the current final draft of the Benzie County Hazard Mitigation

Plan: https://drive.google.com/open?id=1SAiwwEXc85VDvxcjhLKnLhV6te6jl4bs&authuser=stephanie.marchbanks%40networksnorthwest.org&usp=drive_fs This updated version is also on the project webpage at <https://www.networksnorthwest.org/community/natural-hazard-mitigation/benzie-county.html>

Following the public hearing for the plan, the Board should vote to send the draft plan to the Michigan State Police and FEMA for their review and approval.

Recommendation:

That the Board of Commissioners approves the draft Hazard Mitigation Plan for review by the Michigan State police and FEMA.

THE BENZIE COUNTY BOARD OF COMMISSIONERS
May 23, 2023

The Benzie County Board of Commissioners met in a regular session on Tuesday, May 23, 2023, in the Frank Waltherhouse Board of Commissioners Room, 448 Court Place, Government Center, Beulah, Michigan.

The meeting was called to order by Chair Bob Roelofs.

Present were: Commissioners Cunningham, Markey, Nye, Roelofs, Sauer and Warsecke
Excused: Commissioner Jeannot

The invocation was given by Commissioner Roelofs and the Pledge of Allegiance was recited.

Tributes presented by Board Chair:

Chair Roelofs presented a tribute to the Benzie County Emergency Medical Services. Paramedics and Emergency Medical Technicians provide aid after medical emergencies and disasters and ease our suffering in countless ways. The unwavering commitment of Benzie County EMS to public service often comes at the cost of their own physical well-being, mental health, and precious time with loved ones. The Benzie County Board of Commissioners do hereby give this tribute to Benzie County EMS in celebration of Emergency Medical Services Week, May 21 – 27, 2023, and call upon all government officials, parents, teachers, school administrators, caregivers, business leaders, non-profit organizations, and the people of Benzie County to observe this week and thank their Benzie County EMS Personnel for their service to our community.

Agenda:

Motion by Warsecke, seconded by Nye, to approve the agenda as amended, by removing Action Item E, Bomb-Swatting Threat Policy. Ayes: Cunningham, Markey, Nye, Roelofs, Sauer and Warsecke
Nays: None Exc: Jeannot Motion carried.

Minutes:

Motion by Sauer, seconded by Markey, to approve the regular session minutes of May 9, 2023, as presented. Ayes: Cunningham, Markey, Nye, Roelofs, Sauer and Warsecke Nays: None
Exc: Jeannot Motion carried.

Motion by Sauer, seconded by Nye, to approve the close session minutes of May 9, 2023, as presented. Ayes: Cunningham, Markey, Nye, Roelofs, Sauer and Warsecke Nays: None Exc: Jeannot Motion carried.

Public Hearing: Hazard Mitigation Plan:

Stephanie Marchbanks, Networks Northwest, and Rebecca Hubers, Benzie County Emergency Management Coordinator, were present to answer any questions regarding the Hazard Mitigation Plan.

9:08 am Open Public Hearing

Annie Browning, Village of Beulah, questioned what you think the most likely hazard would be from the environment.

Stephanie Marchbanks stated that it would be weather.

Rebecca Hubers stated that another area it could be is flooding, which is addressed in this plan.

Stephanie Marchbanks stated that this plan was available online for the public to review for about a month and Networks Northwest has not received any comments.

COMMISSIONERS

Page 2 of 6

May 23, 2023

Commissioner Nye stated that some residents had insurance issues because of the flood zones delineation, does this satisfy what they are looking for?

Rebecca Hubers stated that the townships still need to present, adopt and accept the maps of the Hazard Mitigation Plan.

Commissioner Cunningham stated that she has heard from the public quite a bit and will speak on their behalf. On page 10 – “on going enforcement of soil erosion, permitting” and then “permits and inspections based on code.” Is there anyone who will follow through on this?

Rebecca Hubers stated that we do not enforce this, that would be the building department for soil erosion, and it may be different for each Township.

9:19 a.m. Close Public Hearing

Motion by Markey, seconded by Cunningham, to approve the draft Hazard Mitigation Plan for review by the Michigan State Police and FEMA. Ayes: Cunningham, Markey, Nye, Roelofs, Sauer and Warsecke Nays: None Exc: Jeannot Motion carried

9:20 a.m. Public Comment

Richard Haan, Honor, stated that they own the Sleeping Bear Riverside Cabins in Honor, and the Laundromat in Frankfort. Requesting \$28,450 of the ARPA funds to replace 3 washing machines in their laundromat with two 40-pound washing machines.

