

WHITEWATER TOWNSHIP BOARD
AGENDA REGULAR MEETING – DECEMBER 13, 2022
9:00 a.m. at the Whitewater Township Hall
5777 Vinton Road, Williamsburg, MI 49690
Phone 231-267-5141/Fax 231-267-9020

At this time, the Board invites everyone to silence their electronic devices.

Whitewater Zoom is inviting you to a scheduled Zoom meeting.

Topic: Board Meeting Time: Dec 13, 2022 09:00 AM Eastern Time (US and Canada)

Join Zoom Meeting

<https://us06web.zoom.us/j/87534557006?pwd=dU5wTGFOSmVtdWtscFVHNnNqa2VIZz09>

Meeting ID: 875 3455 7006: Passcode: 972660

One tap mobile

+16465588656,,87534557006#,,,972660# US (New York)

+16469313860,,87534557006#,,,972660# US

Dial by your location: +1 646 558 8656 US (New York): +1 301 715 8592 US (Washington DC)

+1 312 626 6799 US (Chicago): +1 720 707 2699 US (Denver)

Find your local number: <https://us06web.zoom.us/j/87534557006?pwd=dU5wTGFOSmVtdWtscFVHNnNqa2VIZz09>

Whitewater Township will provide necessary reasonable auxiliary aids and services to individuals with disabilities upon reasonable advance notice. Contact the Township Clerk at 231.267.5141 Ext. 24 at least 5 days in advance of the meeting.

- A. Call to Order
- B. Roll Call of Board Members
- C. Set/Adjust Meeting Agenda
- D. Declaration of Conflict of Interest
- E. Public Comment. Any person shall be permitted to address a meeting of the township board. Public comment shall be carried out in accordance with the following board rules and procedures:
 - 1. Comments shall be directed to the board, with questions directed to the chair.
 - 2. Any person wishing to address the board shall speak from the lectern and state his or her name and address.
 - 3. Persons may address the board on matters that are relevant to township government issues.
 - 4. No person shall be allowed to speak more than once on the same matter, excluding the time needed to answer board member's questions. The chair shall control the amount of time each person shall be allowed to speak, which shall not exceed five (5) minutes.
 - 5. In order to avoid unscheduled debates, the board generally will not comment or respond to public comment. Silence or non-response from the board should not be interpreted and disinterest by the board.

F. Public Hearing – None

G. Reports/Presentations/Announcements/Comments

1. County Board of Commissioners
2. Fire Department Report -
3. Planning Commission Report –
4. Parks & Recreation Advisory Committee Report

H. **Consent Calendar**

Receive and File

1. Supervisor's Report for November 2022
2. Clerk's Report for November 2022 (none this month)
3. Treasurer Report November 2022 (none this month)
4. Trustee Vollmuth's November 2022 Report
5. Trustee Glenn's November 2022 Report
6. Zoning Administrator's Report for November 2022 (none this month)
7. Mobile Medical Response's October & November 2022 Activity Report
8. Fire Department November 2022 Report
9. Planning Commission November 2022 Report (part of Trustee report)
10. Historical Society November 2022 Report (none this month)
11. Approved PC Minutes 2022.10.05

Correspondence

1. DNR Roads
2. Slopsma – Boat Wash Information
3. Youth Work
4. Brunner Comments
5. Housing North

Minutes for Approval

1. Whitewater Township Board Minutes 2022.11.15.
2. Whitewater Township Board Minutes 2022.11.17.

Bills for Approval

1. Alden State Bank Vouchers # 48529-48607. Checks can be viewed at the clerk's office during normal business hours

Budget Amendments See New Business Agenda Items 1 & 2.

Revenue & Expenditure Report None provided this month

I. **Unfinished Business**

1. Proposed Zoning Ordinance 83 – Assembled comments
2. Proposed WWT Policy & Procedure Manual Section 4.5 Amendment
3. Whitewater Township Park Boat Launch- Entryway Improvement Project
Drawings and additional information can be found on the Township Website

J. New Business –

1. Review/Approve Proposed Budget Amendments 04.01.2022 to 09.30.2022
2. Review Proposed Budget Amendments 2022/2023 Part Two
3. Accept Resignation of Park & Recreation Administrator.
4. Review/Approve Board Liaison to Park & Recreation Advisory Committee Job Description
5. Recommendations for Appointments: Planning Commission,
6. Review/Approve Hazard Mitigation Plan
7. Schedule Budget Work Session
8. Discuss Continuing Zoom into 2023

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K. Tabled Items

1. None

L. Board Comments/Discussion

M. Announcements

1. Regular Whitewater Township Board Meeting January 10, 2023

N. Public Comment

O. Adjournment

Whitewater Township will provide necessary reasonable auxiliary aids and services to individuals with disabilities who are planning to attend. Contact the township clerk at 231-267-5141.

To: Whitewater Township Board

From: Ron Popp, Township Supervisor

Date: 12.02.2022

Re: Consent Calendar December 13, 2022 Whitewater Township Board Meeting

Receive & File –

1. Supervisor's Report for November 2022
2. Clerk's Report for November 2022 (none this month)
3. Treasurer Report November 2022 (none this month)
4. Trustee Vollmuth's November 2022 Report
5. Trustee Glenn's November 2022 Report
6. Zoning Administrator's Report for November 2022 (none this month)
7. Mobile Medical Response's October & November 2022 Activity Reports
8. Fire Department November 2022 Report
9. Planning Commission November 2022 Report – (none this month)
10. Historical Society November 2022 Reports – (none this month)
11. Approved PC Minutes 2022.10..05

Correspondence

1. DNR - Roads
2. Slopsma – Boat Wash Information
3. Youthwork Information
4. Brunner Comments
5. Housing Matters Newsletter

Minutes –

1. Approve Whitewater Township Board Meeting Draft 2022.11.15 Minutes
2. Approve Whitewater Township Special Board Meeting Draft 2022.11.17 Minutes

Bills for Approval – Alden State Bank Vouchers 48529 to 48607

Budget Amendments See Agenda New Business Items 1 & 2

Revenue & Expenditure Report – None Currently Pending

Motion to Approve Consent Calendar.

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Whitewater Township Supervisor's Report

November 2022

1) Investigate citizen observations:

A. None this month.

2) Office duties:


A. Meetings:

- 1) Five Freedom of Information Act (FOIA) request were received this month. The Township current process for dealing with these requests is very inefficient. A different approach to the requests for public records should be considered in the near future.
- 2) Significant time was devoted to recommendations for appointments to various board and commissions this month. Every year during this process I learn some from talking with each member. Thank you to those who serve! This topic is elsewhere on the December agenda.
- 3) Board Members gathered for two special meetings again in November. One such gathering dealt with the recently completed Feasibility Study from the engineering firm c2ae. The second meeting focused on preliminary budget discussions for 2023.
- 4) Attended the monthly Supervisor's meeting. Election talk, zoning violations and the new fire station Blair Township is building. Blair Township is using a construction company to act as a consultant to the board as part of their project management. I will pay close attention to how that process works to see if elements of Blair's plan can help Whitewater.
- 5) Participated in two meetings with State of Michigan Department of Environment, Great Lakes, and Energy (EGLE) officials to discuss discharge water permitting process or available exemptions for water-based boat wash stations. The second meeting was to learn more about campground sewage dump stations and the known risks of contaminations from various Recreational vehicle treatment chemicals. More to follow on both of these topics. Visit their website at [NotMISpecies Webinar Series \(michigan.gov\)](https://www.notmispecies.org/NotMISpeciesWebinarSeries/michigan.gov)
- 6) Attended a NotMISpecies webinar hosted by EGLE on mechanical treating (removing) aquatic invasive plants. These webinars are a very good resource for anyone looking for education on various environmental issues. meeting hosted by Garfield Township that focused on Ordinance enforcement and interaction with the court system. Those Townships that regularly appear before the magistrate or judge want to streamline the process. The group asked Garfield Township Planner John Sych to draft a letter in hopes of scheduling a meeting with court and township officials.

3. Other Items of Interest:

- 1) Cheryl Goss has resigned as the Park & Recreation Administrator. Please join me in thanking her for the years of services. Please visit the Township's website for a job description if you have an interest in the hospitality industry.
- 2) The Township currently has openings on the Board of Review, Park & Recreation Advisory Committee, and the Zoning Board of Appeals. If you have any desire to serve the community in this way, please contact the Supervisor's Office at 231.267.5141 ext. 23 for more information.
- 3) General Ordinance 26, Land Division, review is complete. Findings and recommendations will be a future agenda.
- 4) No time was allotted to verify the legal description of the N- Industrial Zoning District.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Ron Popp", with a stylized flourish at the end.

Ron Popp
Whitewater Township Supervisor.

HeidiVyourtrustee. Happy Holidays. A different approach to communicate.

Greetings to the greater good!

The Lossie Trail access has been in discussion for a long time. One must remember that we work for the greater good. Right now, all we really have is opinions and wants and needs of a few. Reflecting back in several minutes when I was a private citizen in the audience there was more discussion of people using the trail with wheels in a positive way than people walking in a negative way. Whitewater Township is home to the silent hills and trails of northern Michigan. These trails are used by human feet, bicycles, electric bicycles, skiers, snowshoe's, ORV's, UTV's, golf carts and automobiles and trucks. These trails are also shared with many forms of wildlife.

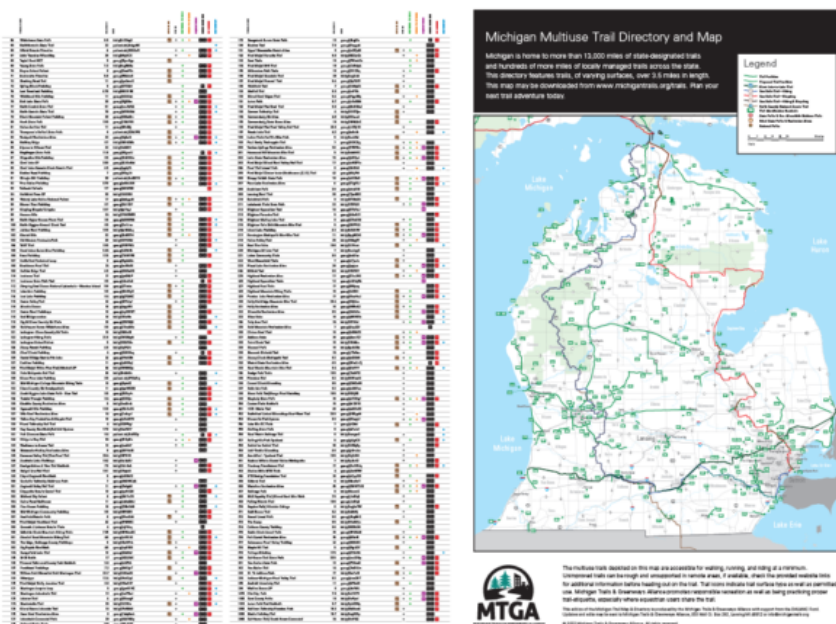
Factual findings are very interesting as Michigan has several shared trails very close to home. There are rules and trail etiquette for these shared trails. I have placed this added information below. There are a few options to explore to place a better solution on the books, however there are some unanswered questions to this situation that need to be addressed and answered before we make a rash decision and spend more money.

My added homework and questions are still not back to me from the attorney therefore I can not provide a final opinion on this issue, however, I am hopeful everyone that reads this puts an effort to find a solution for everyone not just some.

This trail is three miles long and apparently not really traveled by many but by few. From a look from above (live satellite) one can see foot and vehicle traffic has and continues to happen. Comments from most using wheels appear to use it regularly and have for decades. Let's find the right fix together for this obstacle between wheels and feet.

Please contact me anytime and add your thoughts comments and concerns. Need to find a shared trail Google it, it is a great read. Want to experience it, several in the area. If we turn half into a shared trail there are more people to maintain it. If we decide to turn half into a private road one would then follow the Grand Traverse County private road standards. There are also two track possibilities. One can also leave it status quo.

Shared Trails



Michigan's multi-use trails stretch more than 2,100 miles across the state. Trail surfaces are indicated by icons for paved trails, crushed stone, unimproved, boardwalk or road sections as represented in the trail chart. State parks are included as additional places to bike, hike and camp. Listings also include icons when trails are shared with horses, snowmobiles and/or ORVs.

The Michigan Multi-Use Trails Directory & Map is a general overview of the trail system across the state for trails 3.5 miles and longer and is updated biennially.

Trail Etiquette

Stay to the right on the trail.

Hikers, runners and bikers should always yield to horses.

Bicyclists should yield to hikers and runners

Snowmobiles and ORVs should slow down and give the right of way to any skiers, hikers, persons on snowshoes or dogsleds.

Downhill traffic should yield to uphill traffic.

When hiking with your dog, ensure they are on a leash 6-feet or shorter.

When approaching others from behind, let others know you are approaching. For example, runners and cyclists commonly say "on your left" when passing.

I would add please be aware of your surroundings at all times and watch for wildlife.

Plus most likely a speed limit. This trail has policed itself for years, possibly without incident, unless someone knows of one, I was unable to confirm. The conversation that has taken place when asked about the issue is more wheels than foot traffic driven. This information most likely

needs a traffic study, usually done with a trail camera. To be fair no one will know till the numbers come out when this actually might take place.

In fairness to all, not some let us find the best solution for everyone to enjoy the trail. When my homework is complete, I will readdress with the board members when information becomes complete.

Merry Christmas & Happy Holidays

Heidi\Yourtrustee

November 2022

Whitewater Township Trustee report – Don Glenn

Citizen communications and/or observations

- Spoke with a concerned citizen regarding the zoning requirements necessary for township approval of a manufactured home development and in what areas of the township this would apply.
- Spoke with a concerned citizen regarding how the planning commission decides to take action to create zoning amendments or make revisions to existing ordinances and the review process for these types of activities to completion.

Educational opportunities

1. Webinars:

- A. November 1st MSU Extension & Dept. of Treasury webinar **Fiscally Ready Communities: Managing Internal Controls** / the material covered why strong internal controls framework is an essential piece of a culture of fiscal sustainability. It covered what internal controls are, why they're necessary, how they help your community, implementation, and where to start.
 - B. November 7th – achieved **FEMA certification via the Emergency Management Institute** upon successful completion of the IS-100.C, “Introduction to the Incident Command System” which provides the foundation for higher level ICS training. This course described the history, features, principles, and organizational structure of the Incident Command System. It also explained the relationship between ICS and the National Incident Management System (NIMS).
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2. **Continuing education:** reading “Zoning Reform Toolkit – 15 Tools to Expand Housing Choice & Supply” which is a American Planning Association – Michigan Chapter publication.

WW RT October 2022

| Response Time Minutes | Call Count | Cumulative Call Count | Percentage | Cumulative Percentage |
|-----------------------|------------|-----------------------|------------|-----------------------|
| 00:00:00 - 00:00:59 | 0 | 0 | 0.00% | 0.00% |
| 00:02:00 - 00:02:59 | 1 | 1 | 8.33% | 8.33% |
| 00:04:00 - 00:04:59 | 3 | 4 | 25.00% | 33.33% |
| 00:07:00 - 00:07:59 | 3 | 7 | 25.00% | 58.33% |
| 00:08:00 - 00:08:59 | 1 | 8 | 8.33% | 66.67% |
| 00:09:00 - 00:09:59 | 1 | 9 | 8.33% | 75.00% |
| 00:13:00 - 00:13:59 | 1 | 10 | 8.33% | 83.33% |
| 00:17:00 - 00:17:59 | 1 | 11 | 8.33% | 91.67% |
| 00:20:00 - 00:20:59 | 1 | 12 | 8.33% | 100.00% |

Whitewater Twp Responses

October 2022

| Nature of Call | WW | Total |
|---------------------------------------|----|-------|
| 10-Chest Pain (Non-Traumatic) | 2 | 2 |
| 12-Convulsions/Seizures | 2 | 2 |
| 17-Falls | 3 | 3 |
| 21-Hemorrhage/Lacerations | 1 | 1 |
| 29-Traffic/Transportation/Accidents | 1 | 1 |
| 6-Breathing Problems | 3 | 3 |
| 7-Burns (Scalds) /Explosion | 1 | 1 |
| 9-Cardiac or Respiratory Arrest/Death | 1 | 1 |
| Total | 14 | 14 |

| Call Disposition | WW | Total |
|------------------|----|-------|
| Transport | 9 | 9 |
| Refusal | 3 | 3 |
| Cancelled | 2 | 2 |
| Total | 14 | 14 |

| Response Priority | WW | Total |
|-------------------|----|-------|
| P-1 Emergency ALS | 5 | 5 |
| P-2 Emergency BLS | 9 | 9 |
| Total | 14 | 14 |

| Run# | Date | Priority | Nature of Call | Dispatch Zone | Unit | Disposition | Dispatch Time | Scene Time | Response Time |
|---------|------------|----------|-----------------------------------|---------------|----------|-------------|---------------|------------|---------------|
| 131,078 | 10/02/2022 | P-2 | 21-Hemorrhage/Lacerations | Whitewater | 10 GTA3 | Transport | 14:54:15 | 15:02:02 | 00:07:47 |
| 131,838 | 10/04/2022 | P-1 | 9-Cardiac or Respiratory Arrest/I | Whitewater | 10 GTA3 | Refusal | 10:35:01 | 10:39:58 | 00:04:57 |
| 133,649 | 10/07/2022 | P-2 | 17-Falls | Whitewater | 10 GTA3 | Transport | 16:07:38 | 16:17:02 | 00:09:24 |
| 134,329 | 10/09/2022 | P-2 | 12-Convulsions/Seizures | Whitewater | 10 GTA3 | Canceled | 7:22:06 | 7:38:51 | 00:16:45 |
| 134,339 | 10/09/2022 | P-2 | 12-Convulsions/Seizures | Whitewater | 10 55A1 | Transport | 7:40:31 | 7:58:16 | 00:17:45 |
| 136,633 | 10/13/2022 | P-2 | 7-Burns (Scalds) /Explosion | Whitewater | 10 GTA3 | Canceled | 18:46:53 | | |
| 138,196 | 10/17/2022 | P-2 | 10-Chest Pain (Non-Traumatic) | Whitewater | 10 55A1 | Transport | 12:27:24 | 12:48:14 | 00:20:50 |
| 138,987 | 10/18/2022 | P-1 | 6-Breathing Problems | Whitewater | 10 GTA3 | Refusal | 20:48:38 | 20:55:59 | 00:07:21 |
| 139,397 | 10/19/2022 | P-1 | 6-Breathing Problems | Whitewater | 10 55A1 | Transport | 15:29:16 | 15:42:23 | 00:13:07 |
| 140,554 | 10/21/2022 | P-2 | 29-Traffic/Transportation/Accider | Whitewater | 8 CA01 | Refusal | 18:09:18 | 18:11:23 | 00:02:05 |
| 142,667 | 10/25/2022 | P-1 | 6-Breathing Problems | Whitewater | 10 MA302 | Transport | 22:28:54 | 22:36:07 | 00:07:13 |
| 143,574 | 10/27/2022 | P-2 | 17-Falls | Whitewater | 10 GTA3 | Transport | 16:16:24 | 16:21:22 | 00:04:58 |
| 144,034 | 10/28/2022 | P-2 | 17-Falls | Whitewater | 10 GTA3 | Transport | 14:56:54 | 15:05:10 | 00:08:16 |
| 144,974 | 10/30/2022 | P-1 | 10-Chest Pain (Non-Traumatic) | Whitewater | 10 GTA3 | Transport | 21:06:09 | 21:10:57 | 00:04:48 |

GT-A3 Activity (October 2022)

| Call Disposition | Acme | WW | Elk Rapids | East Bay | Total |
|------------------|------|----|------------|----------|-------|
| Transport | 29 | 5 | 0 | 1 | 35 |
| Refusal | 13 | 1 | 1 | 0 | 15 |
| Cancelled | 8 | 2 | 1 | 0 | 11 |
| At Scene | 0 | 1 | 0 | 0 | 1 |
| Total | 50 | 9 | 2 | 1 | 62 |

| Response Priority | Acme | WW | Elk Rapids | East Bay | Total |
|-------------------|------|----|------------|----------|-------|
| P-1 Emergency ALS | 13 | 3 | 0 | 0 | 16 |
| P-2 Emergency BLS | 29 | 6 | 2 | 1 | 38 |
| P-3 Non-Emergent | 8 | 0 | 0 | 0 | 8 |
| Total | 50 | 9 | 2 | 1 | 62 |

| Nature of Call | Acme | WW | Elk Rapids | East Bay | Total |
|---|------|----|------------|----------|-------|
| 10-Chest Pain (Non-Traumatic) | 2 | 1 | 0 | 0 | 3 |
| 12-Convulsions/Seizures | 0 | 1 | 0 | 0 | 1 |
| 16-Eye Problems/Injuries | 1 | 0 | 0 | 0 | 1 |
| 17-Falls | 12 | 3 | 0 | 0 | 15 |
| 18-Headache | 1 | 0 | 0 | 0 | 1 |
| 1-Abdominal Pain/Problems | 5 | 0 | 0 | 0 | 5 |
| 21-Hemorrhage/Lacerations | 0 | 1 | 0 | 0 | 1 |
| 22-Inaccessible Incident/Other Entrapment | 1 | 0 | 0 | 0 | 1 |
| 23-Overdose / Poisoning (Ingestion) | 1 | 0 | 0 | 0 | 1 |
| 25-Psychiatric/ Abnormal Behavior/Suicide | 1 | 0 | 0 | 0 | 1 |
| 26-Sick Person (Specific Diagnosis) | 7 | 0 | 1 | 0 | 8 |
| 28-Stroke (CVA) | 1 | 0 | 0 | 0 | 1 |

| | Acme | WW | Elk Rapids | East Bay | Total |
|--|------|----|------------|----------|-------|
| 29-Traffic/Transportation/Accidents | 4 | 0 | 1 | 1 | 6 |
| 30-Traumatic Injuries (Specific) | 1 | 0 | 0 | 0 | 1 |
| 31-Unconscious/Fainting (Near) | 4 | 0 | 0 | 0 | 4 |
| 4-Assault/Sexual Assault | 1 | 0 | 0 | 0 | 1 |
| 5-Back Pain (Non-traumatic or Non Rece | 1 | 0 | 0 | 0 | 1 |
| 6-Breathing Problems | 5 | 1 | 0 | 0 | 6 |
| 7-Burns (Scalds) /Explosion | 0 | 1 | 0 | 0 | 1 |
| 9-Cardiac or Respiratory Arrest/Death | 2 | 1 | 0 | 0 | 3 |
| Total | 50 | 9 | 2 | 1 | 62 |

| Run# | Date | Priority | Nature of Call | Dispatch Zone | Unit | Disposition | Dispatch Time | Scene Time | Response Time |
|---------|------------|----------|-----------------------------------|---------------|---------|-------------|---------------|------------|---------------|
| 130,600 | 10/01/2022 | P-1 L | 31-Unconscious/Fainting (Near) | Acme | 10 GTA3 | Transport | 10:29:17 | 10:44:12 | 00:14:55 |
| 130,675 | 10/01/2022 | P-1 L | 1-Abdominal Pain/Problems | Acme | 10 GTA3 | Refusal | 13:51:00 | 13:55:00 | 00:04:00 |
| 130,745 | 10/01/2022 | P-2 F | 29-Traffic/Transportation/Accider | Acme | 10 GTA3 | Refusal | 17:11:16 | 17:19:05 | 00:07:49 |
| 131,078 | 10/02/2022 | P-2 F | 21-Hemorrhage/Lacerations | Whitewater | 10 GTA3 | Transport | 14:54:15 | 15:02:02 | 00:07:47 |
| 131,290 | 10/03/2022 | P-2 F | 26-Sick Person (Specific Diagno | Acme | 10 GTA3 | Transport | 4:54:24 | 5:10:33 | 00:16:09 |
| 131,616 | 10/03/2022 | P-2 F | 17-Falls | Acme | 10 GTA3 | Transport | 20:04:12 | 20:13:26 | 00:09:14 |
| 131,838 | 10/04/2022 | P-1 L | 9-Cardiac or Respiratory Arrest/I | Whitewater | 10 GTA3 | At Scene | 10:35:01 | 10:39:58 | 00:04:57 |
| 132,093 | 10/04/2022 | P-3 L | 1-Abdominal Pain/Problems | Acme | 10 GTA3 | Transport | 19:39:18 | 19:53:39 | 00:14:21 |
| 132,524 | 10/05/2022 | P-2 F | 26-Sick Person (Specific Diagno | Acme | 10 GTA3 | Transport | 13:26:34 | 13:29:27 | 00:02:53 |
| 132,862 | 10/06/2022 | P-1 L | 9-Cardiac or Respiratory Arrest/I | Acme | 10 GTA3 | Refusal | 6:04:59 | 6:16:31 | 00:11:32 |
| 132,960 | 10/06/2022 | P-2 F | 29-Traffic/Transportation/Accider | Elk Rapids | 10 GTA3 | Refusal | 11:04:05 | 11:15:29 | 00:11:24 |
| 133,191 | 10/06/2022 | P-3 L | 17-Falls | Acme | 10 GTA3 | Refusal | 19:18:51 | 19:29:11 | 00:10:20 |
| 133,270 | 10/06/2022 | P-2 F | 18-Headache | Acme | 10 GTA3 | Refusal | 23:23:10 | 23:33:10 | 00:10:00 |
| 133,326 | 10/07/2022 | P-2 F | 17-Falls | Acme | 10 GTA3 | Canceled | 4:56:36 | 5:06:48 | 00:10:12 |
| 133,519 | 10/07/2022 | P-2 F | 29-Traffic/Transportation/Accider | East Bay | 10 GTA3 | Transport | 11:59:09 | 12:06:21 | 00:07:12 |
| 133,636 | 10/07/2022 | P-2 F | 17-Falls | Acme | 10 GTA3 | Refusal | 15:46:50 | 15:55:24 | 00:08:34 |
| 133,649 | 10/07/2022 | P-2 F | 17-Falls | Whitewater | 10 GTA3 | Transport | 16:07:38 | 16:17:02 | 00:09:24 |
| 134,241 | 10/08/2022 | P-2 F | 17-Falls | Acme | 10 GTA3 | Transport | 22:56:09 | 23:06:02 | 00:09:53 |
| 134,269 | 10/09/2022 | P-1 L | 9-Cardiac or Respiratory Arrest/I | Acme | 10 GTA3 | Refusal | 1:14:27 | 1:22:43 | 00:08:16 |
| 134,322 | 10/09/2022 | P-2 F | 26-Sick Person (Specific Diagno | Acme | 10 GTA3 | Transport | 6:18:14 | 6:33:24 | 00:15:10 |
| 134,329 | 10/09/2022 | P-2 F | 12-Convulsions/Seizures | Whitewater | 10 GTA3 | Canceled | 7:22:06 | 7:38:51 | 00:16:45 |
| 134,491 | 10/09/2022 | P-2 F | 29-Traffic/Transportation/Accider | Acme | 10 GTA3 | Refusal | 14:59:20 | 15:03:54 | 00:04:34 |
| 134,501 | 10/09/2022 | P-2 F | 17-Falls | Acme | 10 GTA3 | Transport | 15:23:55 | 15:31:10 | 00:07:15 |

| Run# | Date | Priority | Nature of Call | Dispatch Zone | Unit | Disposition | Dispatch Time | Scene Time | Response Time |
|---------|------------|----------|-----------------------------------|---------------|---------|-------------|---------------|------------|---------------|
| 134,654 | 10/10/2022 | P-3 I | 17-Falls | Acme | 10 GTA3 | Transport | 2:05:19 | 2:16:23 | 00:11:04 |
| 134,734 | 10/10/2022 | P-2 I | 26-Sick Person (Specific Diagno | Acme | 10 GTA3 | Transport | 8:52:06 | 8:54:04 | 00:01:58 |
| 134,795 | 10/10/2022 | P-2 I | 26-Sick Person (Specific Diagno | Elk Rapids | 10 GTA3 | Canceled | 11:10:58 | | |
| 135,702 | 10/11/2022 | P-1 I | 28-Stroke (CVA) | Acme | 10 GTA3 | Transport | 22:32:34 | 22:45:47 | 00:13:13 |
| 136,212 | 10/12/2022 | P-2 I | 17-Falls | Acme | 10 GTA3 | Canceled | 22:01:36 | 22:17:16 | 00:15:40 |
| 136,351 | 10/13/2022 | P-2 I | 17-Falls | Acme | 10 GTA3 | Transport | 7:24:03 | 7:35:54 | 00:11:51 |
| 136,633 | 10/13/2022 | P-2 I | 7-Burns (Scalds) /Explosion | Whitewater | 10 GTA3 | Canceled | 18:46:53 | | |
| 137,208 | 10/14/2022 | P-2 I | 17-Falls | Acme | 10 GTA3 | Canceled | 21:15:59 | 21:32:31 | 00:16:32 |
| 137,250 | 10/14/2022 | P-3 I | 5-Back Pain (Non-traumatic or N | Acme | 10 GTA3 | Transport | 23:39:11 | 23:44:01 | 00:04:50 |
| 137,599 | 10/15/2022 | P-2 I | 31-Unconscious/Fainting (Near) | Acme | 10 GTA3 | Transport | 18:40:13 | 18:42:32 | 00:02:19 |
| 137,843 | 10/16/2022 | P-2 I | 29-Traffic/Transportation/Accider | Acme | 10 GTA3 | Canceled | 13:35:52 | | |
| 138,000 | 10/16/2022 | P-3 I | 17-Falls | Acme | 10 GTA3 | Transport | 22:58:31 | 23:08:47 | 00:10:16 |
| 138,169 | 10/17/2022 | P-1 I | 6-Breathing Problems | Acme | 10 GTA3 | Transport | 11:15:49 | 11:20:00 | 00:04:11 |
| 138,886 | 10/18/2022 | P-1 I | 6-Breathing Problems | Acme | 10 GTA3 | Transport | 16:09:24 | 16:14:06 | 00:04:42 |
| 138,987 | 10/18/2022 | P-1 I | 6-Breathing Problems | Whitewater | 10 GTA3 | Refusal | 20:48:38 | 20:55:59 | 00:07:21 |
| 139,191 | 10/19/2022 | P-2 I | 31-Unconscious/Fainting (Near) | Acme | 10 GTA3 | Transport | 8:50:08 | 9:02:07 | 00:11:59 |
| 139,361 | 10/19/2022 | P-1 I | 1-Abdominal Pain/Problems | Acme | 10 GTA3 | Transport | 14:25:14 | 14:29:25 | 00:04:11 |
| 139,451 | 10/19/2022 | P-2 I | 1-Abdominal Pain/Problems | Acme | 10 GTA3 | Transport | 17:48:39 | 17:55:27 | 00:06:48 |
| 139,474 | 10/19/2022 | P-2 I | 22-Inaccessible Incident/Other E | Acme | 10 GTA3 | Refusal | 19:07:38 | 19:12:17 | 00:04:39 |
| 139,989 | 10/20/2022 | P-2 I | 10-Chest Pain (Non-Traumatic) | Acme | 10 GTA3 | Transport | 17:30:09 | 17:38:34 | 00:08:25 |
| 140,343 | 10/21/2022 | P-2 I | 26-Sick Person (Specific Diagno | Acme | 10 GTA3 | Transport | 12:16:17 | 12:25:00 | 00:08:43 |
| 140,464 | 10/21/2022 | P-2 I | 29-Traffic/Transportation/Accider | Acme | 10 GTA3 | Canceled | 15:12:48 | 15:18:57 | 00:06:09 |
| 140,710 | 10/22/2022 | P-2 I | 4-Assault/Sexual Assault | Acme | 10 GTA3 | Refusal | 5:04:14 | 5:15:27 | 00:11:13 |
| 141,058 | 10/22/2022 | P-1 I | 6-Breathing Problems | Acme | 10 GTA3 | Transport | 19:27:57 | 19:35:25 | 00:07:28 |
| 141,158 | 10/23/2022 | P-2 I | 25-Psychiatric/ Abnormal Behavi | Acme | 10 GTA3 | Canceled | 1:07:46 | 1:18:47 | 00:11:01 |
| 141,264 | 10/23/2022 | P-2 I | 26-Sick Person (Specific Diagno | Acme | 10 GTA3 | Transport | 9:46:37 | 10:07:51 | 00:21:14 |
| 142,685 | 10/25/2022 | P-3 I | 26-Sick Person (Specific Diagno | Acme | 10 GTA3 | Refusal | 23:55:25 | 0:08:17 | 00:12:52 |
| 142,788 | 10/26/2022 | P-3 I | 17-Falls | Acme | 10 GTA3 | Canceled | 9:02:51 | | |
| 142,894 | 10/26/2022 | P-1 I | 23-Overdose / Poisoning (Ingest | Acme | 10 GTA3 | Refusal | 11:07:36 | 11:12:34 | 00:04:58 |
| 143,336 | 10/27/2022 | P-1 I | 6-Breathing Problems | Acme | 10 GTA3 | Transport | 8:12:20 | 8:22:44 | 00:10:24 |
| 143,371 | 10/27/2022 | P-2 I | 1-Abdominal Pain/Problems | Acme | 10 GTA3 | Transport | 9:28:50 | 9:43:39 | 00:14:49 |
| 143,574 | 10/27/2022 | P-2 I | 17-Falls | Whitewater | 10 GTA3 | Transport | 16:16:24 | 16:21:22 | 00:04:58 |
| 144,034 | 10/28/2022 | P-2 I | 17-Falls | Whitewater | 10 GTA3 | Transport | 14:56:54 | 15:05:10 | 00:08:16 |
| 144,430 | 10/29/2022 | P-3 I | 16-Eye Problems/Injuries | Acme | 10 GTA3 | Canceled | 12:58:55 | 13:02:19 | 00:03:24 |
| 144,465 | 10/29/2022 | P-2 I | 30-Traumatic Injuries (Specific) | Acme | 10 GTA3 | Transport | 14:21:26 | 14:30:20 | 00:08:54 |
| 144,619 | 10/29/2022 | P-1 I | 10-Chest Pain (Non-Traumatic) | Acme | 10 GTA3 | Refusal | 23:22:15 | 23:36:27 | 00:14:12 |
| 144,709 | 10/30/2022 | P-1 I | 6-Breathing Problems | Acme | 10 GTA3 | Transport | 5:29:25 | 5:39:46 | 00:10:21 |
| 144,974 | 10/30/2022 | P-1 I | 10-Chest Pain (Non-Traumatic) | Whitewater | 10 GTA3 | Transport | 21:06:09 | 21:10:57 | 00:04:48 |

| Run# | Date | Priority | Nature of Call | Dispatch Zone | Unit | Disposition | Dispatch Time | Scene Time | Response Time |
|---------|------------|----------|--------------------------------|---------------|---------|-------------|---------------|------------|---------------|
| 145,261 | 10/31/2022 | P-2 E | 31-Unconscious/Fainting (Near) | Acme | 10 GTA3 | Transport | 13:59:36 | 14:06:16 | 00:06:40 |

A-3 Transports By Month (Billable Calls)

| Dispatch Zone | Oct-21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-22 | Oct-22 | Total |
|---------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| Antrim-City of Elk Rapids | 0 | 2 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 3 | 0 | 1 | 10 |
| Antrim-Elk Rapids | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 4 |
| Antrim-Milton | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 6 |
| GT-Acme | 1 | 9 | 31 | 26 | 26 | 22 | 26 | 33 | 41 | 50 | 50 | 24 | 42 | 381 |
| GT-Blair | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| GT-East Bay | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 2 | 1 | 0 | 1 | 11 |
| GT-Garfield | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| GT-Traverse City | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 5 |
| GT-Whitewater | 17 | 23 | 16 | 14 | 16 | 18 | 12 | 16 | 12 | 23 | 14 | 15 | 6 | 202 |
| Kalkaska-Clearwater | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Kalkaska-Excelsior | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Kalkaska-Rapid River | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Total | 19 | 37 | 50 | 42 | 46 | 43 | 38 | 52 | 56 | 80 | 71 | 41 | 50 | 625 |

WW Twp November 2022 RT

| Response Time Minutes | Call Count | Cumulative Call Count | Percentage | Cumulative Percentage |
|-----------------------|------------|-----------------------|------------|-----------------------|
| 00:00:00 - 00:00:59 | 0 | 0 | 0.00% | 0.00% |
| 00:01:00 - 00:01:59 | 1 | 1 | 7.69% | 7.69% |
| 00:02:00 - 00:02:59 | 1 | 2 | 7.69% | 15.38% |
| 00:05:00 - 00:05:59 | 1 | 3 | 7.69% | 23.08% |
| 00:08:00 - 00:08:59 | 3 | 6 | 23.08% | 46.15% |
| 00:09:00 - 00:09:59 | 1 | 7 | 7.69% | 53.85% |
| 00:12:00 - 00:12:59 | 1 | 8 | 7.69% | 61.54% |
| 00:13:00 - 00:13:59 | 3 | 11 | 23.08% | 84.62% |
| 00:14:00 - 00:14:59 | 1 | 12 | 7.69% | 92.31% |
| 00:16:00 - 00:16:59 | 1 | 13 | 7.69% | 100.00% |

Whitewater Twp Responses

November 2022

| Nature of Call | WW | Total |
|---|----|-------|
| 10-Chest Pain (Non-Traumatic) | 3 | 3 |
| 17-Falls | 1 | 1 |
| 21-Hemorrhage/Lacerations | 1 | 1 |
| 23-Overdose / Poisoning (Ingestion) | 1 | 1 |
| 25-Psychiatric/ Abnormal Behavior/Suici | 1 | 1 |
| 30-Traumatic Injuries (Specific) | 1 | 1 |
| 31-Unconscious/Fainting (Near) | 3 | 3 |
| 6-Breathing Problems | 3 | 3 |
| Total | 14 | 14 |

| Call Disposition | WW | Total |
|------------------|----|-------|
| Transport | 11 | 11 |
| Refusal | 2 | 2 |
| Cancelled | 1 | 1 |
| Total | 14 | 14 |

| Response Priority | WW | Total |
|-------------------|----|-------|
| P-1 Emergency ALS | 7 | 7 |
| P-2 Emergency BLS | 6 | 6 |
| P-18 Stage | 1 | 1 |
| Total | 14 | 14 |

| Run# | Date | Priority | Nature of Call | Dispatch Zone | Unit | Disposition | Dispatch Time | Scene Time | Response Time |
|---------|------------|----------|----------------------------------|---------------|---------|-------------|---------------|------------|---------------|
| 146,920 | 11/03/2022 | P-1 | 10-Chest Pain (Non-Traumatic) | Whitewater | 10 GTA3 | Transport | 11:56:56 | 11:59:43 | 00:02:47 |
| 147,467 | 11/04/2022 | P-1 | 6-Breathing Problems | Whitewater | 10 GTA3 | Transport | 11:07:05 | 11:20:45 | 00:13:40 |
| 147,706 | 11/04/2022 | P-1 | 10-Chest Pain (Non-Traumatic) | Whitewater | 10 GTA3 | Transport | 19:08:44 | 19:14:00 | 00:05:16 |
| 148,050 | 11/05/2022 | P-2 | 17-Falls | Whitewater | 10 GTA2 | Transport | 12:16:12 | 12:24:56 | 00:08:44 |
| 150,351 | 11/10/2022 | P-1 | 21-Hemorrhage/Lacerations | Whitewater | 10 GTA3 | Transport | 5:25:55 | 5:27:08 | 00:01:13 |
| 151,633 | 11/12/2022 | P-2 | 31-Unconscious/Fainting (Near) | Whitewater | 10 GTA3 | Transport | 19:17:30 | 19:26:03 | 00:08:33 |
| 151,772 | 11/13/2022 | P-1 | 23-Overdose / Poisoning (Ingest | Whitewater | 10 GTA3 | Transport | 8:18:28 | 8:31:46 | 00:13:18 |
| 154,650 | 11/19/2022 | P-1 | 6-Breathing Problems | Whitewater | 10 GTA3 | Transport | 6:26:26 | 6:34:55 | 00:08:29 |
| 154,991 | 11/20/2022 | P-1 | 6-Breathing Problems | Whitewater | 10 GTA3 | Refusal | 1:58:35 | 2:12:00 | 00:13:25 |
| 155,123 | 11/20/2022 | P-2 | 10-Chest Pain (Non-Traumatic) | Whitewater | 10 GTA3 | Refusal | 10:55:34 | 11:04:46 | 00:09:12 |
| 156,595 | 11/23/2022 | P-2 | 30-Traumatic Injuries (Specific) | Whitewater | 10 GTA3 | Transport | 10:06:42 | 10:21:00 | 00:14:18 |
| 158,026 | 11/26/2022 | P-2 | 31-Unconscious/Fainting (Near) | Whitewater | 10 GTA3 | Transport | 15:51:35 | 16:03:48 | 00:12:13 |
| 158,029 | 11/26/2022 | P-2 | 31-Unconscious/Fainting (Near) | Whitewater | 10 55A1 | Canceled | 16:11:01 | | |
| 160,128 | 11/30/2022 | P-1 | 25-Psychiatric/ Abnormal Behavi | Whitewater | 10 GTA3 | Transport | 19:19:05 | 19:35:24 | 00:16:19 |