Chris Kitzman, Benzonia Township, has two comments regarding action item B, Strategic Priorities and Goals. First, one relates to your strategy to achieve effective external communication with the community by engaging in positive outreach. She would like to see a synopsis of the approved minutes published in the Record Patriot. The other one fits under enhance county services also and ask that you revisit some form of awareness and coordination of zoning throughout the county.

9:26 a.m. Public Comment closed.

FINANCE

Bills: Motion by Warsecke, seconded by Sauer, to approve payment of the bills from May 6, 2023, through May 18, 2023, in the amount of \$411,179.98, as presented. Roll call. Ayes: Cunningham, Markey, Nye, Roelofs, Sauer and Warsecke Nays: None Exc: Jeannot Motion carried.

ELECTED OFFICIALS & DEPARTMENT HEAD COMMENTS:

Doug Durand, Benzie Senior Resource Director provided a written report and stated that they have started a new footcare clinic at Michigan Shores. Commented that all four nurses are doing electronic charting. The golf outing on behalf of Benzie Senior Resources, will be June 11, 2023.

Nate Loop, Maples Administrator provided a written report and presented it. He stated that he will be providing this report monthly whether he is present at the meeting or not.

CLOSED SESSION: Collective Bargaining Negotiations

9:41 a.m. Motion by Roelofs, seconded by Sauer, in accordance with MCL 15.268 (c), to enter into closed session to discuss strategy in accordance with FOPLC bargaining unit. Ayes: Cunningham, Markey, Nye, Roelofs, Sauer and Warsecke Nays: None Exc: Jeannot Motion carried.

9:54 a.m. back in open session.

COMMISSIONERS

Page 3 of 6

May 23, 2023

Motion by Nye, seconded by Sauer, to move to ratify the tentative agreement previously ratified by the FOPLC Deputies Bargaining for the 2023 re-opener and authorize the Board Chair to sign the Letter of Agreement to make the agreed upon change as approved as to form by the County's legal counsel. Roll call. Ayes: Cunningham, Markey, Nye, Roelofs, Sauer and Warsecke Nays: None Exc: Jeannot Motion carried.

ELECTED OFFICIALS & DEPARTMENT HEAD COMMENTS (continued):

Rebecca Hubers, Emergency Management, stated that if anyone would like to see the drawing of the lower-level expansion plans, come and see her. We do not want it out there on the public website for security reasons. Same as the upcoming Cyber Incident Response Policy. Also, introduced Jacob Balhorn, he is a summer Criminal Justice Intern for the building.

Brianne Lindsay, Equalization Director provided a written report.

Jesse Zylstra, Solid Waste and Recycling Coordinator provided a written report.

10:00 a.m. PRESENTATION: Terry VanderCook, Networks Northwest, presented 2022 Networks Northwest Annual Report, and went over the services they provided to Benzie County.

ACTION ITEMS

Consider accepting the 2021/2022 audit: Motion by Sauer, seconded by Cunningham, to accept the Audited Financial Statements for Benzie County's Fiscal Year 2021-2022. Roll call. Ayes: Cunningham, Markey, Nye, Roelofs, Sauer and Warsecke Nays: None Exc: Jeannot Motion carried.

Adopt Benzie County Strategic Priorities and Goals: Discussion held. Motion by Warsecke, seconded by Markey, to adopt the Benzie County Strategic Priorities, Goals and Actions dated May 9, 2023. Roll call. Ayes: Markey, Nye, Roelofs, Sauer and Warsecke Nays: Cunningham Exc: Jeannot Motion carried.

Consider adopting the Cyber Incident Policy: Rebecca Hubers was present to answer any questions. Motion by Sauer, seconded by Nye, to adopt the Cyber Incident Response Policy which adopts the Cyber Incident Response Plan. Roll call. Ayes: Cunningham, Markey, Nye, Roelofs, Sauer and Warsecke Nays: None Exc: Jeannot Motion carried.

Consider adopting the Personnel File Policy: Jackie Palfey was present to answer any questions. Motion by Sauer, seconded by Cunningham, to adopt the Personnel File Policy and add it to the staff manual. Roll call. Ayes: Cunningham, Markey, Nye, Roelofs, Sauer and Warsecke Nays: None Exc: Jeannot Motion carried.