GT-A3 Activity (November 2022)

| Call Disposition | Acme | WW | Elk Rapids | East Bay | Total |
|------------------|------|----|------------|----------|-------|
| Transport | 19 | 10 | 1 | 1 | 31 |
| Refusal | 10 | 2 | 0 | 2 | 14 |
| Cancelled | 10 | 0 | 0 | 1 | 11 |
| Total | 39 | 12 | 1 | 4 | 56 |

| Response Priority | Acme | WW | Elk Rapids | East Bay | Total |
|-------------------|------|----|------------|----------|-------|
| P-1 Emergency ALS | 15 | 7 | 0 | 0 | 22 |
| P-2 Emergency BLS | 20 | 4 | 1 | 2 | 27 |
| P-3 Non-Emergent | 4 | 0 | 0 | 2 | 6 |
| P-18 Stage | 0 | 1 | 0 | 0 | 1 |
| Total | 39 | 12 | 1 | 4 | 56 |

| Nature of Call | Acme | WW | Elk Rapids | East Bay | Total |
|---|------|----|------------|----------|-------|
| 10-Chest Pain (Non-Traumatic) | 0 | 3 | 0 | 0 | 3 |
| 12-Convulsions/Seizures | 2 | 0 | 1 | 0 | 3 |
| 13-Diabetic Problems | 1 | 0 | 0 | 0 | 1 |
| 17-Falls | 11 | 0 | 0 | 3 | 14 |
| 21-Hemorrhage/Lacerations | 0 | 1 | 0 | 0 | 1 |
| 23-Overdose / Poisoning (Ingestion) | 0 | 1 | 0 | 0 | 1 |
| 25-Psychiatric/ Abnormal Behavior/Suici | 0 | 1 | 0 | 0 | 1 |
| 26-Sick Person (Specific Diagnosis) | 7 | 0 | 0 | 0 | 7 |
| 29-Traffic/Transportation/Accidents | 5 | 0 | 0 | 1 | 6 |
| 30-Traumatic Injuries (Specific) | 1 | 1 | 0 | 0 | 2 |
| 31-Unconscious/Fainting (Near) | 2 | 2 | 0 | 0 | 4 |
| 32-Unknown Problem (Man Down) | 3 | 0 | 0 | 0 | 3 |

| | Acme | WW | Elk Rapids | East Bay | Total |
|--|------|----|------------|----------|-------|
| 5-Back Pain (Non-traumatic or Non Rece | 2 | 0 | 0 | 0 | 2 |
| 6-Breathing Problems | 5 | 3 | 0 | 0 | 8 |
| Total | 39 | 12 | 1 | 4 | 56 |

| Run# | Date | Priority | Nature of Call | Dispatch Zone | Unit | Disposition | Dispatch Time | Scene Time | Response Time |
|---------|------------|----------|-----------------------------------|---------------|---------|-------------|---------------|------------|---------------|
| 145,926 | 11/01/2022 | P-1 L | 6-Breathing Problems | Acme | 10 GTA3 | Transport | 17:00:38 | 17:10:13 | 00:09:35 |
| 146,047 | 11/01/2022 | P-3 L | 26-Sick Person (Specific Diagno | Acme | 10 GTA3 | Canceled | 23:10:31 | | |
| 146,220 | 11/02/2022 | P-3 L | 17-Falls | Acme | 10 GTA3 | Canceled | 3:27:33 | | |
| 146,554 | 11/02/2022 | P-3 L | 17-Falls | East Bay | 10 GTA3 | Refusal | 17:30:38 | 17:41:54 | 00:11:16 |
| 146,849 | 11/03/2022 | P-1 L | 6-Breathing Problems | Acme | 10 GTA3 | Transport | 9:21:36 | 9:39:07 | 00:17:31 |
| 146,920 | 11/03/2022 | P-1 L | 10-Chest Pain (Non-Traumatic) | Whitewater | 10 GTA3 | Transport | 11:56:56 | 11:59:43 | 00:02:47 |
| 147,129 | 11/03/2022 | P-1 L | 12-Convulsions/Seizures | Acme | 10 GTA3 | Transport | 18:22:02 | 18:34:09 | 00:12:07 |
| 147,427 | 11/04/2022 | P-1 L | 12-Convulsions/Seizures | Acme | 10 GTA3 | Transport | 9:43:07 | 9:48:03 | 00:04:56 |
| 147,467 | 11/04/2022 | P-1 L | 6-Breathing Problems | Whitewater | 10 GTA3 | Transport | 11:07:05 | 11:20:45 | 00:13:40 |
| 147,662 | 11/04/2022 | P-1 L | 29-Traffic/Transportation/Accider | Acme | 10 GTA3 | Refusal | 17:36:52 | 17:39:05 | 00:02:13 |
| 147,670 | 11/04/2022 | P-1 L | 29-Traffic/Transportation/Accider | Acme | 10 GTA3 | Refusal | 17:36:52 | 17:39:05 | 00:02:13 |
| 147,706 | 11/04/2022 | P-1 L | 10-Chest Pain (Non-Traumatic) | Whitewater | 10 GTA3 | Transport | 19:08:44 | 19:14:00 | 00:05:16 |
| 148,289 | 11/06/2022 | P-2 F | 17-Falls | Acme | 10 GTA3 | Refusal | 0:41:15 | 0:56:23 | 00:15:08 |
| 148,422 | 11/06/2022 | P-3 L | 17-Falls | East Bay | 10 GTA3 | Transport | 10:19:22 | 10:25:17 | 00:05:55 |
| 148,800 | 11/07/2022 | P-2 F | 26-Sick Person (Specific Diagno | Acme | 10 GTA3 | Refusal | 9:02:08 | 9:11:10 | 00:09:02 |
| 148,921 | 11/07/2022 | P-2 F | 26-Sick Person (Specific Diagno | Acme | 10 GTA3 | Transport | 13:40:00 | 13:44:52 | 00:04:52 |
| 149,626 | 11/08/2022 | P-2 F | 26-Sick Person (Specific Diagno | Acme | 10 GTA3 | Transport | 18:38:29 | 18:52:09 | 00:13:40 |
| 149,925 | 11/09/2022 | P-3 L | 30-Traumatic Injuries (Specific) | Acme | 10 GTA3 | Transport | 9:32:34 | 9:35:44 | 00:03:10 |
| 150,351 | 11/10/2022 | P-1 L | 21-Hemorrhage/Lacerations | Whitewater | 10 GTA3 | Transport | 5:25:55 | 5:27:08 | 00:01:13 |
| 150,540 | 11/10/2022 | P-1 L | 17-Falls | Acme | 10 GTA3 | Transport | 13:22:46 | 13:29:08 | 00:06:22 |
| 150,770 | 11/10/2022 | P-2 F | 26-Sick Person (Specific Diagno | Acme | 10 GTA3 | Refusal | 23:33:09 | 23:42:16 | 00:09:07 |
| 151,438 | 11/12/2022 | P-1 L | 29-Traffic/Transportation/Accider | Acme | 10 GTA3 | Transport | 10:27:13 | 10:36:23 | 00:09:10 |
| 151,512 | 11/12/2022 | P-2 F | 17-Falls | Acme | 10 GTA3 | Refusal | 13:14:59 | 13:21:32 | 00:06:33 |
| 151,633 | 11/12/2022 | P-2 F | 31-Unconscious/Fainting (Near) | Whitewater | 10 GTA3 | Transport | 19:17:30 | 19:26:03 | 00:08:33 |
| 151,772 | 11/13/2022 | P-1 L | 23-Overdose / Poisoning (Ingest | Whitewater | 10 GTA3 | Transport | 8:18:28 | 8:38:46 | 00:20:18 |
| 151,874 | 11/13/2022 | P-1 L | 6-Breathing Problems | Acme | 10 GTA3 | Transport | 14:04:46 | 14:08:18 | 00:03:32 |
| 152,041 | 11/14/2022 | P-2 F | 17-Falls | Acme | 10 GTA3 | Canceled | 0:11:05 | | |
| 152,346 | 11/14/2022 | P-1 L | 31-Unconscious/Fainting (Near) | Acme | 10 GTA3 | Transport | 16:30:15 | 16:32:07 | 00:01:52 |
| 152,413 | 11/14/2022 | P-1 L | 6-Breathing Problems | Acme | 10 GTA3 | Transport | 20:06:09 | 20:17:00 | 00:10:51 |
| 153,188 | 11/16/2022 | P-2 F | 26-Sick Person (Specific Diagno | Acme | 10 GTA3 | Refusal | 7:52:59 | 7:58:08 | 00:05:09 |
| 153,248 | 11/16/2022 | P-2 F | 32-Unknown Problem (Man Dow | Acme | 10 GTA3 | Transport | 10:22:45 | 10:27:55 | 00:05:10 |
| 153,600 | 11/17/2022 | P-3 L | 17-Falls | Acme | 10 GTA3 | Refusal | 0:56:47 | 1:14:00 | 00:17:13 |

| Run# | Date | Priority | Nature of Call | Dispatch Zone | Unit | Disposition | Dispatch Time | Scene Time | Response Time |
|---------|------------|----------|-----------------------------------|---------------|---------|-------------|---------------|------------|---------------|
| 153,641 | 11/17/2022 | P-1 L | 32-Unknown Problem (Man Dow | Acme | 10 GTA3 | Canceled | 4:53:40 | | |
| 154,136 | 11/18/2022 | P-1 L | 17-Falls | Acme | 10 GTA3 | Canceled | 7:18:42 | | |
| 154,417 | 11/18/2022 | P-2 F | 29-Traffic/Transportation/Accider | East Bay | 10 GTA3 | Canceled | 17:15:59 | | |
| 154,650 | 11/19/2022 | P-1 L | 6-Breathing Problems | Whitewater | 10 GTA3 | Transport | 6:26:26 | 6:34:55 | 00:08:29 |
| 154,704 | 11/19/2022 | P-2 F | 17-Falls | Acme | 10 GTA3 | Canceled | 9:10:37 | | |
| 154,933 | 11/19/2022 | P-2 F | 29-Traffic/Transportation/Accider | Acme | 10 GTA3 | Transport | 20:18:00 | 20:27:27 | 00:09:27 |
| 154,991 | 11/20/2022 | P-1 L | 6-Breathing Problems | Whitewater | 10 GTA3 | Refusal | 1:58:35 | 2:12:00 | 00:13:25 |
| 155,123 | 11/20/2022 | P-2 F | 10-Chest Pain (Non-Traumatic) | Whitewater | 10 GTA3 | Refusal | 10:55:34 | 11:04:46 | 00:09:12 |
| 155,683 | 11/21/2022 | P-2 F | 29-Traffic/Transportation/Accider | Acme | 10 GTA3 | Canceled | 16:16:09 | | |
| 155,733 | 11/21/2022 | P-2 F | 17-Falls | Acme | 10 GTA3 | Refusal | 18:42:51 | 18:54:07 | 00:11:16 |
| 156,035 | 11/22/2022 | P-2 F | 5-Back Pain (Non-traumatic or N | Acme | 10 GTA3 | Transport | 8:09:35 | 8:26:20 | 00:16:45 |
| 156,531 | 11/23/2022 | P-2 F | 17-Falls | Acme | 10 GTA3 | Transport | 8:41:46 | 8:47:16 | 00:05:30 |
| 156,595 | 11/23/2022 | P-2 F | 30-Traumatic Injuries (Specific) | Whitewater | 10 GTA3 | Transport | 10:06:42 | 10:27:00 | 00:20:18 |
| 156,794 | 11/23/2022 | P-2 F | 12-Convulsions/Seizures | Elk Rapids | 10 GTA3 | Transport | 17:11:29 | 17:25:08 | 00:13:39 |
| 157,116 | 11/24/2022 | P-2 F | 26-Sick Person (Specific Diagno | Acme | 10 GTA3 | Canceled | 9:09:16 | | |
| 157,143 | 11/24/2022 | P-1 L | 31-Unconscious/Fainting (Near) | Acme | 10 GTA3 | Transport | 10:52:19 | 10:55:24 | 00:03:05 |
| 158,026 | 11/26/2022 | P-2 F | 31-Unconscious/Fainting (Near) | Whitewater | 10 GTA3 | Transport | 15:51:35 | 16:03:48 | 00:12:13 |
| 158,560 | 11/27/2022 | P-2 F | 32-Unknown Problem (Man Dow | Acme | 10 GTA3 | Canceled | 23:58:46 | | |
| 158,701 | 11/28/2022 | P-2 F | 5-Back Pain (Non-traumatic or N | Acme | 10 GTA3 | Transport | 9:49:32 | 9:57:31 | 00:07:59 |
| 159,061 | 11/28/2022 | P-1 L | 6-Breathing Problems | Acme | 10 GTA3 | Transport | 22:29:55 | 22:38:04 | 00:08:09 |
| 159,391 | 11/29/2022 | P-2 F | 13-Diabetic Problems | Acme | 10 GTA3 | Refusal | 16:13:24 | 16:19:07 | 00:05:43 |
| 160,037 | 11/30/2022 | P-2 F | 17-Falls | East Bay | 10 GTA3 | Refusal | 15:26:12 | 15:31:28 | 00:05:16 |
| 160,128 | 11/30/2022 | P-18 | 25-Psychiatric/ Abnormal Behavi | Whitewater | 10 GTA3 | Transport | 19:19:05 | 19:35:24 | 00:16:19 |
| 160,188 | 11/30/2022 | P-2 F | 17-Falls | Acme | 10 GTA3 | Canceled | 23:52:23 | | |

A-3 Transports By Month (Billable Calls)

| Dispatch Zone | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-22 | Oct-22 | Nov-22 | Total |
|---------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| Antrim-City of Elk Rapids | 2 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 3 | 0 | 1 | 1 | 11 |
| Antrim-Elk Rapids | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 4 |
| Antrim-Milton | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 6 |
| GT-Acme | 9 | 31 | 26 | 26 | 22 | 26 | 33 | 41 | 50 | 51 | 24 | 41 | 29 | 409 |
| GT-Blair | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| GT-East Bay | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 2 | 0 | 0 | 1 | 3 | 13 |
| GT-Garfield | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| GT-Traverse City | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 5 |
| GT-Whitewater | 23 | 16 | 14 | 16 | 18 | 12 | 16 | 12 | 23 | 14 | 15 | 7 | 12 | 198 |
| Kalkaska-Clearwater | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Kalkaska-Excelsior | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Kalkaska-Rapid River | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Total | 37 | 50 | 42 | 46 | 43 | 38 | 52 | 56 | 80 | 71 | 41 | 50 | 45 | 651 |



WHITEWATER TOWNSHIP FIRE DEPARTMENT

8380 OLD M-72 ♦ PO Box 9 ♦ WILLIAMSBURG, MICHIGAN 49690 ♦ 231.267.5969 ♦ FIRECHIEF@WHITEWATERTOWNSHIP.ORG

November 2022 Monthly Report Fire Chief Brandon Flynn

Alarms: The fire department responded to 3 emergency calls in November.

- EMS Assist
- Injured bike rider at the Iceman Cometh Race.
- 911 Hang-up

Training: 4 training sessions were held in November.

- Vehicle Maintenance & SCBA check
- Target Solutions, MIOSHA Part 74
- New air compressor training, OSHA Questionnaire
- Stokes Basket and Patient Handling

Meetings/Other:

- Regional Training Center, November 3
- MABAS, November 3
- EMPT, Cancelled
- County Fire Chiefs, Cancelled
- LEPC, Cancelled
- 911 BOD, Cancelled

General:

Firefighters provided standby services for the Iceman Cometh race that took place on Saturday, November 5. No major incidents occurred, however, with over 5000 riders we had a long day.

Firefighter annual physicals were completed this month.

Engine 3 pump testing and annual maintenance performed.

Most monthly meetings were cancelled this month because of hunting season.

One lockdown drill conducted at Mill Creek Elementary School.



Committed to proudly serving the community with professionalism and integrity.

The fire departments two 1998 Arctic Cat snowmobiles were sold this month by sealed bid. 4 people submitted sealed bids for both snowmobiles with the highest bidder paying \$1,251.00 for each sled. Mr. Mark Hatfield picked up the snowmobiles on Saturday, December 3.

WHITEWATER TOWNSHIP PLANNING COMMISSION
MINUTES FOR REGULAR MEETING
October 5, 2022

Call to Order at 7: 00 p.m.

Roll Call: In person: Keaton, Mangus, Steelman, Wroubel, Vollmuth
Absent: Darrow, Jacobson

Also in attendance: Planner Randy Mielnik and Recording Secretary MacLean

Set / Adjust Agenda: Set

Declaration of Conflict of Interest: Mangus has property that is site condo platted

Public Comment:

Public comment began at 7:04 p.m.

Connie Hymore

Denise Peltonen

Vicki Beam

Public comment ended at 7:13 p.m.

Public Hearing: None

Approval of Minutes:

MOTION by Keaton, to approve the minutes of September 7, 2022; second by Wroubel.

Roll call: Wroubel-yes; Darrow-n/a; Jacobson-n/a; Keaton-yes; Mangus-yes; Steelman-yes, Vollmuth-n/a.

Motion carried.

Correspondence: Included in packet.

Reports:

Zoning Administrator Report, Hall:

Chair's Report, Mangus: Welcome to our Board Rep., Heidi Vollmuth, and Planner Mielnik

Township Board Rep, Vollmuth: Handed out her resume, business card and contact card.

ZBA Representative, Wroubel: No meetings in September. Reported on the August cases.

Committee Reports: None.

Planner, Mielnik: Generally will be working on the ordinances and the township's Master Plan (MP). Will provide materials for the packets. Will provide the MP process to the commissioners. Will work as directed by the PC with Board approval.

Unfinished Business:

1. Update on Zoning Ordinance amendments submitted to the Board.
#83 – Articles 1, 12 and 14 was submitted and has not been completed.
#84 – Article 25, Site Plan Review (SPR) and Special Use Permit (SUP) the Board approved the amendment
#80 – Article 25, Adult Use Marihuana was submitted and has not been completed.
2. Report on township board special meeting. Discussion included pending zoning ordinance amendments, moratorium and insurance coverage.

Materials request:

Planning and Zoning book for Rachel Steelman.

Hard copy of the ordinance history of amendments, general ordinance and zoning ordinance that is currently being used for each member and Mielnik.

Items for each commissioner: the employee handbook and the policy and procedure manual.

Muni-Code for Mielnik and Vollmuth, digital copy preferred by Mielnik.

Discussion of the zoning ordinance codification and process ensued.

3. Amendment #85 – Medical Marihuana discussion.

Findings of Fact:

Whereas medical marihuana has been rejected by Whitewater Township residents by a referendum of the voters.

Whereas the Whitewater Township Board has voted to rescind authorization for both adult-use and medical marihuana commercial grow and processing facilities within Whitewater Township.

The Planning Commission recommends disapproval of Parts of 1 and all of sections 2-5 of the proposed amendment #85, establishing medical marihuana grow and processing establishments as a special use.

Whereas Marihuana Caregiver Operations are permitted within the State of Michigan and Whitewater Township.

Whereas as common sense guidelines would be helpful for residents and neighbors to be aware of standards for such establishments.

Whereas enforcement of standards can be addressed locally if within ordinance.

The Planning Commission recommends approval of the definition of MARIHUANA CAREGIVER OPERATION, MARIHUANA PRIMARY CAREGIVER AND MARIHUANA regarding Medical Marihuana Grow and Processing and adoption of the Medical Marihuana Caregiver grow guidelines in Article 37.

MOTION by Keaton to forward to the township as outlined, based on the stated findings of fact; second by Vollmuth.

Roll call: Vollmuth-yes; Jacobson-n/a; Keaton-yes; Mangus-yes; Steelman-yes; Darrow-n/a; Wroubel-yes.
Motion carried.

4. Citizen Planner enrollment and signup. Mangus will provide the link so commissioners can present to the Clerk.
5. Workgroup report on Articles 28, 31 and 32. Discussion included comments that Article 28 is good/useable. Consensus to have Article 28 reviewed by Mielnik before being sent to the attorney. Consensus to have Mielnik redo Articles 31 and 32 in the future.
6. Planning Consultant and Master Plan Review status: Randy Mielnik has been contracted by the township.
7. Article 5, Districts and zoning ordinance Word documents were discussed previously during the meeting.

New Business:

1. Review of Article 25, Special Use Permit standards for Commercial Campgrounds. Discussion included the number of days allowed to camp, state requirements, site sizes and density. Hand it off to Mielnik for input.

Mangus will present the plan of Mielnik work, Article 28 and Article 25-commercial campgrounds, to Popp for contract approval.

Next Regular Meeting is scheduled for November 2, 2022, 7:00 p.m.

Next meeting agenda: Article 28, Article 25-campgrounds, strategy and recommendations on moving forward on the MP and the zoning ordinance.

Public Comment:

Public comment began at 9:16 p.m.

Vicki Beam

Connie Hymore

Lois MacLean

Public comment ended at 9:32

Commission Discussion/Comments: Wroubel appreciates the better sound.

Continuing Education, Vollmuth will provide links to various articles of interest.

Adjournment: 9:37 p.m.

Respectfully Submitted
Lois MacLean,
Recording Secretary

DNR State Forest Road Program changes

1 message

legislation <legislation@michigantownships.org>
To: Michelle Hart <michelle@michigantownships.org>

Fri, Oct 28, 2022 at 1:31 PM



MTA is forwarding the attached letter and information at the request of the state Department of Natural Resources regarding the state forest road program and requesting your review. The DNR updates its forest road inventory on an annual basis as required by law and is required to issue notice of intent to open or close forest roads on state lands—some of these proposed changes may be located in your township. Please note comments can be submitted until Dec. 1.

Should you have any questions, please contact Mark Monroe, DNR Forest Road – Project Manager, at 989-983-4101, 989-329-9827 (cell) or MonroeM@Michigan.gov.

2 attachments

DNR 2022 Review Cycle Summary.pdf
260K



Road Inventory Review_Townships Notification.pdf
351K

Michigan Department of Natural Resources

Road Inventory Review 2022 Summary

The Michigan Department of Natural Resources updates its forest road inventory on an annual basis, which meets Public Act 288 legislative requirements and provides an opportunity to account for current road conditions. The DNR also encourages public involvement in the management of state forest roads, as well as incorporating staff input.

In 2018 the DNR launched an online map to provide an easy way for the public to interactively view forest roads and to submit comments on the management of those roads. This interactive web map has continued to be a very useful tool throughout the 2022 road inventory cycle. As of Aug. 31, 2022, the public submitted **124** comments over the previous year. These comments were reviewed by DNR staff and considered as potential proposals for changes to the road inventory. All remaining changes were proposed by DNR staff as they worked to complete inventory on the ground and refine the existing road data and/or respond to the impact of off-road vehicle use on state forest roads.

Detail of mileage:

Changes in mileage can occur due to adding or deleting a road following field confirmation of what exists. This includes either extending or shortening a road segment, as well as data cleanup such as deleting duplicate segments from the map. A statewide summary of the proposed mileage changes includes the following:

- Total mileage of roads to be removed from the state forest road maps due to closure to conventional vehicles and ORVs: **28.3 miles.**
 - Reasons for roads to be closed to conventional vehicles include environmental or resource protection.
- Total mileage of roads to delete due to data cleanup: **23.3 miles.**
 - Examples of data cleanup include roads that do not exist on the ground, duplicate roads and data reconciliation.
- Total mileage of roads to add: **39.7 miles.**
 - Added roads must be classified as either open to ORVs, closed to ORVs, or seasonally closed to ORVs. The mileage summary for each of these categories is as follows:
 - Added roads open to ORVs: **26.5 miles.**
 - Added roads closed to ORVs: **12.9 miles.**
 - Reason for roads closed to ORVs include resource protection and existing Land Use Orders of the Director.
 - Added roads seasonally closed to ORVs: **0.3 miles.**

- Reason for roads closed to ORVs seasonally: Road leads to a boating access site or public water access site, which is open to ORVs in the winter only to provide access to the ice in the Lower Peninsula.

In addition to actual road mileage being added or deleted, changes in road mileage open or closed to ORVs can also occur as a result of the ORV status on the existing road changing. Those changes are summarized as follows:

- Total mileage of roads to be changed from opened to closed to ORVs: **0.1 miles.**
- Total mileage of roads to be changed from closed to ORVs to open: **9.4 miles.**

Overall summary:

When incorporating DNR staff refinements, as well as proposals that were initiated both by DNR staff and by comments submitted from members of the public, the overall mileage of state forest roads by region is as follows:

- **Upper Peninsula:**
 - Total miles of state forest roads: **5,612.8 miles.**
 - Total miles of state forest roads open to ORVs: **5,503.4 miles.**
 - Total miles of state forest roads closed or seasonally closed to ORVs: **109.4 miles.**
 - Total percentage of roads open to ORV use: **98.1%.**
- **Northern Lower Peninsula:**
 - Total miles of state forest roads: **7,309.2 miles.**
 - Total miles of state forest roads open to ORVs: **6,109.9 miles.**
 - Total miles of state forest roads closed or seasonally closed to ORVs: **1,199.3 miles.**
 - Total percentage of roads open to ORV use: **83.6%.**
- **Southern Lower Peninsula:**
 - Total miles of state forest roads: **365 miles.**
 - Total miles of state forest roads open to ORVs: **10.1 miles.**
 - Total miles of state forest roads closed or seasonally closed to ORVs: **354.9 miles.**
 - Total percentage of roads open to ORV use: **2.8%.**



GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES
LANSING



DANIEL EICHINGER
DIRECTOR

Dear Township Supervisor:

In compliance with Public Act 288, Section 72118 (2)(c), the Department of Natural Resources hereby provides notice of the intent to open or close certain forest roads on state lands to conventional vehicles, off-road vehicles or both. You can view the specific proposed changes and road locations in detail beginning Nov. 1 at Michigan.gov/ForestRoads. Some of these proposed changes may be on lands located within your jurisdiction.

The proposed changes in forest road status are based on DNR staff site reviews and comments received from the public. A summary of the changes, as well as the primary reasons for the changes, is available on the enclosed "Department of Natural Resources – Road Inventory Review 2022 Summary" document. Additional details are on the website.

Comments may be submitted until Dec. 1 by using the interactive web map found on the website or via email to DNR-RoadInventoryProject@Michigan.gov. The formal information memo to the DNR director will be submitted at the January 2023 Natural Resources Commission meeting. The final land use order will be submitted for action by the director at the February 2023 NRC meeting. Comments will also be received at each of the NRC meetings.

Please contact me at either of the phone numbers provided below if you have any questions.

Sincerely,

Mark Monroe
Forest Road – Project Manager
989-983-4101
989-329-9827 (cell)
MonroeM@Michigan.gov



Ron Popp <supervisorwhitewater@gmail.com>

Whitewater Township Boat Wash Technology

1 message

Linda Slopsema [REDACTED] Thu, Dec 1, 2022 at 5:08 PM

To: Ron Popp <supervisorwhitewater@gmail.com>, heidi vollmuth <dito115@aol.com>, Don Glenn <DGLENN6542@yahoo.com>, Ardella Benak <treasurerwhitewater@gmail.com>, Cheryl Goss <clerk@whitewatertownship.org>

Cc: Robert Campbell [REDACTED] Jan Garvey [REDACTED] John Reid

[REDACTED] Sue Moody [REDACTED] Samantha Jo Krause [REDACTED]
[REDACTED] Linda Slopsema [REDACTED]

Please see attached memo outline boat wash research and recommendation for Whitewater Township Park.

RECOMMENDATION: Based on Michigan EGLE / DNR guidance and current analysis, **ESLA recommends pursuing a pressurized water system (unheated)** as the best cost/benefit solution. ESLA will continue to support this project with ongoing research, analysis, and boater outreach.

Linda Slopsema
lindaslopsema@gmail.com
517-614-4887 (cell)



Boat Wash Technology letter to WWT revised 12012022.docx

54K



SUBJECT: WHITEWATER TOWNSHIP PARK BOAT WASH

DATE: 12-01-2022

The top threat to Elk and Skegemog lakes water quality is biological pollution in the form of aquatic invasive species (AIS)* introduced from trailered boats through ballast/bilge water, live wells, and/or attached to the boat hull or trailer in the form of plants or organisms. Invasive species that have been detected in Elk and Skegemog lakes are: Eurasian Watermilfoil, Yellow Flag Iris, Purple Loosestrife, Zebra and Quagga mussels, and Round Gobby (fish). ESLA has been treating Eurasian Water Milfoil (EWM) since 2014. EWM is one of the most aggressive invasive aquatic weeds in North America. Infestation creates dense mats, entangling boat props and restricting water flow. You likely have heard about substantial infestations in Lake Cadillac and Lake Leelanau where 2022 treatment costs have been reported at \$90,000 and \$300,000 respectively with more spending expected in 2023.

According to State of Michigan EGLE experts, it is **critically important to decontaminate (remove plants and organisms) from any boat that is launching in a different waterway in less than 5 days** to stop the spread of invasives. A boat wash program is the best line of defense to prevent this and is most effective when coordinated with education via signage, handouts and events with person-to-person interaction at the boat wash.

High pressure hot water (140F) with 10 seconds of contact time has long been regarded as the most effective method to decontaminate a boat. This is the configuration of mobile boat wash units that are used at staffed outreach events sponsored by the State of Michigan. Very few permanent boat wash stations use hot water due to liability (risk of burns) and therefore the need to fund trained operators on an ongoing basis. High pressure washing reduces the number of aquatic plants by 83% and small bodied organisms by 91%.

Many lakes have recently installed or are planning high pressure water wash systems (unheated) for high usage launch sites. The rationale is that it can be a self-serve site (no risk of burns) and it provides excellent mechanical action from pressurized water (1500 – 2500psi) to remove contaminants.

Waterless boat cleaning is also a popular option. It works using a wet/dry vacuum, an air blower (90 PSI), and hand tools. CD3 out of Minnesota is the only commercial vendor at this time.

Below is a comparison of the boat wash types gathered from various organizations using the equipment:

| EQUIPMENT | PRO | CON | COST | COMMENTS |
|---------------------------------------|---|--|-----------------------------|---|
| HIGH PRESSURE HOT WATER | <ul style="list-style-type: none"> MOST EFFECTIVE DECONTAMINATION EXCELLENT MECHANICAL CLEANING CONSISTENT WASH & FAST THRU-PUT (MANNED) | <ul style="list-style-type: none"> RISK OF BURNS ONGOING COST OF MANNING MAINTENANCE WATER DISCHARGE PERMIT OR EXEMPTION | \$55,000 | <ul style="list-style-type: none"> NOT ALL PEOPLE WILL TAKE THE 10 SECONDS FOR KILL EFFECTIVENESS COORDINATION OF UTILITIES (WATER & ELEC) REQUIRED |
| HIGH PRESSURE WATER (UNHEATED) | <ul style="list-style-type: none"> EXCELLENT MECHANICAL CLEANING BEST VALUE FOR THE COST SIMPLE MINIMAL MAINTENANCE | <ul style="list-style-type: none"> WATER DISCHARGE PERMIT OR EXEMPTION | \$40,000¹ | <ul style="list-style-type: none"> EASY TO USE COORDINATION OF UTILITIES (WATER & ELEC) REQUIRED |
| WATERLESS | <ul style="list-style-type: none"> EASY TO IMPLEMENT (DROP OFF AND PLACE) SOLAR POWERED (NO UTILITIES) EXCELLENT COMMUNICATION TOOL USAGE DATA COLLECTION | <ul style="list-style-type: none"> VISUALLY DIFFICULT TO SEE PROGRESS OF BLOWER LEAST EFFECTIVE DECONTAMINATION EXPENSIVE FOR WHAT YOU GET ANNUAL SOFTWARE FEE \$1,100 | \$41,500 | <ul style="list-style-type: none"> WAND "WAVING" COMMON MOSTLY AN EDUCATIONAL TOOL WE NEED TO UPGRADE TO A WATER SYSTEM |

¹ cost estimate based upon on site review and detailed construction cost breakdown from the 2022 HIGH PRESSURE WASH @ Lake Leelanau DNR launch. Data supplied by Lake Leelanau Lake Association.



SUBJECT: WHITEWATER TOWNSHIP PARK BOAT WASH

DATE: 12-01-2022

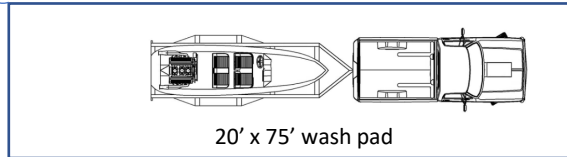
RECOMMENDATION: Based on Michigan EGLE / DNR guidance and current analysis, **ESLA recommends pursuing a pressurized water system (unheated)** as the best cost/benefit solution. ESLA will continue to support this project with ongoing research, analysis, and boater outreach.

Thank you for your consideration.

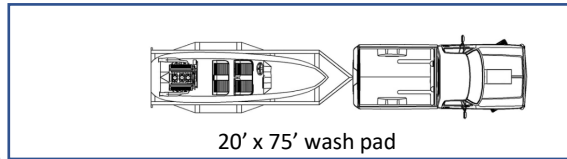
Linda Slopsema
ESLA Environmental Committee
lindaslopsema@gmail.com

Whitewater Township Park Boat Wash

Park Rd.



6'X6' shed →



Wash Pad Area Construction

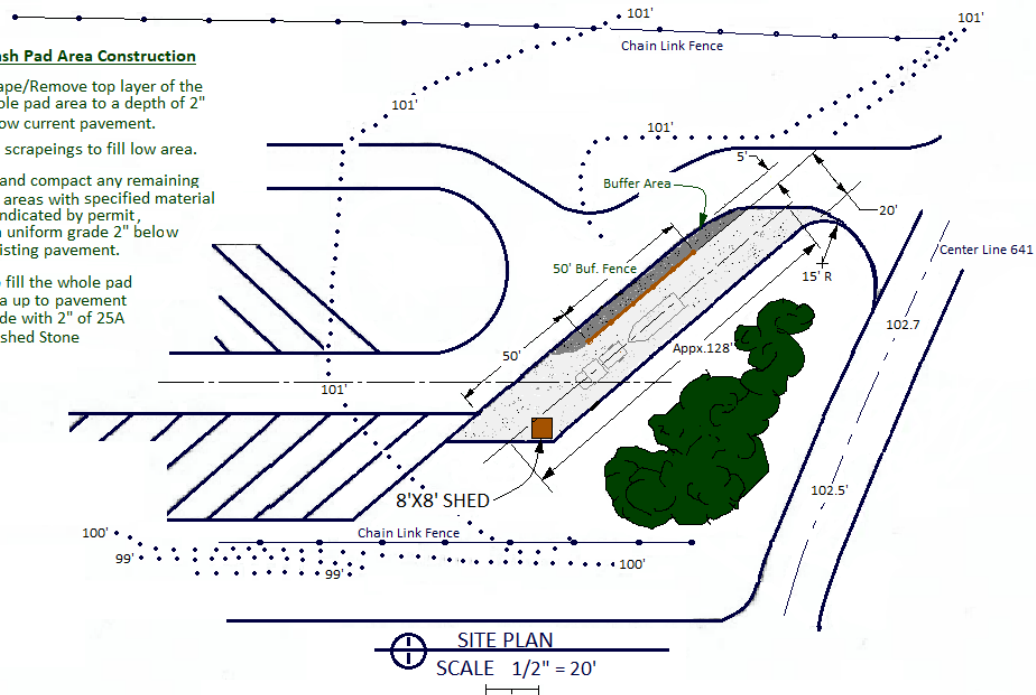
- Scrape/Remove top layer of the whole pad area to a depth of 2" below current pavement.
- Use scrapeings to fill low area.
- Fill and compact any remaining low areas with specified material as indicated by permit, to a uniform grade 2" below existing pavement.
- Top fill the whole pad area up to pavement grade with 2" of 25A Crushed Stone

REFERENCE ONLY

DNR NARROWS LAUNCH @ LK LEELANAU (BOAT WASH PAD)

Wash Pad Area Construction

- Scrape/Remove top layer of the whole pad area to a depth of 2" below current pavement.
- Use scrapeings to fill low area.
- Fill and compact any remaining low areas with specified material as indicated by permit, to a uniform grade 2" below existing pavement.
- Top fill the whole pad area up to pavement grade with 2" of 25A Crushed Stone





Ron Popp <supervisorwhitewater@gmail.com>

FW: Hi from YouthWork

1 message

Beth Friend <bfriend@eastbaytwp.org>

Sat, Oct 8, 2022 at 8:42 AM

Hi everyone,

See the attached brochure and below email. You may have already received this, but in case you haven't, I thought I'd send along.

Have a great day!

Beth



Beth Friend, Supervisor
East Bay Charter Township
1965 N Three Mile Road
Traverse City, MI 49696
(231) 947-8719 (office)
(231) 633-1110 (cell)
bfriend@eastbaytwp.org

From: Amanda Scott <AScott@cfs3l.org>
Sent: Wednesday, October 5, 2022 8:31 AM
To: Beth Friend <bfriend@eastbaytwp.org>
Subject: Hi from YouthWork

Hi Beth, Gerianne Street in Fife Lake suggested that I reach out to you. I am writing to introduce you to [YouthWork](#), a nonprofit workforce development program of Child and Family Services. YouthWork partners with government agencies and nonprofits to complete vital projects while at the same time teaching job and life skills to local young adults. I would love to talk more with you about a potential partnership and ways we could work together.

We have significant experience completing conservation and skilled trades projects for local governments and can save you time and resources. When you hire YouthWork to complete a project, we'll assign a crew of 3-5 young adults supervised by an adult crew leader. Crews will show up for the day with the tools, equipment, and labor necessary to get things done. Some projects are completed in a day or less while others may take several months, depending on the scope of work.

YouthWork crews can complete a variety of activities including spring/fall cleanups, cemetery cleanup/maintenance, trail repair and development, park improvements and maintenance, boardwalk/viewing deck construction or repair, light construction or deconstruction projects, tree planting, invasive species removal, historic preservation, and more! YouthWork staff hold various licenses and certifications and specialize in a variety of areas.

Hiring YouthWork also has significant impacts the young adults in our community. Our young people earn money, scholarships, and 21st century job skills. Many of our young adults have even been hired by YouthWork's partners like the TC Parks and Rec Department.

YouthWork's 200+ project partners are continuously pleased with the quality of our work and 100% said on evaluations that they would hire YouthWork again. Studies show that programs like ours can reduce project expenses by up to 50%. We're happy to partner on grant-funded or contractual projects.

YouthWork has openings for projects this fall and can even schedule into summer 2023. We are also happy to partner with you on Grand Traverse County ARPA funded projects to increase your capacity and show collaboration with other nonprofit partners and have experience writing and managing similar grants and contracts. Note County ARPA Proposals are due October 31. Learn more about GT County ARPA Funding here: <https://www.gtcountymi.gov/2527/American-Rescue-Plan-Advisory-Committee>.

I have attached a brochure that you can share with your board and/or staff. Please don't hesitate to reach out with ANY questions or to discuss a current or future project need.

Thanks for your time!

Amanda Scott


YouthWork AmeriCorps Director
Child & Family Services

Office: (231) 946-8975 ext. 1139
Cell: (231) 313-8002
ascott@CFS3L.org

**Please note my new contact information*



This e-mail is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential, and exempt from disclosure under applicable law. If you have received this communication in error, please do not distribute it. Please notify the sender by e-mail at the address shown and delete the original message. Thank you.

 **YouthWork Info Booklet 9-2022sm.pdf**
2771K



Youth can serve,

grow,

& learn

YouthWork
Industries
Child & Family Services



YouthWork is GETTING THINGS DONE!

Since inception in summer 2018, 300+ YouthWork AmeriCorps members have collectively provided more than 100,000+ hours of community services for 200+ partners at 250+ project sites contributing to:



150,000+ native plants and trees planted



400+ miles of trails constructed/improved, including 5+ miles made ADA-accessible



1,000+ feet of shoreline bio-engineered and 90+ miles of riparian corridor restored



2,600+ acres of public lands improved



300+ acres of meadows created/restored for pollinators



350+ historic or public structures constructed or restored



40+ tons of recycled material removed from the waste stream



100+ boardwalks and viewing decks constructed



Service and Learning



Developing youth and communities through service

YouthWork, a part of the national AmeriCorps network, is a unique workforce development program serving vulnerable youth and project partners in more than 37 counties throughout Michigan. YouthWork is the only AmeriCorps program of its kind in Michigan! Our young members learn important job and life skills as they complete projects in their home communities. YouthWork activities are centered around industries vital to our local communities – environmental conservation, skilled trades, and culinary.

YouthWork members come from all walks of life. Some already have experience and just want to learn new skills. Others have never had a job or worked outdoors and want to gain experience. No matter where members are starting, YouthWork wants to help them succeed and will provide the training and support necessary to help members reach their goals.

YouthWork members are age 15-26+ and might be: in school or out of school; in foster care or have experienced significant trauma; living with disabilities or delays; homeless or at-risk of homelessness; academically at-risk or in special education programs; on probation or having behavioral issues; and/or living in poverty.

A win-win for our communities

With limited budgets and capacity, nonprofits and government agencies are often forced to delay important projects. YouthWork allows for the completion of these projects at a reduced cost, saving valuable resources and enhancing community spaces for all to enjoy. Studies show that programs like YouthWork can reduce project expenses by up to 50%.

YouthWork has significant experience completing conservation and skilled trades projects. YouthWork's 200+ project partners are continuously pleased with the quality of our work and 100% say they would hire YouthWork again.

We all benefit from YouthWork

Our youth learn vital job and life skills, increasing their opportunities and instilling in them an appreciation for community service, recreation, and stewardship.

Our partners save valuable resources, as projects are completed at reduced rate by leveraging strategic partnerships and diverse funding sources.

Our businesses benefit from a skilled, better-prepared workforce—employees our economy needs to thrive.

Our communities enjoy improved community spaces, a better quality of life, enhanced recreation opportunities, and real solutions to local and global challenges.

Community Partners



Together we can get more things done

YouthWork proudly **partners with a growing list of community organizations** who refer youth to the program, hire YouthWork to complete projects, and invest in our program. Our largest investor is AmeriCorps, a federal agency that supports a portion of the program's costs. To support remaining costs, YouthWork collects fees-for-services on projects we complete and gratefully receives support from local investors who see the value, impact, and great potential of YouthWork.

When you hire YouthWork or donate to our program, your dollar grows exponentially and its impact spreads throughout our community. Grants and donations received are used to: 1) support specific projects, thus reducing or eliminating the direct cost to our nonprofit and public partners; 2) provide additional support/training to youth participants who need extra help; or 3) grow the program and our impact.

A word from our partners

“Through the efforts of YouthWork, Keweenaw National Historical Park has made strides engaging young people from our own community on preservation maintenance projects. YouthWork's collaboration builds trust and understanding across generations and provides participants with the opportunity to develop leadership skills, confidence, and a sense of accomplishment and civic pride. I love YouthWork!”

– **John Rosemurgy, Historical Architect**, Keweenaw National Historic Park, National Park Service

“We have worked with YouthWork on trail-building and maintenance projects at Sleeping Bear Dunes National Lakeshore for several years. YouthWork crews have been hard-working, disciplined, and friendly. They have worked well with National Park staff and our volunteers, resulting in seamless and effective teamwork between the three groups. We plan to have them back again.”

Kerry Kelly, President, Friends of Sleeping Bear Dunes

“YouthWork helps students who need soft skills training, hands on experience, trades skills, and just learning things like how to keep a schedule and show up and be reliable and motivated. We have found that this program is a really good fit for many of our students.”

Mimi Kinney, Transition Coordinator, Traverse Bay Area Intermediate School District

300+ YouthWork members have served 200+ project partners at 250+ sites.

Our project partners include:

- Sleeping Bear Dunes National Lakeshore
- Keweenaw National Historic Park
- Pictured Rocks National Lakeshore
- Isle Royale National Park
- Hiawatha National Forest
- Huron-Manistee National Forests
- Conservation Resource Alliance
- Bay Area Recycling for Charities
- US Fish and Wildlife Service
- The Watershed Center
- Habitat for Humanity
- Parks and Recreation Departments
- Various Conservation Districts and Land Conservancies
- Grass River Natural Area
- Inland Seas
- Local counties, townships, cities, and villages
- Grow Benzie!
- Friends of Sleeping Bear Dunes
- HistoriCorps
- Reining Liberty Ranch
- PEACE Ranch
- The Optimist Club
- GT Band of Ottawa & Chippewa Indians
- Upper Manistee River Association
- Nonprofits including Goodwill and Salvation Army

See a complete list on our website

Making a difference

Projects that change lives

YouthWork has significant experience completing conservation and skilled trades projects. We bring the tools, equipment, experience, and labor necessary to **GET THINGS DONE!** YouthWork staff hold various licenses and certifications and specialize in a variety of areas. We strategically assign crews to projects based on the needs of our partners and participants. We adhere to strict safety protocol and are committed to providing excellent, professional services.

Getting things done for you

Trail Construction, Maintenance, & Rehab

Cemetery Maintenance & Cleanup

Fall & Spring Cleanups

Park Maintenance

Hazard Tree & Debris Removal

Waterway and Shoreline Protection & Restoration

Invasive Species Removal

Planting Trees & Plants

Habitat Protection & Restoration

Historic Preservation & Window Re-glazing

Light Construction, Maintenance, Weatherization, & Deconstruction

Landscaping & Sustainable Farming

Deferred Maintenance & Repairs

Boardwalk, Staircase, & Observation Deck Construction & Repairs

Food service, Catering, & Concessions

ADA-Accessibility Projects, Ramp Construction, & Trail

Improvements Event Setup & Take Down



Get in touch!

Want to **hire** YouthWork for a project, **refer** a member, or **invest** in our program? We would love to hear from you!

youthwork@cfs3L.org

231-946-8975 x 1139

www.cfsnwmi.org/YouthWork

[@youthwork_industries](https://www.instagram.com/youthwork_industries)



YouthWork Industries

Child & Family Services



AmeriCorps

YouthWork is a proud AmeriCorps program
and WINNER of the Corps Network 2020
National Project of the Year!

www.cfsnwmi.org/YouthWork

  @youthwork_industries

YouthWork Campus
Twin Lakes Park
6800 N. Long Lake Road
Traverse City, MI 49685
231-946-8975 x1139
youthwork@cfs3L.org

Child & Family Services
3785 Veterans Drive
Traverse City, MI 49684
231-946-8975
cfsnwmi.org

Serving These Communities and More:

Upper Peninsula

Alger/Delta/Marquette/Schoolcraft
Luce/Mackinac/Chippewa
Houghton/Keweenaw/Baraga/Ontonagan

Northern Lower Peninsula

Benzie/Grand Traverse/Kalkaska
Leelanau/Manistee/Missaukee
Wexford/Antrim/Charlevoix
Emmet/Cheboygan/Crawford/Otsego

Central & Southeast Michigan

Lake/Newaygo/Mason/Oceana
Genesee/ Bay/Saginaw/Shiawassee
Oakland/Macomb/Wayne/Monroe
Bay/Saginaw/Shiawassee



Ron Popp <supervisorwhitewater@gmail.com>

FW: Today's special meeting 10/24/22

1 message

Ardella M Benak <treasurer@whitewatertownship.org>
To: Ron Popp <supervisorwhitewater@gmail.com>

Tue, Nov 15, 2022 at 3:53 PM

Ron,

I'm not sure how this letter to the board did not make it into the correspondence section of our board packet for November, but I am requesting it be in the December board packet. We have been including citizens emails and letters in the correspondence section for quite some time and I think it is a good thing. I'm sure it was just missed with all the other duties you are responsible for.