Consider adopting the Fraud Policy: Jackie Palfey was present to answer any questions. Motion by Warsecke, seconded by Markey, to adopt the Anti-Fraud Policy to replace the old policy listed in the staff policy manual. Roll call. Ayes: Cunningham, Markey, Nye, Roelofs, Sauer and Warsecke Nays: None Exc: Jeannot Motion carried.

Consider adopting the Tobacco/Smoke Free Policy: Jackie Palfey was present to answer any questions. Motion by Nye, seconded by Cunningham, to adopt the Tobacco/Smoke Free Workplace

COMMISSIONERS

Page 4 of 6

May 23, 2023

Policy to replace the old policy listed in the staff policy manual. Roll call. Ayes: Cunningham, Markey, Nye, Roelofs, Sauer and Warsecke Nays: None Exc: Jeannot Motion carried.

Consider adopting the Adoption and Administration Policy: Jackie Palfey was present to answer any questions. Motion by Warsecke, seconded by Sauer to adopt the Adoption and Administration Policy to replace the old policy listed in the staff policy manual. Roll call. Ayes: Cunningham, Markey, Nye, Roelofs, Sauer and Warsecke Nays: None Exc: Jeannot Motion carried.

Consider adopting the Disciplinary Action Policy: Jackie Palfey was present to answer any questions. Motion by Cunningham, seconded by Warsecke, to adopt the Disciplinary Action Policy and rescinds all related policies. Roll call. Ayes: Cunningham, Markey, Nye, Roelofs, Sauer and Warsecke Nays: None Exc: Jeannot Motion carried.

Consider adopting the Nepotism Policy: Jackie Palfey was present to answer any questions. Motion by Warsecke, seconded by Nye, to adopt the Nepotism Policy and rescinds all related nepotism policies. Roll call. Ayes: Cunningham, Markey, Nye, Roelofs, Sauer and Warsecke Nays: None Exc: Jeannot Motion carried.

Consider entering into a contract for Equalization Fieldwork services: Brianne Lindsay, Equalization Director, was present to answer any questions. Motion by Nye, seconded by Markey, to approve a one-year contract with Dr. Mark Holley, Complete Appraisal Service, in the total annual amount of \$23,300, such contract subject to approval as to its form by legal counsel and authorizes the Chair to sign. Roll call. Ayes: Cunningham, Markey, Nye, Roelofs, Sauer and Warsecke Nays: None Exc: Jeannot Motion carried.

Approve copy machines and service agreements with Netlink for Sheriff's Office: Motion by Markey, seconded by Sauer, to approve three agreements with Netlink Business Solutions for a period of 36 months for copy machines in Sheriff's Office in the estimate total annual amount of \$1,800. Roll call. Ayes: Cunningham, Markey, Nye, Roelofs, Sauer and Warsecke Nays: None Exc: Jeannot Motion carried.

Approve 2% tribal grant application for full body scanner: Motion by Cunningham, seconded by Markey, to approve the grant application for Tribal Council Allocation of 2% funding for a total body scanner and authorizes the Chair to sign. Roll call. Ayes: Cunningham, Markey, Nye, Roelofs, Sauer and Warsecke Nays: None Exc: Jeannot Motion carried.

COMMISSIONER REPORTS

Chair Roelofs stated he was invited to and attended the New Covenant Christian Academy first graduation ceremony, Agenda Review meeting, Union Negotiations, and a couple more meetings.

Comm Jeannot provided a written report.

Comm Cunningham provided a written report. She gave updates on the Frankfort City Council meeting and the Crystal Lake Township meeting.

Comm Nye provided a written report. She updated her report to add attendance to the MACC Health and Human Service meeting, and the EDC meeting.

COMMISSIONERS

Page 5 of 6

May 23, 2023

Comm Markey provided a written report. He updated his report to add attendance to the MACC Judicial and Public Safety Committee meeting.

Comm Warsecke – nothing to report as he had been out of state.

Comm Sauer stated he attended the Weldon Township meeting, Road Commission meeting, Village of Thompsonville meeting, Village of Elberta meeting, and Weldon Township Planning Commission meeting. Ms. Haan needs to be advised to go for a loan through ~~LARA~~ Laura Galbraith, Venture North Funding.

COUNTY ADMINISTRATOR’S REPORT – Katie Zeits stated that she has sent out the bids received for the lower-level expansion to all the Commissioners. This will be brought before the Board at the June 13, 2023, meeting for action. If you have any questions, please contact her or Rebecca Hubers, prior to that meeting. She will be attending the County Administrator Conference at Crystal Mountain for the rest of this week.

STUDY SESSION - None

COMMITTEE APPOINTMENTS- None

UNFINISHED BUSINESS - None

NEW BUSINESS - None

PRESENTATION OF CORRESPONDENCE

- Benzie Leelanau Health Department May 24, 2023, Agenda.
- Osceola County Resolution #2023-0009 – to Oppose all Firearms Control Legislation.
- Lenawee County Resolution -Opposition to Legislation Preempting Local Control.

11:23 a.m. Public Comment

Annie Browning, Village of Beulah, stated that what she is hearing today is the importance of planning commissions and emergency preparedness.

11:24 a.m. Public Comment closed.

Motion by Warsecke, seconded by Markey, to adjourn at 11:25 a.m. Ayes: Cunningham, Markey, Nye, Roelofs, Sauer and Warsecke Nays: None Exc: Jeannot Motion carried.

Bob Roelofs, Chair

Tammy Bowers, Benzie County Clerk

COMMISSIONERS

Page 6 of 6

May 23, 2023

INDEX

1. Approve the agenda as amended, by removing Action Item E, Bomb-Swatting Threat Policy.
2. Approve the regular session minutes of May 9, 2023, as presented.
3. Approve the close session minutes of May 9, 2023, as presented.
4. Approve the draft Hazard Mitigation Plan for review by the Michigan State Police and FEMA.
5. Approve payment of the bills from May 6, 2023, through May 18, 2023, in the amount of \$411,179.98, as presented.
6. Accordance with MCL15.268 (c) to enter into closed session to discuss strategy in accordance with FOPLC bargaining unit.
7. To move to ratify the tentative agreement previously ratified by the FOPLC Deputies Bargaining for the 2023 re-opener and authorize the Board Chair to sign the Letter of Agreement to make the agreed upon change as approved as to form by the County's legal counsel.
8. To accept the Audited Financial Statements for Benzie County's Fiscal Year 2021-2022.
9. To adopt the Benzie County Strategic Priorities, Goals and Actions dated May 9, 2023.
10. To adopt the Cyber Incident Response Policy which adopts the Cyber Incident Response Plan.
11. To adopt the Personnel File Policy and add it to the staff manual.
12. To adopt the Anti-Fraud Policy to replace the old policy listed in the staff policy manual.
13. To adopt the Tobacco/Smoke Free Workplace Policy to replace the old policy listed in the staff policy manual.
14. To adopt the Adoption and Administration Policy to replace the old policy listed in the staff policy manual.
15. To adopt the Disciplinary Action Policy and rescinds all related policies.
16. To adopt the Nepotism Policy and rescinds all related nepotism policies.
17. To approve a one-year contract with Dr. Mark Holley, Complete Appraisal Service, in the total annual amount of \$23,300, such contract subject to approval as to its form by legal counsel and authorizes the Chair to sign.
18. To approve the grant application for Tribal Council Allocation of 2% funding for a total body scanner and authorizes the Chair to sign.

Art Jeannot
Commissioner Report
May 23, 2023

- **5/10 – Northwest MI Community Action Agency (Housing Committee)**
 - The committee is recommending to the full board approval of funding for a housing project in Frankfort. The developer and owner is Homestretch in partnership with the City. The amount recommended is \$40k.
- **5/11 – Platte Township**
 - Business as usual.
- **5/15 – Northern MI Association of Counties**
 - Discussed the need for MSU Extension to provide a training seminar for BOC Chairmen/Chairwomen. Anyone could participate. I would like your feedback.
 - Chet Janik gave an overview of MI Leadership Institute and the services they provide. Services include executive job recruitment. Some of you may remember that Chet was the County Administrator in Leelanau County and he retired in December 2022.
 - We had several legislative updates. Most of these updates are already shared with you via emails from MAC.
 - The June 19th meeting has been cancelled.
- **5/18 – Northwest MI Community Action Agency**
 - Approved \$40k to help fund the Homestretch housing project (12 units) in Frankfort. Another \$50k was approved for a project in Traverse City.
 - The Summer Conference for State Action Agencies will be held at Crystal Mountain July 18-20.
- **5/19 – EDC/BRA**
 - I attended the meeting along with Rhonda. I will rely on Rhonda to give you an update.
- **Other**
 - I met with Paula Eberhart to get updated on the operations of her department. Technology, customer service and staffing are areas we spent the most time on.