Thank you

Ardella M. Benak

Whitewater Township Treasurer

231-267-5141 ext. 22

From: Brenda Bruner [REDACTED]
Sent: Monday, October 24, 2022 5:15 PM
To: clerk@whitewatertownship.org; heidivourtrustee@gmail.com; supervisor@whitewatertownship.org; treasurer@whitewatertownship.org; trustee02@whitewatertownship.org
Subject: Today's special meeting 10/24/22

To all whitewater board members

I attended your meeting today, and didn't speak but have a few questions and comments.

You never addressed the park funds that the 3 members decided to put in the general fund. Is this a done deal? That would be very sad to take money out of a park that has fees to put back in the park which needs improvements. Such as boat launch and bathrooms. To go in a general fund to use money for whatever!

I feel like you are kicking this boat launch project down the road, if you do then we can lose the 200000 grant money? What is the end date of this grant money to expire? You addressed safety, sounds like the docks are moving towards unsafe so why would you not want to improve them?

As a resident at this meeting, one it went way too long. Two, you can tell it's very obvious that you all don't get along. Your face and body expressions tell a lot about you as individuals. I would agree you should have a sub committee to do the boat launch project. that could possibly work together with this board. As I could see some definitely don't respect each other

I also would be interested in a kayak/canoe put in and taking out in this upgrade at the park.

Kindly

Brenda Bruner

--

Brenda Bruner
Shaklee 633-5923
Brendagogreen@gmail.com



Ron Popp <supervisorwhitewater@gmail.com>

Housing Matters Newsletter - November Edition

1 message

Housing North <info@housingnorth.org>
Reply-To: Housing North <info@housingnorth.org>
To: Ron <supervisor@whitewatertownship.org>

Wed, Nov 9, 2022 at 11:58 AM

[View this email in your browser](#)



November Edition

HOUSING MATTERS NEWSLETTER



Influencing Policy

Housing Michigan Coalition Bills on the Michigan House this **THURSDAY**
Let your legislators hear your voice!

Good news, but we need your help to get it across the finish line! The Michigan

Senate bill package pushed by Housing North and the Housing Michigan Coalition is scheduled to be on the House agenda this week, Thursday, November 10. The bills - **Senate Bills 422, 432, 364, 362** - create new tools to help the market spur housing development in the range of 60-120% AMI.

We need your support in [contacting northern Michigan legislators](#) by Noon on Thursday, Nov. 10th!

You can [click here](#) and send a personalized short letter of support.



Expanding Capacity

Launch of the Rental Preservation Program

At the 2022 Northwest Michigan Housing Summit, Housing North shared exciting news: the creation of the [Rental Preservation Program](#). The ultimate goal of this program is the preservation of year-round rental housing, which will increase the number of accessible housing options within our area. In its pilot year, the Rental Preservation Project will facilitate a minimum of two affordable housing projects in Leelanau County, as well as create a replicable public-private model for other regional entities desperate to address their communities' housing crisis.

The Consumers Energy Foundation has generously committed \$100,000 to the launch of this pilot program, **contingent upon Housing North raising matching support by December 31, 2022**. Every dollar you donate gets us closer not only to unlocking \$100,000 in matching support but also to increasing the availability of housing for people within our local communities. NOW is the best time to show your support for this program and donate!

Donate today by [clicking here](#), and please note "Rental Preservation Program" when donating.

2022 Northwest Michigan Housing Summit

Highlights and takeaways!



For the first time in two years, the Northwest Michigan Housing Summit convened in person. We had over 220 people register to attend the event! This made for a full house, with lots of participation, networking, and discussions. We had a great time meeting you all, sharing information, and learning from not only our amazing presenters but also each other!

Highlights & Key takeaways

- Yusuf Dahl shared advice and his inspirational story as our 2022 Keynote speaker. You might have also caught his speech on Interlochen Public Radio. If you haven't, [click here!](#)
- Here is a link to the [Statewide housing plan](#) and the programs. We encourage you to provide feedback through MSHDA on these programs and how they can benefit NW Michigan.
- We would also like to remind you of the newly announced [Blight Elimination Program](#) (State Land Bank) Request for Proposals. The proposals are due on January 31st, 2023.
- The legislative panel discussed the four [Housing Michigan Coalition](#) bills, which we hope will be voted on during the remaining house sessions, which are limited. We will have a Lobby Day in November so stay tuned for this.
- Scott Smith was awarded the Housing Leadership Award for his amazing work with the [Little Traverse Bay Housing Partnership](#).
- Senator Wayne Schmidt was awarded the Housing Advocate Award, which makes him the first person ever to win the same Housing Summit award two years in a row! His work advocating for housing solutions and funding for our region has been instrumental for projects in our region.
- Our Funders Award was presented to Charlevoix County, City of Charlevoix, the City of Boyne City, and the City of East Jordan for being the first county to launch the Housing Ready Program.

- CEDAM also got in on the award action and awarded our very own board member Tony Lentych with the 2022 Gene Kuthy award, which also included a cash award for Housing North. Thank you and congratulations to Tony!
- Here is a link to the [Michigan Association of Planning's \(MAP\) Zoning Reform Toolkit](#). Andrea Brown of MAP and Suzanne Schulz of Progressive AE presented the toolkit to attendees, which includes 15 reforms to address housing supply, choice, and affordability.
- Melissa Milton-Pung from the Michigan Municipal League and Amanda Harrell-Seyburn debuted their [Pattern Book Homes Manual: Pattern book for 21st Century](#).
- Here is a link to [Networks Northwest's Seasonal Population Study for Northwest](#) Lower Michigan. Rowan Brady of Beckett & Raeder and Rob Carson of Networks Northwest presented the report's findings and implications for the region.
- Tina Allen with Strategic Solutions Northwest led an advocacy training workshop. [Here is a link to sign up](#) and be part of our advocacy team.

Housing North debuted our first t-shirt! If you are a Proud Housing Advocate, consider buying one. All proceeds from t-shirt sales go directly to Housing North and help us continue our mission of building awareness, influencing policy, and expanding capacity so communities can create housing solutions that meet their unique needs. [Contact us](#) and get yours today!

We are thankful for a successful event and look forward to seeing you next year!

Building Awareness

CEDAM & Housing North: Connecting Community Developers



Thank you to all of the attendees of the Connecting Community Developers event that we hosted with CEDAM in August! It was great to chat with fellow

housing professionals and other development-focused people within our region, especially when delicious ice cream is involved.

The [Community Economic Association of Michigan \(or CEDAM\)](#) is a membership-based nonprofit organization focused on community economic development. Visit their website to learn more about their work. They often host housing-related events and training that you might find useful!

SUCCESS STORIES FROM OUR TEAM



[Click here](#) and take a look at Sean Bradley's Blog Post: Foundations for our Future: A new initiative to support homes for our communities.



Manistee's Commitment to Housing: Former Fellow Lissette Reyes Discusses Their Journey. [Click here](#) and learn more about Manistee's success story!



Donate



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[PARTNERS](#)

[PROGRAMS](#)

[NEWS & SUCCESSES](#)

[GET INVOLVED](#)

[231-335-1685](tel:231-335-1685) info@housingnorth.org

Mailing address: PO Box 1434 Traverse City, MI 49685

Got this email from a friend? [Subscribe here.](#)



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DRAFT MINUTES**Whitewater Township Board
Minutes of Regular Meeting held November 15, 2022****Call to Order/Pledge of Allegiance**

Supervisor Popp called the meeting to order at 9:00 a.m. at the Whitewater Township Hall, 5777 Vinton Road, Williamsburg, Michigan, followed by the Pledge of Allegiance.

Roll Call of Board Members

Board Members present in person: Clerk Goss, Treasurer Benak, Popp, Trustee Glenn

Board Members absent: Trustee Vollmuth

Others present in person: Fire Chief Brandon Flynn, County Commissioner Darryl Nelson, and 2 others

Others present via Zoom: 5

Set/Adjust Meeting Agenda

Goss requested that update on moratorium be added.

Added as Unfinished Business #7.

Benak reported she will be leaving at 1:30 p.m. due to a treasurer's meeting at 2:00.

Bills for Approval 11/09/2022 was added as New Business #5.

Declaration of Conflict of Interest

None

Public Comment

Public comment began at 9:04 a.m.

Connie Hymore

Vicki Beam

Public comment ended at 9:09 a.m.

Public Hearing – Proposed Ordinance No. 63 – Parking Ordinance

The public hearing was opened at 9:10 a.m. A sign-in sheet was provided.

Legal notice was published in the Traverse City Record-Eagle on 10/30/2022 and posted at the township hall at least 15 days in advance of the public hearing.

No written comments were received.

Public comment:

Tom McElwee spoke in support of the proposed ordinance.

The public hearing was closed at 9:15 a.m.

DRAFT MINUTES**Reports/Presentations/Announcements/Comments****County Commissioner Report**

Darryl Nelson gave the following report:

- Thanked all the clerks and people who worked on the 11/8 election.
- Reported the township's L-4029 was approved yesterday.
- Got 105 ARPA applications totaling approximately \$77 million; they have \$18 million to distribute. Whitewater Township has \$650,000 in requests. Other requests are more region-wide.
- Regarding mental health services in the jail, a local contractor put in a bid. They went with that company. Mental health and healthcare services in the jail have improved significantly. They have now decided to go with a separate organization. A \$400,000 mistake is not the county's mistake.
- He will probably be following up with ARPA requests from Whitewater. Consultant is categorizing them now. Board of Commissioners will see all of them.

Questions were directed to Nelson.

Fire Department Report

Brandon Flynn gave the following report:

- 11 calls in October, large call volume.
- Had the Halloween Party, which was a great success. Thanked WESA. Noted it was probably one of the most attended Halloween parties he has been to.
- MIOSHA Part 74 was rewritten; they have to fill out for each individual employee. Local medical control has done the same thing. He is busy putting all of that information together.
- Finished an inspection at Turtle Creek Hotel.
- Looking forward to wrapping up this year and getting started on another new year.
- Snowmobile bids are due 11/18, public bid opening at 12:15 that day.

Planning Commission Report

Heidi Vollmuth is not present.

Parks & Recreation Advisory Committee Report

Cheryl Goss gave the following report:

- Committee met last night; all five members were present.
- Minutes of their 10/10 meeting were approved.
- Michigan Township Participating Plan risk reduction grant information was provided to the committee.
- Regarding the Hi Pray Park dugouts, the dugouts passed inspection on 10/3. Leftover diamond dust will be spread on the field in the spring when annual field maintenance is completed. The committee would like to request that the cost of adding diamond dust to both fields be placed in the next fiscal year budget.
- Regarding the Whitewater Township Park playground, the committee was updated that all repair items have been completed.

DRAFT MINUTES

- Regarding BCNA/Lossie Trail Cleanup, the committee asked Goss to inquire of Popp whether an estimate has been sought from Steve Largent for the unfinished trail cleanup. If this work is not to be completed in this fiscal year, a cost figure will be needed for the next fiscal year budget purposes.
- Regarding Lossie Trail Wetland Improvements, Melton's walk-through with the EGLE representative remains unscheduled.
- Regarding Hi Pray Park playground, Melton reported the 3-foot extension and border have been completed. Decals and clevises have been received. The post-mounted signs are ready to be picked up. One or more PRAC members will get these items installed. Melton will call the playground inspector to schedule re-inspections of both playgrounds.
- Regarding BCNA/Lossie Trail signage, temporary trail maps will be laminated and installed at the kiosks. Permanent signage will await completion of the BCNA trail cleanup.
- Regarding PRAC meeting dates, that item is on the board's 11/15 agenda.
- Regarding GT County ARPA grants, two grant applications were submitted on 10/28, one for a loop trail at BCNA, one for wetlands improvements on Lossie Trail.
- Spark grants and various suggested projects were discussed.

Benak asked that the issue of the remaining cleanup at BCNA be brought back at a later date.

Consent Calendar

Receive and File

1. Supervisor's Report for October 2022
2. Clerk's Report for October 2022 (none this month)
3. Treasurer's Report October 2022
4. Trustee Vollmuth's October 2022 Report
5. Trustee Glenn's October 2022 Report
6. Zoning Administrator's Report for October 2022
7. Mobile Medical Response September 2022 Activity Report
8. Fire Department October 2022 Report
9. Planning Commission October 2022 Report (part of trustee report)
10. Historical Society September/October 2022 Report
11. Approved 06/01/2022 Planning Commission Minutes
12. Approved 07/06/2022 Planning Commission Minutes
13. Approved 07/19/2022 Planning Commission Minutes
14. Approved 08/03/2022 Planning Commission Minutes
15. Approved 09/07/2022 Planning Commission Minutes

Correspondence

1. DNR Roads
2. Sheriff September Report
3. ARPA Support Letter Down by the Creek
4. ARPA Support Letter ACTS

Minutes

1. Draft 10/11/2022 Whitewater Township Board Minutes

DRAFT MINUTES

2. Draft 10/17/2022 Whitewater Township Board Minutes
3. Draft 10/24/2022 Whitewater Township Board Minutes

Bills for Approval

1. ~~No documents provided by the Clerk's office in time for publishing.~~ Alden State Bank voucher #s 48384 through 48528.

Budget Amendments - No documents provided by the clerk's office in time for publishing.

Revenue & Expenditure Report – No documents provided by the clerk's office in time for publishing.

Motion by Benak to approve Consent Calendar; second by Popp.

Proposed correction by Glenn to 10/17 minutes (page 4008): Strike “bring it back in November” and insert “send the revised language to the clerk's office for review and approval.”

Proposed correction by Popp to 10/11 meeting minutes (page 4001): Remove the strikeouts and remove the added language that is not a strikeout.

Goss replied with statutory requirement for minutes and policy requirement for bills.

Roll call vote: Vollmuth, absent; Benak, yes; Popp, no; Glenn, no; Goss, yes. Motion failed.

Unfinished Business**FINAL APPROVAL OOSTERHOUSE LETTER**

Motion by Popp to approve Fahey Schultz Burzych Rhodes letter to send by certified return receipt requested dated October 21, 2022 to Roland Oosterhouse; second by Glenn.

Roll call vote: Goss, no; Vollmuth, absent; Glenn, yes; Popp, yes; Benak, no. Motion failed.

PROPOSED ZONING ORDINANCE 83

Motion by Goss to send proposed Zoning Ordinance Amendment 83 back to the planning commission for additional work; second by Popp.

There was board consensus that each board member will submit their questions for the December packet and this agenda item will be brought back in December.

The motion and second were rescinded.

PROPOSED WWT POLICY & PROCEDURE MANUAL SECTION 4.5 AMENDMENT

This item will be on the December agenda.

WHITEWATER TOWNSHIP PARK BOAT LAUNCH-ENTRYWAY IMPROVEMENT PROJECT

New documents from Fleis & VandenBrink were received after the board packet was put out.

DRAFT MINUTES

Motion by Popp to send the professional services agreement signed 12/16/2019 to legal for termination.

The motion was not seconded or voted on.

There was board consensus that this agenda item, including the termination letter, will be moved to the December agenda.

BROADBAND FOLLOWUP DISCUSSION

Motion by Popp to discuss the proposed findings of fact; second by Glenn.

Roll call vote: Benak, yes; Glenn, yes; Goss, yes; Vollmuth, absent; Popp, yes. Motion carried.

Benak will use the assessing program to map out the roads highlighted in pink (on exhibit A) not served by other funds and will ask Dawn (assessor) to assist.

Needs from vendors include a map showing each vendor's commitment in the township, global commitment for Whitewater Township by 186, timeline for our monies' phase, and reporting. What they supply needs to align with the reporting that the township has to do.

Benak will go online and see what they are asking for specifically.

There was consensus Popp will send the requested information out to each vendor.

This agenda item will be brought back in January. Popp noted whatever he sends out to the vendor will be sent to all board members.

Popp will update the findings of fact to remove the prevailing wage section.

APPROVAL OF PROPOSED GENERAL ORDINANCE NO. 63 PARKING

Motion by Popp to approve proposed General Ordinance No. 63 Parking Ordinance as written; second by Goss.

Roll call vote: Popp, yes; Goss, yes; Vollmuth, absent; Benak, yes; Glenn, yes. Motion carried.

Motion by Popp requesting the supervisor to make and distribute hard copies of General Ordinance No. 63 to board, PC, and ZBA members, and to provide Word document of the same to the clerk's office for filing; second by Glenn.

Roll call vote: Glenn, yes; Popp, yes; Benak, yes; Goss, yes; Vollmuth, absent. Motion carried.

Motion by Popp appointing Don Glenn to verify General Ordinance 63, Parking Ordinance, has been fully processed according to motion two; second by Glenn.

DRAFT MINUTES

Roll call vote: Benak, yes; Vollmuth, absent; Popp, yes; Glenn, yes; Goss, yes. Motion carried.

Motion by Popp adopting Resolution 22-18 as presented in this packet; second by Glenn.

Roll call vote: Popp, yes; Benak, yes; Vollmuth, absent; Goss, yes; Glenn, yes. Motion carried.

UPDATE ON MORATORIUM (added)

In response to Goss's question asking what has to happen for the moratorium to be lifted, Popp and Glenn said they have not directed the PC in any way with respect to the moratorium.

Goss noted the PC chair's statement on 09/13/2022 asking what the PC should be working on for the moratorium.

At about 12:20 p.m., the meeting recessed.

At about 12:30 p.m., the meeting reconvened.

New Business

PC REQUEST FOR ORDINANCE UPDATE

Motion by Popp requesting planning commission to submit a redline/clean copy of entire Article 25 as amended for board approval and filing in the clerk's office; second by Glenn.

Popp amended the motion to requesting planning commission to submit a redline/clean copy of entire Article 25 as amended for board approval; second by Glen.

Popp reported all articles in Word format that were on the zoning computer have been forwarded to the planning commission and the amendment exists in Word.

Roll call vote: Vollmuth, absent; Goss, no; Glenn, yes; Benak, yes; Popp, yes. Motion carried.

Motion by Popp requesting the supervisor to make and distribute hard copies of Article 25 of the Whitewater Township Zoning Ordinance to board, PC, and ZBA members and to update the website version of the zoning ordinance; second by Glenn.

Glenn suggested to amend the motion: "to board, PC chair, and ZBA chair for their distribution to their respective members."

Popp agreed to the amendment; re-second by Glenn.

Roll call vote: Goss, no; Glenn, yes; Benak, yes; Popp, yes; Vollmuth, absent. Motion carried.

DRAFT MINUTES

Motion by Popp appointing Don Glenn to verify Amendment No. 84 has been fully processed according to motion two; second by Glenn.

Roll call vote: Glenn, yes; Popp, yes; Goss, no; Vollmuth, absent; Benak, yes. Motion carried.

PRAC REQUEST FOR DATE CHANGE

Motion by Popp requesting PRAC to submit a redline/clean copy of the documents detailed above for board approval and filing in the clerk's office; second by Glenn.

Roll call vote: Vollmuth, absent; Benak, yes; Popp, yes; Glenn, yes; Goss, no. Motion carried.

Motion by Glenn requesting the supervisor to make and distribute hard copies of documents detailed above for distribution to the board, PC chair, PRAC chair, and ZBA chair for their distribution to their respective members and to update the website home page and calendar; second by Popp.

Roll call vote: Goss, no; Vollmuth, absent; Glenn, yes; Popp, yes; Benak, yes. Motion carried.

Motion by Popp appointing Heidi Vollmuth to verify PRAC's request for meeting date change has been fully processed according to the above; second by Glenn.

Popp will send a letter of completion of what he sent when and where.

Motion amended to delete Heidi Vollmuth and insert Don Glenn.

Roll call vote: Benak, yes; Glenn, yes; Goss, no; Vollmuth, absent; Popp, yes. Motion carried.

SHORT TERM RENTAL STATEMENT

Motion by Popp to have the clerk place the following statement on the Whitewater Township website home page. "Short-term rental of a residential dwelling for a period of less than 30 days is not currently allowed in Whitewater Township. Although not allowed within a residential dwelling, short-term rentals may be permitted in certain zoning districts as bed and breakfasts, hotels and motels, campgrounds and other similar uses." and to have the supervisor create a written document to the board verifying the completion date of this task; second by Glenn.

Glenn amended the motion to have the clerk place the following statement on home page, zoning administrator page.

The motion and second were withdrawn.

Motion by Glenn to have the clerk place the following statement on the Whitewater Township

DRAFT MINUTES

website home page and zoning administrator page, “Short-term rental of a residential dwelling for a period of less than 30 days is not currently allowed in Whitewater Township. Although not allowed within a residential dwelling, short-term rentals may be permitted in certain zoning districts as bed and breakfasts, hotels and motels, campgrounds and other similar uses.” and to have the supervisor create a written document to the board verifying the completion date of this task; second by Popp.

Roll call vote: Popp, yes; Goss, no; Vollmuth, absent; Benak, yes; Glenn, yes. Motion carried.

PACKET DEADLINE RECOMMENDATION TO PLANNING COMMISSION

Motion by Popp requesting planning commission to consider/adopt a packet distribution deadline of 10 days before the next meeting consistent with the redline/clean copy bylaws attached; second by Glenn.

Roll call vote: Glenn, yes; Popp, yes; Benak, yes; Goss, no; Vollmuth, absent. Motion carried.

BILLS FOR APPROVAL 11/09/2022 (added)

Motion by Popp to accept Bills for Approval dated 11/09/2022 as presented; second by Benak.

Roll call vote: Vollmuth, absent; Popp, yes; Glenn, yes; Goss, yes; Benak, yes. Motion carried.

Tabled Items

None

Board Comments/Discussion

Goss brought to the board’s attention budgeted transfers (9/6 memo) and budget amendments (10/6 memo) which have not been addressed, as well as the Baird invoice. Goss will re-send both memos.

Benak noted the newsletter deadline is 11/21.

Announcements

1. 11/17/2022 special meeting at 9:00 a.m.
2. 11/30/2022 special meeting at 9:00 a.m.
3. 12/13/2022 regular meeting at 9:00 a.m.

Public Comment

Public comment began at 1:33 p.m.

Connie Hymore

Benak left the meeting at 1:35 p.m.

DRAFT MINUTES

Vicki Beam
Lois MacLean

Public comment ended at 1:41 p.m.

Adjournment

Motion by Popp to adjourn; second by Glenn. Roll call vote: Popp, yes; Benak, absent; Vollmuth, absent; Goss, yes; Glenn, yes. Meeting adjourned at 1:42 p.m.

Cheryl A. Goss
Whitewater Township Clerk

DRAFT MINUTES

**Whitewater Township Board
Minutes of Special Meeting held November 17, 2022**

Call to Order

Supervisor Popp called the meeting to order at 9:01 a.m. at the Whitewater Township Hall, 5777 Vinton Road, Williamsburg, Michigan.

Roll Call of Board Members

Board Members present in person: Treasurer Benak, Clerk Goss, Trustee Glenn, Popp

Board Members absent: Trustee Vollmuth

Others present in person: Fire Chief Brandon Flynn and 1 other

Others present via Zoom: None

Set/Adjust Meeting Agenda

There were no adjustments.

Declaration of Conflict of Interest

None

Public Comment

None

Agenda Items as Listed in Special Meeting Notice**FEASIBILITY STUDY – TOWNSHIP FACILITIES AND WATER SUPPLY**

Motion by Benak to end this meeting and convene on a different day when C2AE can be here to present this and speak to any questions that we have, since they are not here today; second by Goss.

Roll call vote: Vollmuth, absent; Benak, yes; Popp, no; Glenn, no; Goss, yes. Motion failed.

Discussion followed.

Popp will forward three items to Jantz and Cronk: financing, grants, and calendar.

There was consensus that another meeting with C2AE present is desired, but scheduling of the meeting will await their input as to available dates. This agenda item will be discussed again at the December regular meeting.

Board Comments/Discussion

The Parks & Recreation Advisory Committee has requested to add an item to the 11/30 meeting regarding a Sparks grant and they need a resolution. They have outlined three potential projects.

There was consensus to add Sparks grant request to the 11/30 special meeting agenda.

Public Comment

Public comment began at 10:13 a.m.

DRAFT MINUTES

Melissa Melton

Public comment ended at 10:14 a.m.

Adjournment

Motion by Benak to adjourn; second by Glenn. Roll call vote: Goss, yes; Vollmuth, absent; Glenn, yes; Popp, yes; Benak, yes. Meeting adjourned at 10:15 a.m.

Cheryl A. Goss
Whitewater Township Clerk

**Bills for Approval
December 13, 2022**

ALDEN STATE BANK

PAYROLL 11/18

11/8 ELECTION PAYROLL

ACCTS PAYABLE 11/22

CHECK REISSUE 11/22 (48193)

PAYROLL 12/2

48529 - 48607

48529 - 48550

48551 - 48568

48569 - 48583

48584

48585 - 48607

Gross Payroll \$9,132.33

Gross Payroll \$4,279.00

Grand Total \$163,741.15

Grand Total \$773.16

Gross Payroll \$8,480.54

ALDEN STATE BANK - MONEY MARKET

FIRST COMMUNITY BANK - FEDERAL FUND

Check Register Report

Bills for Approval 12/13/2022

Date: 12/02/2022

Time: 9:55 am

Page: 1

Whitewater Township

BANK: ALDEN STATE BANK

| Check Number | Check Date | Status | Void/Stop Date | Reconcile Date | Vendor Number | Vendor Name | Check Description | Amount |
|--------------------------------|------------|---------|----------------|----------------|---------------|------------------------------|--|------------|
| ALDEN STATE BANK Checks | | | | | | | | |
| 48569 | 11/22/22 | Printed | | | ACE | ACE HARDWARE | POWER STRIP | 9.99 |
| 48570 | 11/22/22 | Printed | | | AFLAC | AFLAC | OCTOBER 2022 | 211.80 |
| 48571 | 11/22/22 | Printed | | | CONSUMERS | CONSUMERS ENERGY | 10/11-11/09/2022 | 1,110.92 |
| 48572 | 11/22/22 | Printed | | | EFTPS | EFTPS | PAYROLLS 11/18/2022 & ELECTION 11/08/2022 | 5,171.42 |
| 48573 | 11/22/22 | Printed | | | FAHEY | FAHEY SCHULTZ BURZYCH RHODES | LOSSIE RD NATURE TRAIL (W/\$175.00 DISCOUNT) | 4,937.50 |
| 48574 | 11/22/22 | Printed | | | FAST SIGNS | FAST SIGNS TRAVERSE CITY | 4 SIGN POSTS, HARDWARE AND INSTALLING SIGNS ON POSTS | 421.92 |
| 48575 | 11/22/22 | Printed | | | FUELMAN | FUELMAN | FUEL FOR OCT. 2022 | 558.20 |
| 48576 | 11/22/22 | Printed | | | GMOSER | GMOSER'S SEPTIC SERVICE, INC | PUMP 1ST TANK | 740.00 |
| 48577 | 11/22/22 | Printed | | | MOBILE MED | MOBILE MEDICAL RESPONSE | 1/2 ANNUAL SUBSIDY | 147,500.00 |
| 48578 | 11/22/22 | Printed | | | MUNSON OH | MUNSON OCCUPATIONAL HEALTH | PHYSICALS-FLYNN/JOHNSON/ TILLEY | 954.12 |
| 48579 | 11/22/22 | Printed | | | PAYR/SALES | STATE OF MICHIGAN - TREASURY | PAYROLLS 10/07/22 & 10/21/2022 | 971.18 |
| 48580 | 11/22/22 | Printed | | | STATEWIDE | STATEWIDE COMMUNICATIONS INC | 11/14-12/13/2022 | 179.37 |
| 48581 | 11/22/22 | Printed | | | THE COPY | THE COPY SHOP | 1000 CHECKS FOR GENERAL CHECKING ACCT | 221.13 |
| 48582 | 11/22/22 | Printed | | | WELLS F | WELLS FARGO FINANCIAL | 10/29-11/28/2022 COPIER LEASE | 83.60 |
| 48583 | 11/22/22 | Printed | | | WEST SHORE | WEST SHORE FIRE, INC | 2 BOOSTER 600 FT HOSES | 670.00 |
| 48584 | 11/22/22 | Printed | | | CHERRY PRC | CHERRY PROPANE | 361.2 GAL @ \$2.099 | 773.16 |

Total Checks: 16

Checks Total (excluding void checks):

164,514.31

Total Payments: 16

Bank Total (excluding void checks):

164,514.31

Total Payments: 16

Grand Total (excluding void checks):

164,514.31

INVOICE APPROVAL LIST BY FUND REPORT

Bills for Approval 12/13/2022

Date: 12/02/2022

Time: 9:56 am

Page: 1

Whitewater Township

| Fund/Dept/Acct | Vendor Name | Invoice # | Invoice Desc. | Check # | Due Date | Check Date | Amount |
|---|---|--------------|-----------------------------|---------|------------|------------|-----------------|
| Fund: 101 GENERAL FUND | | | | | | | |
| Dept: 101 Township Board | | | | | | | |
| 101-101-903 | Township Newsletter I THE COPY SHOP | 21365097 | REAMS OF PAPER FOR | 48581 | 11/10/2022 | 11/22/2022 | 9.00 |
| | | | | | | | 9.00 |
| 101-101-940 | Equipment Rental WELLS FARGO FINANCIAL | 5022522381 | 10/29-11/28/2022 COPIER | 48582 | 11/04/2022 | 11/22/2022 | 83.60 |
| | | | | | | | 83.60 |
| Total Dept. Township Board: | | | | | | | 92.60 |
| Dept: 210 Attorney | | | | | | | |
| 101-210-801 | Legal Services | | | | | | |
| | FAHEY SCHULTZ BURZYCH | 7042 | OOSTERHOUSE | 48573 | 11/01/2022 | 11/22/2022 | 412.50 |
| | FAHEY SCHULTZ BURZYCH | 7042 | LOSSIE TRAIL SHOOTING RANGE | 48573 | 11/01/2022 | 11/22/2022 | 1,628.00 |
| | FAHEY SCHULTZ BURZYCH | 7042 | CODE ENFORCEMENT | 48573 | 11/01/2022 | 11/22/2022 | 1,354.50 |
| | FAHEY SCHULTZ BURZYCH | 7042 | LOSSIE RD NATURE TRAIL | 48573 | 11/01/2022 | 11/22/2022 | 1,542.50 |
| | | | | | | | 4,937.50 |
| Total Dept. Attorney: | | | | | | | 4,937.50 |
| Dept: 215 Clerk | | | | | | | |
| 101-215-727 | Office Supplies & Exp THE COPY SHOP | 21365802 | 1000 CHECKS FOR GENERAL | 48581 | 11/17/2022 | 11/22/2022 | 194.13 |
| | | | | | | | 194.13 |
| Total Dept. Clerk: | | | | | | | 194.13 |
| Dept: 253 Treasurer | | | | | | | |
| 101-253-727 | Office Supplies & Exp | | | | | | |
| | ACE HARDWARE | 128244 | POWER STRIP | 48569 | 11/14/2022 | 11/22/2022 | 9.99 |
| | THE COPY SHOP | 21365097 | REAMS OF PAPER FOR | 48581 | 11/10/2022 | 11/22/2022 | 18.00 |
| | | | | | | | 27.99 |
| Total Dept. Treasurer: | | | | | | | 27.99 |
| Dept: 265 Township Hall & Groun | | | | | | | |
| 101-265-922 | Electricity CONSUMERS ENERGY | 205546157994 | 10/07-11/08/2022 | 48571 | 11/08/2022 | 11/22/2022 | 175.77 |
| | | | | | | | 175.77 |
| 101-265-923 | Electric Heat CONSUMERS ENERGY | 205546157995 | 10/07-11/08/2022 | 48571 | 11/08/2022 | 11/22/2022 | 300.95 |
| | | | | | | | 300.95 |
| 101-265-924 | Telephone STATEWIDE COMMUNICATIO | 2664744 | 11/14-12/13/2022 | 48580 | 11/14/2022 | 11/22/2022 | 149.47 |
| | | | | | | | 149.47 |
| Total Dept. Township Hall & Grounds: | | | | | | | 626.19 |
| Dept: 276 Cemetery | | | | | | | |
| 101-276-922 | Electricity CONSUMERS ENERGY | 201630581623 | 10/07-11/08/2022 | 48571 | 11/08/2022 | 11/22/2022 | 29.27 |
| | | | | | | | 29.27 |
| Total Dept. Cemetery: | | | | | | | 29.27 |
| tal Fund GENERAL FUND: | | | | | | | 5,907.68 |

Fund: 206 FIRE FUND**Dept: 336 Fire Dept**

206-336-713 Other Benefits

INVOICE APPROVAL LIST BY FUND REPORT

Bills for Approval 12/13/2022

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Page: 2

Whitewater Township

| Fund/Dept/Acct | Vendor Name | Invoice # | Invoice Desc. | Check # | Due Date | Check Date | Amount |
|------------------------|---|----------------|--------------------------|---------|------------|------------|-----------------|
| | AFLAC | 442437 | OCTOBER 2022 | 48570 | 11/15/2022 | 11/22/2022 | 211.80 |
| | | | | | | | 211.80 |
| 206-336-739 | Fuel & Oil FUELMAN | 63252450995401 | FUEL FOR OCT. 2022 | 48575 | 11/07/2022 | 11/22/2022 | 558.20 |
| | | | | | | | 558.20 |
| 206-336-803 | Medical Professional MUNSON OCCUPATIONAL H | 00203515-00 | PHYSICALS-FLYNN/JOHNSON, | 48578 | 11/15/2022 | 11/22/2022 | 954.12 |
| | | | | | | | 954.12 |
| 206-336-922 | Electricity CONSUMERS ENERGY | 201630581622 | 10/07-11/08/2022 | 48571 | 11/08/2022 | 11/22/2022 | 231.54 |
| | | | | | | | 231.54 |
| Total Dept. Fire Dept: | | | | | | | 1,955.66 |
| Total Fund FIRE FUND: | | | | | | | 1,955.66 |

Fund: 208 PARK FUND

Dept: 756 Township Park

| | | | | | | | |
|----------------------------|--|-----------------|---------------------|-------|------------|------------|-----------------|
| 208-756-748 | Sales Tax STATE OF MICHIGAN - TREA | SMIBUS009290483 | SALES TAX OCT. 2022 | 48579 | 11/21/2022 | 11/22/2022 | 15.85 |
| | | | | | | | 15.85 |
| 208-756-812 | Septic Services GMOSER'S SEPTIC SERVICE | 404796 | PUMP 1ST TANK | 48576 | 11/11/2022 | 11/22/2022 | 740.00 |
| | | | | | | | 740.00 |
| 208-756-922 | Electricity CONSUMERS ENERGY | 202876454083 | 10/11-11/09/2022 | 48571 | 11/09/2022 | 11/22/2022 | 43.22 |
| | CONSUMERS ENERGY | 202876454084 | 10/11-11/09/2022 | 48571 | 11/09/2022 | 11/22/2022 | 69.36 |
| | | | | | | | 112.58 |
| 208-756-924 | Telephone STATEWIDE COMMUNICATIO | 2664744 | 11/14-12/13/2022 | 48580 | 11/14/2022 | 11/22/2022 | 29.90 |
| | | | | | | | 29.90 |
| 208-756-929 | Propane CHERRY PROPANE | 11296 | 361.2 GAL @ \$2.099 | 48584 | 08/10/2022 | 11/22/2022 | 773.16 |
| | | | | | | | 773.16 |
| Total Dept. Township Park: | | | | | | | 1,671.49 |
| Total Fund PARK FUND: | | | | | | | 1,671.49 |

Fund: 209 RECREATION FUND

Dept: 757 Recreation

| | | | | | | | |
|-------------------------|---|--------------|---------------------------|-------|------------|------------|---------------|
| 209-757-922 | Electricity CONSUMERS ENERGY | 205546157993 | 10/07-11/08/2022 | 48571 | 11/08/2022 | 11/22/2022 | 29.27 |
| | | | | | | | 29.27 |
| 209-757-930 | Facility Repairs/Maint FAST SIGNS TRAVERSE CIT | 435-36742 | 4 SIGN POSTS, HARDWARE AI | 48574 | 11/08/2022 | 11/22/2022 | 421.92 |
| | | | | | | | 421.92 |
| Total Dept. Recreation: | | | | | | | 451.19 |
| Fund RECREATION FUND: | | | | | | | 451.19 |

Fund: 210 AMBULANCE FUND

Dept: 651 Ambulance

210-651-806 Contractual Services

INVOICE APPROVAL LIST BY FUND REPORT

Bills for Approval 12/13/2022

Date: 12/02/2022

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Whitewater Township

| Fund/Dept/Acct | Vendor Name | Invoice # | Invoice Desc. | Check # | Due Date | Check Date | Amount |
|--------------------------------------|--------------------------|-----------------|------------------------------|---------|------------|------------|--|
| | MOBILE MEDICAL RESPON | 0002556-IN | 1/2 ANNUAL SUBSIDY | 48577 | 11/22/2022 | 11/22/2022 | 147,500.00 |
| | | | | | | | 147,500.00 |
| 210-651-922 | Electricity | | | | | | |
| | CONSUMERS ENERGY | 201630581622 | 10/07-11/08/2022 | 48571 | 11/08/2022 | 11/22/2022 | 231.54 |
| | | | | | | | 231.54 |
| | | | | | | | |
| | | | | | | | Total Dept. Ambulance: 147,731.54 |
| | | | | | | | Fund AMBULANCE FUND: 147,731.54 |
| Fund: 406 FIRE CAPITAL IMPROV | | | | | | | |
| Dept: 000 | | | | | | | |
| 406-000-970 | Capital Expenditure | | | | | | |
| | WEST SHORE FIRE, INC | 28794 | 2 BOOSTER 600 FT HOSES | 48583 | 11/10/2022 | 11/22/2022 | 670.00 |
| | | | | | | | 670.00 |
| | | | | | | | |
| | | | | | | | Total Dept. 000: 670.00 |
| | | | | | | | AL IMPROVEMENT FUND: 670.00 |
| Fund: 750 PAYROLL CLEARING F | | | | | | | |
| Dept: 000 | | | | | | | |
| 750-000-258 | Accrued Payroll Taxes: | | | | | | |
| | EFTPS | 270271271624915 | PAYROLL 11/04/2022 | 48572 | 11/08/2022 | 11/22/2022 | 3,087.86 |
| | EFTPS | 270272605472809 | PAYROLLS 11/18/2022 & ELEC | 48572 | 11/22/2022 | 11/22/2022 | 2,083.56 |
| | STATE OF MICHIGAN - TREA | SMIBUS009290498 | PAYROLLS 10/07/22 & 10/21/20 | 48579 | 11/21/2022 | 11/22/2022 | 955.33 |
| | | | | | | | 6,126.75 |
| | | | | | | | |
| | | | | | | | Total Dept. 000: 6,126.75 |
| | | | | | | | PAYROLL CLEARING FUND: 6,126.75 |
| | | | | | | | |
| | | | | | | | Grand Total: 164,514.31 |

Memo

To: Whitewater Township Board of Trustees
CC: None
Date: 12-02-2022
Re: Assembled Comments for Proposed Ordinance Amendment #83

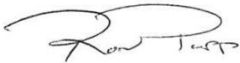
Board Members –

As we agreed on 11.15.2022 here are all of the Board member comments regarding proposed Ordinance Amendment #83 for discussion.

From these lists hopefully we can generate one list to send back to the Planning Commission for further review.

No motion is made at this time pending further Board discussion.

Respectfully submitted,



Whitewater Township FOIA Coordinator
Supervisor, Whitewater Township

Amendments Notes:

The purpose of this amendment is to create an easier to read format, move items to more appropriate locations within the Ordinance, address apartment density and setbacks, address unclear standards, update terms, and address inconsistencies with other portions of the Ordinance.

**WHITEWATER TOWNSHIP
GRAND TRAVERSE COUNTY, MICHIGAN
ZONING ORDINANCE AMENDMENT
ORDINANCE NO. [INSERT NUMBER]**

At a meeting of the Township Board of Whitewater Township, Grand Traverse County, Michigan, held at the Whitewater Township Hall on [REDACTED], 2022, at [REDACTED] p.m., Township Board Member [REDACTED] moved to adopt the following Ordinance, which motion was seconded by Township Board Member [REDACTED]:

An Ordinance to amend the Whitewater Township Zoning Ordinance, as amended to revise its preamble, amend Article XXII addressing building sizes, lot sizes and yard requirements, and alter Article XIV to address certain requirements in the Boardman River Valley in order to maintain the public health, safety, and welfare of the residents of and visitors to Whitewater Township.

THE TOWNSHIP OF WHITEWATER, GRAND TRAVERSE COUNTY, MICHIGAN, ORDAINS:

SECTION 1: AMENDMENT TO ZONING ORDINANCE WHITEWATER TOWNSHIP, MICHIGAN Ord. No. 6 eff. Dec. 23, 1972. The Whitewater Township Zoning Ordinance's preamble shall be amended to read as follows:

**ZONING ORDINANCE
WHITEWATER TOWNSHIP, MICHIGAN
Ord. No. 6 eff. Dec. 23, 1972**

An Ordinance to establish zoning districts and regulations in the Township of Whitewater, County of Grand Traverse and State of Michigan in accordance with the provisions of Act 184 of Public Acts of 1943, as amended, and act 231 of the Public Acts of 1970, as amended (Natural River Act); 110 of the Public Acts of 2006 as amended; to define certain terms used herein; to provide for regulations governing nonconforming uses and structures; to establish a Zoning Board of Appeals and define its duties and powers; to provide for the administration and enforcement of this Ordinance; to provide for amendments to this Ordinance; and to provide penalties for the violation of this Ordinance.

Amendment is to update authority to zone legal reference. Old text refences outdated sources.

SECTION 2: AMENDMENT TO ARTICLE XII. The Whitewater Township Zoning Ordinance, Article XII shall be amended by amending ARTICLE XII Building Sizes and Yard Requirements to read as follows:

ARTICLE XII

BUILDING SIZES AND ~~YARD~~ SETBACK REQUIREMENTS

12.00 BUILDING SIZES AND ~~YARD~~ SETBACK REQUIREMENTS

12.10 BUILDING SIZES

Mobile homes & travel trailers specifically.

- A. Each Dwelling or other main building hereafter erected in any district shall have a permanent foundation and a minimum of seven hundred (700) square feet of floor space, not including breezeways, porches and garages, unless specifically exempted elsewhere in this Ordinance.
- B. The floor area of a mobile home shall be that stated as the manufacturer's declared measurements.
- C. Campground cabins shall not exceed six hundred and fifty (650) square feet including covered porches.
- D. All structures, lots, and structure setbacks from property lines shall comply with the regulations established in Article XII of this Ordinance, unless specifically exempted elsewhere in this Ordinance.

12.11 GENERALLY APPLICABLE CONDITIONS: (~~Schedule of Regulations~~) (New name, previously just "Notes" - Numbers changed to letters)

- A. No structure shall be built within the minimum yards required except when expressly allowed elsewhere in the ordinance. (**Relocated**)
- B. Minimum Lot Areas shall be calculated by square foot unbroken by any road, street, or thoroughfare. (**Relocated from table**)
- C. Maximum Structure Height in all districts shall be 35' or 2 ½ stories above grade. (**Relocated from table**)
- D. Minimum Width to Maximum Depth Ratio regulating lot shape of new parcels shall be 1:4 in all districts. (**Relocated from table**)
- E. Variance provisions for Depth to Width Ratio are found in General Ordinance 26, Land Division Ordinance. (**Relocated**)
- F. There shall be a 30' Setback in all directions between multi-family residential structures in any district. (**New to provide greater distance between structures that may use clustered development or be evaluated as a single complex, and preserve better fire department access to more densely populated housing**)

12.12 RESIDENTIAL DISTRICTS (Table split into new tables by topic)

25.21.A. Purpose (**PAGE 23 - WHY DO WE USE THE WORD "GENERAL"...CONTRADICTION?**)
This Ordinance divides the Township into districts in which specific uses are permitted which are mutually compatible.

ARTICLE 3 - DEFINITIONS DOES NOT HAVE A "GENERAL" DEFINITION...IS THIS A PROBLEM?