May 23

Commissioner Cunningham, District 3

kcunningham@benzieco.net

231.822.4067

Attended/Presented

- 12 May MAC Environment Regulatory Committee, Lansing: planning future topics and speakers then sharing with counties. Received legislature update, future topics: water from natural to tap, biochar- economic/entrepreneur /education.
- 16 May Frankfort City Council/ CLTwp
- 17 May Benzie Chamber/Frankfort Accelerator/Point Betsie

Community

FEAS groundbreaking.

Point Betsie: Open House 6 May, 10am- 4pm.

Kinship Coalition: planning a Benzie meeting in June, purpose to establish a monthly support meeting.

Writing a description for a "liaison".

Veterans Inspiring Veterans Art Show board site visit. Frankfort Public Hearing/Golf cart ordinance. Toured Land Grant housing on "Jay's Place". Planning on Frankfort Business Accelerator Task Force.

Assorted meetings and emails with constituents, as it relates to county information, concerns and strategies.

MI Infrastructure survey. "Seeking resilient input." link:

<https://forms.office.com/pages/responsepage.aspx?id=h3D71Xc3rJKWaoku9HII0URLghCLLTVGs6msvMgvZkRUOVFMMjA5Rkl0SVgzU0Y1R0ZIMUJYOVl2OC4u>

Commissioner Report 05/23/23

Rhonda Nye

District IV

May 9th – Village of Beulah

- Sewer ACO (Administrative Consent Order) not received but expected.
- Sewer upgrade funding option consultation held with Baker Tilly Finance; they will attend the June 13th meeting to share information.
- Price for 10 garbage bags raised to \$33.00 effective June 1st.

May 10th – Benzonia Township

- Approved contract with Consumer Energy. Power poles will be relocated along Grace Road for accessibility. Several red pines will be removed, \$1,500.00 accepted for new tree purchase.
- Fire call volume rising, staffing issues may need to be addressed soon.
- Approved grant writer for township. No contract, service will be charges on hourly basis.

May 11th – Centra Wellness Board

- New Executive Committee members selected:
 - Chair – Don Tanner
 - Vice Chair – Terry Piachek
 - Secretary – Rhonda Nye
- End of Covid means return to pre-pandemic Medicaid rules, no clients came off of Medicaid during the pandemic.
- Northern Lakes status discussed.

May 15th – Union negotiations – Deputies and General Unions.

May 17th – Agenda Review

May 19th – EDC

- Update will be given at 05/23 BOC meeting.

May 22nd – MAC Health & Human Services

- Update will be given at 05/23 BOC meeting.

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MAY 18 2023

TAMMY BOWERS
BENZIE COUNTY CLERK
BEULAH, MI 49617

Tim Markey
Commissioner Report
May 23, 2023

May 10th – Homestead Twp Board

- Progress is being made on the new Platte River Park. Hope to have the Kayak launch, fishing piers, and bathroom done before July.
- Looking to add security cameras outside the bathrooms by the ball fields. There has been some damage to the facilities.

May 11th – Centra Wellness Network

- Elected new board officers:
 - Chair – Don Tanner
 - Vice-Chair – Terry Pechacek
 - Secretary – Rhonda Nye
- Northern Lakes Community Mental Health Authority (Leelanau, Grand Traverse, Wexford, Missaukee, Roscommon, & Crawford) will continue. All counties signed a new agreement. They are in the process of hiring a CEO.
- The NMRE (Northern Michigan Regional Entity) has re-structured the SUD (Substance Use Disorder Oversight advisory Committee). With an opinion from their attorney, participation in the SUD can be done remotely as it is only an advisory committee.
- Working with MAC to add rural exception to MAC's platform
- Holding a staff BBQ on June 29th.

May 11th – Dispatch Advisory

- Discussed the fall-out of the lightning strike on Dispatch & the Sheriff's office
- Approved some policies

May 15th – LPT

- Approved the Public Safety Annex of the new EOP (Emergency Operations Plan)
- Discussed the possibility of have a Safety Fair this summer or Fall. Asked that the agencies provide any Public Safety events that their communities are having so that we can coordinate.