Color Code: **Black** = original standards **Red** = New or changed text **Blue** = Notes

Why the change for no descriptive use in R1 to state it now as "General"...why not "Residential"?

| District | Use | Minimum Lot Width | Minimum Lot Area | Front Yard Setback | Side Yard Setback | Rear Yard Setback | Additional Standards |
|----------|---------------|-------------------|---------------------|--------------------|-------------------|-------------------|----------------------|
| R1 | General | 100' | 20,000 | 30' | 15' | 30' | --- |
| R2 | Single family | 100' | 12,000 | 30' | 15' | 30' | --- |
| | Two Family | 120' | 22,000 | 30' | 15' | 30' | --- |
| R3 | General | 120' | 11,000 Per Dwelling | 30' | 15' | 30' | --- |

Why did we alter the R3 use from "Multi-Family" to "General"?

12.13 AGRICULTURAL AND RECREATION (New table, same standards)

"AG" doesn't match the map? Map is A1

| District | Use | Minimum Lot Width | Minimum Lot Area | Front Yard Setback | Side Yard Setback | Rear Yard Setback | Additional Standards |
|----------|-----------------------|-------------------|------------------|--------------------|-------------------|-------------------|----------------------|
| Ag | General | 200' | 40,000 | 30' | 15' | 30' | --- |
| | Commercial Campground | --- | 40-acre min | 100' | 100' | 100' | --- |

Why the change for no descriptive use in R1 to state it now as "General"...why not "Agriculture"?

| | | | | | | | |
|----|-----------------------|------|-------------|------|------|------|---|
| RC | General | 100' | 5 acres | 30' | 15' | 30' | --- |
| | Commercial Campground | --- | 40-acre min | 100' | 100' | 100' | Limit of 1 site per 2 acres or 1 cabin per 5 acres. |

(RC Campground: New addition to table, existing standard)

12.14 COMMERCIAL AND INDUSTRIAL DISTRICTS

| District | Use | Minimum Lot Width | Minimum Lot Area | Front Yard Setback | Side Yard Setback | Rear Yard Setback | Additional Standards |
|---|----------------------|-------------------|---------------------|--------------------|-------------------|-------------------|-----------------------|
| C | General | 100' | | 50' | * 10' | 30' | 40% Max. lot coverage |
| | Multi-family Housing | --- | 11,000 Per Dwelling | 50' | 50' | 50' | See 12.11.F |
| *Combination shall total 30% of width but not less than 10' per side. | | | | | | | |
| (Multi-Family: Applying density standard to all districts) | | | | | | | |

"C" doesn't match the map? Map is C1

Color Code: **Black** = original standards **Red** = New or changed text **Blue** = Notes

The "General" in Village subject to interpretation?

| | | | | | | | |
|--|----------------------|------|---------------------|-----|-----|-----|-----------------------|
| | | | | | | | |
| Village -V | General | * | * | * | 10' | 15' | ---- |
| | Multi-family Housing | * | 11,000 Per Dwelling | * | * | * | See 12.11.F |
| (Multi-Family: Applying density standard to all districts) | | | | | | | |
| *Refer to conditional standards in Article 8.6. | | | | | | | |
| Industrial - N | General | 100' | ---- | 50' | (a) | 30' | 40% Max. lot coverage |
| | Multi-family Housing | --- | 11,000 Per Dwelling | 50' | 50' | 50' | See 12.11.F |
| (Multi-Family: Applying density standard to all districts) | | | | | | | |
| (a) Combination shall total 30% of width but not less than 15' per side. | | | | | | | |

12.15 RESERVED FOR MARIHUANA RELATED ESTABLISHMENTS

12.16 SPECIAL SITUATIONS (New table, same standards)

Except for the specific requirements stated the regulation for the underlying zone shall remain unchanged.

| Situation /Use | Minimum Lot Width | Minimum Lot Area | Front Yard Setback | Side Yard Setback | Rear Yard Setback | Additional Standards |
|--|-------------------|------------------|---------------------------|-------------------|-------------------|----------------------|
| Frontage on Boardman River and tributaries | 200' | ---- | 100' from water's edge | Ordinary | | See Article 14 |
| Frontage on all other Lakes and Streams | ---- | ---- | 50' from the water's edge | Ordinary | | See Article 14 |
| M72 in the Ag District | ---- | ---- | 100' | ---- | ---- | ---- |
| Supply Rd. | ---- | ---- | 100' | ---- | ---- | ---- |
| Old M-72 in the C District | ---- | ---- | 30' | 0 | ---- | ---- |
| Enclosures/structures Enclosure/structures for livestock, domestic animals (except house pets) | | | | | | |
| Horses/livestock | ---- | 2 ½ acres | 100' | 100' | 100' | ---- |
| Chickens/rabbits | ---- | 2 ½ acres | 40' | 40' | 40' | ---- |

| | | | | | | |
|--|------|----------|------|------|------|------|
| Dog Kennels – Sled, Hunting, or Breeding | ---- | 10 acres | 200' | 200' | 200' | ---- |
| Existing standard in Article 37.20 (chickens) and 37.30 (dogs) Chart was expanded to provide greater detail, incorporate missing standards in chart, and resolve conflict with other portions of the ordinance. | | | | | | |

~~12.12~~ 12.17 HARDSHIP

No requirements contained in this Article shall prevent the use of a lot or parcel of land of lesser size, provided the same was of legal record or had been laid out by a registered surveyor prior to the effective date of this Ordinance; and provided, further, that as to any lot or parcel of land not of legal record or so laid out on the date of passage of this Ordinance, if any conditions shall create a hardship in complying with the restrictions contained in this Article, ~~then the Planning Commission~~ **Zoning Board of Appeals (ZBA)** may grant deviation therefrom after first determining that the same shall not be inimical to the public health, safety or welfare. **(Variance is determined by ZBA not PC)**

SECTION 3: AMENDMENT TO ARTICLE XIV. The Whitewater Township Zoning Ordinance, Article XIV, Section 14.11 Special Requirements for the Boardman River Valley shall be amended to read as follows:

14.11 SPECIAL REQUIREMENTS FOR THE BOARDMAN RIVER VALLEY.

~~The following special requirements shall apply to all properties within fifty (50) feet of the Boardman River and its tributaries.~~

All properties within fifty (50) feet of the Boardman River and its tributaries shall have the following special requirements. (Reworded to improve clarity)

A. A managed vegetative strip shall be maintained within fifty (50) feet of the ~~water's edge~~ **ordinary high water-mark**, as follows: **(Removed outdated term and replaced with current term)**

1. Vegetative strips shall consist of native trees, shrubs, vegetation and other natural materials.
2. Existing native vegetation should be preserved whenever possible.
3. No ponds shall be constructed, no earth moved, surface soils removed or filled for building within the managed vegetative strip.
4. Utility lines shall be installed only as follows:
 - (a) New distribution lines for utilities within the housing setback line shall be placed underground unless overhead lines are less disruptive to the environment.
 - (b) Brushy vegetation shall be restored to the disturbed area in the managed vegetation strip.

(c) Local service lines to private dwellings shall originate from the landward side of the dwelling.

5. Chemical control of vegetation shall be prohibited within the managed vegetative strip.

6. Fencing, grazing, riding trails and soil tilling for farm crops is prohibited within the managed vegetative strip.

7. The use of the managed vegetative strip for stock watering areas and stream crossing of horseback trails is subject to the approval of the Zoning Administrator, who may require a plan from the Soil Conservation District, or ~~Department of Environmental Quality (DEQ)~~ **Michigan Department of Environment Great Lakes and Energy (EGLE), or their successors, where applicable** as part of the requirement for use.

B. Any variance from these standards shall be in accordance with a plan approved by the Zoning Board of Appeals. In evaluating such applications, the Zoning Board of Appeals shall consider all relevant factors pertaining to the purpose of the vegetative strip which is to:

1. Stabilize the river banks.
2. Prevent erosion.
3. Absorb nutrients in water runoff from adjacent lands.
4. Provide shading for the stream to maintain cool water temperature.
5. Screen adjacent man-made structures.

C. In no case shall a lot or parcel having frontage on the Boardman River or its tributaries be less than two hundred (200) feet wide at the ~~water's edge~~ **ordinary high-water mark** or the building setback line, or be less than two hundred (200) feet deep. **(Re-located from 12.11.2 - Removed outdated term and replaced with current term)**

D. A dock may be constructed parallel to the bank, not exceeding ten (10) feet in length and not protruding in the stream, and when constructed of natural materials such as rocks or logs. **(Re-located from 12.11.4)**

SECTION 4: CONFLICT AND INTERPRETATION. The standards and provisions of this Zoning Amendment shall be interpreted as being the minimum requirements necessary to uphold the purposes of this Ordinance. Whenever this Zoning Amendment imposes a higher standard than that required by other regulations, ordinances, or rules, or by easements, covenants or agreements, the provisions of this Zoning Amendment shall govern. When the provisions of any other statute impose higher standards the provisions of such statutes shall govern. When it is alleged by a petitioner that there is an error in interpretation of this Zoning Amendment by the Zoning Administrator or designee, the Whitewater Township Zoning Board of Appeals pursuant to Article 18 of the Zoning Ordinance shall review such an appeal, provided

that a written appeal is filed within thirty (30) days of the decision of the Zoning Administrator or designee. The concurring vote of a majority of the Zoning Board of Appeals shall be necessary to reverse any interpretation of this Zoning Amendment by the Zoning Administrator or designee.

SECTION 5: SAVINGS CLAUSE. All proceedings pending and rights and liabilities existing, acquired or incurred at the time this Zoning Amendment takes effect are saved and may be consummated according to the law in force when they were commenced.

SECTION 6: SEVERABILITY. The provisions of this Ordinance are declared severable. If any part of this Ordinance is declared invalid for any reason by a court of competent jurisdiction, that declaration does not affect or impair the validity of all other provisions that are not subject to that declaration.

SECTION 7: EFFECTIVE DATE. This Ordinance shall become effective seven (7) days after publication of a notice of adoption of this Ordinance, unless referendum procedures are initiated under MCL 125.3402. If referendum procedures are initiated, this Ordinance will take effect in accordance with MCL 125.3402.

SECTION 8: REPEAL. All Ordinances or parts of Ordinances in conflict herewith are hereby repealed.

YEAS: _____

NAYS: _____

ABSENT/ABSTAIN: _____

ORDINANCE DECLARED ADOPTED.

Ron Popp, Whitewater Township Supervisor

CERTIFICATION

I hereby certify that:

1. The above is a true copy of an Ordinance adopted by the Whitewater Township Board at a duly scheduled and noticed meeting of that Township Board held on _____, 2022, pursuant to the required statutory procedures.
2. A summary of the above Ordinance was duly published in the _____ newspaper, a newspaper that circulates within Whitewater Township, on _____, 2022.

Color Code: **Black** = original standards **Red** = New or changed text **Blue** = Notes

3. Within 1 week after such publication, I recorded the above Ordinance in a book of ordinances kept by me for that purpose, including the date of passage of the ordinance, the names of the members of the township board voting, and how each member voted.
4. I filed an attested copy of the above Ordinance with the Grand Traverse County Clerk on , 2022.

ATTESTED:

Cheryl Goss, Whitewater Township Clerk

CLERK COMMENTS/QUESTIONS/NOTES IN GREEN

Amendments Notes:

The purpose of this amendment is to create an easier to read format, move items to more appropriate locations within the Ordinance, address apartment density and setbacks, address unclear standards, update terms, and address inconsistencies with other portions of the Ordinance.

**WHITEWATER TOWNSHIP
GRAND TRAVERSE COUNTY, MICHIGAN
ZONING ORDINANCE AMENDMENT
ORDINANCE NO. [INSERT NUMBER]**

At a meeting of the Township Board of Whitewater Township, Grand Traverse County, Michigan, held at the Whitewater Township Hall on _____, 2022, at ____:____ p.m., Township Board Member _____ moved to adopt the following Ordinance, which motion was seconded by Township Board Member _____:

*An Ordinance to amend the Whitewater Township Zoning Ordinance, as amended to revise its preamble, **amend Article XXII** addressing building sizes, lot sizes and yard requirements, and alter Article XIV to address certain requirements in the Boardman River Valley in order to maintain the public health, safety, and welfare of the residents of and visitors to Whitewater Township.*

ARTICLE 22?

THE TOWNSHIP OF WHITEWATER, GRAND TRAVERSE COUNTY, MICHIGAN, ORDAINS:

SECTION 1: AMENDMENT TO ZONING ORDINANCE WHITEWATER TOWNSHIP, MICHIGAN Ord. No. 6 eff. Dec. 23, 1972. The Whitewater Township Zoning Ordinance's preamble shall be amended to read as follows:

**ZONING ORDINANCE
WHITEWATER TOWNSHIP, MICHIGAN
Ord. No. 6 eff. Dec. 23, 1972**

*An Ordinance to establish zoning districts and regulations in the Township of Whitewater, County of Grand Traverse and State of Michigan in accordance with the provisions of Act 184 of Public Acts of 1943, as amended, and act 231 of the Public Acts of 1970, as amended (Natural River Act); **110 of the Public Acts of 2006 as amended**; to define certain terms used herein; to provide for regulations governing nonconforming uses and structures; to establish a Zoning Board of Appeals and define its duties and powers; to provide for the administration and enforcement **of this Ordinance**; to provide for amendments **to this Ordinance**; and to provide penalties for the violation of this Ordinance.*

Amendment is to update authority to zone legal reference. Old text refences outdated sources.

SECTION 2: AMENDMENT TO ARTICLE XII. The Whitewater Township Zoning Ordinance, Article XII shall be amended by amending ARTICLE XII Building Sizes and Yard Requirements to read as follows:

ARTICLE XII

BUILDING SIZES AND ~~YARD~~ SETBACK REQUIREMENTS

Isn't the current Article 12 entitled "Building Sizes, Lot Sizes and Yard Requirements"? Doesn't appear to be an accurate redline.

12.00 BUILDING SIZES AND ~~YARD~~ SETBACK REQUIREMENTS

12.10 BUILDING SIZES

- A. Each Dwelling or other main building hereafter erected in any district shall have a permanent foundation and a minimum of seven hundred (700) square feet of floor space, not including breezeways, porches and garages, unless specifically exempted elsewhere in this Ordinance.
- B. The floor area of a mobile home shall be that stated as the manufacturer's declared measurements.
- C. Campground cabins shall not exceed six hundred and fifty (650) square feet including covered porches.
- D. All structures, lots, and structure setbacks from property lines shall comply with the regulations established in Article XII of this Ordinance, unless specifically exempted elsewhere in this Ordinance.

12.11 GENERALLY APPLICABLE CONDITIONS: (~~Schedule of Regulations~~) (New name, previously just "Notes" - Numbers changed to letters)

- A. No structure shall be built within the minimum yards required except when expressly allowed elsewhere in the ordinance. (**Relocated**)
- B. Minimum Lot Areas shall be calculated by square foot unbroken by any road, street, or thoroughfare. (**Relocated from table**)
- C. Maximum Structure Height in all districts shall be 35' or 2 ½ stories above grade. (**Relocated from table**)
- D. Minimum Width to Maximum Depth Ratio regulating lot shape of new parcels shall be 1:4 in all districts. (**Relocated from table**)
- E. Variance provisions for Depth to Width Ratio are found in General Ordinance 26, Land Division Ordinance. (**Relocated**)
- F. There shall be a 30' Setback in all directions between multi-family residential structures in any district. (**New to provide greater distance between structures that may use clustered development or be evaluated as a single complex, and preserve better fire department access to more densely populated housing**)

12.12 RESIDENTIAL DISTRICTS (Table split into new tables by topic)

Color Code: **Black** = original standards **Red** = New or changed text **Blue** = Notes

Where does it note that the minimum lot areas are square footage measurements?

| District | Use | Minimum Lot Width | Minimum Lot Area | Front Yard Setback | Side Yard Setback | Rear Yard Setback | Additional Standards |
|----------|---------------|-------------------|------------------------|--------------------|-------------------|-------------------|----------------------|
| R1 | General | 100' | 20,000 | 30' | 15' | 30' | ---- |
| R2 | Single family | 100' | 12,000 | 30' | 15' | 30' | ---- |
| | Two Family | 120' | 22,000 | 30' | 15' | 30' | ---- |
| R3 | General | 120' | 11,000 Per Dwelling | 30' | 15' | 30' | ---- |

12.13 AGRICULTURAL AND RECREATION (New table, same standards)

| District | Use | Minimum Lot Width | Minimum Lot Area | Front Yard Setback | Side Yard Setback | Rear Yard Setback | Additional Standards |
|----------|-----------------------|-------------------|------------------|--------------------|-------------------|-------------------|--|
| Ag | General | 200' | 40,000 | 30' | 15' | 30' | ---- |
| | Commercial Campground | --- | 40-acre min | 100' | 100' | 100' | ---- |
| RC | General 300'? | 100' | 5 acres | 30' | 15' | 30' | ---- |
| | Commercial Campground | ---- | 40-acre min | 100' | 100' | 100' | Limit of 1 site per 2 acres or 1 cabin per 5 acres. (Private Family only) |

(RC Campground: New addition to table, existing standard)

What districts are private family campgrounds allowed in? (Std's start Pg 175 ZO under Art 37 Suppl Provisions.)

12.14 COMMERCIAL AND INDUSTRIAL DISTRICTS

| District | Use | Minimum Lot Width | Minimum Lot Area | Front Yard Setback | Side Yard Setback | Rear Yard Setback | Additional Standards |
|---|----------------------|-------------------|------------------------|--------------------|-------------------|-------------------|-----------------------|
| Commercial - C | General | 100' | ---- | 50' | * 10' | 30' | 40% Max. lot coverage |
| | Multi-family Housing | ---- | 11,000 Per Dwelling | 50' | 50' | 50' | See 12.11.F |
| *Combination shall total 30% of width but not less than 10' per side. (Multi-Family: Applying density standard to all districts) | | | | | | | |

12.11.F says 30' (not 50').

Color Code: **Black** = original standards **Red** = New or changed text **Blue** = Notes

| | | | | | | | |
|--|----------------------|------|------------------------|-----|----------------------------|-----|-----------------------|
| | | | | | | | |
| Village - V | General | * | * | * | 10' | 15' | ---- |
| | Multi-family Housing | * | 11,000 Per Dwelling | 30' | 30' | 30' | See 12.11.F |
| (Multi-Family: Applying density standard to all districts) | | | | | 12.11.F says 30'. | | |
| *Refer to conditional standards in Article 8.6. | | | | | | | |
| | | | | | | | |
| Industrial - N | General | 100' | ---- | 50' | (a) | 30' | 40% Max. lot coverage |
| | Multi-family Housing | --- | 11,000 Per Dwelling | 50' | 50' | 50' | See 12.11.F |
| (Multi-Family: Applying density standard to all districts) | | | | | 12.11.F says 30'. (not 50) | | |
| (a) Combination shall total 30% of width but not less than 15' per side. | | | | | | | |

12.15 RESERVED FOR MARIHUANA RELATED ESTABLISHMENTS

12.16 SPECIAL SITUATIONS (New table, same standards)

Except for the specific requirements stated the regulation for the underlying zone shall remain unchanged.

| Situation /Use | Minimum Lot Width | Minimum Lot Area | Front Yard Setback | Side Yard Setback | Rear Yard Setback | Additional Standards |
|---|-------------------|------------------|--|-------------------|-------------------|----------------------|
| Frontage on Boardman River and tributaries | 200' | ---- | 100' from water's edge Ordinary High Water Mark | | | See Article 14 |
| Frontage on all other Lakes and Streams | ---- | ---- | 50' from the water's edge Ordinary High Water Mark | | | See Article 14 |
| M72 in the Ag District | ---- | ---- | 100' | ---- | ---- | ---- |
| Supply Rd. | ---- | ---- | 100' | Says 150' in ZO. | | ---- |
| Old M-72 in the C District | ---- | ---- | 30' | 0 | ---- | ---- |
| Enclosures/structures Enclosure/structures for livestock, domestic animals (except house pets) | | | | | | |
| Horses/livestock | ---- | 2 ½ acres | 100' | 100' | 100' | ---- |
| Chickens/rabbits | ---- | 2 ½ acres | 40' | 40' | 40' | ---- |

| | | | | | | |
|--|------|----------|------|------|------|------|
| Dog Kennels – Sled, Hunting, or Breeding | ---- | 10 acres | 200' | 200' | 200' | ---- |
| Existing standard in Article 37.20 (chickens) and 37.30 (dogs) Chart was expanded to provide greater detail, incorporate missing standards in chart, and resolve conflict with other portions of the ordinance. | | | | | | |

~~12.12~~ 12.17 HARDSHIP

No requirements contained in this Article shall prevent the use of a lot or parcel of land of lesser size, provided the same was of legal record or had been laid out by a registered surveyor prior to the effective date of this Ordinance; and provided, further, that as to any lot or parcel of land not of legal record or so laid out on the date of passage of this Ordinance, if any conditions shall create a hardship in complying with the restrictions contained in this Article, ~~then the Planning Commission~~ **Zoning Board of Appeals (ZBA)** may grant deviation therefrom after first determining that the same shall not be inimical to the public health, safety or welfare. **(Variance is determined by ZBA not PC)**

SECTION 3: AMENDMENT TO ARTICLE XIV. The Whitewater Township Zoning Ordinance, Article XIV, Section 14.11 Special Requirements for the Boardman River Valley shall be amended to read as follows:

SECTION 14.10 IS NOT SHOWN. IS IT BEING ELIMINATED?

14.11 SPECIAL REQUIREMENTS FOR THE BOARDMAN RIVER VALLEY.

~~The following special requirements shall apply to all properties within fifty (50) feet of the Boardman River and its tributaries.~~

All properties within fifty (50) feet of the Boardman River and its tributaries shall have the following special requirements. (Reworded to improve clarity)

A. A managed vegetative strip shall be maintained within fifty (50) feet of the ~~water's edge~~ **ordinary high water-mark**, as follows: **(Removed outdated term and replaced with current term)**

1. Vegetative strips shall consist of native trees, shrubs, vegetation and other natural materials.
2. Existing native vegetation should be preserved whenever possible.
3. No ponds shall be constructed, no earth moved, surface soils removed or filled for building within the managed vegetative strip.
4. Utility lines shall be installed only as follows:
 - (a) New distribution lines for utilities within the housing setback line shall be placed underground unless overhead lines are less disruptive to the environment.
 - (b) Brushy vegetation shall be restored to the disturbed area in the managed vegetation strip.

(c) Local service lines to private dwellings shall originate from the landward side of the dwelling.

5. Chemical control of vegetation shall be prohibited within the managed vegetative strip.

6. Fencing, grazing, riding trails and soil tilling for farm crops is prohibited within the managed vegetative strip.

7. The use of the managed vegetative strip for stock watering areas and stream crossing of horseback trails is subject to the approval of the Zoning Administrator, who may require a plan from the Soil Conservation District, or ~~Department of Environmental Quality (DEQ)~~ **Michigan Department of Environment Great Lakes and Energy (EGLE), or their successors, where applicable** as part of the requirement for use.

B. Any variance from these standards shall be in accordance with a plan approved by the Zoning Board of Appeals. In evaluating such applications, the Zoning Board of Appeals shall consider all relevant factors pertaining to the purpose of the vegetative strip which is to:

1. Stabilize the river banks.
2. Prevent erosion.
3. Absorb nutrients in water runoff from adjacent lands.
4. Provide shading for the stream to maintain cool water temperature.
5. Screen adjacent man-made structures.

C. In no case shall a lot or parcel having frontage on the Boardman River or its tributaries be less than two hundred (200) feet wide at the ~~water's edge~~ **ordinary high-water mark** or the building setback line, or be less than two hundred (200) feet deep. **(Re-located from 12.11.2 - Removed outdated term and replaced with current term)**

D. A dock may be constructed parallel to the bank, not exceeding ten (10) feet in length and not protruding in the stream, and when constructed of natural materials such as rocks or logs. **(Re-located from 12.11.4)**

SECTION 4: CONFLICT AND INTERPRETATION. The standards and provisions of this Zoning Amendment shall be interpreted as being the minimum requirements necessary to uphold the purposes of this Ordinance. Whenever this Zoning Amendment imposes a higher standard than that required by other regulations, ordinances, or rules, or by easements, covenants or agreements, the provisions of this Zoning Amendment shall govern. When the provisions of any other statute impose higher standards the provisions of such statutes shall govern. When it is alleged by a petitioner that there is an error in interpretation of this Zoning Amendment by the Zoning Administrator or designee, the Whitewater Township Zoning Board of Appeals pursuant to Article 18 of the Zoning Ordinance shall review such an appeal, provided

that a written appeal is filed within thirty (30) days of the decision of the Zoning Administrator or designee. The concurring vote of a majority of the Zoning Board of Appeals shall be necessary to reverse any interpretation of this Zoning Amendment by the Zoning Administrator or designee.

SECTION 5: SAVINGS CLAUSE. All proceedings pending and rights and liabilities existing, acquired or incurred at the time this Zoning Amendment takes effect are saved and may be consummated according to the law in force when they were commenced.

SECTION 6: SEVERABILITY. The provisions of this Ordinance are declared severable. If any part of this Ordinance is declared invalid for any reason by a court of competent jurisdiction, that declaration does not affect or impair the validity of all other provisions that are not subject to that declaration.

SECTION 7: EFFECTIVE DATE. This Ordinance shall become effective seven (7) days after publication of a notice of adoption of this Ordinance, unless referendum procedures are initiated under MCL 125.3402. If referendum procedures are initiated, this Ordinance will take effect in accordance with MCL 125.3402.

SECTION 8: REPEAL. All Ordinances or parts of Ordinances in conflict herewith are hereby repealed.

YEAS: _____

NAYS: _____

ABSENT/ABSTAIN: _____

ORDINANCE DECLARED ADOPTED.

Ron Popp, Whitewater Township Supervisor

CERTIFICATION

I hereby certify that:

1. The above is a true copy of an Ordinance adopted by the Whitewater Township Board at a duly scheduled and noticed meeting of that Township Board held on _____, 2022, pursuant to the required statutory procedures.
2. A summary of the above Ordinance was duly published in the _____ newspaper, a newspaper that circulates within Whitewater Township, on _____, 2022.

Color Code: **Black** = original standards **Red** = New or changed text **Blue** = Notes

3. Within 1 week after such publication, I recorded the above Ordinance in a book of ordinances kept by me for that purpose, including the date of passage of the ordinance, the names of the members of the township board voting, and how each member voted.
4. I filed an attested copy of the above Ordinance with the Grand Traverse County Clerk on , 2022.

ATTESTED:

Cheryl Goss, Whitewater Township Clerk



Ron Popp <supervisorwhitewater@gmail.com>

ZO amendments #83 and #84 documents

1 message

Kim Mangus <manguspc@yahoo.com>

Sat, Aug 6, 2022 at 12:27 AM

To: Ron Popp <supervisorwhitewater@gmail.com>

Cc: Heidi Vollmuth <heidivourtrustee@gmail.com>

Ron,

Here is the "Clean" and "Redline" copy of the proposed amendment #84 to ZO Article 25 addressing Site Plan Review and Special Land Uses and amendment #83 to Articles 1 - Preamble, 12 - Setbacks, and 14 - Waterfront. The PC has recommended adoption of all amendments by unanimous vote. Additionally, you will find the "Findings of Fact" as approved by the PC for Articles 1, 12, and 14 and a second for Article 25. These should be reflected in the meeting minutes but I thought that it might be helpful to have a copy as approved.

Please note that the attached files have been labeled using the format used by our township attorneys, year, month, day, followed by Article numbers, topic, and version (clean/redline). Any names have been removed as these are documents that have been recommended by the entire PC for adoption by the TB. Please let me know if you have any questions.

Respectfully Submitted,
Kim Mangus

6 attachments**2022.08.03 Articles 1, 12, 14 Forwarded to TB - Redline.docx**

40K

**2022.08.03 Articles 1, 12, 14 Forwarded to TB (clean).docx**

36K

**2022.08.05 Article 25 - SUP Forwarded to TB (Clean).docx**

40K

**2022.08.05 Article 25 - SUP Forwarded to TB (Redline).docx**

41K

**2022.08.06 Approved Findings of Fact - Article 25 Site Plan Review and SUP.docx**

13K

**2022.08.06 Approved Findings of Fact - Articles 1, 12, 14.docx**

13K

Amendments Notes:

The purpose of this amendment is to create an easier to read format, move items to more appropriate locations within the Ordinance, address apartment density and setbacks, address unclear standards, update terms, and address inconsistencies with other portions of the Ordinance.

**WHITEWATER TOWNSHIP
GRAND TRAVERSE COUNTY, MICHIGAN
ZONING ORDINANCE AMENDMENT
ORDINANCE NO. [INSERT NUMBER]**

At a meeting of the Township Board of Whitewater Township, Grand Traverse County, Michigan, held at the Whitewater Township Hall on [REDACTED], 2022, at [REDACTED] p.m., Township Board Member [REDACTED] moved to adopt the following Ordinance, which motion was seconded by Township Board Member [REDACTED]:

An Ordinance to amend the Whitewater Township Zoning Ordinance, as amended to revise its preamble, amend Article XXII addressing building sizes, lot sizes and yard requirements, and alter Article XIV to address certain requirements in the Boardman River Valley in order to maintain the public health, safety, and welfare of the residents of and visitors to Whitewater Township.

THE TOWNSHIP OF WHITEWATER, GRAND TRAVERSE COUNTY, MICHIGAN, ORDAINS:

SECTION 1: AMENDMENT TO ZONING ORDINANCE WHITEWATER TOWNSHIP, MICHIGAN Ord. No. 6 eff. Dec. 23, 1972. The Whitewater Township Zoning Ordinance's preamble shall be amended to read as follows:

**ZONING ORDINANCE
WHITEWATER TOWNSHIP, MICHIGAN
Ord. No. 6 eff. Dec. 23, 1972**

An Ordinance to establish zoning districts and regulations in the Township of Whitewater, County of Grand Traverse and State of Michigan in accordance with the provisions of Act 184 of Public Acts of 1943, as amended, and act 231 of the Public Acts of 1970, as amended (Natural River Act); 110 of the Public Acts of 2006 as amended; to define certain terms used herein; to provide for regulations governing nonconforming uses and structures; to establish a Zoning Board of Appeals and define its duties and powers; to provide for the administration and enforcement of this Ordinance; to provide for amendments to this Ordinance; and to provide penalties for the violation of this Ordinance.

Amendment is to update authority to zone legal reference. Old text references outdated sources.

SECTION 2: AMENDMENT TO ARTICLE XII. The Whitewater Township Zoning Ordinance, Article XII shall be amended by amending ARTICLE XII Building Sizes and Yard Requirements to read as follows:


ARTICLE XII

BUILDING SIZES AND ~~YARD SETBACK~~² REQUIREMENTS






12.00 BUILDING SIZES AND ~~YARD SETBACK~~ REQUIREMENTS

12.10 BUILDING SIZES

- A. ⁴Each Dwelling or other main building hereafter erected in any district shall have a permanent foundation and a minimum of seven hundred (700) square feet of floor space, not including breezeways, porches and garages, unless specifically exempted elsewhere in this Ordinance. 
- B. The floor area of a mobile home shall be that stated as the manufacturer's declared measurements.
- C. Campground cabins shall not exceed six hundred and fifty (650) square feet including covered porches.
- D. All structures, lots, and structure setbacks from property lines shall comply with the regulations established in Article XII of this Ordinance, unless specifically exempted elsewhere in this Ordinance.

12.11 **GENERALLY APPLICABLE CONDITIONS:** (~~Schedule of Regulations~~) (New name, previously just “Notes” - Numbers changed to letters)

- A. No structure shall be built within the minimum yards required except when expressly allowed elsewhere in the ordinance. (Relocated)
- B. Minimum Lot Areas shall be calculated by square foot unbroken by any road, street, or thoroughfare. (Relocated from table)
- ⁶ C. Maximum Structure Height in all districts shall be 35’ or 2 ½ stories above grade. 
(Relocated from table)
- D. Minimum Width to Maximum Depth Ratio regulating lot shape of new parcels shall be 1:4 in all districts. (Relocated from table)
- E. ⁸ Variance provisions for Depth to Width Ratio are found in General Ordinance 26, Land Division Ordinance. (Relocated) 
- F. ¹⁰ There shall be a 30’ Setback in all directions between multi-family residential structures in any district. (New to provide greater distance between structures that may use clustered development or be evaluated as a single complex, and preserve better fire department access to more densely populated housing) 


12.12 **RESIDENTIAL DISTRICTS** (Table split into new tables by topic)

Summary of Comments on Pages from 09.13.2022_whitewater_township_board_packet 83.pdf

Page: 3

 Number: 1 Author: Supervisor Subject: Sticky Note Date: 9/12/2022 3:10:58 PM -04'00'
Response – Does this follow the coloring scheme?


 Number: 2 Author: Supervisor Subject: Highlight Date: 9/12/2022 3:10:49 PM -04'00'

 Number: 3 Author: Supervisor Subject: Sticky Note Date: 9/21/2022 11:09:08 AM -04'00'
Response – Once there was a minimum width requirement of 24'. Where did that go?

About 2017 - this was change mobile home were added in ag and rc district. look in article 36.


Define foundation.

 Number: 4 Author: Supervisor Subject: Highlight Date: 9/12/2022 3:12:54 PM -04'00'


 Number: 5 Author: Supervisor Subject: Sticky Note Date: 9/13/2022 11:21:52 AM -04'00'
Response – The starting and ending pints need better definition. Walk out basements will have a sloped low and high side. Where will the measurement be taken? From the low point to the eave? Peek of the roof?

There are words in definitions article 3

 Number: 6 Author: Supervisor Subject: Highlight Date: 9/12/2022 3:18:28 PM -04'00'

 Number: 7 Author: Supervisor Subject: Sticky Note Date: 9/12/2022 3:41:09 PM -04'00'
Response – List section and provision number.

 Number: 8 Author: Supervisor Subject: Highlight Date: 9/12/2022 3:40:58 PM -04'00'

 Number: 9 Author: Supervisor Subject: Sticky Note Date: 9/12/2022 6:35:27 PM -04'00'
Response – This has unintended consequences. We should not be reducing back yard setbacks. I am fine with the increase side yard setback.

 Number: 10 Author: Supervisor Subject: Highlight Date: 9/12/2022 6:34:28 PM -04'00'

Color Code: **Black** = original standards **Red** = New or changed text **Blue** = Notes

| District | Use | Minimum Lot Width | Minimum Lot Area | Front Yard Setback | Side Yard Setback | Rear Yard Setback | Additional Standards |
|----------|----------------------|-------------------|------------------------|--------------------|-------------------|-------------------|----------------------|
| R1 | ² General | 100' | 20,000 | 30' | 15' | 30' | --- |
| R2 | Single family | 100' | 12,000 | 30' | 15' | 30' | --- |
| | Two Family | 120' | 22,000 | 30' | 15' | 30' | --- |
| R3 | General | 120' | 11,000 Per Dwelling | 30' | 15' | 30' | --- |

12.13 AGRICULTURAL AND RECREATION (New table, same standards)

| District | Use | Minimum Lot Width | Minimum Lot Area | Front Yard Setback | Side Yard Setback | Rear Yard Setback | Additional Standards |
|----------|------------------------------------|-------------------|------------------|--------------------|-------------------|-------------------|---|
| Ag | General | 200' | 40,000 | 30' | 15' | 30' | --- |
| | Commercial Campground | --- | 40-acre min | 100' | 100' | 100' | --- |
| RC | General | 100' | 5 acres | 30' | 15' | 30' | --- |
| | ⁴ Commercial Campground | ---- | 40-acre min | 100' | 100' | 100' | Limit of 1 site per 2 acres or 1 cabin per 5 acres. |

(RC Campground: New addition to table, existing standard)

12.14 COMMERCIAL AND INDUSTRIAL DISTRICTS

| District | Use | Minimum Lot Width | Minimum Lot Area | Front Yard Setback | Side Yard Setback | Rear Yard Setback | Additional Standards |
|---|-----------------------------------|-------------------|------------------------|--------------------|-------------------|-------------------|-----------------------|
| Commercial - C | General | 100' | --- | 50' | * 10' | 30' | 40% Max. lot coverage |
| | ⁶ Multi-family Housing | --- | 11,000 Per Dwelling | 50' | 50' | 50' | See 12.11.F |
| ⁸ Combination shall total 30% of width but not less than 10' per side. | | | | | | | |

(Multi-Family: Applying density standard to all districts)

 Number: 1 Author: Supervisor Subject: Sticky Note Date: 9/12/2022 6:46:27 PM -04'00'

Charts not sure the separate charts enhance user ability. What does the term "general mean" it not defined anywhere in the ordinance. Do you mean Use by right? Are special uses eligible for the same lots sizes and if so why?

 Number: 2 Author: Supervisor Subject: Highlight Date: 9/12/2022 6:46:07 PM -04'00'

 Number: 3 Author: Supervisor Subject: Sticky Note Date: 9/12/2022 7:01:16 PM -04'00'

Response – I do not see this use for the RC district as existing where is it listed?

 Number: 4 Author: Supervisor Subject: Highlight Date: 9/12/2022 7:00:55 PM -04'00'

 Number: 5 Author: Supervisor Subject: Sticky Note Date: 9/12/2022 7:10:49 PM -04'00'

Response – Why is multi family allowed in commercial district? This makes no sense. The Blue notes do not make any sense either.

 Number: 6 Author: Supervisor Subject: Highlight Date: 9/12/2022 7:12:15 PM -04'00'

 Number: 7 Author: Supervisor Subject: Sticky Note Date: 9/12/2022 7:06:50 PM -04'00'

Response – This appears to be a new standard.

 Number: 8 Author: Supervisor Subject: Highlight Date: 9/12/2022 7:06:35 PM -04'00'

Color Code: **Black** = original standards **Red** = New or changed text **Blue** = Notes

| | | | | | | | |
|--|----------------------|------|---------------------|-----|-----|-----|-----------------------|
| | | | | | | | |
| Village -V | General | * | * | * | 10' | 15' | ---- |
| | Multi-family Housing | * | 11,000 Per Dwelling | * | * | * | See 12.11.F |
| (Multi-Family: Applying density standard to all districts) | | | | | | | |
| *Refer to conditional standards in Article 8.6. | | | | | | | |
| Industrial - N | General | 100' | ---- | 50' | (a) | 30' | 40% Max. lot coverage |
| | Multi-family Housing | --- | 11,000 Per Dwelling | 50' | 50' | 50' | See 12.11.F |
| (Multi-Family: Applying density standard to all districts) | | | | | | | |
| (a) Combination shall total 30% of width but not less than 15' per side. | | | | | | | |

12.15 RESERVED FOR MARIHUANA RELATED ESTABLISHMENTS

12.16 SPECIAL SITUATIONS (New table, same standards)

Except for the specific requirements stated the regulation for the underlying zone shall remain unchanged.

| Situation /Use | Minimum Lot Width | Minimum Lot Area | Front Yard Setback | Side Yard Setback | Rear Yard Setback | Additional Standards |
|--|-------------------|------------------|---|-------------------|-------------------|----------------------|
| Frontage on Boardman River and tributaries | 200' | ---- | 100' from water's edge High Water Mark Ordinary | | | See Article 14 |
| Frontage on all other Lakes and Streams | ---- | ---- | 50' from the water's edge High Water Mark Ordinary | | | See Article 14 |
| M72 in the Ag District | ---- | ---- | 100' | ---- | ---- | ---- |
| Supply Rd. | ---- | ---- | 100' | ---- | ---- | ---- |
| Old M-72 in the C District | ---- | ---- | 30' | 0 | ---- | ---- |
| Enclosures/structures Enclosure/structures for livestock, domestic animals (except house pets) | | | | | | |
| Horses/livestock | 2--- | 2 ½ acres | 100' | 100' | 100' | ---- |
| Chickens/rabbits | ---- | 2 ½ acres | 40' | 40' | 40' | ---- |

 Number: 1 Author: Supervisor Subject: Sticky Note Date: 9/12/2022 7:18:09 PM -04'00'

Reponse – Where is the number of animals located? How many horses can you have on 2.5 Acres?

 Number: 2 Author: Supervisor Subject: Highlight Date: 9/12/2022 7:17:56 PM -04'00'

| | | | | | | |
|--|------|----------|------|------|------|------|
| Dog Kennels – Sled, Hunting, or Breeding | ---- | 10 acres | 200' | 200' | 200' | ---- |
| Existing standard in Article 37.20 (chickens) and 37.30 (dogs) Chart was expanded to provide greater detail, incorporate missing standards in chart, and resolve conflict with other portions of the ordinance. | | | | | | |

~~12.12~~ 12.17 HARDSHIP

No requirements contained in this Article shall prevent the use of a lot or parcel of land of lesser size, provided the same was of legal record or had been laid out by a registered surveyor prior to the effective date of this Ordinance; and provided, further, that as to any lot or parcel of land not of legal record or so laid out on the date of passage of this Ordinance, if any conditions shall create a hardship in complying with the restrictions contained in this Article, ~~then the Planning Commission~~ **Zoning Board of Appeals (ZBA)** may grant deviation therefrom after first determining that the same shall not be inimical to the public health, safety or welfare. **(Variance is determined by ZBA not PC)**

SECTION 3: AMENDMENT TO ARTICLE XIV. The Whitewater Township Zoning Ordinance, Article XIV, Section 14.11 Special Requirements for the Boardman River Valley shall be amended to read as follows:

14.11 SPECIAL REQUIREMENTS FOR THE BOARDMAN RIVER VALLEY.

~~The following special requirements shall apply to all properties within fifty (50) feet of the Boardman River and its tributaries.~~

All properties within fifty (50) feet of the Boardman River and its tributaries shall have the following special requirements. (Reworded to improve clarity)

A. A managed vegetative strip shall be maintained within fifty (50) feet of the ~~water's edge~~ **ordinary high water-mark**, as follows: **(Removed outdated term and replaced with current term)**

1. Vegetative strips shall consist of native trees, shrubs, vegetation and other natural materials.
2. Existing native vegetation should be preserved whenever possible.
3. No ponds shall be constructed, no earth moved, surface soils removed or filled for building within the managed vegetative strip.
4. Utility lines shall be installed only as follows:
 - (a) New distribution lines for utilities within the housing setback line shall be placed underground unless overhead lines are less disruptive to the environment.
 - (b) Brushy vegetation shall be restored to the disturbed area in the managed vegetation strip.

(c) Local service lines to private dwellings shall originate from the landward side of the dwelling.

5. Chemical control of vegetation shall be prohibited within the managed vegetative strip.

6. Fencing, grazing, riding trails and soil tilling for farm crops is prohibited within the managed vegetative strip.

7. The use of the managed vegetative strip for stock watering areas and stream crossing of horseback trails is subject to the approval of the Zoning Administrator, who may require a plan from the Soil Conservation District, or ~~Department of Environmental Quality (DEQ)~~ **Michigan Department of Environment Great Lakes and Energy (EGLE)**, or their **successors, where applicable** as part of the requirement for use.

B. Any variance from these standards shall be in accordance with a plan approved by the Zoning Board of Appeals. In evaluating such applications, the Zoning Board of Appeals shall consider all relevant factors pertaining to the purpose of the vegetative strip which is to:

1. Stabilize the river banks.
2. Prevent erosion.
3. Absorb nutrients in water runoff from adjacent lands.
4. Provide shading for the stream to maintain cool water temperature.
5. Screen adjacent man-made structures.

C. In no case shall a lot or parcel having frontage on the Boardman River or its tributaries be less than two hundred (200) feet wide at the ~~water's edge~~ **ordinary high-water mark** or the building setback line, or be less than two hundred (200) feet deep. **(Re-located from 12.11.2 - Removed outdated term and replaced with current term)**

D. A dock may be constructed parallel to the bank, not exceeding ten (10) feet in length and not protruding in the stream, and when constructed of natural materials such as rocks or logs. **(Re-located from 12.11.4)**

SECTION 4: CONFLICT AND INTERPRETATION. The standards and provisions of this Zoning Amendment shall be interpreted as being the minimum requirements necessary to uphold the purposes of this Ordinance. Whenever this Zoning Amendment imposes a higher standard than that required by other regulations, ordinances, or rules, or by easements, covenants or agreements, the provisions of this Zoning Amendment shall govern. When the provisions of any other statute impose higher standards the provisions of such statutes shall govern. When it is alleged by a petitioner that there is an error in interpretation of this Zoning Amendment by the Zoning Administrator or designee, the Whitewater Township Zoning Board of Appeals pursuant to Article 18 of the Zoning Ordinance shall review such an appeal, provided

that a written appeal is filed within thirty (30) days of the decision of the Zoning Administrator or designee. The concurring vote of a majority of the Zoning Board of Appeals shall be necessary to reverse any interpretation of this Zoning Amendment by the Zoning Administrator or designee.