May 15th – LEPC

- Approved the Smeltzer Orchards off-site response plan

May 17th – Benzie Senior Resources

- Canceled due to lack of quorum

May 22nd – MAC – Judiciary

- Will provide updates as I see necessary

FW: answers to questions _ EDITS to Benzie County plan please. 6-2023

Stephanie Marchbanks <stephanie.marchbanks@networksnorthwest.org>
To: Rebecca Hubers <rhubers@benzieco.net>

Thu, Jun 8, 2023 at 10:43 AM

Hi Rebecca,

Please see my responses in [Blue](#) below.

Stephanie Marchbanks
Community Planner
Networks Northwest

Desk: 231.439.5247
Mobile: 231.590.0930
stephanie.marchbanks@networksnorthwest.org



2240 Mitchell Park Dr., Suite B
Petoskey MI 49770

On Tue, Jun 6, 2023 at 4:20 PM Rebecca Hubers <rhubers@benzieco.net> wrote:

Hi,

In the email below I mentioned to Ms. Doris Winslow of the GTBOI community that we could possibly adjust some wording in the Hazard Mitigation Draft.

Can you please add her name to the Acknowledgements under the organization of Grand Traverse Band of Ottawa and Chippewa Indians. I believe her Title is Executive Assistant to the Tribal Manager or works in the Tribal Manager's Office. **Yes of course, not a problem.**

The only two changes I said we would look at are cut and paste below... White is her words from the email prior, Red is a response from Jolanda Murphy GTBOI Emergency manager and the Green is my response.

REFERNCE: Page 24 does not mention Reservation **I will contact Rebecca Hubers, the emergency manager at Benzie.** I will have them add the Reservation to the list of Critical Facilities and infrastructure (table 16) page 24. Please note the GTBOI Tribal Community will also have its own hazard mitigation plan specific to its government facilities and it will probably be listed on there as well. Please let me know if you were thinking of a different location for the Reservation to be referenced and I will add it 9there is still time for changes).

She was referencing an older draft and on the new draft I think it is now Table 17 on page 29/30. Can we add a block that identifies Tribal government Facility (1) maybe under Government **We can certainly add them as a governmental facility in this table. Unfortunately, it didn't get mapped because it wasn't on the Critical Infrastructure list you sent us. I can ask Jenni if she can make this small mapping change.**

REFERENCE: Page 69, do we want to be included in the "Landowners and Homeowners Association as well as Tribal Nation" meeting the following requirements? **Not sure but will ask Rebecca.** I will talk to the plan writer and ask them to generalize that away from "associations to just landowner. I suspect they cut and paste the verbiage from the NMISN website. (now page72)

Is there any harm in changing the middle paragraph on page 72 to just "landowners" or "Residents" instead of it reading specifically about "homeowner associations"? **I'll just change it to "landowners", no problem.**

Thank you for accommodating if possible.

I sent off an email to the road commission for better time lines for the road projects in the strategies. I am waiting to hear back. And I am working on the others. If I don't hear anything back by the end of the week – I will send you what I have and wait them out (I guess) **Thank you.**

Rebecca S. Hubers

Rebecca S. Hubers PEM

Benzie County Emergency Management Coordinator

448 Court Place – Suite 134

Beulah, MI 49617

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From: Rebecca Hubers <rhubers@benzieco.net>
Sent: Tuesday, June 6, 2023 3:37 PM
To: doris.winslow@gtb-nsn.gov; Murphy, Jolanda, A <jolanda.murphy@gtb-nsn.gov>
Cc: Rebecca Hubers <rhubers@benzieco.net>
Subject: answers to questions

Hello Ms. Winslow,

Apologies for my delay on answers. I put them aside while we finished the Hazard Mitigation Plan to make sure I could answer everything as close to final as I could.

Ms. Jolanda Murphy's answers are in red from the previous email. I will shade mine in green if that is OK.

Thank you for taking the time to read it and provide input – that is a lot of documents to digest.

Please let me know if you noticed anything further you would like me to take a second look at. My contact information is at the bottom of the email.

From: Winslow, Doris <Doris.Winslow@gtb-nsn.gov>
Sent: Tuesday, February 21, 2023 10:16 AM
To: Murphy, Jolanda, A <Jolanda.Murphy@gtb-nsn.gov>
Subject: RE: Updated Benzie HM Plan Draft

Can I ask a few questions.

First, that is a great draft plan for Benzie. The information in it is amazing on so much that has happened there from 1950 to the present. Great job!

My questions are:

Will we be sending the Code Red details to all GTB Residence in Benzie? **Code Red is facilitated by Benzie Emergency Managers Office and they notify all Benzie residents if they want to sign up to receive notices.** I attached a FAQ sheet regarding Code Red. **If you would like a poster to put up for community awareness or sign up, I can send one, or there is a link on the Emergency Management page of www.benzieco.net.** If there was a very serious event that impacted the whole County, it would go out to the whole county as a mapped overlay, but I can also send one by community if there was only an impact to part of the County. **Some warnings will only go out to those that sign up, but the serious stuff, like evacuations or stay indoors requests would go to everyone mostly via a cell phone alert or it would call a land line phone or there will be a notice over television (in some instances).**

Will the Benzie Reservation have a team for emergency plan that they will assist with.? **All sites should have an emergency plan with staff associated with that facility.**

Were printed surveys sent to the GTB Community to respond to? **Yes, in the GTB Newsletter and on GTB website.**

Only on page 18 does it mention Native Americans.

Page 24 does not mention Reservation **I will contact Rebecca Hubers, the emergency manager at Benzie.** I will have them add the Reservation to the list of Critical Facilities and infrastructure (table 16) page 24. Please note the GTBOI Tribal Community will also have its own hazard mitigation plan specific to its government facilities and it will probably be listed on there as well. Please let me know if you were thinking of a different location for the Reservation to be referenced and I will add it 9there is still time for changes).

Did not know there was a tornado in 1956 in the area, or Katrina affected this area. **Reference to Katrina is personnel or resources came from or to Benzie area.**

They get a lot of hail in Benzie.

Are the Tornado shelters still in operation? **Yes, open April 1 every year and close October 1st.**

They did not list the Covid-19 numbers on page 65, or should they? **I will ask Rebecca as this was a DRAFT plan and comments and changes can still occur.** I believe they added some COVID numbers to that page (which is now #67 on the “almost final Draft” here is a link to the most updated version – bet I still have notes that have to be added to this one, so it is not final or approved yet.
<https://www.networksnorthwest.org/userfiles/filemanager/phxt5n2zlcq6j8jwd7wc/>

Should they list on page 67 state Federal Reservation Land under Government on the right side of the page? **Will contact Rebecca.** You might need to help me with this one. Are you referring to the Oak Wilt Cases Map on old page #67. The GTBOI Benzie Reservation is identified in brown on the map, but I do not see it on the “legend” – I believe that is a cut and paste from the Michigan DNR website for Oak Wilt. I do not believe we can modify the picture. Please let me know if I need to look at a different page. 9sorry they have moved around a few times since the version you were provided).

Page 69, do we want to be included in the "Landowners and Homeowners Association as well as Tribal Nation" meeting the following requirements? **Not sure but will ask Rebecca.** I will talk to the plan writer and ask them to generalize that away from "associations to just landowner. I suspect they cut and paste the verbiage from the NMISN website. (now page72)

Page 74 Encourage cooperation and communication between Tribal Nations... maybe? **Yes, as Manistee is nearby and Tribes and counties share available resources at times.**

Page 76- Will the Benzie community building be used as a temporary emergency shelter since the generators went in? **Yes, they are officially classified as emergency shelters.**

Ok, done reading and looking at all the grafts and maps.

Rebecca S. Hubers

Rebecca S. Hubers PEM

Benzie County Emergency Management Coordinator

448 Court Place – Suite 134

Beulah, MI 49617

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Manistee County Hazard Mitigation Plan Available for Review and Comment until June 20

Audrey Menninga <amenninga@gtcd.org>
To: Stephanie Marchbanks <stephanie.marchbanks@networksnorthwest.org>

Fri, Jun 30, 2023 at 8:12 AM

Hi Stephanie,

I would maybe change the language for the HWA in Benzie County - at this time, due to how long we suspect this infestation at Crystal Downs has been there, it is likely that it has been spread elsewhere in the county, and it's just a matter of finding it now unfortunately. As to the priority species for each county, there's definitely some overlap, but here's what I would likely put it at:

- Manistee County: HWA, invasive knotweeds, invasive phragmites, Japanese barberry
- Benzie County: HWA, invasive knotweeds, invasive phragmites, baby's breath
- Leelanau County: HWA, invasive knotweeds, invasive phragmites, baby's breath, and coltsfoot

Manistee has some pretty dense populations of Japanese barberry, especially in Onekama where I've seen entire hillsides of it growing. Baby's breath is included for Benzie and Leelanau Counties because it grows on the dunes and beaches, which can limit recreational use of the beaches and also can threaten some federally threatened species including pitcher's thistles. Coltsfoot is a species that has been found in Leelanau County, and grows in the same areas as federally endangered [Michigan monkey flower](#), which is a species that is endemic to Michigan. HWA is included for all three counties, due to its threat to our dense and important hemlock populations, invasive knotweeds are listed because of their potential for destruction to infrastructure, ability to spread easily, and dense growth patterns, and invasive phragmites are listed due to their habitat impacts and their ability to restrict beach use and lower property values.