SECTION 5: SAVINGS CLAUSE. All proceedings pending and rights and liabilities existing, acquired or incurred at the time this Zoning Amendment takes effect are saved and may be consummated according to the law in force when they were commenced.

SECTION 6: SEVERABILITY. The provisions of this Ordinance are declared severable. If any part of this Ordinance is declared invalid for any reason by a court of competent jurisdiction, that declaration does not affect or impair the validity of all other provisions that are not subject to that declaration.

SECTION 7: EFFECTIVE DATE. This Ordinance shall become effective seven (7) days after publication of a notice of adoption of this Ordinance, unless referendum procedures are initiated under MCL 125.3402. If referendum procedures are initiated, this Ordinance will take effect in accordance with MCL 125.3402.

SECTION 8: REPEAL. All Ordinances or parts of Ordinances in conflict herewith are hereby repealed.

YEAS: _____

NAYS: _____

ABSENT/ABSTAIN: _____

ORDINANCE DECLARED ADOPTED.

Ron Popp, Whitewater Township Supervisor

CERTIFICATION

I hereby certify that:

1. The above is a true copy of an Ordinance adopted by the Whitewater Township Board at a duly scheduled and noticed meeting of that Township Board held on _____, 2022, pursuant to the required statutory procedures.
2. A summary of the above Ordinance was duly published in the _____ newspaper, a newspaper that circulates within Whitewater Township, on _____, 2022.

Color Code: **Black** = original standards **Red** = New or changed text **Blue** = Notes

3. Within 1 week after such publication, I recorded the above Ordinance in a book of ordinances kept by me for that purpose, including the date of passage of the ordinance, the names of the members of the township board voting, and how each member voted.
4. I filed an attested copy of the above Ordinance with the Grand Traverse County Clerk on , 2022.

ATTESTED:

Cheryl Goss, Whitewater Township Clerk

Memo

To: Whitewater Township Board
From: Don Glenn, Trustee
cc: None
Date: November 28, 2022
Re: Administrative Policy & Procedure manual – Section 4.5 Financial Reporting

The purpose of monthly financial reporting is both for our citizens and board to obtain a concise overview of the previous month's financial status by having up-to-date reporting. This is essential as this reporting provides a snapshot of the township's financial health, giving insight into our performance, operations, and cash flow.

Below is the current policy and procedure for Section 4.5(a) Periodic Revenue and Expenditure Report with the proposed language to be amended as shown in "red" that was emailed to the Clerk on October 25th for her review & comments. An email response was provided back to me on November 28th from the Clerk that both she and the Treasurer did not have any suggested revisions to this language below.

4.5 Financial Reporting

4.5(a) Periodic Revenue and Expenditure Report

The clerk shall prepare a financial report for the township board at the end of ~~each of the first three quarters and at the end of~~ each month ~~occurring~~ during the fiscal year. ~~fourth qua~~The expenditures on this report will be current through the last day of the previous month. ~~and shall be presented to the board at its regular monthly meeting.~~ The revenues on this report will be lagging the expenditures by one (1) month. This revenue and expenditure report shall be presented to the board before or at its regular monthly meeting. Subsequently, the financial report (expenditures current and revenues one (1) month behind expenditures) shall then become part of the Consent Calendar in the agenda/packet of the next regular monthly meeting. The financial report for each fund will show the following information for revenues and expenditures:

1. Chart of Accounts number
2. Description
3. Original Budget
4. Amended budget
5. Year to date
6. Budget balance

By way of example:

- A. A Board of Trustee regular scheduled meeting is on December 13, 2022;
- B. The Revenue and Expenditure report prepared by the Clerk shall be presented to the Board of Trustee's before or at the December 13, 2022, meeting and contains the following information:

- i. The expenditure line items in the report shall be current thru November 30, 2022, and;
 - ii. The revenue line items in the report shall be current thru October 31, 2022.
 - C. This report presented to the township board before or at the December 13, 2022, meeting shall then be included in the next regular monthly meeting Agenda-Packet on January 10, 2023.
-

BLACK LINE

4.5 Financial Reporting

4.5(a) Periodic Revenue and Expenditure Report

The clerk shall prepare a financial report for the township board at the end of each month during the fiscal year. The expenditures on this report will be current through the last day of the previous month.-The revenues on this report will be lagging the expenditures by one (1) month. This revenue and expenditure report shall be presented to the board before or at its regular monthly meeting. Subsequently, the financial report (expenditures current and revenues one (1) month behind expenditures) shall then become part of the agenda/packet of the next regular monthly meeting. The financial report for each fund will show the following information for revenues and expenditures:

1. Chart of Accounts number
2. Description
3. Original Budget
4. Amended budget
5. Year to date
6. Budget balance

By way of example:

- D. A Board of Trustee regular scheduled meeting is on December 13, 2022;
 - E. The Revenue and Expenditure report prepared by the Clerk shall be presented to the Board of Trustee's before or at the December 13, 2022, meeting and contains the following information:
 - i. The expenditure line items in the report shall be current thru November 30, 2022, and;
 - ii. The revenue line items in the report shall be current thru October 31, 2022.
 - F. This report presented to the township board before or at the December 13, 2022, meeting shall then be included in the next regular monthly meeting Agenda-Packet on January 10, 2023.
-

Motion to amend the policy & procedure manual section 4.5(a) Periodic Revenue and Expenditure Report as approved December 13, 2022, to the Administrative Policy & Procedure manual.

Cheryl A. Goss <clerk@whitewatertownship.org>

11/28/2022 1:30 PM

RE: Revised language / 4.5 Financial Reporting

To Donald Glenn <trustee02@whitewatertownship.org>

Don –

The treasurer's office and I have reviewed the proposed language shown below. We do not have any suggested revisions.

FYI - Month-to-month compliance with this new deadline will be dependent on whether the necessary revenue and expenditure information is available and we have had time to process it.

bcc Treasurer's Office

Cheryl A. Goss, MIPMC
Whitewater Township Clerk
5777 Vinton Road, P.O. Box 159
Williamsburg, Michigan 49690
Telephone: 231.267.5141 X 24
Fax: 231.267.9020
clerk@whitewatertownship.org

Office Hours: Mon/Tue/Wed/Thurs 9:00 am to 5:00 pm

I Pledge Allegiance to the Flag of the United States of America, and to the REPUBLIC for which it stands, one Nation, under God, Indivisible, with Liberty and Justice for All.

From: Donald Glenn <trustee02@whitewatertownship.org>

Sent: Tuesday, October 25, 2022 9:26 AM

To: Cheryl A. Goss <clerk@whitewatertownship.org>

Subject: Revised language / 4.5 Financial Reporting

Cheryl, per the discussion at the October 17th BoT meeting, below is the proposed language to replace section 4.5(a) taking into account comments at that meeting...please advise as to your acceptance or additional proposed changes, thanks.

4.5 Financial Reporting

4.5(a) Periodic Revenue and Expenditure Report

The clerk shall prepare a financial report for the township board at the end of each month during the year. The expenditures on this report will be current through the last day of the previous month. The revenues on this report will be lagging the expenditures by one (1) month. This revenue and expenditure report shall be presented to the board before or at its regular monthly meeting. Subsequently, the financial report (expenditures current and revenues one (1) month behind expenditures) shall then become part of the agenda/packet of the next regular monthly meeting. The financial report for each fund will show the following information for revenues and expenditures:

1. Chart of Accounts number
2. Description

4. Amended budget
5. Year to date
6. Budget balance

By way of example:

1. A Board of Trustee regular scheduled meeting is on December 13, 2022;
2. The Revenue and Expenditure report prepared by the Clerk shall be presented to the Board of Trustee's before or at the December 13, 2022, meeting and contains the following information:
 1. The expenditure line items in the report shall be current thru November 30, 2022, and
 2. The revenue line items in the report shall be current thru October 31, 2022.
3. This report presented to the township board before or at the December 13, 2022, meeting shall then be included in the next regular monthly meeting Agenda-Packet on January 10, 2023.

Memo

To: Whitewater Township Board of Trustees
CC: None
Date: 12-02-2022
Re: Boat Ramp Expansion Plans

Board Members –

I do not believe we were expecting any additional information from Flies & Vanderbrink and this is a continuation of the 10.24.2022 discussion.

No motion is made at this time pending Board discussion of boat ramp expansion plans.

Respectfully submitted,



Whitewater Township FOIA Coordinator
Supervisor, Whitewater Township

MEMO

To: Whitewater Township Board
From: Cheryl A. Goss, Clerk
Date: 10/05/2022
Re: Budget Amendments 04/01/2022 through 09/30/2022

The following budget amendments are recommended.

GENERAL FUND: (to cover current and future unbudgeted wages) (101-101-703 includes trustee wages, including 5 special meetings as of 9/30, newsletter wages, marihuana subcommittee wages) (Recording secretary wages of \$2,450 have been moved to 101-215-703)

| GL# | Description | Debit | Credit |
|-------------|-------------|-------|--------|
| 101-101-703 | Wages | 2,500 | |
| 101-890-890 | Contingency | | 2,500 |

GENERAL FUND: (to cover unbudgeted cost of audit)

| GL# | Description | Debit | Credit |
|-------------|-----------------------------|-------|--------|
| 101-101-802 | Audit & Accounting Services | 5,475 | |
| 101-890-890 | Contingency | | 5,475 |

GENERAL FUND: (to cover increased insurance costs)

| GL# | Description | Debit | Credit |
|-------------|----------------------|-------|--------|
| 101-865-820 | Liability Insurance | 365 | |
| 101-865-821 | Workers Compensation | 4 | |
| 101-890-890 | Contingency | | 369 |

FIRE FUND (to cover additional turnout gear)

| GL# | Description | Debit | Credit |
|-------------|--------------|-------|--------|
| 206-336-745 | Turnout Gear | 6,734 | |
| 206-890-890 | Contingency | | 6,734 |

PARK FUND (to cover increased insurance costs)

| GL# | Description | Debit | Credit |
|-------------|-------------|-------|--------|
| 208-865-820 | Insurance | 85 | |
| 208-890-890 | Contingency | | 85 |

RECREATION FUND (to return unused storm damage funds to 930 (for HPP playground/other repairs) and to 970 for capital improvements)

| GL# | Description | Debit | Credit |
|-------------|------------------------------|--------|--------|
| 209-757-930 | Facility Repairs/Maintenance | 8,000 | |
| 209-757-970 | Capital Expenditure | 29,200 | |
| 209-757-960 | Storm Damage Cleanup | | 37,200 |

#

BUDGET WORKSHEET

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Whitewater Township

| | Prior Year Actual | Original Budget | Amended Budget | Current Year Actual Thru September | Estimated Total | (6) Requested | (7) Recommended | (8) Adopted |
|------------------------------------|-------------------------|--------------------|-------------------|--|--------------------|------------------|--------------------|----------------|
| Month: 9/30/2022 | | | | | | | | |
| Fund: 101 - GENERAL FUND | | | | | | | | |
| Revenues | | | | | | | | |
| Dept: 000 | | | | | | | | |
| 402 Property Taxes | 135,734 | 144,592 | 144,592 | 0 | 0 | | | |
| 445 Penalties & Interest | 3,750 | 2,000 | 2,000 | 0 | 0 | | | |
| 447 Property Tax Admin Fees | 70,397 | 65,000 | 65,000 | 0 | 0 | | | |
| 448 Collection Fees | 0 | 4,500 | 4,500 | 3,629 | 0 | | | |
| 451 Franchise Fees | 30,078 | 32,400 | 32,400 | 7,058 | 0 | | | |
| 476 Licenses & Permits | 3,700 | 2,500 | 2,500 | 1,850 | 0 | | | |
| 479 Marihuana Zoning Fees | 0 | 0 | 0 | 0 | 0 | | | |
| 480 Marihuana Application Fees | 0 | 0 | 0 | 0 | 0 | | | |
| 528 Other Federal Grants | 0 | 0 | 0 | 0 | 0 | | | |
| 566 State Grants | 0 | 0 | 0 | 0 | 0 | | | |
| 573 Local Community Stabilization | 4,626 | 0 | 0 | 0 | 0 | | | |
| 574 State-Shared Revenues | 281,389 | 250,000 | 250,000 | 97,219 | 0 | | | |
| 575 Swamp Taxes/Comm Forest Distri | 30,966 | 29,000 | 29,000 | 0 | 0 | | | |
| 590 Grants-Private Sources | 0 | 0 | 0 | 0 | 0 | | | |
| 607 Service Fees | 4,925 | 2,000 | 2,000 | 275 | 0 | | | |
| 608 Interment Fees | 2,225 | 2,000 | 2,000 | 700 | 0 | | | |
| 633 Election Reimbursement | 0 | 0 | 0 | 0 | 0 | | | |
| 642 Sale of Cemetery Lots | 400 | 750 | 750 | 0 | 0 | | | |
| 643 Miscellaneous Sales | 1,265 | 500 | 500 | 87 | 0 | | | |
| 665 Interest Earned | 1,629 | 1,000 | 1,000 | 304 | 0 | | | |
| 668 Oil & Gas Lease | 0 | 0 | 0 | 0 | 0 | | | |
| 670 Cell Tower Lease | 44,775 | 34,844 | 34,844 | 11,217 | 0 | | | |
| 671 Other Revenues | 2,000 | 1,000 | 1,000 | 286 | 0 | | | |
| 673 Sale of Fixed Assets | 0 | 0 | 0 | 0 | 0 | | | |
| 678 Gypsy Moth Assessment | 0 | 0 | 0 | 0 | 0 | | | |
| 687 Refunds | 0 | 0 | 0 | 0 | 0 | | | |
| 698 Insurance Recovery | 2,402 | 0 | 0 | 1,501 | 0 | | | |
| 699 Transfers From Other Funds | 0 | 0 | 0 | 0 | 0 | | | |
| Dept: 000 | 620,261 | 572,086 | 572,086 | 124,126 | 0 | 0 | 0 | 0 |
| Total Revenues | 620,261 | 572,086 | 572,086 | 124,126 | 0 | 0 | 0 | 0 |
| Expenditures | | | | | | | | |
| Dept: 101 Township Board | | | | | | | | |
| 702 Salaries | 6,860 | 8,800 | 8,800 | 3,800 | 0 | | | |
| 703 Wages | 4,329 | 3,000 | 3,000 | 4,074 | 0 | | | |
| 715 Social Security (Employer) | 666 | 732 | 732 | 615 | 0 | | | |
| 716 Medicare (Employer) | 156 | 171 | 171 | 144 | 0 | | | |

BUDGET WORKSHEET

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Whitewater Township

| | Prior Year Actual | Current Year | | | | (6) | (7) | (8) |
|---------------------------------|-------------------------|--------------------|-------------------|--------------------------|--------------------|-----------|-------------|---------|
| | | Original Budget | Amended Budget | Actual Thru September | Estimated Total | Requested | Recommended | Adopted |
| Month: 9/30/2022 | | | | | | | | |
| Fund: 101 - GENERAL FUND | | | | | | | | |
| Expenditures | | | | | | | | |
| Dept: 101 Township Board | | | | | | | | |
| 727 Office Supplies & Expense | 1,389 | 2,700 | 2,700 | 1,353 | 0 | | | |
| 728 Postage | 530 | 2,000 | 2,000 | 148 | 0 | | | |
| 802 Audit & Accounting Services | 6,844 | 7,500 | 7,500 | 475 | 0 | | | |
| 804 Professional Services | 500 | 4,500 | 4,500 | 0 | 0 | | | |
| 817 Clean Up Day Services | 11,835 | 14,000 | 14,000 | 0 | 0 | | | |
| 830 Pension Plan | 3,546 | 4,000 | 4,000 | 1,553 | 0 | | | |
| 840 Dues and Memberships | 3,925 | 4,000 | 4,000 | 4,098 | 0 | | | |
| 852 Promotional Expenses | 1,000 | 1,000 | 1,000 | 1,000 | 0 | | | |
| 853 Finance Charges | 0 | 0 | 0 | 0 | 0 | | | |
| 854 Late Fees | 0 | 0 | 0 | 0 | 0 | | | |
| 860 Mileage Reimbursement | 0 | 200 | 200 | 0 | 0 | | | |
| 865 Meal/Lodging Expense | 0 | 400 | 400 | 0 | 0 | | | |
| 880 Education & Training | 0 | 500 | 500 | 545 | 0 | | | |
| 901 Publishing | 1,258 | 2,000 | 2,000 | 164 | 0 | | | |
| 902 Printing | 0 | 1,500 | 1,500 | 531 | 0 | | | |
| 903 Township Newsletter Expense | 2,276 | 3,000 | 3,000 | 1,129 | 0 | | | |
| 940 Equipment Rental | 1,003 | 1,100 | 1,100 | 502 | 0 | | | |
| 941 Postage Meter Rental/Fees | 1,614 | 1,300 | 1,300 | 646 | 0 | | | |
| 955 Grand Vision | 0 | 0 | 0 | 0 | 0 | | | |
| 956 Miscellaneous Expense | 232 | 500 | 500 | 50 | 0 | | | |
| 957 Boardman River Project | 0 | 0 | 0 | 0 | 0 | | | |
| 958 Gypsy Moth Program | 0 | 0 | 0 | 0 | 0 | | | |
| 959 Scrap Tire Expense | 2,000 | 500 | 500 | 0 | 0 | | | |
| 964 Refunds | 127 | 400 | 400 | 0 | 0 | | | |
| Township Board | 50,090 | 63,803 | 63,803 | 20,827 | 0 | 0 | 0 | 0 |
| Dept: 171 Supervisor | | | | | | | | |
| 702 Salaries | 27,691 | 27,585 | 27,585 | 13,792 | 0 | | | |
| 703 Wages | 0 | 2,000 | 2,000 | 0 | 0 | | | |
| 715 Social Security (Employer) | 1,710 | 1,834 | 1,834 | 855 | 0 | | | |
| 716 Medicare (Employer) | 400 | 429 | 429 | 200 | 0 | | | |
| 727 Office Supplies & Expense | 0 | 250 | 250 | 0 | 0 | | | |
| 728 Postage | 2 | 40 | 40 | 0 | 0 | | | |
| 860 Mileage Reimbursement | 325 | 500 | 500 | 0 | 0 | | | |
| 865 Meal/Lodging Expense | 0 | 250 | 250 | 0 | 0 | | | |
| 880 Education & Training | 0 | 400 | 400 | 165 | 0 | | | |
| Supervisor | 30,128 | 33,288 | 33,288 | 15,012 | 0 | 0 | 0 | 0 |
| Dept: 195 Elections | | | | | | | | |

BUDGET WORKSHEET

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Whitewater Township

| | Prior Year Actual | Current Year | | | | (6) | (7) | (8) |
|--------------------------------|-------------------------|--------------------|-------------------|--------------------------|--------------------|-----------|-------------|---------|
| | | Original Budget | Amended Budget | Actual Thru September | Estimated Total | Requested | Recommended | Adopted |
| Month: 9/30/2022 | | | | | | | | |
| Fund: 101 - GENERAL FUND | | | | | | | | |
| Expenditures | | | | | | | | |
| Dept: 195 Elections | | | | | | | | |
| 703 Wages | 984 | 10,000 | 10,000 | 6,927 | 0 | | | |
| 715 Social Security (Employer) | 3 | 200 | 200 | 81 | 0 | | | |
| 716 Medicare (Employer) | 1 | 100 | 100 | 19 | 0 | | | |
| 727 Office Supplies & Expense | 1,820 | 3,000 | 3,000 | 4,172 | 0 | | | |
| 728 Postage | 1,842 | 4,000 | 4,000 | 1,012 | 0 | | | |
| 847 Software Support | 0 | 0 | 0 | 0 | 0 | | | |
| 860 Mileage Reimbursement | 0 | 200 | 200 | 115 | 0 | | | |
| 865 Meal/Lodging Expense | 0 | 300 | 300 | 330 | 0 | | | |
| 880 Education & Training | 209 | 1,000 | 1,000 | 1,044 | 0 | | | |
| 901 Publishing | 414 | 500 | 500 | 779 | 0 | | | |
| 970 Capital Expenditure | 0 | 600 | 600 | 0 | 0 | | | |
| Elections | 5,273 | 19,900 | 19,900 | 14,479 | 0 | 0 | 0 | 0 |
| Dept: 209 Assessor | | | | | | | | |
| 702 Salaries | 1,200 | 1,200 | 1,200 | 600 | 0 | | | |
| 715 Social Security (Employer) | 74 | 74 | 74 | 37 | 0 | | | |
| 716 Medicare (Employer) | 17 | 17 | 17 | 9 | 0 | | | |
| 727 Office Supplies & Expense | 580 | 200 | 200 | 224 | 0 | | | |
| 728 Postage | 924 | 1,300 | 1,300 | 0 | 0 | | | |
| 807 Assessing Services | 24,600 | 27,600 | 27,600 | 13,625 | 0 | | | |
| 847 Software Support | 654 | 700 | 700 | 676 | 0 | | | |
| 880 Education & Training | 0 | 0 | 0 | 0 | 0 | | | |
| 901 Publishing | 0 | 50 | 50 | 0 | 0 | | | |
| Assessor | 28,049 | 31,141 | 31,141 | 15,171 | 0 | 0 | 0 | 0 |
| Dept: 210 Attorney | | | | | | | | |
| 801 Legal Services | 91,532 | 100,000 | 100,000 | 25,719 | 0 | | | |
| Attorney | 91,532 | 100,000 | 100,000 | 25,719 | 0 | 0 | 0 | 0 |
| Dept: 215 Clerk | | | | | | | | |
| 702 Salaries | 28,223 | 28,115 | 28,115 | 14,058 | 0 | | | |
| 703 Wages | 12,031 | 18,660 | 18,660 | 9,163 | 0 | | | |
| 715 Social Security (Employer) | 2,456 | 3,138 | 3,138 | 1,288 | 0 | | | |
| 716 Medicare (Employer) | 574 | 734 | 734 | 301 | 0 | | | |
| 727 Office Supplies & Expense | 1,920 | 2,000 | 2,000 | 369 | 0 | | | |
| 728 Postage | 80 | 100 | 100 | 19 | 0 | | | |
| 840 Dues and Memberships | 120 | 120 | 120 | 0 | 0 | | | |
| 847 Software Support | 2,596 | 2,700 | 2,700 | 0 | 0 | | | |
| 860 Mileage Reimbursement | 38 | 600 | 600 | 150 | 0 | | | |
| 865 Meal/Lodging Expense | 0 | 600 | 600 | 0 | 0 | | | |

BUDGET WORKSHEET

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9:54 am

Whitewater Township

| | Prior Year Actual | Original Budget | Amended Budget | Current Year Actual Thru September | Estimated Total | (6) Requested | (7) Recommended | (8) Adopted |
|-----------------------------------|-------------------------|--------------------|-------------------|--|--------------------|------------------|--------------------|----------------|
| Month: 9/30/2022 | | | | | | | | |
| Fund: 101 - GENERAL FUND | | | | | | | | |
| Expenditures | | | | | | | | |
| Dept: 215 Clerk | | | | | | | | |
| 880 Education & Training | 524 | 1,000 | 1,000 | 59 | 0 | | | |
| 901 Publishing | 0 | 1,000 | 1,000 | 0 | 0 | | | |
| Clerk | 48,562 | 58,767 | 58,767 | 25,407 | 0 | 0 | 0 | 0 |
| Dept: 247 Board of Review | | | | | | | | |
| 702 Salaries | 1,030 | 1,200 | 1,200 | 210 | 0 | | | |
| 703 Wages | 175 | 450 | 450 | 42 | 0 | | | |
| 715 Social Security (Employer) | 75 | 102 | 102 | 16 | 0 | | | |
| 716 Medicare (Employer) | 17 | 24 | 24 | 4 | 0 | | | |
| 727 Office Supplies & Expense | 0 | 50 | 50 | 0 | 0 | | | |
| 728 Postage | 0 | 50 | 50 | 0 | 0 | | | |
| 860 Mileage Reimbursement | 0 | 250 | 250 | 0 | 0 | | | |
| 865 Meal/Lodging Expense | 89 | 200 | 200 | 0 | 0 | | | |
| 880 Education & Training | 20 | 1,000 | 1,000 | 0 | 0 | | | |
| 901 Publishing | 43 | 100 | 100 | 0 | 0 | | | |
| Board of Review | 1,449 | 3,426 | 3,426 | 272 | 0 | 0 | 0 | 0 |
| Dept: 253 Treasurer | | | | | | | | |
| 702 Salaries | 27,691 | 27,585 | 27,585 | 13,792 | 0 | | | |
| 703 Wages | 10,038 | 15,288 | 15,288 | 6,693 | 0 | | | |
| 715 Social Security (Employer) | 2,274 | 2,658 | 2,658 | 1,270 | 0 | | | |
| 716 Medicare (Employer) | 532 | 622 | 622 | 297 | 0 | | | |
| 727 Office Supplies & Expense | 3,031 | 1,800 | 1,800 | 321 | 0 | | | |
| 728 Postage | 2,363 | 2,500 | 2,500 | 847 | 0 | | | |
| 804 Professional Services | 0 | 0 | 0 | 0 | 0 | | | |
| 840 Dues and Memberships | 0 | 100 | 100 | 0 | 0 | | | |
| 847 Software Support | 2,418 | 2,000 | 2,000 | 1,394 | 0 | | | |
| 860 Mileage Reimbursement | 962 | 1,350 | 1,350 | 417 | 0 | | | |
| 865 Meal/Lodging Expense | 0 | 600 | 600 | 589 | 0 | | | |
| 880 Education & Training | 343 | 800 | 800 | 1,323 | 0 | | | |
| 901 Publishing | 0 | 100 | 100 | 0 | 0 | | | |
| Treasurer | 49,652 | 55,403 | 55,403 | 26,943 | 0 | 0 | 0 | 0 |
| Dept: 265 Township Hall & Grounds | | | | | | | | |
| 703 Wages | 0 | 8,000 | 8,000 | 0 | 0 | | | |
| 715 Social Security (Employer) | 0 | 496 | 496 | 0 | 0 | | | |
| 716 Medicare (Employer) | 0 | 116 | 116 | 0 | 0 | | | |
| 740 Operating Expense & Supplies | 542 | 1,000 | 1,000 | 942 | 0 | | | |
| 809 Lawn Maintenance Services | 600 | 1,000 | 1,000 | 581 | 0 | | | |
| 810 Janitorial Services | 1,300 | 1,500 | 1,500 | 650 | 0 | | | |

BUDGET WORKSHEET

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Whitewater Township

| | Prior Year Actual | Original Budget | Current Year Amended Budget | Actual Thru September | Estimated Total | (6) Requested | (7) Recommended | (8) Adopted |
|---|-------------------------|--------------------|-----------------------------------|--------------------------|--------------------|------------------|--------------------|----------------|
| Month: 9/30/2022 | | | | | | | | |
| Fund: 101 - GENERAL FUND | | | | | | | | |
| Expenditures | | | | | | | | |
| Dept: 265 Township Hall & Grounds | | | | | | | | |
| 811 Waste Removal Services | 221 | 240 | 240 | 122 | 0 | | | |
| 845 Snowplowing Services | 1,400 | 1,500 | 1,500 | 150 | 0 | | | |
| 851 Internet/Website | 1,680 | 1,500 | 1,500 | 840 | 0 | | | |
| 922 Electricity | 2,147 | 2,500 | 2,500 | 1,199 | 0 | | | |
| 923 Electric Heat | 4,204 | 4,000 | 4,000 | 1,478 | 0 | | | |
| 924 Telephone | 2,537 | 2,750 | 2,750 | 1,246 | 0 | | | |
| 930 Facility Repairs/Maintenance | 4,347 | 10,000 | 10,000 | 962 | 0 | | | |
| 931 Office Equipment Repairs/Maint | 5,101 | 7,500 | 7,500 | 3,218 | 0 | | | |
| Township Hall & Grounds | 24,079 | 42,102 | 42,102 | 11,388 | 0 | 0 | 0 | 0 |
| Dept: 276 Cemetery | | | | | | | | |
| 703 Wages | 0 | 500 | 500 | 0 | 0 | | | |
| 715 Social Security (Employer) | 0 | 31 | 31 | 0 | 0 | | | |
| 716 Medicare (Employer) | 0 | 7 | 7 | 0 | 0 | | | |
| 740 Operating Expense & Supplies | 581 | 1,000 | 1,000 | 529 | 0 | | | |
| 808 Cemetery Sexton | 2,225 | 4,000 | 4,000 | 0 | 0 | | | |
| 809 Lawn Maintenance Services | 3,250 | 4,000 | 4,000 | 3,182 | 0 | | | |
| 847 Software Support | 0 | 0 | 0 | 0 | 0 | | | |
| 922 Electricity | 918 | 1,000 | 1,000 | 176 | 0 | | | |
| 930 Facility Repairs/Maintenance | 4,885 | 25,000 | 25,000 | 21,323 | 0 | | | |
| Cemetery | 11,859 | 35,538 | 35,538 | 25,210 | 0 | 0 | 0 | 0 |
| Dept: 400 Planning Commission | | | | | | | | |
| 702 Salaries | 4,930 | 9,500 | 9,500 | 2,660 | 0 | | | |
| 703 Wages | 3,584 | 4,000 | 4,000 | 1,214 | 0 | | | |
| 715 Social Security (Employer) | 528 | 837 | 837 | 240 | 0 | | | |
| 716 Medicare (Employer) | 123 | 196 | 196 | 56 | 0 | | | |
| 727 Office Supplies & Expense | 1,224 | 1,500 | 1,500 | 152 | 0 | | | |
| 728 Postage | 0 | 2,000 | 2,000 | 0 | 0 | | | |
| 804 Professional Services | 5,375 | 25,000 | 25,000 | 0 | 0 | | | |
| 840 Dues and Memberships | 0 | 250 | 250 | 0 | 0 | | | |
| 860 Mileage Reimbursement | 0 | 250 | 250 | 0 | 0 | | | |
| 865 Meal/Lodging Expense | 0 | 0 | 0 | 0 | 0 | | | |
| 880 Education & Training | 0 | 2,000 | 2,000 | 289 | 0 | | | |
| 901 Publishing | 567 | 1,000 | 1,000 | 897 | 0 | | | |
| 902 Printing | 0 | 500 | 500 | 0 | 0 | | | |
| Planning Commission | 16,331 | 47,033 | 47,033 | 5,508 | 0 | 0 | 0 | 0 |
| Dept: 405 Zoning Administrator/Planning | | | | | | | | |
| 702 Salaries | 0 | 0 | 0 | 0 | 0 | | | |

BUDGET WORKSHEET

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Whitewater Township

| | Prior Year Actual | Current Year | | | | (6) | (7) | (8) |
|---|-------------------------|--------------------|-------------------|--------------------------|--------------------|-----------|-------------|---------|
| | | Original Budget | Amended Budget | Actual Thru September | Estimated Total | Requested | Recommended | Adopted |
| Month: 9/30/2022 | | | | | | | | |
| Fund: 101 - GENERAL FUND | | | | | | | | |
| Expenditures | | | | | | | | |
| Dept: 405 Zoning Administrator/Planning | | | | | | | | |
| 703 Wages | 0 | 0 | 0 | 0 | 0 | | | |
| 715 Social Security (Employer) | 0 | 0 | 0 | 0 | 0 | | | |
| 716 Medicare (Employer) | 0 | 0 | 0 | 0 | 0 | | | |
| 727 Office Supplies & Expense | 285 | 350 | 350 | 0 | 0 | | | |
| 728 Postage | 123 | 100 | 100 | 12 | 0 | | | |
| 803 Medical Professional Services | 0 | 0 | 0 | 0 | 0 | | | |
| 804 Professional Services | 16,263 | 22,000 | 22,000 | 8,936 | 0 | | | |
| 830 Pension Plan | 0 | 0 | 0 | 0 | 0 | | | |
| 840 Dues and Memberships | 0 | 0 | 0 | 0 | 0 | | | |
| 847 Software Support | 0 | 0 | 0 | 0 | 0 | | | |
| 860 Mileage Reimbursement | 306 | 500 | 500 | 200 | 0 | | | |
| 865 Meal/Lodging Expense | 0 | 0 | 0 | 0 | 0 | | | |
| 880 Education & Training | 0 | 0 | 0 | 0 | 0 | | | |
| Zoning Administrator/Planning | 16,977 | 22,950 | 22,950 | 9,148 | 0 | 0 | 0 | 0 |
| Dept: 410 Zoning Board of Appeals | | | | | | | | |
| 702 Salaries | 860 | 3,100 | 3,100 | 310 | 0 | | | |
| 703 Wages | 404 | 1,600 | 1,600 | 262 | 0 | | | |
| 715 Social Security (Employer) | 78 | 291 | 291 | 35 | 0 | | | |
| 716 Medicare (Employer) | 18 | 68 | 68 | 8 | 0 | | | |
| 728 Postage | 0 | 50 | 50 | 3 | 0 | | | |
| 860 Mileage Reimbursement | 0 | 250 | 250 | 0 | 0 | | | |
| 865 Meal/Lodging Expense | 0 | 250 | 250 | 0 | 0 | | | |
| 880 Education & Training | 0 | 500 | 500 | 211 | 0 | | | |
| 901 Publishing | 231 | 600 | 600 | 240 | 0 | | | |
| Zoning Board of Appeals | 1,591 | 6,709 | 6,709 | 1,069 | 0 | 0 | 0 | 0 |
| Dept: 803 Historical Society | | | | | | | | |
| 702 Salaries | 638 | 7,500 | 7,500 | 329 | 0 | | | |
| 703 Wages | 0 | 1,200 | 1,200 | 0 | 0 | | | |
| 715 Social Security (Employer) | 40 | 540 | 540 | 20 | 0 | | | |
| 716 Medicare (Employer) | 9 | 126 | 126 | 5 | 0 | | | |
| 727 Office Supplies & Expense | 148 | 1,200 | 1,200 | 0 | 0 | | | |
| 728 Postage | 0 | 25 | 25 | 0 | 0 | | | |
| 803 Medical Professional Services | 0 | 0 | 0 | 0 | 0 | | | |
| 804 Professional Services | 0 | 500 | 500 | 0 | 0 | | | |
| 840 Dues and Memberships | 0 | 100 | 100 | 0 | 0 | | | |
| 847 Software Support | 0 | 0 | 0 | 0 | 0 | | | |
| 860 Mileage Reimbursement | 0 | 250 | 250 | 0 | 0 | | | |

BUDGET WORKSHEET

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Whitewater Township

| Month: 9/30/2022 | Prior | Current Year | | | | (6) | (7) | (8) |
|---------------------------------------|----------------|--------------------|-------------------|--------------------------|--------------------|-----------|-------------|---------|
| | Year Actual | Original Budget | Amended Budget | Actual Thru September | Estimated Total | Requested | Recommended | Adopted |
| Fund: 101 - GENERAL FUND | | | | | | | | |
| Expenditures | | | | | | | | |
| Dept: 803 Historical Society | | | | | | | | |
| 865 Meal/Lodging Expense | 0 | 250 | 250 | 0 | 0 | | | |
| 880 Education & Training | 0 | 250 | 250 | 0 | 0 | | | |
| Historical Society | 835 | 11,941 | 11,941 | 354 | 0 | 0 | 0 | 0 |
| Dept: 852 Employee Health Insurance | | | | | | | | |
| 714 Health Insurance | 0 | 0 | 0 | 0 | 0 | | | |
| Employee Health Insurance | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dept: 862 Soc Sec/Medicare (Employer) | | | | | | | | |
| 715 Social Security (Employer) | 0 | 0 | 0 | 0 | 0 | | | |
| 716 Medicare (Employer) | 0 | 0 | 0 | 0 | 0 | | | |
| Soc Sec/Medicare (Employer) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dept: 865 Insurance | | | | | | | | |
| 820 Liability Insurance | 6,222 | 10,000 | 10,000 | 10,365 | 0 | | | |
| 821 Workers Compensation | 1,235 | 3,000 | 3,000 | 3,004 | 0 | | | |
| Insurance | 7,457 | 13,000 | 13,000 | 13,369 | 0 | 0 | 0 | 0 |
| Dept: 890 Contingency | | | | | | | | |
| 890 Contingency | 0 | 20,000 | 20,000 | 0 | 0 | | | |
| Contingency | 0 | 20,000 | 20,000 | 0 | 0 | 0 | 0 | 0 |
| Dept: 901 Capital Expenditure | | | | | | | | |
| 970 Capital Expenditure | 2,510 | 30,000 | 30,000 | 0 | 0 | | | |
| 971 Land | 0 | 0 | 0 | 0 | 0 | | | |
| Capital Expenditure | 2,510 | 30,000 | 30,000 | 0 | 0 | 0 | 0 | 0 |
| Dept: 966 Transfers Out | | | | | | | | |
| 999 Transfers To Other Funds | 220,000 | 160,200 | 160,200 | 0 | 0 | | | |
| Transfers Out | 220,000 | 160,200 | 160,200 | 0 | 0 | 0 | 0 | 0 |
| Total Expenditures | 606,374 | 755,201 | 755,201 | 209,876 | 0 | 0 | 0 | 0 |
| GENERAL FUND | 13,887 | -183,115 | -183,115 | -85,750 | 0 | 0 | 0 | 0 |

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| | Prior Year Actual | Current Year | | | | (6) | (7) | (8) |
|--------------------------------|-------------------------|--------------------|-------------------|--------------------------|--------------------|-----------|-------------|----------|
| | | Original Budget | Amended Budget | Actual Thru September | Estimated Total | Requested | Recommended | Adopted |
| Month: 9/30/2022 | | | | | | | | |
| Fund: 203 - ROAD FUND | | | | | | | | |
| Revenues | | | | | | | | |
| Dept: 000 | | | | | | | | |
| 452 METRO Act Fees | 9,134 | 9,500 | 9,500 | 10,189 | 0 | | | |
| 665 Interest Earned | 35 | 30 | 30 | 11 | 0 | | | |
| 671 Other Revenues | 500 | 0 | 0 | 0 | 0 | | | |
| | <u>9,669</u> | <u>9,530</u> | <u>9,530</u> | <u>10,200</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> |
| Dept: 000 | | | | | | | | |
| Dept: 931 Transfers IN | | | | | | | | |
| 699 Transfers From Other Funds | 5,000 | 18,000 | 18,000 | 0 | 0 | | | |
| | <u>5,000</u> | <u>18,000</u> | <u>18,000</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> |
| Transfers IN | | | | | | | | |
| | <u>5,000</u> | <u>18,000</u> | <u>18,000</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> |
| Total Revenues | 14,669 | 27,530 | 27,530 | 10,200 | 0 | 0 | 0 | 0 |
| Expenditures | | | | | | | | |
| Dept: 446 Road Right of Way | | | | | | | | |
| 846 Road Brining Service | 9,224 | 35,000 | 35,000 | 15,058 | 0 | | | |
| 921 Street Lights | 1,583 | 2,500 | 2,500 | 670 | 0 | | | |
| | <u>10,807</u> | <u>37,500</u> | <u>37,500</u> | <u>15,728</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> |
| Road Right of Way | | | | | | | | |
| Dept: 890 Contingency | | | | | | | | |
| 890 Contingency | 0 | 0 | 0 | 0 | 0 | | | |
| | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> |
| Contingency | | | | | | | | |
| | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> |
| Total Expenditures | 10,807 | 37,500 | 37,500 | 15,728 | 0 | 0 | 0 | 0 |
| ROAD FUND | 3,862 | -9,970 | -9,970 | -5,528 | 0 | 0 | 0 | 0 |

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Whitewater Township

| Month: 9/30/2022 | Prior Year Actual | Current Year | | | | (6) | (7) | (8) |
|--|-------------------------|--------------------|-------------------|--------------------------|--------------------|-----------|-------------|---------|
| | | Original Budget | Amended Budget | Actual Thru September | Estimated Total | Requested | Recommended | Adopted |
| Fund: 204 - ROAD REPAIR/REPLACEMENT FUND | | | | | | | | |
| Revenues | | | | | | | | |
| Dept: 000 | | | | | | | | |
| 665 Interest Earned | 573 | 400 | 400 | 159 | 0 | | | |
| 699 Transfers From Other Funds | 100,000 | 0 | 0 | 0 | 0 | | | |
| Dept: 000 | 100,573 | 400 | 400 | 159 | 0 | 0 | 0 | 0 |
| Total Revenues | 100,573 | 400 | 400 | 159 | 0 | 0 | 0 | 0 |
| Expenditures | | | | | | | | |
| Dept: 000 | | | | | | | | |
| 935 Road Repair | 0 | 156,000 | 156,000 | 0 | 0 | | | |
| Dept: 000 | 0 | 156,000 | 156,000 | 0 | 0 | 0 | 0 | 0 |
| Dept: 890 Contingency | | | | | | | | |
| 890 Contingency | 0 | 5,000 | 5,000 | 0 | 0 | | | |
| Contingency | 0 | 5,000 | 5,000 | 0 | 0 | 0 | 0 | 0 |
| Total Expenditures | 0 | 161,000 | 161,000 | 0 | 0 | 0 | 0 | 0 |
| ROAD REPAIR/REPLACEMENT FUND | 100,573 | -160,600 | -160,600 | 159 | 0 | 0 | 0 | 0 |

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Whitewater Township

| | Prior Year Actual | Current Year | | Actual Thru September | Estimated Total | (6) Requested | (7) Recommended | (8) Adopted |
|----------------------------------|-------------------------|-------------------|---------|--------------------------|--------------------|------------------|--------------------|----------------|
| | Original Budget | Amended Budget | | | | | | |
| Month: 9/30/2022 | | | | | | | | |
| Fund: 206 - FIRE FUND | | | | | | | | |
| Revenues | | | | | | | | |
| Dept: 000 | | | | | | | | |
| 402 Property Taxes | 221,610 | 247,802 | 247,802 | 0 | 0 | | | |
| 445 Penalties & Interest | 0 | 0 | 0 | 0 | 0 | | | |
| 590 Grants-Private Sources | 7,300 | 10,000 | 10,000 | 3,595 | 0 | | | |
| 630 Rural Fire Dept Rental Fee | 0 | 0 | 0 | 0 | 0 | | | |
| 635 Mutual Aid | 0 | 0 | 0 | 0 | 0 | | | |
| 637 Cost Recovery | 0 | 0 | 0 | 0 | 0 | | | |
| 665 Interest Earned | 418 | 500 | 500 | 124 | 0 | | | |
| 671 Other Revenues | 1,151 | 1,000 | 1,000 | 250 | 0 | | | |
| 673 Sale of Fixed Assets | 0 | 3,000 | 3,000 | 7,619 | 0 | | | |
| 674 Rural Fire Dissolution Funds | 0 | 0 | 0 | 0 | 0 | | | |
| 675 Contributions | 100 | 0 | 0 | 0 | 0 | | | |
| 679 GTB Inspection Services | 0 | 0 | 0 | 0 | 0 | | | |
| 687 Refunds | 0 | 0 | 0 | 0 | 0 | | | |
| 698 Insurance Recovery | 3,050 | 0 | 0 | 324 | 0 | | | |
| 699 Transfers From Other Funds | 0 | 35,000 | 35,000 | 0 | 0 | | | |
| Dept: 000 | 233,629 | 297,302 | 297,302 | 11,912 | 0 | 0 | 0 | 0 |
| Total Revenues | 233,629 | 297,302 | 297,302 | 11,912 | 0 | 0 | 0 | 0 |
| Expenditures | | | | | | | | |
| Dept: 336 Fire Dept | | | | | | | | |
| 702 Salaries | 62,243 | 61,903 | 61,903 | 30,951 | 0 | | | |
| 703 Wages | 4,157 | 3,825 | 3,825 | 1,913 | 0 | | | |
| 704 Wages (Officers) | 0 | 0 | 0 | 0 | 0 | | | |
| 705 Training Wages | 16,058 | 28,000 | 28,000 | 6,928 | 0 | | | |
| 707 Run Wages | 10,251 | 14,000 | 14,000 | 5,040 | 0 | | | |
| 709 On Call Wages | 0 | 21,000 | 21,000 | 4,500 | 0 | | | |
| 713 Other Benefits | 3,033 | 4,000 | 4,000 | 1,051 | 0 | | | |
| 714 Health Insurance | 0 | 0 | 0 | 0 | 0 | | | |
| 715 Social Security (Employer) | 5,588 | 8,000 | 8,000 | 3,057 | 0 | | | |
| 716 Medicare (Employer) | 1,307 | 1,870 | 1,870 | 715 | 0 | | | |
| 721 Loss of Wage | 0 | 0 | 0 | 0 | 0 | | | |
| 727 Office Supplies & Expense | 800 | 1,200 | 1,200 | 374 | 0 | | | |
| 728 Postage | 0 | 150 | 150 | 0 | 0 | | | |
| 739 Fuel & Oil | 4,377 | 5,000 | 5,000 | 3,200 | 0 | | | |
| 740 Operating Expense & Supplies | 4,515 | 7,000 | 7,000 | 2,948 | 0 | | | |
| 745 Turnout Gear | 3,280 | 7,000 | 7,000 | 0 | 0 | | | |
| 747 Uniforms | 1,729 | 3,000 | 3,000 | 195 | 0 | | | |