If you have any questions, please let me know!

On Tue, Jun 27, 2023 at 10:17 AM Stephanie Marchbanks <stephanie.marchbanks@networksnorthwest.org> wrote:
Hello Audrey,

Thanks so much for your reply! I will make the changes you mentioned accordingly in the invasive species section of the plan. And yes, if you can indicate what specific species NMISN thinks are of most concern, and maybe a short description of why and if there are specific geographic areas that are affected, that would be great.

We are also wrapping up the Hazard Mitigation Plans for Benzie and Leelanau counties, so the same info. on invasive species could also be applied to those plans. We do mention that HWA has been detected in Benzie County (Crystal Downs Country Club and Sleeping Bear Dunes) but that the infestations have been contained and monitoring efforts remain in effect.

No public comments or questions pertaining to invasive species were brought up in the public input sessions for any of these plans.

Stephanie Marchbanks

Community Planner
Networks Northwest

Desk: 231.439.5247
Mobile: 231.590.0930
stephanie.marchbanks@networksnorthwest.org



2240 Mitchell Park Dr., Suite B
Petoskey MI 49770

On Mon, Jun 26, 2023 at 4:10 PM Audrey Menninga <amenninga@gtcd.org> wrote:

Hi Stephanie,
I'm so sorry for how long it took me to get to this! A couple of things:

- We actually usually abbreviate our name as NWISN, just to specify which region of Northern Lower Michigan.
- In 2019, we actually redid our priority invasive species and we now have the "Top 12 Species" instead of 20 - it's a little more manageable! I've attached a graphic that includes that, in case you'd like to use it. If you'd like, I can also pick out specific species that ISN believes may be of concern.
- For HWA, I don't know if it's worth noting that HWA is currently found to the south and north of Manistee County. It is highly suspected that there are HWA populations within Manistee County, and we just haven't found them yet.

I think that was everything that I had - I'm happy to answer any follow up questions, or any other questions that were raised during the public session.

On Tue, Jun 13, 2023 at 12:25 PM Stephanie Marchbanks <stephanie.marchbanks@networksnorthwest.org> wrote:
Dear Manistee County Stakeholder,

The Manistee County Department of 911/Central Dispatch, with assistance from Networks Northwest, has prepared a draft of the County's 2023 Natural Hazard Mitigation Plan. This is a multi-jurisdictional plan which provides mitigation strategies for many hazards, such as wildfire, flooding, invasive species, and public health emergencies. The strategies consider how to mitigate the impacts of hazard events on vulnerable populations (such as the elderly, disabled, isolated, or low-income individuals), as well as personal property, the economy and infrastructure, and environmental features.

As a valued community stakeholder, your input is very important! The draft plan, mitigation strategies and maps can be viewed on the project webpage. Suggested edits and questions are welcome (please email or call me). A public hearing will be held for the plan on Tuesday, June 20, 2023 at 9:15 AM. The meeting location is in the Manistee County Board of Commissioners' Meeting Room in the Manistee County Courthouse and Government Center, at 415 Third Street, Manistee, Michigan. An option to attend virtually via Zoom is also available:
<https://us06web.zoom.us/j/83580115646> Password: 4153

Upon review of the plan, the Board of Commissioners shall recommend it be sent to Michigan State Police Homeland Security Division for review and then on to FEMA for their review and approval. Once FEMA has approved the plan, it will be brought before the County and all local government boards for adoption later this year.

Stephanie Marchbanks

Community Planner
Networks Northwest

Desk: 231.439.5247
Mobile: 231.590.0930
stephanie.marchbanks@networksnorthwest.org



2240 Mitchell Park Dr., Suite B
Petoskey MI 49770

--
Audrey Menninga (she/her)
Northwest Michigan Invasive Species Network
ISN Coordinator
Grand Traverse Conservation District
1450 Cass Rd. Traverse City, MI 49685