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| | Prior Year Actual | Current Year | | | | (6) | (7) | (8) |
|-------------------------------------|-------------------------|--------------------|-------------------|--------------------------|--------------------|-----------|-------------|---------|
| | | Original Budget | Amended Budget | Actual Thru September | Estimated Total | Requested | Recommended | Adopted |
| Month: 9/30/2022 | | | | | | | | |
| Fund: 206 - FIRE FUND | | | | | | | | |
| Expenditures | | | | | | | | |
| Dept: 336 Fire Dept | | | | | | | | |
| 801 Legal Services | 0 | 0 | 0 | 0 | 0 | | | |
| 803 Medical Professional Services | 2,340 | 3,000 | 3,000 | 624 | 0 | | | |
| 804 Professional Services | 780 | 1,000 | 1,000 | 300 | 0 | | | |
| 809 Lawn Maintenance Services | 240 | 500 | 500 | 248 | 0 | | | |
| 810 Janitorial Services | 0 | 600 | 600 | 0 | 0 | | | |
| 811 Waste Removal Services | 110 | 200 | 200 | 61 | 0 | | | |
| 812 Septic Services | 445 | 0 | 0 | 0 | 0 | | | |
| 814 Mutual Aid | 0 | 1,500 | 1,500 | 0 | 0 | | | |
| 815 Contractual Services (hazmat) | 395 | 3,000 | 3,000 | 0 | 0 | | | |
| 818 Rural Fire Dept Assessment | 0 | 0 | 0 | 0 | 0 | | | |
| 823 State Unemployment | 0 | 0 | 0 | 0 | 0 | | | |
| 830 Pension Plan | 6,043 | 6,191 | 6,191 | 2,835 | 0 | | | |
| 840 Dues and Memberships | 1,000 | 1,200 | 1,200 | 245 | 0 | | | |
| 845 Snowplowing Services | 965 | 1,500 | 1,500 | 88 | 0 | | | |
| 851 Internet/Website | 1,070 | 1,200 | 1,200 | 540 | 0 | | | |
| 854 Late Fees | 0 | 0 | 0 | 0 | 0 | | | |
| 855 Community Education | 0 | 500 | 500 | 0 | 0 | | | |
| 860 Mileage Reimbursement | 0 | 250 | 250 | 0 | 0 | | | |
| 865 Meal/Lodging Expense | 0 | 1,000 | 1,000 | 385 | 0 | | | |
| 880 Education & Training | 2,944 | 5,000 | 5,000 | 2,098 | 0 | | | |
| 901 Publishing | 0 | 500 | 500 | 0 | 0 | | | |
| 920 Natural Gas | 778 | 1,000 | 1,000 | 234 | 0 | | | |
| 922 Electricity | 3,376 | 4,000 | 4,000 | 1,361 | 0 | | | |
| 924 Telephone | 1,200 | 1,250 | 1,250 | 600 | 0 | | | |
| 925 Cellular Phone | 480 | 600 | 600 | 240 | 0 | | | |
| 926 Propane Heat | 0 | 0 | 0 | 0 | 0 | | | |
| 927 Pager | 0 | 0 | 0 | 0 | 0 | | | |
| 928 Water | 576 | 1,000 | 1,000 | 114 | 0 | | | |
| 930 Facility Repairs/Maintenance | 512 | 7,000 | 7,000 | 3,680 | 0 | | | |
| 932 Equipment Repair & Maintenance | 3,851 | 5,500 | 5,500 | 3,333 | 0 | | | |
| 933 Vehicle Repair & Maintenance | 15,821 | 20,000 | 20,000 | 3,806 | 0 | | | |
| 942 Building Rental | 0 | 0 | 0 | 0 | 0 | | | |
| 956 Miscellaneous Expense | 0 | 0 | 0 | 0 | 0 | | | |
| 964 Refunds | 125 | 0 | 0 | 0 | 0 | | | |
| 970 Capital Expenditure | 17,834 | 18,000 | 18,000 | 3,464 | 0 | | | |
| Fire Dept | 178,223 | 251,439 | 251,439 | 85,128 | 0 | 0 | 0 | 0 |
| Dept: 852 Employee Health Insurance | | | | | | | | |

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Whitewater Township

| | Prior Year Actual | Original Budget | Amended Budget | Current Year Actual Thru September | Estimated Total | (6) Requested | (7) Recommended | (8) Adopted |
|---------------------------------------|-------------------------|--------------------|-------------------|--|--------------------|------------------|--------------------|----------------|
| Month: 9/30/2022 | | | | | | | | |
| Fund: 206 - FIRE FUND | | | | | | | | |
| Expenditures | | | | | | | | |
| Dept: 852 Employee Health Insurance | | | | | | | | |
| 714 Health Insurance | 0 | 0 | 0 | 0 | 0 | | | |
| Employee Health Insurance | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dept: 862 Soc Sec/Medicare (Employer) | | | | | | | | |
| 715 Social Security (Employer) | 0 | 0 | 0 | 0 | 0 | | | |
| 716 Medicare (Employer) | 0 | 0 | 0 | 0 | 0 | | | |
| Soc Sec/Medicare (Employer) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dept: 865 Insurance | | | | | | | | |
| 820 Liability Insurance | 18,353 | 18,500 | 18,500 | 18,116 | 0 | | | |
| 821 Workers Compensation | 4,476 | 7,400 | 7,400 | 4,036 | 0 | | | |
| Insurance | 22,829 | 25,900 | 25,900 | 22,152 | 0 | 0 | 0 | 0 |
| Dept: 890 Contingency | | | | | | | | |
| 890 Contingency | 0 | 10,000 | 10,000 | 0 | 0 | | | |
| Contingency | 0 | 10,000 | 10,000 | 0 | 0 | 0 | 0 | 0 |
| Dept: 966 Transfers Out | | | | | | | | |
| 999 Transfers To Other Funds | 111,854 | 0 | 0 | 0 | 0 | | | |
| Transfers Out | 111,854 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Expenditures | 312,906 | 287,339 | 287,339 | 107,280 | 0 | 0 | 0 | 0 |
| FIRE FUND | -79,277 | 9,963 | 9,963 | -95,368 | 0 | 0 | 0 | 0 |

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Whitewater Township

| | Prior Year Actual | Current Year | | | | (6) | (7) | (8) |
|----------------------------------|-------------------------|--------------------|-------------------|--------------------------|--------------------|-----------|-------------|---------|
| | | Original Budget | Amended Budget | Actual Thru September | Estimated Total | Requested | Recommended | Adopted |
| Month: 9/30/2022 | | | | | | | | |
| Fund: 208 - PARK FUND | | | | | | | | |
| Revenues | | | | | | | | |
| Dept: 000 | | | | | | | | |
| 590 Grants-Private Sources | 0 | 100,000 | 100,000 | 50 | 0 | | | |
| 626 Fees Charged | 184,852 | 180,000 | 180,000 | 151,410 | 0 | | | |
| 627 Pavilion Rental | 700 | 500 | 500 | 400 | 0 | | | |
| 628 Boat Ramp Fees | 14,428 | 22,500 | 22,500 | 6,322 | 0 | | | |
| 631 Shirts Hats | 0 | 0 | 0 | 0 | 0 | | | |
| 632 Reservation Fees | 14,384 | 14,000 | 14,000 | 9,488 | 0 | | | |
| 644 Ice Sales | 4,668 | 6,000 | 6,000 | 1,044 | 0 | | | |
| 645 Pop Sales | 0 | 0 | 0 | 0 | 0 | | | |
| 646 Wood Sales | 19,950 | 24,000 | 24,000 | 5,078 | 0 | | | |
| 648 Shower Fees | 3,061 | 3,000 | 3,000 | 598 | 0 | | | |
| 665 Interest Earned | 539 | 200 | 200 | 166 | 0 | | | |
| 671 Other Revenues | 1,097 | 1,000 | 1,000 | 549 | 0 | | | |
| 673 Sale of Fixed Assets | 0 | 0 | 0 | 0 | 0 | | | |
| 687 Refunds | 0 | 0 | 0 | 0 | 0 | | | |
| 688 Sales Tax Discount | 0 | 0 | 0 | 0 | 0 | | | |
| 694 Cash Over & Short | 42 | 0 | 0 | 0 | 0 | | | |
| 699 Transfers From Other Funds | 0 | 0 | 0 | 0 | 0 | | | |
| Dept: 000 | 243,721 | 351,200 | 351,200 | 175,105 | 0 | 0 | 0 | 0 |
| Total Revenues | 243,721 | 351,200 | 351,200 | 175,105 | 0 | 0 | 0 | 0 |
| Expenditures | | | | | | | | |
| Dept: 756 Township Park | | | | | | | | |
| 702 Salaries | 6,365 | 7,000 | 7,000 | 3,500 | 0 | | | |
| 703 Wages | 61,213 | 80,000 | 80,000 | 70,852 | 0 | | | |
| 715 Social Security (Employer) | 4,190 | 5,400 | 5,400 | 4,610 | 0 | | | |
| 716 Medicare (Employer) | 980 | 1,300 | 1,300 | 1,078 | 0 | | | |
| 727 Office Supplies & Expense | 1,004 | 1,200 | 1,200 | 1,129 | 0 | | | |
| 728 Postage | 5 | 20 | 20 | 26 | 0 | | | |
| 729 Licenses & Fees | 510 | 600 | 600 | 200 | 0 | | | |
| 739 Fuel & Oil | 20 | 100 | 100 | 21 | 0 | | | |
| 740 Operating Expense & Supplies | 5,627 | 9,000 | 9,000 | 8,362 | 0 | | | |
| 741 Ice | 2,843 | 3,600 | 3,600 | 2,619 | 0 | | | |
| 742 Pop | 0 | 0 | 0 | 0 | 0 | | | |
| 743 Wood | 12,020 | 15,500 | 15,500 | 11,100 | 0 | | | |
| 744 Shirts & Hats | 0 | 0 | 0 | 0 | 0 | | | |
| 747 Uniforms | 292 | 300 | 300 | 0 | 0 | | | |
| 748 Sales Tax | 1,393 | 1,500 | 1,500 | 730 | 0 | | | |

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Whitewater Township

| | Prior Year Actual | Current Year | | | | (6) | (7) | (8) |
|---------------------------------------|-------------------------|--------------------|-------------------|--------------------------|--------------------|-----------|-------------|---------|
| | | Original Budget | Amended Budget | Actual Thru September | Estimated Total | Requested | Recommended | Adopted |
| Month: 9/30/2022 | | | | | | | | |
| Fund: 208 - PARK FUND | | | | | | | | |
| Expenditures | | | | | | | | |
| Dept: 756 Township Park | | | | | | | | |
| 749 Credit Card Processing Fees | 5,351 | 5,500 | 5,500 | 3,501 | 0 | | | |
| 803 Medical Professional Services | 275 | 1,000 | 1,000 | 193 | 0 | | | |
| 804 Professional Services | 0 | 0 | 0 | 0 | 0 | | | |
| 809 Lawn Maintenance Services | 5,500 | 6,000 | 6,000 | 7,092 | 0 | | | |
| 811 Waste Removal Services | 2,379 | 3,000 | 3,000 | 1,856 | 0 | | | |
| 812 Septic Services | 3,189 | 4,500 | 4,500 | 3,480 | 0 | | | |
| 823 State Unemployment | 127 | 0 | 0 | 0 | 0 | | | |
| 851 Internet/Website | 2,439 | 2,500 | 2,500 | 2,534 | 0 | | | |
| 852 Promotional Expenses | 0 | 0 | 0 | 0 | 0 | | | |
| 854 Late Fees | 0 | 0 | 0 | 0 | 0 | | | |
| 860 Mileage Reimbursement | 116 | 200 | 200 | 150 | 0 | | | |
| 901 Publishing | 0 | 0 | 0 | 0 | 0 | | | |
| 902 Printing | 420 | 500 | 500 | 374 | 0 | | | |
| 922 Electricity | 9,257 | 9,400 | 9,400 | 6,923 | 0 | | | |
| 924 Telephone | 388 | 500 | 500 | 179 | 0 | | | |
| 925 Cellular Phone | 154 | 200 | 200 | 70 | 0 | | | |
| 929 Propane | 1,118 | 2,000 | 2,000 | 773 | 0 | | | |
| 930 Facility Repairs/Maintenance | 44,208 | 56,390 | 56,390 | 23,010 | 0 | | | |
| 934 Fire Damage | 0 | 0 | 0 | 0 | 0 | | | |
| 940 Equipment Rental | 0 | 500 | 500 | 0 | 0 | | | |
| 956 Miscellaneous Expense | 0 | 0 | 0 | 0 | 0 | | | |
| 964 Refunds | 0 | 0 | 0 | 0 | 0 | | | |
| 965 Theft | 0 | 0 | 0 | 0 | 0 | | | |
| 970 Capital Expenditure | 6,041 | 250,250 | 250,250 | 2,800 | 0 | | | |
| Township Park | 177,424 | 467,960 | 467,960 | 157,162 | 0 | 0 | 0 | 0 |
| Dept: 862 Soc Sec/Medicare (Employer) | | | | | | | | |
| 715 Social Security (Employer) | 0 | 0 | 0 | 0 | 0 | | | |
| 716 Medicare (Employer) | 0 | 0 | 0 | 0 | 0 | | | |
| Soc Sec/Medicare (Employer) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dept: 865 Insurance | | | | | | | | |
| 820 Liability Insurance | 3,301 | 3,400 | 3,400 | 3,485 | 0 | | | |
| 821 Workers Compensation | 843 | 1,100 | 1,100 | 1,023 | 0 | | | |
| Insurance | 4,144 | 4,500 | 4,500 | 4,508 | 0 | 0 | 0 | 0 |
| Dept: 890 Contingency | | | | | | | | |
| 890 Contingency | 0 | 10,000 | 10,000 | 0 | 0 | | | |
| Contingency | 0 | 10,000 | 10,000 | 0 | 0 | 0 | 0 | 0 |
| Dept: 907 Debt Service/Park | | | | | | | | |
| 991 Debt Service Principal | 0 | 0 | 0 | 0 | 0 | | | |

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Whitewater Township

| | Prior Year Actual | Original Budget | Amended Budget | Current Year Actual Thru September | Estimated Total | (6) Requested | (7) Recommended | (8) Adopted |
|-----------------------------|-------------------------|--------------------|-------------------|--|--------------------|------------------|--------------------|----------------|
| Month: 9/30/2022 | | | | | | | | |
| Fund: 208 - PARK FUND | | | | | | | | |
| Expenditures | | | | | | | | |
| Dept: 907 Debt Service/Park | | | | | | | | |
| 997 Debt Service Interest | 0 | 0 | 0 | 0 | 0 | | | |
| Debt Service/Park | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Expenditures | 181,568 | 482,460 | 482,460 | 161,670 | 0 | 0 | 0 | 0 |
| PARK FUND | 62,153 | -131,260 | -131,260 | 13,435 | 0 | 0 | 0 | 0 |

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Whitewater Township

| | Prior Year Actual | Original Budget | Current Year Amended Budget | Actual Thru September | Estimated Total | (6) Requested | (7) Recommended | (8) Adopted |
|----------------------------------|-------------------------|--------------------|-----------------------------------|--------------------------|--------------------|------------------|--------------------|----------------|
| Month: 9/30/2022 | | | | | | | | |
| Fund: 209 - RECREATION FUND | | | | | | | | |
| Revenues | | | | | | | | |
| Dept: 000 | | | | | | | | |
| 402 Property Taxes | 0 | 0 | 0 | 0 | 0 | | | |
| 445 Penalties & Interest | 0 | 0 | 0 | 0 | 0 | | | |
| 590 Grants-Private Sources | 550 | 550 | 550 | 800 | 0 | | | |
| 627 Pavilion Rental | 75 | 150 | 150 | 0 | 0 | | | |
| 629 Ballfield Rental Fees | 0 | 0 | 0 | 0 | 0 | | | |
| 645 Pop Sales | 0 | 0 | 0 | 0 | 0 | | | |
| 665 Interest Earned | 100 | 100 | 100 | 18 | 0 | | | |
| 671 Other Revenues | 90 | 0 | 0 | 20 | 0 | | | |
| 673 Sale of Fixed Assets | 0 | 0 | 0 | 0 | 0 | | | |
| 687 Refunds | 240 | 0 | 0 | 0 | 0 | | | |
| 699 Transfers From Other Funds | 20,000 | 57,200 | 57,200 | 0 | 0 | | | |
| Dept: 000 | 21,055 | 58,000 | 58,000 | 838 | 0 | 0 | 0 | 0 |
| Total Revenues | 21,055 | 58,000 | 58,000 | 838 | 0 | 0 | 0 | 0 |
| Expenditures | | | | | | | | |
| Dept: 757 Recreation | | | | | | | | |
| 702 Salaries | 850 | 935 | 935 | 467 | 0 | | | |
| 703 Wages | 4,614 | 7,600 | 7,600 | 3,564 | 0 | | | |
| 715 Social Security (Employer) | 339 | 530 | 530 | 250 | 0 | | | |
| 716 Medicare (Employer) | 79 | 124 | 124 | 58 | 0 | | | |
| 727 Office Supplies & Expense | 8 | 70 | 70 | 6 | 0 | | | |
| 728 Postage | 9 | 0 | 0 | 0 | 0 | | | |
| 729 Licenses & Fees | 142 | 200 | 200 | 0 | 0 | | | |
| 740 Operating Expense & Supplies | 520 | 700 | 700 | 520 | 0 | | | |
| 742 Pop | 0 | 0 | 0 | 0 | 0 | | | |
| 804 Professional Services | 0 | 0 | 0 | 0 | 0 | | | |
| 809 Lawn Maintenance Services | 7,195 | 7,000 | 7,000 | 6,686 | 0 | | | |
| 811 Waste Removal Services | 0 | 0 | 0 | 0 | 0 | | | |
| 812 Septic Services | 0 | 500 | 500 | 0 | 0 | | | |
| 823 State Unemployment | 0 | 0 | 0 | 0 | 0 | | | |
| 854 Late Fees | 0 | 0 | 0 | 0 | 0 | | | |
| 860 Mileage Reimbursement | 0 | 50 | 50 | 20 | 0 | | | |
| 880 Education & Training | 0 | 300 | 300 | 0 | 0 | | | |
| 901 Publishing | 89 | 100 | 100 | 90 | 0 | | | |
| 922 Electricity | 1,204 | 1,200 | 1,200 | 749 | 0 | | | |
| 930 Facility Repairs/Maintenance | 6,484 | 14,345 | 14,345 | 9,359 | 0 | | | |
| 956 Miscellaneous Expense | 0 | 0 | 0 | 0 | 0 | | | |

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Whitewater Township

| | Prior Year Actual | Current Year | | | | (6) | (7) | (8) |
|---------------------------------------|-------------------------|--------------------|-------------------|--------------------------|--------------------|-----------|-------------|---------|
| | | Original Budget | Amended Budget | Actual Thru September | Estimated Total | Requested | Recommended | Adopted |
| Month: 9/30/2022 | | | | | | | | |
| Fund: 209 - RECREATION FUND | | | | | | | | |
| Expenditures | | | | | | | | |
| Dept: 757 Recreation | | | | | | | | |
| 960 Storm Damage Cleanup | 8,600 | 67,200 | 67,200 | 28,992 | 0 | | | |
| 964 Refunds | 0 | 0 | 0 | 0 | 0 | | | |
| 970 Capital Expenditure | 1,480 | 19,975 | 19,975 | 18,122 | 0 | | | |
| Recreation | 31,613 | 120,829 | 120,829 | 68,883 | 0 | 0 | 0 | 0 |
| Dept: 862 Soc Sec/Medicare (Employer) | | | | | | | | |
| 715 Social Security (Employer) | 0 | 0 | 0 | 0 | 0 | | | |
| 716 Medicare (Employer) | 0 | 0 | 0 | 0 | 0 | | | |
| Soc Sec/Medicare (Employer) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dept: 890 Contingency | | | | | | | | |
| 890 Contingency | 0 | 0 | 0 | 0 | 0 | | | |
| Contingency | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Expenditures | 31,613 | 120,829 | 120,829 | 68,883 | 0 | 0 | 0 | 0 |
| RECREATION FUND | -10,558 | -62,829 | -62,829 | -68,045 | 0 | 0 | 0 | 0 |

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| | Prior Year Actual | Current Year | | Actual Thru September | Estimated Total | (6) Requested | (7) Recommended | (8) Adopted |
|-----------------------------------|-------------------------|-------------------|---------|--------------------------|--------------------|------------------|--------------------|----------------|
| | Original Budget | Amended Budget | | | | | | |
| Month: 9/30/2022 | | | | | | | | |
| Fund: 210 - AMBULANCE FUND | | | | | | | | |
| Revenues | | | | | | | | |
| Dept: 000 | | | | | | | | |
| 402 Property Taxes | 338,338 | 360,403 | 360,403 | 0 | 0 | | | |
| 445 Penalties & Interest | 0 | 0 | 0 | 0 | 0 | | | |
| 573 Local Community Stabilization | 5,011 | 0 | 0 | 0 | 0 | | | |
| 590 Grants-Private Sources | 0 | 0 | 0 | 0 | 0 | | | |
| 626 Fees Charged | 0 | 0 | 0 | 0 | 0 | | | |
| 665 Interest Earned | 602 | 400 | 400 | 178 | 0 | | | |
| 667 Facility Rent | 7,200 | 7,200 | 7,200 | 1,800 | 0 | | | |
| 671 Other Revenues | 600 | 0 | 0 | 0 | 0 | | | |
| 673 Sale of Fixed Assets | 0 | 0 | 0 | 0 | 0 | | | |
| 675 Contributions | 0 | 0 | 0 | 0 | 0 | | | |
| 687 Refunds | 0 | 0 | 0 | 0 | 0 | | | |
| 699 Transfers From Other Funds | 0 | 0 | 0 | 0 | 0 | | | |
| Dept: 000 | 351,751 | 368,003 | 368,003 | 1,978 | 0 | 0 | 0 | 0 |
| Total Revenues | 351,751 | 368,003 | 368,003 | 1,978 | 0 | 0 | 0 | 0 |
| Expenditures | | | | | | | | |
| Dept: 651 Ambulance | | | | | | | | |
| 702 Salaries | 0 | 0 | 0 | 0 | 0 | | | |
| 703 Wages | 0 | 0 | 0 | 0 | 0 | | | |
| 704 Wages (Officers) | 0 | 0 | 0 | 0 | 0 | | | |
| 705 Training Wages | 0 | 0 | 0 | 0 | 0 | | | |
| 708 Duty Crew Wages | 0 | 0 | 0 | 0 | 0 | | | |
| 709 On Call Wages | 0 | 0 | 0 | 0 | 0 | | | |
| 715 Social Security (Employer) | 0 | 0 | 0 | 0 | 0 | | | |
| 716 Medicare (Employer) | 0 | 0 | 0 | 0 | 0 | | | |
| 721 Loss of Wage | 0 | 0 | 0 | 0 | 0 | | | |
| 727 Office Supplies & Expense | 0 | 0 | 0 | 0 | 0 | | | |
| 728 Postage | 0 | 0 | 0 | 0 | 0 | | | |
| 729 Licenses & Fees | 0 | 0 | 0 | 0 | 0 | | | |
| 739 Fuel & Oil | 0 | 0 | 0 | 0 | 0 | | | |
| 740 Operating Expense & Supplies | 135 | 0 | 0 | 0 | 0 | | | |
| 746 Medical Supplies | 0 | 0 | 0 | 0 | 0 | | | |
| 747 Uniforms | 0 | 0 | 0 | 0 | 0 | | | |
| 801 Legal Services | 0 | 0 | 0 | 0 | 0 | | | |
| 803 Medical Professional Services | 0 | 0 | 0 | 0 | 0 | | | |
| 806 Contractual Services - MMR | 311,972 | 295,000 | 295,000 | 147,500 | 0 | | | |
| 809 Lawn Maintenance Services | 240 | 500 | 500 | 248 | 0 | | | |

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Whitewater Township

| | Prior Year Actual | Current Year | | | | (6) | (7) | (8) |
|---------------------------------------|-------------------------|--------------------|-------------------|--------------------------|--------------------|-----------|-------------|---------|
| | | Original Budget | Amended Budget | Actual Thru September | Estimated Total | Requested | Recommended | Adopted |
| Month: 9/30/2022 | | | | | | | | |
| Fund: 210 - AMBULANCE FUND | | | | | | | | |
| Expenditures | | | | | | | | |
| Dept: 651 Ambulance | | | | | | | | |
| 810 Janitorial Services | 0 | 600 | 600 | 0 | 0 | | | |
| 811 Waste Removal Services | 110 | 200 | 200 | 61 | 0 | | | |
| 812 Septic Services | 0 | 0 | 0 | 0 | 0 | | | |
| 813 Billing Services | 0 | 0 | 0 | 0 | 0 | | | |
| 823 State Unemployment | 0 | 0 | 0 | 0 | 0 | | | |
| 830 Pension Plan | 0 | 0 | 0 | 0 | 0 | | | |
| 840 Dues and Memberships | 0 | 0 | 0 | 0 | 0 | | | |
| 845 Snowplowing Services | 965 | 1,500 | 1,500 | 88 | 0 | | | |
| 855 Community Education | 0 | 0 | 0 | 0 | 0 | | | |
| 860 Mileage Reimbursement | 0 | 0 | 0 | 0 | 0 | | | |
| 865 Meal/Lodging Expense | 0 | 0 | 0 | 0 | 0 | | | |
| 880 Education & Training | 0 | 0 | 0 | 0 | 0 | | | |
| 901 Publishing | 0 | 0 | 0 | 0 | 0 | | | |
| 902 Printing | 0 | 0 | 0 | 0 | 0 | | | |
| 920 Natural Gas | 778 | 1,000 | 1,000 | 234 | 0 | | | |
| 922 Electricity | 3,376 | 4,000 | 4,000 | 1,361 | 0 | | | |
| 924 Telephone | 0 | 0 | 0 | 0 | 0 | | | |
| 925 Cellular Phone | 0 | 0 | 0 | 0 | 0 | | | |
| 927 Pager | 0 | 0 | 0 | 0 | 0 | | | |
| 928 Water | 576 | 500 | 500 | 114 | 0 | | | |
| 930 Facility Repairs/Maintenance | 0 | 7,000 | 7,000 | 0 | 0 | | | |
| 942 Building Rental | 0 | 0 | 0 | 0 | 0 | | | |
| 956 Miscellaneous Expense | 0 | 0 | 0 | 0 | 0 | | | |
| 964 Refunds | 0 | 0 | 0 | 0 | 0 | | | |
| 970 Capital Expenditure | 0 | 0 | 0 | 0 | 0 | | | |
| Ambulance | 318,152 | 310,300 | 310,300 | 149,606 | 0 | 0 | 0 | 0 |
| Dept: 862 Soc Sec/Medicare (Employer) | | | | | | | | |
| 715 Social Security (Employer) | 0 | 0 | 0 | 0 | 0 | | | |
| 716 Medicare (Employer) | 0 | 0 | 0 | 0 | 0 | | | |
| Soc Sec/Medicare (Employer) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dept: 890 Contingency | | | | | | | | |
| 890 Contingency | 0 | 5,000 | 5,000 | 0 | 0 | | | |
| Contingency | 0 | 5,000 | 5,000 | 0 | 0 | 0 | 0 | 0 |
| Total Expenditures | 318,152 | 315,300 | 315,300 | 149,606 | 0 | 0 | 0 | 0 |
| AMBULANCE FUND | 33,599 | 52,703 | 52,703 | -147,628 | 0 | 0 | 0 | 0 |

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Whitewater Township

| | Prior Year Actual | Current Year | | Actual Thru September | Estimated Total | (6) Requested | (7) Recommended | (8) Adopted |
|--------------------------|-------------------------|-------------------|---------|--------------------------|--------------------|------------------|--------------------|----------------|
| | Original Budget | Amended Budget | | | | | | |
| Month: 9/30/2022 | | | | | | | | |
| Fund: 285 - FEDERAL FUND | | | | | | | | |
| Revenues | | | | | | | | |
| Dept: 000 | | | | | | | | |
| 528 Other Federal Grants | 0 | 147,000 | 147,000 | 0 | 0 | | | |
| 665 Interest Earned | 0 | 0 | 0 | 11 | 0 | | | |
| Dept: 000 | 0 | 147,000 | 147,000 | 11 | 0 | 0 | 0 | 0 |
| Total Revenues | 0 | 147,000 | 147,000 | 11 | 0 | 0 | 0 | 0 |
| Expenditures | | | | | | | | |
| Dept: 890 Contingency | | | | | | | | |
| 890 Contingency | 0 | 100,000 | 100,000 | 0 | 0 | | | |
| Contingency | 0 | 100,000 | 100,000 | 0 | 0 | 0 | 0 | 0 |
| Total Expenditures | 0 | 100,000 | 100,000 | 0 | 0 | 0 | 0 | 0 |
| FEDERAL FUND | 0 | 47,000 | 47,000 | 11 | 0 | 0 | 0 | 0 |

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Whitewater Township

| | Prior Year Actual | Current Year | | | | (6) | (7) | (8) |
|-------------------------------------|-------------------------|--------------------|-------------------|--------------------------|--------------------|-----------|-------------|---------|
| | | Original Budget | Amended Budget | Actual Thru September | Estimated Total | Requested | Recommended | Adopted |
| Month: 9/30/2022 | | | | | | | | |
| Fund: 401 - PUBLIC IMPROVEMENT FUND | | | | | | | | |
| Revenues | | | | | | | | |
| Dept: 000 | | | | | | | | |
| 566 State Grants | 0 | 0 | 0 | 0 | 0 | | | |
| 590 Grants-Private Sources | 0 | 0 | 0 | 0 | 0 | | | |
| 665 Interest Earned | 197 | 125 | 125 | 51 | 0 | | | |
| 671 Other Revenues | 0 | 0 | 0 | 0 | 0 | | | |
| 695 Proceeds from Loan | 0 | 0 | 0 | 0 | 0 | | | |
| 699 Transfers From Other Funds | 50,000 | 0 | 0 | 0 | 0 | | | |
| Dept: 000 | 50,197 | 125 | 125 | 51 | 0 | 0 | 0 | 0 |
| Total Revenues | 50,197 | 125 | 125 | 51 | 0 | 0 | 0 | 0 |
| Expenditures | | | | | | | | |
| Dept: 000 | | | | | | | | |
| 804 Professional Services | 15,950 | 30,000 | 30,000 | 5,900 | 0 | | | |
| 816 Co Road Comm Services | 0 | 0 | 0 | 0 | 0 | | | |
| 970 Capital Expenditure | 0 | 0 | 0 | 0 | 0 | | | |
| Dept: 000 | 15,950 | 30,000 | 30,000 | 5,900 | 0 | 0 | 0 | 0 |
| Dept: 966 Transfers Out | | | | | | | | |
| 999 Transfers To Other Funds | 0 | 0 | 0 | 0 | 0 | | | |
| Transfers Out | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Expenditures | 15,950 | 30,000 | 30,000 | 5,900 | 0 | 0 | 0 | 0 |
| PUBLIC IMPROVEMENT FUND | 34,247 | -29,875 | -29,875 | -5,849 | 0 | 0 | 0 | 0 |

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Whitewater Township

| | Prior Year Actual | Current Year | | | | (6) | (7) | (8) |
|---|-------------------------|--------------------|-------------------|--------------------------|--------------------|-----------|-------------|---------|
| | | Original Budget | Amended Budget | Actual Thru September | Estimated Total | Requested | Recommended | Adopted |
| Month: 9/30/2022 | | | | | | | | |
| Fund: 406 - FIRE CAPITAL IMPROVEMENT FUND | | | | | | | | |
| Revenues | | | | | | | | |
| Dept: 000 | | | | | | | | |
| 590 Grants-Private Sources | 0 | 0 | 0 | 0 | 0 | | | |
| 665 Interest Earned | 246 | 175 | 175 | 63 | 0 | | | |
| 671 Other Revenues | 0 | 0 | 0 | 0 | 0 | | | |
| 699 Transfers From Other Funds | 156,854 | 50,000 | 50,000 | 0 | 0 | | | |
| Dept: 000 | 157,100 | 50,175 | 50,175 | 63 | 0 | 0 | 0 | 0 |
| Total Revenues | 157,100 | 50,175 | 50,175 | 63 | 0 | 0 | 0 | 0 |
| Expenditures | | | | | | | | |
| Dept: 000 | | | | | | | | |
| 703 Wages | 0 | 0 | 0 | 0 | 0 | | | |
| 715 Social Security (Employer) | 0 | 0 | 0 | 0 | 0 | | | |
| 716 Medicare (Employer) | 0 | 0 | 0 | 0 | 0 | | | |
| 740 Operating Expense & Supplies | 0 | 0 | 0 | 0 | 0 | | | |
| 804 Professional Services | 0 | 0 | 0 | 0 | 0 | | | |
| 860 Mileage Reimbursement | 0 | 0 | 0 | 0 | 0 | | | |
| 970 Capital Expenditure | 45,469 | 135,500 | 135,500 | 54,188 | 0 | | | |
| Dept: 000 | 45,469 | 135,500 | 135,500 | 54,188 | 0 | 0 | 0 | 0 |
| Dept: 862 Soc Sec/Medicare (Employer) | | | | | | | | |
| 715 Social Security (Employer) | 0 | 0 | 0 | 0 | 0 | | | |
| 716 Medicare (Employer) | 0 | 0 | 0 | 0 | 0 | | | |
| Soc Sec/Medicare (Employer) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dept: 890 Contingency | | | | | | | | |
| 890 Contingency | 0 | 0 | 0 | 0 | 0 | | | |
| Contingency | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dept: 908 Debt Service/Fire Capital Imp | | | | | | | | |
| 991 Debt Service Principal | 0 | 0 | 0 | 0 | 0 | | | |
| 997 Debt Service Interest | 0 | 0 | 0 | 0 | 0 | | | |
| Debt Service/Fire Capital Imp | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Expenditures | 45,469 | 135,500 | 135,500 | 54,188 | 0 | 0 | 0 | 0 |
| FIRE CAPITAL IMPROVEMENT FUND | 111,631 | -85,325 | -85,325 | -54,125 | 0 | 0 | 0 | 0 |
| Grand Total: | 270,117 | -553,308 | -553,308 | -448,688 | 0 | 0 | 0 | 0 |

MEMO

To: Whitewater Township Board
From: Cheryl A. Goss, Clerk
Date: 09/06/~~2021~~ 2022
Re: Budgeted Transfers 2022/2023

The following budgeted transfers were planned for in the 2022/2023 budget and are recommended for board approval at this time, as budgeted.

TRANSFER \$18,000 FROM GENERAL FUND TO ROAD FUND:

An appropriate motion would be: Motion to transfer \$18,000 from the General Fund to the Road Fund.

TRANSFER \$35,000 FROM GENERAL FUND TO FIRE FUND:

An appropriate motion would be: Motion to transfer \$35,000 from the General Fund to the Fire Fund.

TRANSFER \$57,200 FROM GENERAL FUND TO RECREATION FUND:

An appropriate motion would be: Motion to transfer \$57,200 from the General Fund to the Recreation Fund.

TRANSFER \$50,000 FROM GENERAL FUND TO FIRE CAPITAL IMPROVEMENT FUND:

An appropriate motion would be: Motion to transfer \$50,000 from the General Fund to the Fire Capital Improvement Fund.

###

Memo

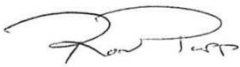
To: Whitewater Township Board of Trustees
CC: None
Date: 11-29-2022
Re: Goss Resignation as Park & Recreation Administrator

Board Members –

Cheryl Goss provided her resignation via email November 23, 2022 as the Park & Recreation Administrator to all board members. Her email is attached below.

Motion to accept Cheryl Goss's Resignation dated November 23, 2022 as the Park & Recreation Administrator.

Respectfully submitted,



Whitewater Township FOIA Coordinator
Supervisor, Whitewater Township



Ron Popp <supervisorwhitewater@gmail.com>

Parks & Recreation Administration

1 message

Cheryl A. Goss <clerk@whitewatertownship.org>
To: "Cheryl A. Goss" <clerk@whitewatertownship.org>

Wed, Nov 23, 2022 at 2:32 PM

Township Board -

This e-mail will serve as my resignation as the Whitewater Township Parks & Recreation Administrator, effectively immediately.

bcc Parks & Recreation Advisory Committee

Cheryl A. Goss, MiPMC

Whitewater Township Clerk

[5777 Vinton Road](#), P.O. Box 159

Williamsburg, Michigan 49690

Telephone: 231.267.5141 X 24

Fax: 231.267.9020

clerk@whitewatertownship.org

Office Hours: Mon/Tue/Wed/Thurs 9:00 am to 5:00 pm

I Pledge Allegiance to the Flag of the United States of America, and to the REPUBLIC for which it stands, one Nation, under God, Indivisible, with Liberty and Justice for All.

Memo

To: Whitewater Township Board of Trustees
CC: Park & Recreation Advisory Committee
Date: 11-29-2022
Re: Board Liaison to Park & Recreation Advisory Committee

Board Members –

With the resignation of Cheryl Goss as the Park & Recreation Administrator the Board needs a communication conduit with the Park & Recreation Advisory Committee (PRAC). Unlike the other bodies that operate in the Township a Board member does not sit on this body that can serve in a liaison capacity. Via email I asked Trustee Don Glenn to consider assisting the Township in this capacity. He accepted.

If created, this position is not expected to be long term however, there is a great deal of administrative work needed to incorporate an expanded role of PRAC into the camping park as contemplated in June of 2022.

A proposed Job Description is presented:

**Whitewater Township Board of Trustees
Board Liaison to Park & Recreation Advisory Committee
Job Description**

General Description

To assist with communications and administration functions between the Park & Recreation Advisory Committee (PRAC) and the Whitewater Township Board of Trustees. The Board Liaison serves at the pleasure of and under the general authority of the Whitewater Township Board. This position is considered temporary and can be eliminated at any time by majority vote of the Whitewater Township Board of Trustees.

Qualifications

1. Ability to provide effective communication between the Township Board and PRAC Membership.
2. Ability to explain and coordinate Township Board desired administration changes in PRAC.

Physical Demands

The physical demands of this position are those customarily associated with an office manager.

Work Environment

Some travel between various Township recreation venues with an occasional visit to remote areas. However, the majority of time spent will be in an office setting.

Wage

Hourly wage shall be set by the Additional Activities Compensation Program outlined in Section 3.4 of the Whitewater Township Policy & Procedure Manual.

Hours of Work

The Board Liaison to Park & Recreation Advisory Committee will provide assistance as needed or as directed by the Board.

Duties and Responsibilities Include, But Are Not Limited To:

1. Be familiar with Whitewater Township Board's Administrative functions and communicate the same to PRAC Membership.
2. Respond to inquiries concerning township parks and recreation facilities.
3. Research and make recommendations to the Township Board on all park and recreation venues.
4. Participate in program budgets, rates, fees and operational dates recommendations and decisions.
5. Assist, monitor and troubleshoot PRAC agenda packet issues.
6. Get familiar with all park procedure manuals
7. Become familiar with and make recommendation on park opening and closing checklists.
8. Review parks and recreation operations with Park & Recreation Advisory Committee, supervisor and/or Township Board.
9. Maintain a professional demeanor while representing Whitewater Township.
10. Create a written monthly report of each Park & Recreation Advisory Committee Meeting and submit such report to the Board for its inclusion on the next regular meeting agenda.
11. Perform other duties as assigned by the Township Board.

I have read the above job description and fully understand the conditions set forth therein. I will perform these duties to the best of my knowledge and ability.

Date: _____

Signature: _____

Motion 1: Motion to approved Board Liaison to Park & Recreation Advisory Committee Job Description as amended.

Motion 2: Motion to appoint Trustee Don Glenn to the position of Board Liaison to Park & Recreation Advisory Committee.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Don Glenn", with a stylized flourish at the end.

Whitewater Township FOIA Coordinator
Supervisor, Whitewater Township

Memo

To: Whitewater Township Board
From: Ron Popp
CC:
Date: 12-02-2022
Re: Board of Review Re appointment – Eric Sanborn

Colleagues,

I am recommending:

Eric Sanborn, 7905 Cook Road, Williamsburg, Michigan 49690 to a position on the Whitewater Township Board of Review in accordance with Public Act 206 of 1893 Section 28 (1) MCL 211.28 (1). The term will end on December 31, 2024. If the recommendation for appointment is confirmed, the Appointee **shall pledge the Oath of Office as administered by the Township Clerk within ten (10) business days as required by Public Act 206 of 1893 MCL 211.28 (1) as amended.**

An appropriate motion might be:

A motion to confirm the recommendation of the Supervisor appointing Eric Sanborn to a two (2) term on the Whitewater Township Board of Review. The term will end on December 31, 2024.

Roll Call Vote

Ron Popp.

Memo

To: Whitewater Township Board
From: Ron Popp
CC:
Date: 12-01-2022
Re: Board of Review Reappointment

Colleagues,

I am recommending:

Brenda Baker, 5982 Cook Road, Williamsburg, Michigan 49690 to a position on the Whitewater Township Board of Review in accordance with Public Act 206 of 1893 Section 28 (3) MCL 211.28 (3). The term will end on December 31, 2024. If the recommendation for appointment is confirmed, the Appointee **shall pledge the Oath of Office as administered by the Township Clerk within ten (10) business days as required by Public Act 206 of 1893 MCL 211.28 (1) as amended.**

An appropriate motion might be:

A motion to confirm the recommendation of the Supervisor appointing Brenda Baker to a term on the Whitewater Township Board of Review. The term will end on December 31, 2024.

Roll Call Vote

Respectfully submitted,



Ron Popp
Whitewater Township Supervisor

Memo

To: Whitewater Township Board
From: Ron Popp
CC:
Date: 12-01-2022
Re: Board of Review Reappointment

Colleagues,

I am recommending:

Tammy Jarvis, 5387 N. Broomhead Road, Williamsburg, Michigan 49690 to a position on the Whitewater Township Board of Review in accordance with Public Act 206 of 1893 Section 28 (1) MCL 211.28 (1). The term will end on December 31, 2024. If the recommendation for appointment is confirmed, the Appointee shall pledge the Oath of Office as administered by the Township Clerk **within ten (10) business days** as required by Public Act 206 of 1893 MCL 211.28 (1) as amended.

An appropriate motion might be:

A motion to confirm the recommendation of the Supervisor appointing Tammy Jarvis to a two (2) year term on the Whitewater Township Board of Review. The term will end on December 31, 2024.

Roll Call Vote

Ron Popp.

Memo

To: Whitewater Township Board
From: Ron Popp
CC:
Date: 11.30.2022
Re: Planning Commission Reappointment

Board Members,

I am recommending:

Carlyle Wroubel, 9806 Elk Lake Trail, Williamsburg, Michigan 49690 to a seat on the Whitewater Township Planning Commission. This recommendation is in accordance with Public Act 33 of 2008, MCL 125.3815 Section 15 and Whitewater Township General Ordinance Number 42, Section 102. The term will end on December 31, 2025.

An appropriate motion might be:

A motion to confirm the recommendation of the Supervisor reappointing Carlyle Wroubel to a 3-year position on the Whitewater Township Planning Commission. The term will end on December 31, 2025.

Roll Call Vote

Ron Popp

Supervisor, Whitewater Township.

Memo

To: Whitewater Township Board
From: Ron Popp
CC:
Date: 11.29.2022
Re: Planning Commission Appointment – Rachel Steelman

Colleagues,

In order to bring the ending term dates of Planning Commissioners more in line with Section 102 (B) and 108 (a) of General Ordinance 42 Planning Commission. The Ordinance is provided below for review.

I am recommending:

Rachel Steelman, 7315 Crisp Road, Williamsburg, Michigan 49690 to a 2- year term position ending December 31, 2024 on the Whitewater Township Planning Commission. This recommendation is in accordance with Public Act 33 of 2008, MCL 125.3815 Section 15 and Whitewater Township General Ordinance Number 42, Section 102.

An appropriate motion may look like:

A motion to confirm the recommendation of the Supervisor appointing Rachel Steelman to a 2-year term position on the Whitewater Township Planning Commission. The term shall end December 31, 2024.

102. Membership:

B. Members shall be appointed for three-year terms. However, when first appointed a number of members shall be appointed to one-year, two-year, or three-year terms such that, as nearly as possible, the terms of 1/3 of all commission members will expire each year. If a vacancy occurs, the vacancy shall be filled for the unexpired term in the same manner as provided for an original appointment such that, as nearly as possible, the terms of 1/3 of all commission members continue to expire each year.

108. Membership; Transition:

A. The transition from the previous Township of Whitewater Planning Commission and the

Commission established in this ordinance shall be gradual and shall take place over the next three years. The Township of Whitewater Board of Trustees shall continue to make annual appointments, appointing approximately 1/3 of the membership of the Commission as specified in this Ordinance, so that three years from the effective date of this ordinance the membership, membership representation, and number of members have completed the transition to fully comply with this Ordinance.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Ron Popp". The signature is stylized with a large, looping "R" and a cursive "Popp".

Ron Popp
Whitewater Township Supervisor



WHITEWATER TOWNSHIP

5777 Vinton Road • P.O. Box 159 • Williamsburg, MI 49690 (231)
267-5141 • FAX (231) 267-9020

APPLICATION FOR APPOINTMENT

Date of Application: 12/01/2021

Name: Steelman Rachel
Last First Middle Initial

Address: 7315 Crisp Road **City:** Williamsburg **Zip:** 49690

Telephone: (Home) (Cell)

E-Mail Address:

What Committees and/or Boards are you interested in?

(Select as many as you like)

Board of Review: Park & Recreation Advisory Committee:

Planning Commission: X Zoning Board of Appeals:

Are you a Whitewater Township Resident? Yes X No

Are you a Land Owner in Whitewater Township? Yes X No

Are you a Qualified Elector of the Township? Yes X No

As defined by the 1963 Michigan Constitution, as amended by the 26th Amendment of the U.S. Constitution

Please describe your interest in the selected committee/board and how you feel your expertise and contribution would benefit the group:

My family and I have lived in Whitewater Township for 5 years, we are raising our children here,
and want Whitewater township to be our forever home and community. I believe my skill set
having worked for the State of Michigan in a supervisory and oversight capacity for 36 counties
gives me the expertise necessary for the Planning Commission. In my roles with the State, I
have managed people, projects, and numerous initiatives for 20 years. At this point in my
career and stage of life I have a desire as well as the time to serve my community, neighbors,
and Township.



WHITEWATER TOWNSHIP

5777 Vinton Road • P.O. Box 159 • Williamsburg, MI 49690 (231)
267-5141 • FAX (231) 267-9020

Please provide any other information you wish to share.

~~A little personal info about myself - I am [REDACTED] years old and married to Randy Steelman. Together, we own and operate a "mom & pop" construction business, we built our forever home on Crisp Road, and we have 4 children - [REDACTED]~~

I appreciate the opportunity to serve and represent our great community.

Thank you for your time.

Complete, sign, and return this application to:

**Whitewater Township Supervisor
P.O. Box 159, 5777 Vinton Road,
Williamsburg MI 49690,
Fax 231-267-9020**

[Email: supervisor@whitewatertownship.org](mailto:supervisor@whitewatertownship.org)

Rachel Steelman

Applicant Signature

12/01/2021

Date

Memo

To: Whitewater Township Board
From: Ron Popp
CC:
Date: 12.01.2022
Re: Planning Commission Appointment – Rod Rebant

Colleagues,

In order to bring the ending term dates of Planning Commissioners more in line with Section 102 (B) and 108 (a) of General Ordinance 42 Planning Commission. The Ordinance is provided below for review.

I am recommending:

Rod Rebant, 648 Island View Drive, Traverse City, Michigan 49696 to a 1- year term position ending December 31, 2023 on the Whitewater Township Planning Commission. This recommendation is in accordance with Public Act 33 of 2008, MCL 125.3815 Section 15 and Whitewater Township General Ordinance Number 42, Section 102.

An appropriate motion may look like:

A motion to confirm the recommendation of the Supervisor appointing Rod Rebant to a 1-year term position on the Whitewater Township Planning Commission. The term shall end December 31, 2023.

102. Membership:

B. Members shall be appointed for three-year terms. However, when first appointed a number of members shall be appointed to one-year, two-year, or three-year terms such that, as nearly as possible, the terms of 1/3 of all commission members will expire each year. If a vacancy occurs, the vacancy shall be filled for the unexpired term in the same manner as provided for an original appointment such that, as nearly as possible, the terms of 1/3 of all commission members continue to expire each year.

108. Membership; Transition:

A. The transition from the previous Township of Whitewater Planning Commission and the

Commission established in this ordinance shall be gradual and shall take place over the next three years. The Township of Whitewater Board of Trustees shall continue to make annual appointments, appointing approximately 1/3 of the membership of the Commission as specified in this Ordinance, so that three years from the effective date of this ordinance the membership, membership representation, and number of members have completed the transition to fully comply with this Ordinance.

Roll Call Vote

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Ron Popp", with a stylized flourish at the end.

Ron Popp
Whitewater Township Supervisor



WHITEWATER TOWNSHIP

5777 Vinton Road • P.O. Box 159 • Williamsburg, MI 49690 (231)
267-5141 • FAX (231) 267-9020

APPLICATION FOR APPOINTMENT

Date of Application: Apr 6, 2022

Name: Rebent Rodney R
Last First Middle Initial

Address: 648 Island View Dr City: Townsend City Zip: 49692

Telephone: (Home) _____ (Cell) _____

E-Mail Address: _____

What Committees and/or Boards are you interested in?

(Select as many as you like)

Board of Review: _____ Park & Recreation Advisory Committee: _____

Planning Commission: ☒ Zoning Board of Appeals: _____

Are you a Whitewater Township Resident? Yes ☒ No _____

Are you a Land Owner in Whitewater Township? Yes ☒ No _____

Are you a Qualified Elector of the Township? Yes ☒ No _____

As defined by the 1963 Michigan Constitution, as amended by the 26th Amendment of the U.S. Constitution

Please describe your interest in the selected committee/board and how you feel your expertise and contribution would benefit the group:

I am interested in Joining the PC. We need to
complete the task of updating the Master Plans
and zoning ordinances.

I am willing to commit time and energy to
bring these tasks to completion. A well prepared
plan minimizes the potential of misplaced development
within a protected community resource.



WHITEWATER TOWNSHIP

5777 Vinton Road • P.O. Box 159 • Williamsburg, MI 49690 (231)
267-5141 • FAX (231) 267-9020

Please provide any other information you wish to share.

Complete, sign, and return this application to:

Whitewater Township Supervisor
P.O. Box 159, 5777 Vinton Road,
Williamsburg MI 49690,
Fax 231-267-9020

Email: supervisor@whitewatertownship.org


Applicant Signature


Date

Memo

To: Whitewater Township Board
From: Ron Popp
CC:
Date: 12.02.2022
Re: Planning Commission Appointments – Keith DeYoung

Colleagues,

I am recommending:

Keith DeYoung Alex Darrow, 586 Starflower Lane, Traverse City, Michigan 49696 to a 3-year position ending December 31, 2025 on the Whitewater Township Planning Commission. This recommendation is in accordance with Public Act 33 of 2008, MCL 125.3815 Section 15 and Whitewater Township General Ordinance Number 42, Section 102.

An appropriate motion may look like:

A motion to confirm the recommendation of the Supervisor appointing Keith De Young to a 3-year term position on the Whitewater Township Planning Commission. The term shall end December 31, 2025.

Roll Call Vote

Respectfully submitted,



Ron Popp
Whitewater Township Supervisor



WHITEWATER TOWNSHIP

5777 Vinton Road • P.O. Box 159 • Williamsburg, MI 49690 (231)
267-5141 • FAX (231) 267-9020

RECEIVED
7-5-22
CB

APPLICATION FOR APPOINTMENT

Date of Application: July 5 2022

Name: DeYoung Keith L
Last First Middle Initial

Address: 586 Starflower LN City: Traverse City Zip: 49696

Telephone: (Home) [REDACTED] (Cell) Same

E-Mail Address: [REDACTED]

What Committees and/or Boards are you interested in?

(Select as many as you like)

Board of Review: ☒ Park & Recreation Advisory Committee: ☐

Planning Commission: ☒ Zoning Board of Appeals: ☒

Are you a Whitewater Township Resident? ☒ Yes ☐ No

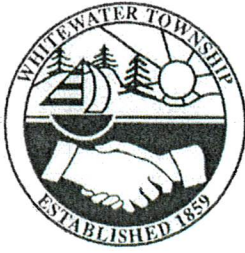
Are you a Land Owner in Whitewater Township? ☒ Yes ☐ No

Are you a Qualified Elector of the Township? ☒ Yes ☐ No

As defined by the 1963 Michigan Constitution, as amended by the 26th Amendment of the U.S. Constitution

Please describe your interest in the selected committee/board and how you feel your expertise and contribution would benefit the group:

Lived in area all my life.
Subject Matter Expert in Anti Terrorism, Law Enforcement,
Security.



WHITEWATER TOWNSHIP

5777 Vinton Road • P.O. Box 159 • Williamsburg, MI 49690 (231)
267-5141 • FAX (231) 267-9020

Please provide any other information you wish to share.

Background: Supervisory Inspector for the U.S. Dept. Homeland Security
911 Director
Emergency Management Director
Police Officer

Complete, sign, and return this application to:

Whitewater Township Supervisor
P.O. Box 159, 5777 Vinton Road,
Williamsburg MI 49690,
Fax 231-267-9020

Email: supervisor@whitewatertownship.org

Applicant Signature

[Handwritten Signature]

Date

July 5th 2022

Memo

To: Whitewater Township Board

From: Ron Popp

CC:

Date: December 2, 2022

Re: Zoning Board of Appeals Recommendations for Reappointment – Skip Lake

Colleagues,

I am recommending:

Therowin (Skip) Lake, 5463 Broomhead Road, Williamsburg, Michigan 49690 to a post on the Whitewater Township Zoning Board of Appeals, in accordance with Public Act 110 of 2006, MCL 125.3601 (7) and the Whitewater Township Zoning Board of Appeals By-Laws, Section 5 (e) as amended. The term will end on December 31, 2025.

An appropriate motion might be:

A motion to confirm the recommendation of the Supervisor appointing Therowin (Skip) Lake to a 3 year position on the Whitewater Township Zoning Board of Appeals. The term will end on December 31, 2025.

Roll Call Vote

Ron Popp.

Memo

To: Whitewater Township Board of Trustees

CC: None

Date: 11.21.2022

Re: Natural Hazard Mitigation Plan

Board Members –

The Grand Traverse County Emergency Manager has provided this proposed Natural Hazard Mitigation Plan for our approval. A similar plan was put in motion in the aftermath of the August 2015 straight line wind event that affected several northern Michigan Counties including Whitewater Township. Plans of this nature are designed to deal with catastrophic events which leave behind significant wide spread damage. More recently, Whitewater Township has experienced other natural weather related events that did not rise to the minimum level of damage this plan and highlight the need for the Township preparedness for smaller events.

Motion to adopt the Natural Hazard Mitigation plan developed by Grand Traverse County Dated 2022.

Respectfully submitted,



Whitewater Township FOIA Coordinator
Supervisor, Whitewater Township



Ron Popp <supervisorwhitewater@gmail.com>

2022 Grand Traverse Co. Natural Hazard Mitigation Plan

1 message

Gregg Bird <gbird@gtcountymi.gov>

Thu, Sep 29, 2022 at 9:30 AM

To: Ron Popp <supervisorwhitewater@gmail.com>, "supervisor@peninsulatownship.com" <supervisor@peninsulatownship.com>, "supervisor@blairtownship.org" <supervisor@blairtownship.org>, "supervisor@longlaketownship.com" <supervisor@longlaketownship.com>, "supervisor@paradisetwp.org" <supervisor@paradisetwp.org>, "kvmanager@villageofkingsley.com" <kvmanager@villageofkingsley.com>, Ann Olsen <kvclerk@villageofkingsley.com>, "moriarty1984@gmail.com" <moriarty1984@gmail.com>, "doug@maaeps.com" <doug@maaeps.com>, "supervisor@fifelaketwp.com" <supervisor@fifelaketwp.com>, "mcgoughdavid16@gmail.com" <mcgoughdavid16@gmail.com>
Cc: "fire@peninsulatownship.com" <fire@peninsulatownship.com>, Brandon Flynn <firechief@whitewatertownship.org>, "fire@blairtownshipmi.gov" <fire@blairtownshipmi.gov>, "chief@longlaketownship.com" <chief@longlaketownship.com>, "chief@greenlaketownship.org" <chief@greenlaketownship.org>, Scott Tinker <chief.flaesa@gmail.com>

Good morning.

There is a newly approved and adopted Grand Traverse Co. Natural Hazard Mitigation Plan that will be valid for the next five years. The next step is for your municipality to consider adopting the plan via formal resolution.

The adoption of this plan by your municipality allows you to be eligible for state and federal mitigation and Building Resilient Communities & Infrastructure (BRIC) grant monies to assist in improvements and protections aimed at preventing natural disasters from affecting your jurisdiction and infrastructure. Examples of these would be improved drainage culverts, flood prevention improvements, emergency shelters from high winds in public spaces, wildfire mitigation/prevention, etc.

I've attached the following to this email –

- 2022 Grand Traverse Co. Natural Hazard Mitigation Plan
- Sample template resolution verbiage

I've included your fire chiefs on this email as they played an integral part of the revision process as well as some of your public works and planning officials. A full list of acknowledgements of participating personnel is on Page 5 of the plan.

Please let me know if you'd like or need me to do a presentation to the board and I'll work with you to get it on my schedule. If this is not necessary, I'll just need a copy of your signed resolution to send to FEMA to receive your official plan adopted designation.

Thank you.

Regards,

Gregg

Gregg Bird PEM, NEMP

Emergency Management Coordinator

Office: (231) 995-6059

Cell: (231) 590-2373

Email: gbird@gtcountymi.gov

www.grandtraverse.org/EM

www.Fb.com/GTCemergency



[Enroll for CodeRED here](#)

2 attachments



2022 Grand Traverse County Hazard Mitigation Plan.pdf
6925K



Sample HazMit Resolution.docx
20K

Whitewater Township, Grand Traverse County

Natural Hazard Mitigation Plan Adoption Resolution

Resolution No. 22-19

At a meeting of the Whitewater Township Board, Grand Traverse County, Michigan, held on December 13, 2022, at 9:00 a.m.

PRESENT: _____

ABSENT: _____

The following was moved by _____ and seconded by _____:

WHEREAS, Whitewater Township, has experienced risks that may damage commercial, residential and public properties, displace citizens and businesses, close streets and impair infrastructure, and present general public health and safety concerns; and

WHEREAS, Grand Traverse County has developed the Grand Traverse County Natural Hazard Mitigation Plan that outlines the counties options to reduce damages and impacts from natural and technological hazards; and

WHEREAS, the Natural Hazard Mitigation Plan has been reviewed by residents, business owners, and federal, state and local agencies, and has been revised where appropriate to reflect their concerns;

NOW, THEREFORE, BE IT RESOLVED:

1. The Natural Hazard Mitigation Plan is hereby adopted as an official plan of Whitewater Township
2. All resolutions and parts of resolutions insofar as they conflict with the provisions of this resolution are hereby rescinded

Roll call vote:

Yes: _____

No: _____

Absent/Abstain: _____

The Supervisor declared the resolution adopted.

Ron Popp, Whitewater Township Supervisor

Certificate

I, Cheryl A. Goss, the duly elected and acting Clerk of Whitewater Township, hereby certify that the foregoing resolution was adopted by the Township Board by a roll call vote at a regular meeting of the Board held on December 13, 2022, at which meeting a quorum was present; and that this resolution was ordered to take immediate effect.

Cheryl A. Goss, Whitewater Township Clerk

NOTE: AN OFFICIAL SIGNED COPY OF A RESOLUTION OF ADOPTION MUST BE SUBMITTED TO THE MICHIGAN STATE POLICE EMERGENCY MANAGEMENT AND HOMELAND SECURITY DIVISION (to comply with the requirements of the Disaster Mitigation Act of 2000).



Natural Hazards Mitigation Plan

2022

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FEMA

September 28, 2022

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 2022 Grand Traverse County Natural 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 Grand Traverse County. Please submit adoption resolutions for any remaining jurisdictions who participated in the planning process.

The approval of this plan ensures continued availability of the full complement of Hazard Mitigation Assistance (HMA) Grants. All requests for funding, however, will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted.

We encourage the county to follow the plan's schedule for monitoring and updating the plan and to continue their efforts to implement the mitigation measures. The expiration date of the 2022 Grand Traverse County Natural Hazard Mitigation Plan is five years from the date of this letter. The plan must be reviewed, revised as appropriate, resubmitted, and approved no later than the plan expiration date.

Please pass on our congratulations to Grand Traverse County for completing this significant action. If you or the community have any questions, please contact Lorena Reyes at (202) 805-6352 or Lorena.reyes@fema.dhs.gov.

Sincerely,

Steven M. Greene
Chief (acting), Risk Analysis Branch
Mitigation Division



Resolution 88-2022

Date: September 7, 2022

2022 Grand Traverse County Natural Hazard Mitigation Plan Resolution

Whereas; Grand Traverse County, Michigan has experienced risks that may damage commercial, residential and public properties, displacing citizens and businesses, close streets and impair infrastructure, present general public health and safety concerns; and

Whereas; Grand Traverse County has developed the Grand Traverse County Natural Hazard Mitigation Plan that outlines the county's options to reduce damages and impacts from natural and technological hazards; and

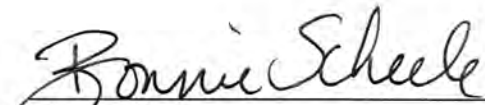
Whereas; the Natural Hazard Mitigation Plan has been reviewed by residents, business owners, and federal, state, and local agencies, and has been revised where appropriate to reflect their concerns;

Now, therefore, be it resolved that:

The Natural Hazard Mitigation Plan is hereby adopted as an official plan of Grand Traverse County, Michigan.



Chairman



Bonnie Scheele
County Clerk

ACKNOWLEDGEMENTS

The Grand Traverse County Hazard Mitigation Plan is prepared for Grand Traverse County and the jurisdictions in Grand Traverse County. Each jurisdiction within Grand Traverse County is a continuing participant in the update of the Plan. The Plan is the culmination of the interdisciplinary and interagency planning effort that required the assistance and expertise of numerous agencies, organizations, and individuals. Without the technical assistance and contributions of time and ideas of these agencies, organizations, and individuals, this plan could not have been completed.

| Agency | Name | Title |
|---|-------------------|--|
| Grand Traverse County Board of Commissioners | Robert Hentschel | Chair, District 7 |
| | Brad Jewett | Vice Chair, District 3 |
| Grand Traverse County | Nathan Alger | County Administrator |
| | Gregg Bird | Emergency Management Coordinator |
| | Thomas Bensley | Sheriff |
| | Michael Shea | Undersheriff |
| | Jason Torrey | 911 / Central Dispatch Director |
| | Andy Smits | Drain Commissioner |
| | John Divozzo | Director of Public Works |
| | James D. Baker | Director of Equalization |
| | Josh Green | GIS Analyst, Equalization Department |
| | Wayne Schoonover | Manager of Engineering, Road Commission |
| Grand Traverse Band of Ottawa and Chippewa Indians | Jolanda Murphy | Public Safety Department 2 Manager and Emergency Manager |
| | Garrett Fairchild | Fire Chief |
| | Lori Savaso | Director of Risk Management and Safety |
| City of Traverse City | Art Krueger | Director of Municipal Utilities |
| | Frank Dituri | Director of Public Services |
| | Jeff O'Brien | Chief of Police |
| | Jim Tuller | Fire Chief |
| Acme Township | Pat Parker | Fire Chief |
| Blair Township | Bill Parker | Fire Chief |
| East Bay Township | Beth Friend | Township Supervisor |
| | Nick Lemcool | EMS Director |
| | Pat Parker | Fire Chief |
| Village of Fife Lake | Scott Tinker | Fire Chief |
| Fife Lake Township | Scott Tinker | Fire Chief |
| Garfield Township | John Sych | Planning Director |
| | Stephen Hannon | Deputy Planning Director |
| | Pat Parker | Fire Chief |
| Grant Township | Daryl Case | Emergency Services Chief |
| Green Lake Township | Daryl Case | Emergency Services Chief |
| Village of Kingsley | Dan Hawkins | Village Manager |
| | Deb Nickerson | Treasurer |
| | Terry Almquist | Supervisor, Department of Public Works |
| | Todd Weaver | Department of Public Works |
| | Norm Fenton | Department of Public Works |
| Long Lake Township | Andrew Down | Fire Chief |
| Mayfield Township | Bill Parker | Fire Chief |
| Paradise Township | Bill Parker | Fire Chief |
| Peninsula Township | Fred Gilstorff | Fire Chief |
| Union Township | Bill Parker | Fire Chief |
| Whitewater Township | Brandon Flynn | Fire Chief |
| The Salvation Army | Matthew Winters | Lieutenant |
| Mobile Medical Response | Amy Fairchild | Paramedic Field Supervisor |
| Area Agency on Aging of Northwest Michigan | Dee Wilkinson | Housing Coordinator |
| Munson Medical Center | John Bolde | Facilities & Emergency Management |
| Cherry Capitol Airport | Dan Sal | Operations Chief |
| Traverse Health Clinic | Krista Tharp | Compliance Officer |

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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. When successful, hazard mitigation will lessen the need for a community to respond to subsequent hazard events, for some incidents may remain as mere incidents and not become disasters. Similarly, disaster events should involve lesser levels of impact than they otherwise would have. Hazard mitigation strives to reduce the impact of hazards on people, property, the environment and economy, and continuity of services, through the coordination of available resources, programs, initiatives, and authorities.

A hazard is an event or physical condition that has potential to cause fatalities, injuries, property damage, infrastructure damage, and agricultural loss, damage to the environment, interruption of business, or other types of harm or loss. The mission of the Grand Traverse 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 Grand Traverse County.

The Grand Traverse County Natural Hazards Mitigation Plan focuses on natural hazards such as drought, wildfires, flooding, shoreline erosion, thunderstorms and high winds, hail, and extreme winter weather, and was created to protect the health, safety, and economic interests of the residents and businesses by reducing the impacts of natural hazards through planning, awareness, and implementation. Through this Plan, a broad perspective was taken in examining multiple natural hazards mitigation activities and opportunities in Grand Traverse County. Each natural hazard was analyzed from a historical perspective, evaluated for potential risk, and considered for possible mitigation.

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. This process is needed to ensure 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.

During the previous plan's adoption period, the county and municipalities achieved the following mitigation activities:

- Removal of the Boardman Dam (2017) and Sabin Dam (2018) and restoration of the upper Boardman River to its historical natural channel. The dam removal projects were a collaboration between local, county, state, federal, and tribal partnerships.
- Construction of two (2) severe storm/tornado shelters and integrated public alerting sirens at Traverse City State Park Campground and Interlochen State Park Campground (2019 & 2020)
- Finally, during the revision period of this plan document, the City of Traverse City is developing a comprehensive series of project applications for the newly developed FEMA Building Resilient Infrastructure and Communities grant program to repair and improve damage storm and sewer water, road, and drainage infrastructure and riverbank restoration and stabilization in the Traverse City area bordering the Grand Traverse Bay and Boardman River areas. Applications will be submitted once the County plan is approved and adopted.

Section VI provides a list of hazard mitigation strategies for each natural hazard identified in this plan. Strategies were developed based on discussions with local officials and a review of FEMA best practices for hazard mitigation. Appendix C provides a review of mitigation strategies included in the 2015 plan and their current status. Mitigation strategies are intended to be action items completed during the 5-year timeframe the plan is active.

Recognizing the importance of reducing community vulnerability to natural hazards, Grand Traverse County is actively addressing the issue through the development and implementation of this plan. This process will help ensure that Grand Traverse 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 Grand Traverse 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 following:

Figure 1: Planning Goals

| Natural Hazards Mitigation Planning Goals for Grand Traverse County | |
|---|---|
| Goal 1: | Increase local awareness and participation in natural hazards mitigation |
| Goal 2: | Integrate natural hazards mitigation considerations into the community's comprehensive planning and operational processes |
| Goal 3: | Utilize available resources and apply for additional 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 hazards mitigation plan in place and updated on a 5-year cycle as a condition for receiving grant money related to natural hazard remediation. Grand Traverse County has a history of mitigation planning and adopted past Natural Hazard Mitigation Plans in 2007 and 2015. The adoption of the 2022 plan will reaffirm the county's eligibility for federal funding. Additionally, those local municipalities who participate in the planning process and adopt the County's Plan will also become eligible.

The update of the County's plan was led by the Natural Hazards Task Force comprised of the County's Local (Emergency) Planning Team (LPT). Team 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 assisted with the plan update and provided support to facilitate meetings and plan writing. The Task Force met monthly at the Grand Traverse County Governmental Center, and meetings were open to the public. The following is an outline of events for the development of the 2022 Natural Hazard Mitigation Plan:

- The Task Force initiated the plan update in 2020 with a review of the County's 2015 Plan
- In December 2021, an online survey was administered to all local units of government to identify hazard threats, community vulnerabilities, and potential mitigation strategies
- The Task Force reviewed and commented on the Community Profile at the December 16, 2021 LPT meeting
- The Task Force had a discussion regarding hazard identification and assessment at a special meeting on January 11, 2022
- The Task Force reviewed and commented on the results of the community survey at the February 17, 2022 LPT meeting
- Local officials, municipal staff, and members of the Grand Traverse Band of Ottawa & Chippewa Indians participated in a community input session on March 23 and 24, 2022
- The Task Force reviewed and commented on the Goals and Objectives and Hazard Mitigation Strategies at the April 21, 2022 LPT meeting
- Local units of government received a draft copy of the plan for review in April 2022
- Public Notices were published in the newspaper on the county website, and via social media releases on April 28, 2022
- The Task Force held a public comment session for the draft plan on May 26, 2022; comments were received by staff.

Additionally, county and regional agencies that share borders with Grand Traverse County were invited to participate in the planning meetings and sent a copy of the plan in its draft form and again the approved plan. Those agency staff members are:

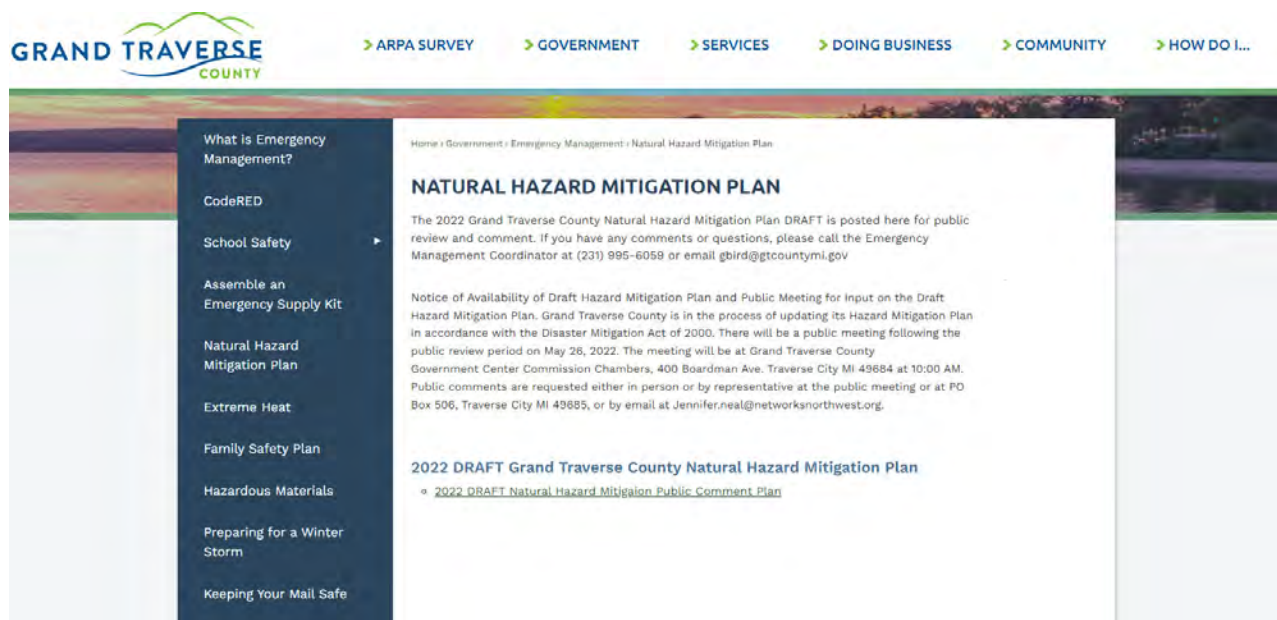
- Leslie Meyers, Emergency Services Coordinator, Antrim County
- Rebecca Hubers, Emergency Management Coordinator, Benzie County
- Mike Thompson, Emergency Management Coordinator, Kalkaska County
- Matt Ansorge, Emergency Management Director, Leelanau County
- Travis Baker, Deputy 911 Director/Emergency Management Coordinator, Wexford County
- Jolanda Murphy, Public Safety Department 2 Manager and Emergency Manager, Grand Traverse Band of Ottawa and Chippewa Indians
- Robert Carson, Regional Director of Community Development, Networks Northwest

The Grand Traverse Band of Ottawa and Chippewa Indians were invited to participate in the County's planning process and provided input related to tribal lands located in Grand Traverse County, but is not relying exclusively on the Grand Traverse County plan to seek full FEMA approval. The Grand Traverse Band of Ottawa and Chippewa Indians is undergoing a separate, but complementary planning process.

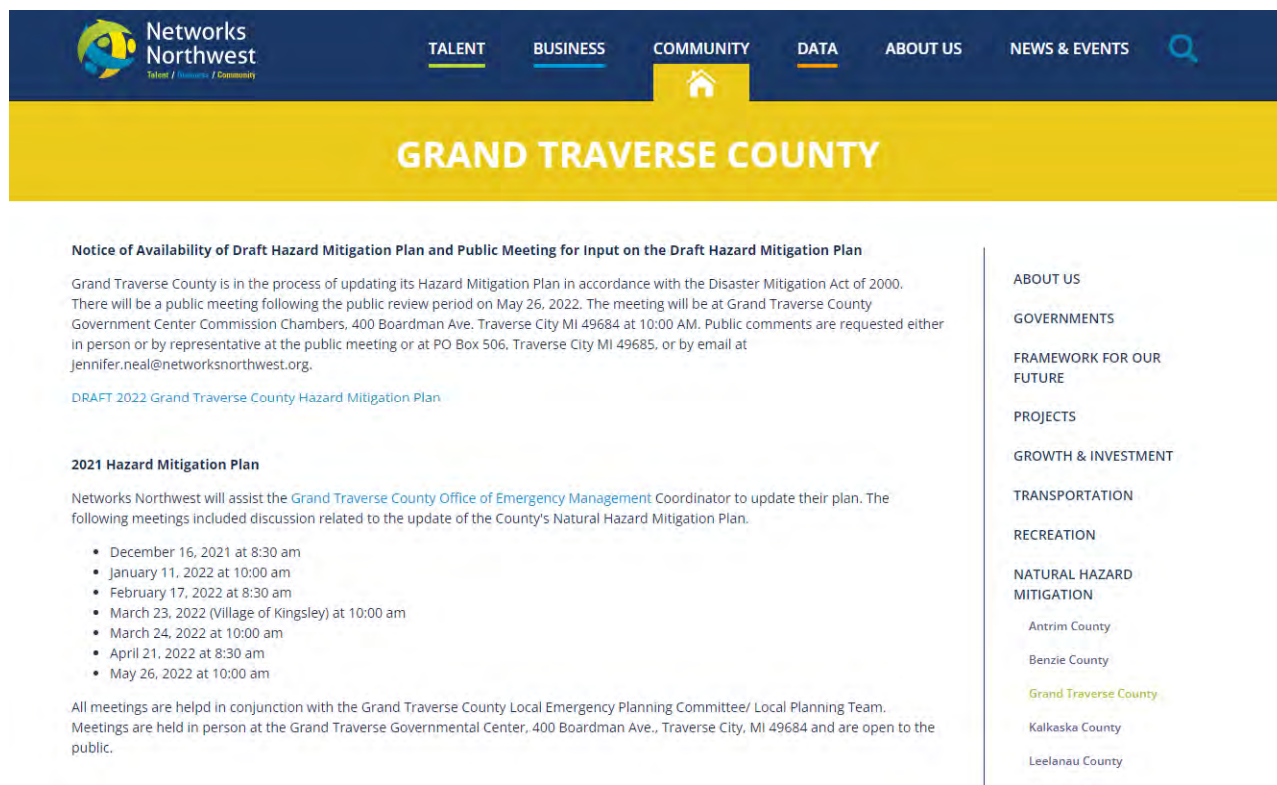
During development of the plan, all Grand Traverse County municipalities were provided the opportunity to formally comment on plan drafts and other related materials. The plan was published openly on the Grand Traverse County Emergency Management website and the public was encouraged to view, review and invited to submit suggestions and ideas for updates, changes to be considered during updates. All meetings where the plan was discussed were openly

published for public and other jurisdiction/municipality participation as well. While no formal written comments were received, county staff (particularly the county Emergency Manager) received feedback via other informal means. This feedback took the form of phone calls, emails and conversations that occurred at various non-mitigation related meetings throughout the county. Specifically, Wayne Schoonover, Manager of Engineering, of the Grand Traverse County Road Commission met with staff and provided a review of potential hazards impacting local road infrastructure. They also identified locations that frequently flood areas and may align with upcoming Road Commission projects. This information was provided and used in development of the plan, including the risk assessment and community profile sections.

The public was notified through a published notice in the Traverse City *Record Eagle* on Thursday, April 28, 2022 of the County's draft Hazard Mitigation Plan and the opportunity to provide feedback at the public hearing held on May 26, 2022. The draft plan was made available on the County's website as well as Networks Northwest's website. Below are images of the websites for the available draft plan and a copy of the published notice to the public.



Source: Grand Traverse County Emergency Management website April 27, 2022



Source: Networks Northwest website April 27, 2022

III. COMMUNITY PROFILE

Land Use

Grand Traverse County is located in northwest lower Michigan, and is bordered by Leelanau County, the Grand Traverse Bay and Antrim County to the north, Kalkaska County to the east, Wexford County to the south, and Benzie County to the west. The county is approximately 384,640 acres or 601 square miles in area. A portion of the county area includes 137 square miles of area in the water. County residents take advantage of diverse environments ranging from dense, urban areas to rural communities and unspoiled natural areas. Its landscape features rolling and hilly forest uplands, extensive wetlands and low areas, numerous inland lakes and streams, and the shorelines of East and West Grand Traverse Bay. The influence of glacial activity is clearly evident in the outwash plains and steep gravel and clay slopes that make up the majority of the southern two-thirds of the County. With 1,214 feet in elevation and 620 feet in depth in Grand Traverse Bay, these geographies lend special character to the County – lofty vistas of the bay, lakes, farmlands, and deep wooded valleys.

In addition to the lakes and rivers, the county is blessed with 66.72 miles of shoreline on the Grand Traverse Bay. The Boardman River, is a Blue Ribbon trout stream, being one of the top 10 trout streams in Michigan, bisects the county as it outlets into the Bay. Approximately 60% of the county is located in the Grand Traverse Bay Watershed. According to the 2017 Census of Agriculture, the county had 50,886 acres of land in farms for a total of 497 farms. Fruits, tree nuts, and berries had the highest market value of agriculture products sold at \$ 19,175,000. Grand Traverse County ranks 8th in the State of Michigan for the sale of fruits, tree nuts, and berries overall. The predominant land cover type is “Forested” followed by the combined types of land cover classified as “Grassland, Pasture, Shrub/Scrub” (Table 1). Developed land cover is found predominantly in and around Traverse City including Garfield Township and East Bay Township, village areas of Kingsley, Interlochen and Fife Lake, and around the Long Lake and Spider Lake areas.

Agriculture land is concentrated on Old Mission Peninsula (Peninsula Township), in the northern halves of Acme and Whitewater Townships, on the fringe of the urban area of Traverse City, and throughout the southern portion of the county. More intense land uses such as commercial, industrial, institutional and transportation are primarily found in the Traverse City area and to a lesser extent in village areas and in small parcels on major corridors throughout the county.

Table 1: Land Cover by Type

| Classification | Acres | Percent |
|--|------------|---------|
| Developed (High Intensity) | 1,762.77 | 0.6% |
| Developed (Med. Intensity) | 4,550.79 | 1.5% |
| Developed (Low Intensity) | 12,948.59 | 4.2% |
| Developed (Open Space) | 20,966.14 | 6.7% |
| Agriculture | 45,691.89 | 14.7% |
| Forested | 124,006.88 | 39.8% |
| Wetlands | 28,579.29 | 9.2% |
| Grassland, Pasture, Shrub/Scrub | 57,244.17 | 18.4% |
| Barren | 1,387.70 | 0.4% |
| Open Water | 14,410.38 | 4.6% |
| TOTAL | 311,548.60 | |

Source: Networks Northwest

A comparison of the 2007 Grand Traverse County Hazard Mitigation Plan indicates there were 489 farms and 62,268 acres of farmland as of 2002. In the fifteen year timeframe, the number of farms in the county rose, but they are smaller, thus reducing the amount of acres of land in farms. Similarly, a comparison of forested land also indicates a reduction in forested areas. The 2007 Plan identified 175,800 acres or 59.1% of the county was forest lands. Current data shows 124,006.88 acres or 39.8% of Grand Traverse County is forested. While growth in the county has remained steady, it has been noted that the type of growth is changing. Office 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.

Population

Grand Traverse County is the most populated county in the ten county region of northwest lower Michigan (Table 2) and is the 22nd most populated county in the state. The 2019 American Community Survey estimated the county population to be 92,181 people. A comparison of the 2010 and 2019 indicates an upward county population growth trend with a 7.1% increase from 2010 where the population was an estimated 86,061 (Table 3). The 2010 population per square mile is 187.3 people.

Grand Traverse County is comprised of thirteen (13) townships, two (2) villages, and one (1) city. The City of Traverse City, which is also the county seat, makes up 17% of the population. However, nearby Garfield Township is the most populated jurisdiction in the county with 17,319 people (19% of the population). The combined populations of Traverse City, Garfield Township and portions of other surrounding jurisdictions including Blair Township, East Bay Township, and Long Lake Township are likely to create a new metropolitan statistical area with the result of the 2020 decennial Census. All communities, with the exception of Kingsley Village, Fife Lake Township, and Union Township, experienced growth during the subject years (shown in green, Table 3). Grant Township, located in the southwest part of the county, saw the largest percent growth with 17.6%. This is followed by Blair Township which saw the second largest percent growth as well as the second largest numeric growth. Garfield, Blaire, and East Bay Townships saw the largest numeric growth in the county and are within easy commuting distance from Traverse City.

Table 2: Regional Population by County, State 2019

| County | 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 | 9,986,857 |

Source: US Census, 2019 ACS Estimate

Table 3: Population Change by Municipality, 2010, 2019

| Municipality | 2010 Estimated Population | 2019 Estimated Population | Numeric Change | Percent Change | Jurisdiction Status* |
|------------------------------|---------------------------|---------------------------|----------------|----------------|----------------------|
| Grand Traverse County | 86,061 | 92,181 | 6,120 | 7.1% | 2 |
| Fife Lake Village | 357 | 382 | 25 | 7.0% | 2 |
| Kingsley Village | 1,511 | 1,352 | -159 | -10.5% | 2 |
| | | | | | |
| Acme Township | 4,416 | 4,694 | 278 | 6.3% | 2 |
| Blair Township | 7,956 | 8,933 | 977 | 12.3% | 2 |
| East Bay Township | 10,617 | 11,492 | 875 | 8.2% | 2 |
| Fife Lake Township | 2,617 | 1,978 | -639 | -24.4% | 2 |
| Garfield Township | 15,939 | 17,319 | 1,380 | 8.7% | 2 |
| Grant Township | 1,034 | 1,216 | 182 | 17.6% | 3 |
| Green Lake Township | 5,688 | 6,213 | 525 | 9.2% | 2 |
| Long Lake Township | 8,565 | 9,321 | 756 | 8.8% | 2 |
| Mayfield Township | 1,506 | 1,612 | 106 | 7.0% | 2 |
| Paradise Township | 4,655 | 5,085 | 430 | 9.2% | 2 |
| Peninsula Township | 5,445 | 5,776 | 331 | 6.1% | 2 |
| City of Traverse City | 14,608 | 15,338 | 730 | 5.0% | 2 |
| Union Township | 439 | 411 | -28 | -6.4% | 3 |
| Whitewater Township | 2,576 | 2,793 | 217 | 8.4% | 2 |

Source: US Census, 2019 ACS Estimate

* 1. A new participant, 2. A continuing participant, and 3. A non-participant

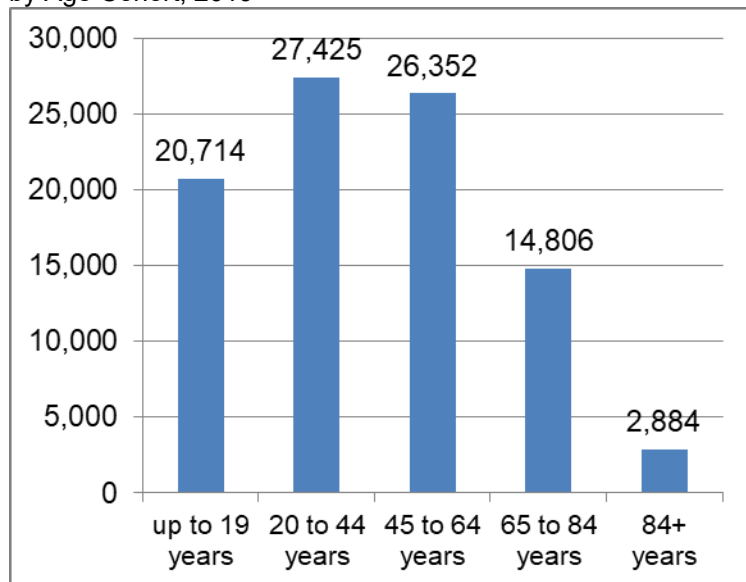
Like many northwest Michigan communities, Grand Traverse County experiences an influx of seasonal residents and tourists during the summer months. However, the decennial Census and the American Community Survey only consistently and comprehensively track the permanent population. The *Northwest Michigan Seasonal Population Analysis*, a 2014 report by the Michigan State University Land Policy Institute, analyzed the 2012 seasonal population for ten counties in northwest Michigan. The data collected for Monthly Permanent, Seasonal and Transient Residents by County estimates the population of Grand Traverse County increases by 19% in the month of July from 89,112 to 110,557. The following ten counties were included in the study: Antrim, Benzie, Charlevoix, Emmet, Grand Traverse, Kalkaska, Leelanau, Manistee, Missaukee, and Wexford.

Although the data in this report is several years old, anecdotally, the influx of seasonal residents and tourists has not decreased. While the population staying in overnight accommodations such as motels, hotels, and bed and breakfasts was considered, the boom of short-term rental accommodations changed the overnight stay market considerably. The implications of seasonal and short-term rental accommodations on hazard mitigation planning are included in discussions throughout this plan.

Age, Race & Disability

Understanding the age distribution and median age of Grand Traverse County can help identify social, economic, and public service needs in the community. The county's total 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 2 indicates the cohort group with the largest population is the 20 to 44 year old group. This is closely followed by the 45 to 64 years cohort. As shown in Figure 3, the median age (the midpoint where half the population is younger and half the population is older) of Grand Traverse County is older (42.8) than the State (39.7). The youngest community in the county is Blair Township with a median age of 34.4; the oldest community in the county is Peninsula Township with a median age of 55.2 (Figure 4).

Figure 2: Grand Traverse County Population by Age Cohort, 2019



Source: U.S. Census, 2000 Decennial Census and 2010 and 2019 ACS

Figure 3: Median Age Trend, 2000, 2010, and 2019

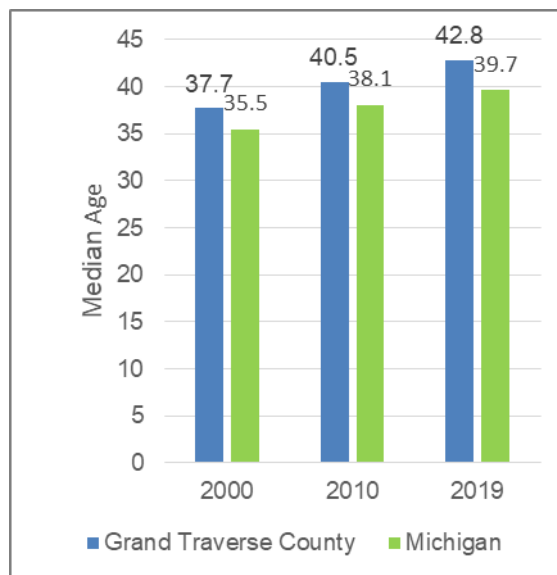
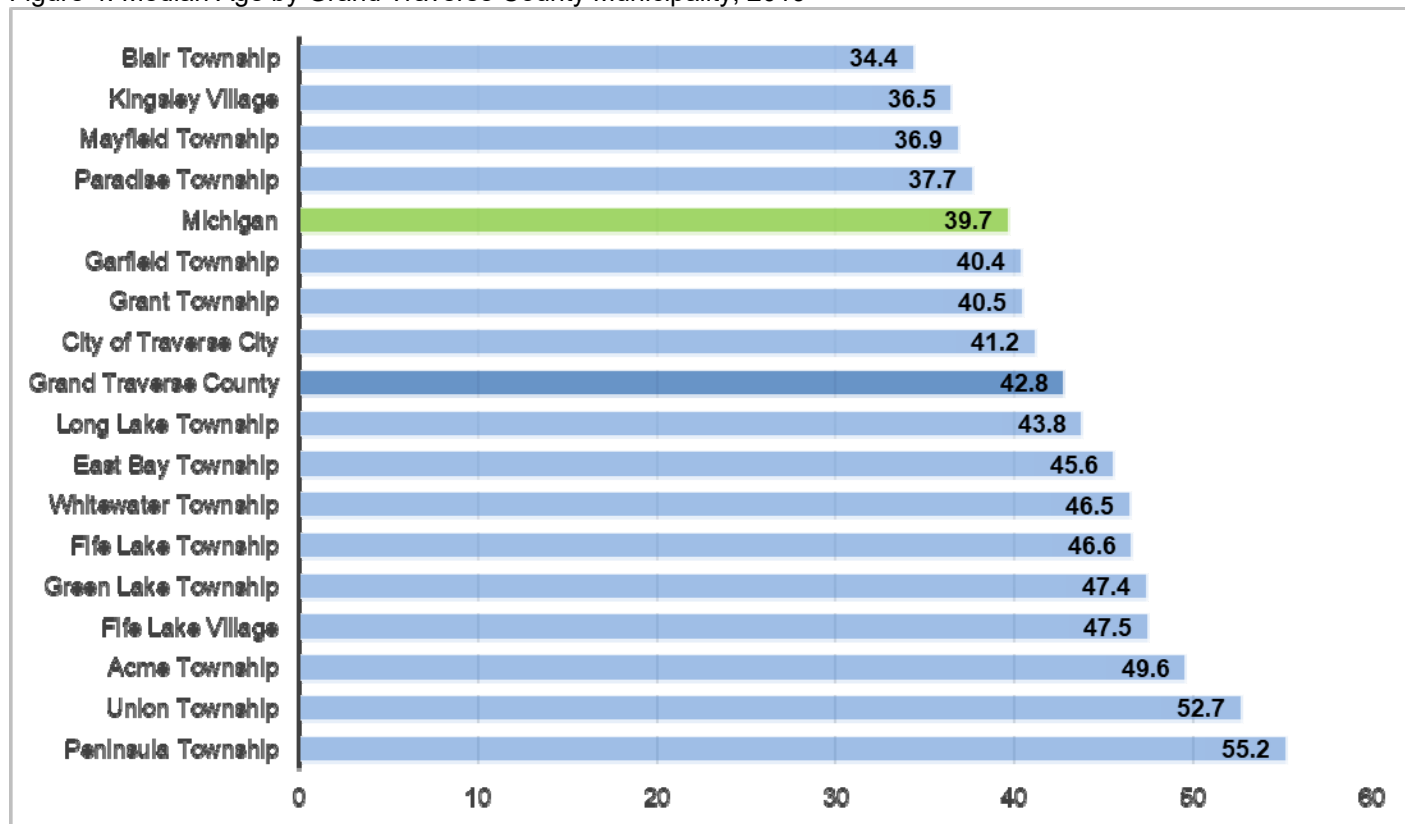


Figure 4: Median Age by Grand Traverse County Municipality, 2019



Source: U.S. Census, 2019 ACS Estimate

The racial makeup of Grand Traverse County is predominantly white. 94.8% of the population is white while the American Indian and Alaskan Native population is 1.0%, the Black population is 0.9%, and those of two or more races is 2.3%.

Table 4 represents the number of persons with a disability by age group. 11,288 or 12.4% of people are estimated to have a disability. 30.5% of persons 65 years and over are reported to have a disability.

Table 4: Persons with a Disability, 2019

| | |
|---|---------------|
| Total Civilian Noninstitutionalized Population | 90,808 |
| With a disability | 11,288 |
| Under 18 with a disability | 805 |
| 18 to 64 years with a disability | 5,223 |
| 65 years and over with a disability | 5,260 |

Source: US Census, 2019 ACS Estimate

Housing Characteristics and Development Trends

The average household size for County residents is 2.44, very similar to the State's average of 2.46. Grand Traverse County has an estimated 37,408 total households. The Census defines a household as all the people who occupy a single housing unit, regardless of their relationship to one another. In 2019, there were 43,942 housing units reported in the 2019 ACS 5-Year Estimates in Grand Traverse County (Table 5), of which 37,319 are occupied. Garfield Township has the largest percentage of housing units of all municipalities in the county (18.7%). 72% (31,837) of units are 1-unit, detached structures or commonly referred to as single-family homes. 57% of structures were built after 1980 (Table 6).

Table 5: Housing Units by Municipality, 2019

| Municipality | 2019 Housing Units (ACS) | Percent of 2019 Total |
|------------------------------|--------------------------|-----------------------|
| Grand Traverse County | 43,942 | |
| Fife Lake Village | 277 | |
| Kingsley Village | 586 | |
| | | |
| Acme Township | 2,634 | 6.0% |
| Blair Township | 3,629 | 8.3% |
| East Bay Township | 5,527 | 12.6% |
| Fife Lake Township | 936 | 2.1% |
| Garfield Township | 8,203 | 18.7% |
| Grant Township | 590 | 1.3% |
| Green Lake Township | 3,190 | 7.3% |
| Long Lake Township | 4,295 | 9.8% |
| Mayfield Township | 706 | 1.6% |
| Paradise Township | 1,873 | 4.3% |
| Peninsula Township | 3,371 | 7.7% |
| City of Traverse City | 7,325 | 16.7% |
| Union Township | 249 | 0.6% |
| Whitewater Township | 1,414 | 3.2% |

Source: US Census, 2019 ACS Estimate

Table 6: Year Structure Built, 2019

| Year Built | Housing Units | Percentage of Units |
|------------------------------|---------------|---------------------|
| Built 2010 or later | 2,740 | 6% |
| Built 2000 to 2009 | 7,503 | 17% |
| Built 1980 to 1999 | 15,047 | 34% |
| Built 1960 to 1979 | 10,140 | 23% |
| Built 1940 to 1959 | 3,662 | 8% |
| Built 1939 or earlier | 4,850 | 11% |
| Total Housing Units | 43,942 | |

Source: US Census, 2019 ACS Estimate

Housing Tenure, Table 7, summarizes the status of housing units, whether occupied or vacant, as well as the median housing value (\$212,500) and the median gross rent (\$ 951). Of the 43,942 total housing units, 37,319 or 84.93% are occupied.

Table 7: Housing Tenure, 2019

| Total housing units | 43,942 | % |
|-------------------------------|------------|--------|
| Occupied housing units | 37,319 | 84.93% |
| Owner-occupied | 28,480 | 87.10% |
| Median Housing Value | \$ 212,500 | |
| Renter-occupied | 8,839 | 12.90% |
| Median Gross Rent | \$ 951 | |
| Vacant housing units | 6,623 | 15.07% |

Source: US Census, 2019 ACS Estimate

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 8 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. Antrim County has the lowest average annual wage with \$ 33,081. As Grand Traverse County's northern neighbor, it is not unexpected to have residents of Antrim County travel to Grand Traverse County for work.

Table 8: Average Annual Wage by County, 2018

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

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

The Economic Profile of Grand Traverse County is further described in Table 9. 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 "Health care, social assistance" with 19.80% followed by "Retail trade" with 15.40%. The annual average wage for "Health care, social assistance" is \$ 54,081 while "Retail trade" is \$ 30,742. "Retail trade" ranks 17 out of the 19 wage figures available. The industry with the highest annual average wage is "Mining" with \$ 114,461 followed by "Utilities" with \$ 103,481. The "Mining, Quarrying, and Oil and Gas Extraction" sector comprises establishments that extract naturally occurring mineral solids, such as coal and ores; liquid minerals, such as crude petroleum; and gases, such as natural gas.

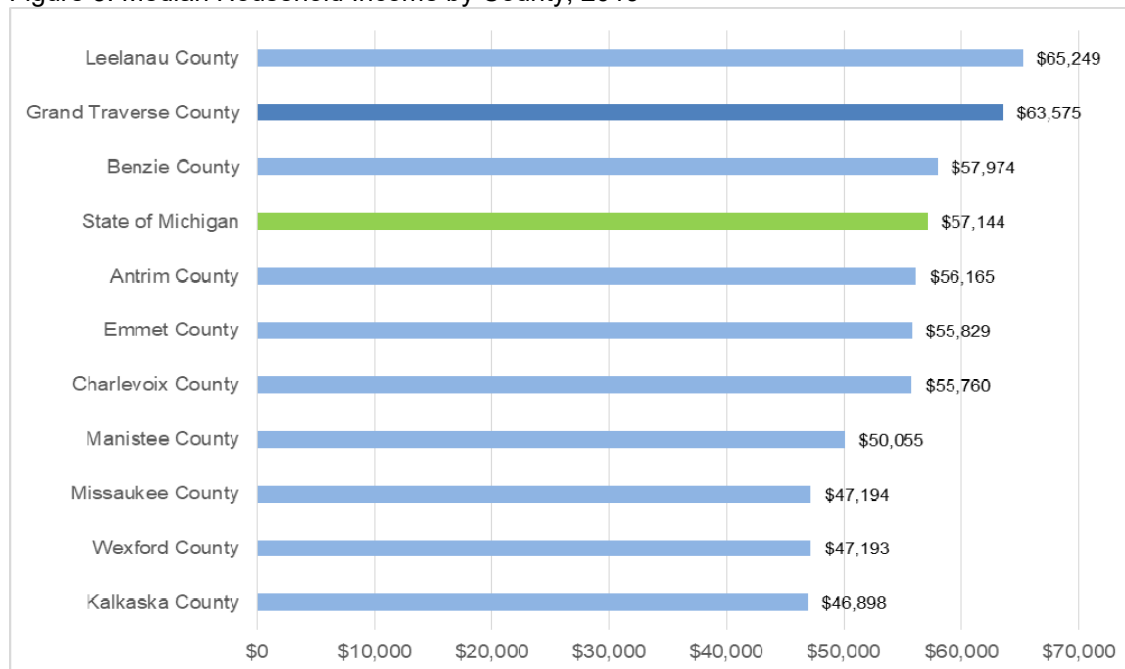
Table 9: Grand Traverse County Economic Distribution by Industry, 2018

| Industry Description | Establishments | Jobs | Percent Distribution | Annual Average Wage |
|--|----------------|--------|----------------------|---------------------|
| Total Covered Employment | 3,287 | 49,968 | 100% | \$44,562.00 |
| Agriculture, forestry, hunting | 38 | 345 | 0.70% | \$37,193.00 |
| Mining | 31 | 157 | 0.30% | \$114,461.00 |
| Construction | 354 | 2,602 | 5.20% | \$49,056.00 |
| Manufacturing | 203 | 5,236 | 10.50% | \$51,684.00 |
| Wholesale trade | 114 | 1,306 | 2.60% | \$55,392.00 |
| Retail trade | 479 | 7,704 | 15.40% | \$30,742.00 |
| Transportation, warehousing | 73 | 922 | 1.80% | \$47,573.00 |
| Utilities | 11 | 220 | 0.40% | \$103,481.00 |
| Information | 76 | 872 | 1.70% | \$52,805.00 |
| Finance and Insurance | 154 | 2,174 | 4.40% | \$80,220.00 |
| Real Estate, rental, leasing | 135 | 573 | 1.10% | \$40,845.00 |
| Professional, technical services | 373 | 1,970 | 3.90% | \$60,399.00 |
| Administrative, waste services | 178 | 1,394 | 2.80% | \$37,186.00 |
| Educational services | 50 | 1,111 | 2.20% | \$33,175.00 |
| Health care, social assistance | 324 | 9,913 | 19.80% | \$54,081.00 |
| Arts, Entertainment, recreation | 65 | 619 | 1.20% | \$24,621.00 |
| Accommodation and food services | 258 | 5,986 | 12.00% | \$20,599.00 |
| Other services, exc. Public admin. | 277 | 1,581 | 3.20% | \$31,971.00 |
| Public administration | 56 | 1,379 | 2.80% | \$51,527.00 |
| Other includes (private, management of business, and unallocated) | | | | |

Source: 2021 Comprehensive Economic Development Strategy, Networks Northwest

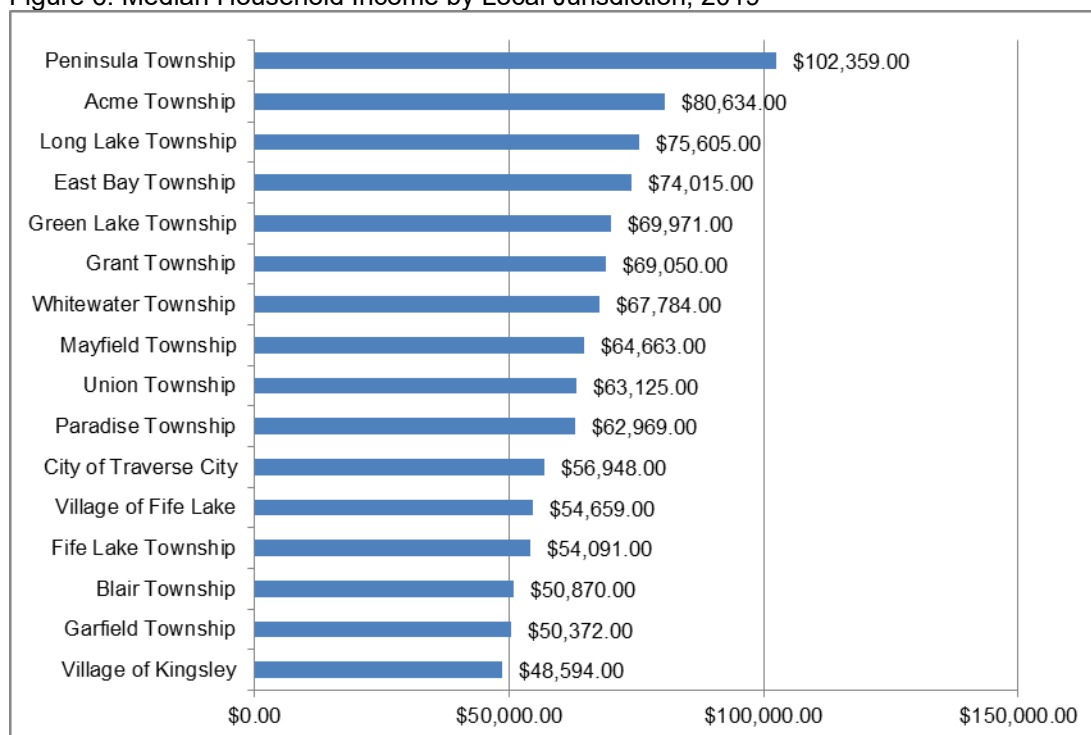
Figures 5 and 6 present a comparison of the median household income (MHI) across the ten county region, the State of Michigan, and local jurisdictions. Grand Traverse County has the second highest median household income (\$ 63,575) behind Leelanau County (\$ 65,249). The economic profile can be further described by considering the cost of housing, transportation, and other goods and services. The budgeting rule of thumb has been 30 percent – that a household should spend no more than 30 percent of its income on housing costs. Considering the MHI of Grand Traverse County over twelve months, a household is earning \$5,298 per month. The average household can afford a \$1,589 monthly rent or mortgage payment. The estimated median gross rent in Grand Traverse County is within this range. However, anecdotally, the cost of rent is much higher and demand 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 5: Median Household Income by County, 2019



Source: US Census, 2019 ACS Estimate

Figure 6: Median Household Income by Local Jurisdiction, 2019



Source: US Census, 2019 ACS Estimate

The following tables describe the population with the lowest incomes. It is estimated, in 2019, that 9.6% of all people in the county lived at or below the poverty level (Table 10). The Census describes poverty thresholds differently based on the size of the family and the number of related children living together. 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 living. Based on a calculation of the actual costs of basic necessities such as child care, transportation, housing, and healthcare, the report establishes the ALICE Threshold, “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 11 identifies the number of ALICE and poverty households for each municipality in the county.

Table 10: Poverty Statistics, 2019

| Poverty | Statistics |
|--|------------|
| Families in poverty | 6.3% |
| Families in poverty with related children | 11.2% |
| Family income less than \$15,000 | 4.1% |
| All people in poverty | 9.6% |

Source: US Census, 2019 ACS Estimate

Table 11: United Ways of Michigan ALICE Report Findings, 2019¹

| ALICE and Poverty Households | Total Households | % of HH in Poverty and ALICE |
|------------------------------|------------------|------------------------------|
| Acme Township | 2,039 | 19% |
| Blair Township | 3,204 | 43% |
| East Bay Township | 4,575 | 27% |
| Fife Lake Township | 618 | 40% |
| Garfield Township | 7,666 | 43% |
| Grant Township | 451 | 30% |
| Green Lake Township | 2,525 | 30% |
| Long Lake Township | 3,589 | 19% |
| Mayfield Township | 565 | 31% |
| Paradise Township | 1,632 | 37% |
| Peninsula Township | 2,554 | 22% |
| City of Traverse City | 6,697 | 40% |
| Union Township | 175 | 30% |
| Whitewater Township | 1,029 | 24% |
| Grand Traverse County | 37,319 | 33% |

¹ Michigan Association of United Ways. *ALICE in Michigan: A Financial Hardship Study*. 2021. file:///C:/Users/jenniferneal/Downloads/2021ALICEReport_MI_FINAL.pdf

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 are represented on the Vulnerable Populations and Hazard Areas Map in Appendix A. Those locations included on the map were specifically mentioned during public input sessions. There may be additional locations of vulnerable populations that are not listed.

As shown in Table 9, the primary economic generators in Grand Traverse County are health care, social assistance, and retail trade. These industries are primarily located in Traverse City, Garfield Township, East Bay, and Acme Townships. Specific locations include Munson Healthcare (hospital), the central business district in downtown Traverse City, and other established and growing commercial centers in the area. The built environment of north-central Grand Traverse County supports housing and other commercial and professional services for more than one-third of county residents. This area is critically important both economically and as a resource for community members. It is vulnerable to all countywide hazards and flood events. This is further detailed in the hazard analysis. Infrastructure points (stream crossings, bridge conditions, and dams) and their ratings are mapped on the Infrastructure Map in Appendix A.

The natural environment is the primary feature residents choose to live in northwest Michigan and the primary feature visitors choose to vacation in northwest Michigan. Grand Traverse County is home to forest lands, water features, and shorelines and all of the wildlife within them 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 environments may decrease the chances for certain species' survival.

Additionally, countywide critical infrastructure is represented on the Critical Infrastructure Map, shown below. Task Force members and community stakeholders identified the critical facilities and infrastructure on the base map and provided updated GIS shape files for mapping purposes. The Critical Infrastructure Points Map is in Appendix A. Table 12 is a summary of critical infrastructure points in Grand Traverse County:

Table 12: Critical Facilities and Infrastructure

| No. of Facilities (TOTAL) | FACILITY TYPE |
|------------------------------|---|
| 27 | Commercial <ul style="list-style-type: none"> • Food processing, packaging, storage • Banking and credit • Public gathering facilities |
| 4 | Communications |
| 22 | Emergency Services <ul style="list-style-type: none"> • Law enforcement • Fire and emergency services |
| 21 | Energy <ul style="list-style-type: none"> • Electricity • Natural gas |
| 25 | Government Facilities |
| 16 | Healthcare 300.8 active physicians per 100,000 people ² (Michigan) <ul style="list-style-type: none"> • Hospital – Munson Medical Center • Extended care facilities • Local care facilities |
| 3 | Industry |
| 37 | School <ul style="list-style-type: none"> • Higher Education • Kindergarten - highschool |
| 4 | Transportation <ul style="list-style-type: none"> • Airports <ul style="list-style-type: none"> ◦ Traverse City Cherry Capital Airport – 602,626 passenger movements (2021) ◦ Green Lake Township Airport • Mass Transit <ul style="list-style-type: none"> ◦ BATA Bus • Mail processing |

Source: Grand Traverse County Emergency Management

² Gooch, Kelly & Plescia, Marissa. "States ranked by active physicians per capita." Becker's Hospital Review. 2022. <https://www.beckershospitalreview.com/workforce/this-state-has-the-most-physicians-per-capita.html>

Historical Analysis

The Historical Analysis of Grand Traverse County weather-related 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. There have been eight distinct disaster declarations that have involved Grand Traverse County (Table 13). These events are further included in the hazard analysis for individual event types.

Table 13: Presidential and Governor Declared Disasters

| Date Declaration | Type of Incident | Affected Area | Type of Declaration/ Fed ID # | Notes |
|-----------------------|-----------------------------------|---|---|--|
| 3/1/2020 | COVID-19; 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 | |
| 8/2/2015 | Thunderstorms | City of Traverse City; Townships of Acme, East Bay, Garfield, Long Lake, Peninsula, Whitewater; Grand Traverse County; Leelanau County. | Governor Declared Emergency | Extensive debris cleanup |
| 9/4/2005 and 9/7/2005 | Hurricane (Katrina) Evacuation | Statewide | Governor Declared Disaster and Presidential Declared Emergency (3225) | 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. |
| 2/21/1986 | Great Lakes Flooding, Wave Action | Grand Traverse and other counties | Governor Declared Disaster | |
| 1/26-27/1978 | Blizzard, Snowstorm | Statewide | Presidential Declared Emergency (3057); Governor Declared Disaster | |
| 3/2/1977 | Drought | Grand Traverse and 43 other counties | Presidential Declared Emergency (3035) | |

Source: FEMA

Hazard Descriptions

Grand Traverse 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 Grand Traverse County Emergency Management 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. Data is collected from the National Oceanic and Atmospheric Administration's National Centers for Environmental Information data center (NOAA).
- Probability of future events is the likelihood of the hazard occurring in the future and can be described in a variety of ways. Probability may be defined using historical frequencies or statistical probabilities.
- Vulnerability assessment accounts for the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas and provides an estimate of the potential dollar losses to vulnerable assets identified.

Data for natural hazard events in Grand Traverse 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:

- Weather/Climate Events, Information, Assessments
- Climatology and Extreme Events
- NOAA Storm Event Database; started at 1950 to present, however, information for various events is limited The database utilizes local storm reports, damage reports, events checked for Grand Traverse County included: Drought (Drought), Flood (Flash Flood, Flood), Shoreline (Lakeshore) Flood, Hail (Hail), Extreme Winter Weather (Blizzard, Extreme Cold/Wind Chill, Freezing Fog, Frost/Freeze, Heavy Snow, Ice Storm, Lake-effect Snow, Sleet, Winter Storm, Winter Weather), Tornado (Tornado, Funnel Cloud), Thunderstorm and High Wind (Heavy Rain, High Wind, Lightning, Strong Wind, Thunderstorm Wind), Wildfire (Wildfire)

The *Michigan Hazard Analysis* report by the Michigan Department of State Police in 2019 was used to collect data on wildfires. The National Inventory of Dams was used to collect information on countywide dams.

Event data is added on a rolling basis, and thus the database is always being added to. The most up to date information was collected, but as events occur the database will change. Thus, 2022 is likely only partially represented. As of 5/31/2022, 288 events were reported between 02/01/1950 and 02/28/2022 (26326 days). Those events as well as the emergency declaration events are included in the hazard analysis. The hazard analysis groups the events into the following categories:

Table 14: Reported Grand Traverse County Event by Type, 1950-2022

| Type of Event | # of Events | Event Location | Priority |
|---|-------------|---|----------|
| Extreme Winter Weather (Inc. Ice, Snow, Blizzard) | 130 | Countywide | 3 |
| Thunderstorms and Severe Winds | 90 | Countywide | 2 |
| Hail | 40 | Countywide | |
| Riverine and Urban Flooding | 12 | Acme, Blair, East Bay, Fife Lake, Garfield, Grant, Green Lake, Long Lake, Mayfield, Paradise, Union, and Whitewater Townships, Village of Kingsley, Village of Fife Lake, and City of Traverse City | 1 |
| Lightning | 6 | Countywide | |
| Tornado | 4 | Countywide | |
| Extreme Temperatures (Heat / Cold) | 2 / 3 | Countywide | |
| Drought | 2 | Countywide | 4 |
| Wildfire | 435 | MDNR Lands | |
| Shoreline Hazard(Coastal Flooding / Coastal Recession) | 3 | Acme, East Bay, Peninsula Townships and City of Traverse City | 5 |
| Infectious Disease | 1 | Countywide | |
| Invasive Species | 1 | Countywide | |

Source: NOAA: National Centers for Environmental Information and MDNR

Economic Impact Analysis

The economic impact of *reported* Grand Traverse County natural hazards is \$17,402,500 in property damages and \$20,001,000 in crop damages since 1950 (Table 15). Events such as hail likely cause numerous residents small amounts in property damage, but go unreported. The total reported Damaging Events' Costs recorded since 1950 with the National Oceanic and Atmospheric Administration for Grand Traverse County are as follows:

Table 15: Damage Cost by Event Type

| Grand Traverse County | Property Damage Cost | Crop Damage Cost |
|------------------------------------|----------------------|---------------------|
| Extreme Winter Weather | \$618,000 | \$20,000,000 |
| Thunderstorm and High Wind | \$13,468,500 | \$1,000 |
| Hail | \$0 | \$0 |
| Riverine and Urban Flooding | \$2,339,000 | \$0 |
| Lightning | \$170,000 | \$0 |
| Tornado | \$775,000 | \$0 |
| Extreme Temperatures | \$0 | \$0 |
| Drought | \$0 | \$0 |
| Wildfire | \$0 | \$0 |
| Shoreline Hazards | \$32,000 | \$0 |
| Public Health Emergency | NA | NA |
| Invasive Species | NA | NA |
| TOTAL | \$17,402,500 | \$20,001,000 |

Source: NOAA: National Centers for Environmental Information and MDNR

Table 16 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). Population data is collected from the US Census, 2019 ACS data. According to the 2014 Northwest Michigan Season Population Analysis, assume a 19% increase to account for the annual average seasonal population within the county.

Table 16: Geographic Economic Impact by Event

| Hazard Event | Geography | Population Totals | State Equalized Value |
|--|--|-------------------|-----------------------|
| Extreme Winter Weather, Thunderstorm, Hail, Lightning, Tornado, Extreme Temperatures, Drought | Grand Traverse County | 92,181 | \$ 7,671,677,680 |
| Inland Flooding | Boardman River and other inland lake jurisdictions | 86,405 | \$ 22,118,365.90 |
| Wildfire | Areas within Jack Pine forest | 22,028 | \$ 654,119,413.10 |
| Shoreline Hazards | Acme, East Bay, and Peninsula Townships, City of Traverse City | 37,300 | \$ 218,792,198.29 |

Source: 2019 ACS Estimate, Grand Traverse County Equalization

Extreme Winter Weather

National Weather Service defined as: *phenomenon (such as snow, sleet, ice, wind chill) that impacts public safety, transportation, and/or commerce.* The Extreme Winter Weather category 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, Michigan has 360 snowstorms with 0.1 average annual deaths, 0.1 average annual injuries, and \$1.9 million in average annual property and 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 in the northwest region of the Lower Peninsula.

Ice and Sleet Storms are storms that 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. Often times, ice storms are accompanied by snowfall, which sometimes causes extensive damage, treacherous conditions, and power loss. On the other hand, sleet storms are small ice pellets that bounce when hitting the ground or other objects. It does not stick to trees or wires, but can cause hazardous driving conditions. When electric lines are down, households are inconvenienced, and communities experience economic loss and the disruption of essential services.

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 damage.

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 Grand Traverse County is at risk to the occurrence and impacts from extreme winter weather; the county is more susceptible to lake-effect snow due to proximity to Lake Michigan.

One of the highest-impact snowstorms in recent memory pounded 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 events accounts for \$600,000 in reported damages.

The frost/freeze event on listed in Table 17 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 stretch of unprecedented warmth in mid-March, which included five consecutive 80-degree days (17th-21st). 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.

Extent

Snowstorms can be measured based on snowfall accumulations or damages. The average annual snowfall in Grand Traverse County is 101.4 inches. On March 2, 2012 Grand Traverse County had \$600,000 in property damages and \$5,000,000 in crop damage caused by heavy snow. Extreme winter weather events in total caused \$618,000 in property damages and \$20,000,000 in crop damages between 1950-2021.

Previous Occurrences

Since 1950, there have been 130 extreme winter weather events, including heavy snowstorms, ice storms, frost/freeze, blizzards, winter weather, and winter storms reported in Grand Traverse County (Table 17). In 1978, Grand Traverse County 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 most frequent recorded event 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 17: Extreme Winter Weather Previous Occurrences, 1950-2022

| Event Type | Number of Events | Property Damage | Crop Damage | Event Year(s) |
|------------------|------------------|-------------------|----------------------|------------------------------------|
| Winter Weather | 1 | \$ - | \$ - | 2006 |
| Winter Storm | 55 | \$ 12,000 | \$ - | 1997-2022 |
| Ice Storm | 4 | \$ - | \$ - | 2001, 2002, 2005, 2008 |
| Heavy Snow | 44 | \$ 600,000 | \$ 5,000,000 | 1996-2020 |
| Blizzard | 6 | \$ 6,000 | \$ - | 1978, 1997, 1998, 1999, 2002, 2019 |
| Frost/Freeze | 1 | \$ - | \$ 15,000,000 | 2012 |
| Lake-Effect Snow | 19 | \$ - | \$ - | 2006-2019 |
| TOTAL | 130 | \$ 618,000 | \$ 20,000,000 | |

Source: NOAA: National Centers for Environmental Information

Probability of Future Events and Vulnerability Assessment

Since 1950, Grand Traverse County has had 130 extreme winter weather events. This averages to about two events every year. The probability of an event occurring in future years 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. Grand Traverse County remains a leading producer of fruits, tree nuts, and berries with over \$19 million products sold. A frost/freeze event of the magnitude in 2012 would decimate more than three quarters of the products sold today. This would be a huge blow to an economy that is also heavily reliant on agriculture and agri-tourism (wineries, orchards, etc.).

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 work remotely from highly desirable northern and coastal communities like those in Grand Traverse County. Many aspects of Grand Traverse County, including natural wooded areas, 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. Winter-related events cause difficult driving conditions and in the event of an emergency, can make travel increasingly difficult for emergency personnel who are dispatched to rural areas.

Thunderstorms and Severe Winds

Severe thunderstorms are weather systems accompanied by strong winds (at least 56mph), lightning, heavy rain (that could cause flash flooding), hail (at least 3/4:" diameter), or tornadoes. 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.

Severe wind events are included in this category. Long-lived wind events associated with fast-moving severe thunderstorms are known as a derecho. A derecho often occurs during the spring or summer; however, it can occur any time of the year. According to The National Severe Storms Laboratory, winds in excess of 58 miles per hour are considered to be a derecho. 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 Grand Traverse County is at risk to the occurrence and impacts from thunderstorms and severe winds.

The most damaging event occurred on August 2, 2015. A historic severe weather outbreak in northern Michigan, as multiple waves of severe thunderstorms crossed the region. A passing cold front would finally end the activity during the evening hours. This episode featured widespread straight-line wind damage in parts of northwest lower Michigan, and the largest hail on record in northern Michigan in Ogemaw County. This event resulted in \$ 7,800,000 in property damages.

\$ 1,000 in crop damages was reported during an event on August 27, 2004. The narrative describes the event, "Thunderstorms rolled across Lake Michigan into Northern Lower Michigan during the overnight hours. A few of these storms produced damaging wind gusts."

Extent

Thunderstorms can be measured based on wind speed or damages. The average wind speed for events in Grand Traverse County is 52 knots. Grand Traverse County had \$13,468,500 in property damages and \$1,000 in crop damages caused by thunderstorms and severe winds.

Previous Occurrences

Since 1950, there have been 90 thunderstorm events accompanied by strong winds and severe wind events reported in Grand Traverse County. In 2015, Grand Traverse County received a Governor Emergency Declaration for a thunderstorm.

Table 18: Thunderstorm and Wind Events Previous Occurrences, 1950-2021

| Event Type | Number of Events | Property Damage | Crop Damage | Event Year(s) |
|---------------------|------------------|----------------------|-----------------|--|
| Thunderstorm | 81 | \$ 13,303,000 | \$ 1,000 | 1950-2021 |
| Wind | | | | |
| High Wind | 8 | \$ 165,000 | \$ - | 1998, 2003, 2005, 2005, 2010, 2020, 2021, 2021 |
| Strong Wind | 1 | \$ - | \$ - | 2001 |
| TOTAL | 90 | \$ 13,468,500 | \$ 1,000 | |

Source: NOAA: National Centers for Environmental Information

Probability of Future Events and Vulnerability Assessment

Since 1950, Grand Traverse County has had 90 thunderstorm events accompanied by strong winds. This averages to 1.25 events every year. The probability of an event occurring in future years is 100 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 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. Mobile home parks, campgrounds, construction areas, institutions (schools, places of worship, etc.), and numerous festivals that draw a large number of tourists such as the National Cherry Festival were identified as specific areas of concern.

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.

According to the 2012 Michigan Hazard Analysis, the National Weather Service began recording hail activity in Michigan in 1967. 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, 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 Grand Traverse County is at risk to the occurrence and impacts from hailstorms. According to the National Weather Service, Grand Traverse County is in an area of the United States that has on average two days of hailstorm events per year.

During one particularly strong event on July 17, 2006, hail damage was significant. 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. The reported hail size was .88", roughly the size of a nickel.

Extent

Hailstorms are categorized using the TORRO Hailstorm Intensity Scale, which ranges from H0 (Hard Hail) to H10 (Super Hailstorms) (Table 19). According to the NOAA National Centers for Environmental Information, the approximate size of hail is described as follows:

Table 19: 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 |
| 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 extent hail reported in Grand Traverse County was 2 inches on July 7, 1980, which correlates to H6 (destructive) on the TORRO Hailstorm Intensity Scale. According to the scale, hailstones of this size are equivalent to a hen egg and can damage ground aircraft and brick walls. Details pertaining to this event are minimal.

Previous Occurrences

Between 1950 and 2021, Grand Traverse County had 40 hailstorms reported to NOAA (Table 20). There are no damages, injuries, or deaths attributed to hail.

Table 20: Hail Events, 1950-2022

| Location | Date | Magnitude |
|--------------------|-----------|-----------|
| Grant Township | 9/7/1958 | 0.75 |
| Long Lake Township | 5/21/1970 | 1.75 |
| Grant Township | 5/18/1971 | 0.75 |
| Garfield Township | 4/18/1975 | 1.5 |
| Fife Lake | 7/7/1980 | 2 |
| Blair Township | 7/14/1982 | 1 |
| Garfield Township | 3/27/1991 | 0.75 |
| Traverse City | 4/24/1993 | 1 |
| Bates | 4/24/1993 | 1 |
| Traverse City | 4/7/1999 | 0.75 |
| Traverse City | 6/9/2000 | 1.75 |
| Traverse City | 9/1/2000 | 1 |
| Fife Lake | 6/8/2003 | 0.75 |
| Traverse City | 8/28/2003 | 0.88 |
| Interlochen | 9/7/2005 | 0.88 |
| Traverse City | 6/28/2006 | 0.88 |
| Kinglsey | 6/28/2006 | 0.75 |
| Old Mission | 7/17/2006 | 0.88 |
| Traverse City | 10/3/2006 | 1.25 |
| Traverse City | 6/15/2008 | 1.25 |

| | | |
|---------------------|------------|------|
| Williamsburg | 6/15/2008 | 1 |
| Traverse City | 7/28/2010 | 0.88 |
| Hannah | 4/10/2011 | 0.88 |
| Old Mission | 6/8/2011 | 1.25 |
| Old Mission | 6/8/2011 | 1 |
| Acme | 5/3/2012 | 1 |
| Williamsburg | 5/20/2012 | 1.25 |
| Fife Lake | 5/28/2012 | 1 |
| Interlochen | 7/26/2014 | 0.88 |
| Kinglsey | 7/26/2014 | 0.75 |
| (TVC) Traverse City | 7/27/2014 | 0.75 |
| Grawn | 7/27/2014 | 1 |
| Williamsburg | 8/14/2015 | 0.75 |
| Fife Lake | 8/14/2015 | 1 |
| (TVC) Traverse City | 7/8/2016 | 1 |
| Kinglsey | 4/20/2017 | 1 |
| Interlochen Arpt | 7/31/2017 | 1 |
| Grawn | 5/25/2019 | 0.75 |
| Traverse City | 5/25/2019 | 1.25 |
| Grawn | 10/13/2020 | 0.88 |

Source: NOAA: National Centers for Environmental Information

Probability of Future Events and Vulnerability Assessment

With 40 events reported in the past 72 years, Grand Traverse County has a 55% chance of a major hailstorm every 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, and cars. Several manufactured home parks are located throughout the county and are more susceptible to hail damage. 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

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.

Urban flooding occurs when water flows into low-lying areas because it does not have a place to go. 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.

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. Grand Traverse County experienced twelve flood events since 1999, with \$2,361,000 in property damages. The largest was a failure by a temporary dam structure in 2012 which impacted 53 homes.

Location

The City of Traverse City is the urbanized center of the county and the most likely location to experience both riverine and urban flooding. Ten of the twelve flooding events occurred in or near Traverse City. Not only does the city have a significant amount of impervious surface coverage, but also the county's major river system, the Boardman (Ottaway) River, travels north through the city to reach the Grand Traverse Bay. Boardman River starts in Kalkaska County to the east, and travels through Whitewater, Union, Fife Lake, Acme, East Bay, Paradise, Garfield, Blair, and Mayfield Townships and Village of Fife Lake, and Village of Kingsley. These townships and villages are likely to experience riverine flooding from the Boardman River tributaries. Long Lake, Green Lake, and Grant Townships may experience flooding from inland lakes and surrounding tributaries. 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.

The Boardman-Ottaway River historically had several dams located in Grand Traverse County. The Brown Bridge Dam, Boardman Dam, and Sabin Dam have been removed and portions of the river are restored to its natural channel. The Union Street Dam is the only remaining high hazard potential dam in the county. The Union Street Dam is located between S. Union Street and Cass Street, south of E. State Street in downtown Traverse City. This is the heart of the central business district which is the economic generator for the county as well home to many senior and economically disadvantaged residents. In addition to flooding businesses and residences on the west side of Traverse City, a dam failure would hit several critical pieces of infrastructure including a transportation facility, schools, and the post office. Hannah Park is directly downstream from the Union Street Dam and would help dissipate water, but largely, downtown would be inundated with water with little means to reach Grand Traverse Bay.

On October 6, 2012, flash flooding occurred along the Boardman River, downstream of the Brown Bridge Dam. A temporary dam and de-watering structure was in place alongside the Brown Bridge Dam on the Boardman River. This temporary dam was to assist in drawing down the small lake (Brown Bridge Pond) behind the dam, prior to the permanent removal of the Brown Bridge Dam. This temporary dam failed on the morning of October 6th, and by late afternoon, most of the remaining water in Brown Bridge Pond had been released downstream. Within an hour, road closing occurred along Garfield and River Roads, and homes were evacuated along the river between Garfield and Keystone Roads. Eventually, 53 homes were impacted, with varying degrees of damage. Environmental damage, related to sediment deposition and fish kills, was possible. This event resulted in \$1,800,000 in damages.

Extent

In Grand Traverse County, flood extent can be measured by the amount of property damage and accumulation of rainfall. On May 28, 2020, the Traverse City experienced a flood event that caused \$ 310,000 in damages. Munson Hospital measured 3.12 inches of rain during the day on the 28th. Most of this was dumped in a short period of time, early in the afternoon. This resulted in a small area flash flooding in downtown Traverse City and on the near west side. Water rose up to three feet high on some roads and parking lots and in a few spots the water was higher. Some people were trapped in vehicles and required rescue. Numerous vehicles were heavily damaged. The basement of Munson Hospital flooded. Kids Creek rose out of banks, flooding roads and some buildings.

In a separate event, on June 10, 2020, Munson Hospital and Kids Creek were again flooded after quick hitting flash flooding developed in the area, in particular, on the near west side of the city. Training thunderstorms brought heavy rain to parts of Traverse City. Munson Hospital measured 2.45 inches of rain during the afternoon and evening. Kids Creek overflowed its banks, and Cedar Street and other roads near Munson Hospital were flooded. This event was extremely similar, though not quite as hard hitting as the flash flood in the same location on May 28, 2020. This event caused \$90,000 in damages.

Other road flooding occurred on October 23, 2020 following very heavy rain across the region. Logan's Landing along the Boardman River saw the parking lot flooded. Eleventh Street and Division Street saw flooding, as did West Front Street and Madison Drive. Flooding also occurred in the Three Mile Road area, near Mitchel Creek. This event caused \$35,000 in damages.

Previous Occurrences

Though not a common occurrence in the county, riverine flooding has occurred when spring snowmelt coincides with prolonged, intense rains. On April 4, 2014 a tardy spring thaw was enhanced by a widespread one to two inches of rain that fell on the 13th and 14th. This resulted in areas of high water in the mid portion of the month. The Boardman River flooded a few homes near Boardman Plains Road. In addition, Townline Road south of South Airport Road was closed by floodwaters. This event caused \$75,000 in damages. 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. Overall flooding event caused \$2,361,000 in property damages, however, no deaths or injuries occurred from these events (Table 21).

Table 21: Fluvial and Pluvial Flood Events

| LOCATION | DATE | EVENT TYPE | PROPERTY DAMAGE | CROP DAMAGE | FLOOD CAUSE |
|-----------------------|------------|-------------|-----------------------|-------------|------------------------|
| Traverse City | 7/6/1999 | Flash Flood | \$0.00 | 0 | |
| Traverse City | 7/27/2000 | Flash Flood | \$0.00 | 0 | |
| COUNTYWIDE | 9/1/2000 | Flash Flood | \$0.00 | 0 | |
| NORTH CENTRAL PORTION | 4/12/2001 | Flash Flood | \$0.00 | 0 | |
| Mayfield | 10/6/2012 | Flash Flood | \$1,800,000.00 | 0 | Dam / Levee Break |
| Traverse City | 11/17/2013 | Flash Flood | \$14,000.00 | 0 | Heavy Rain |
| Blair Township | 4/14/2014 | Flood | \$75,000.00 | 0 | Heavy Rain / Snow Melt |
| Traverse City | 5/28/2020 | Flash Flood | \$310,000.00 | 0 | Heavy Rain |
| Traverse City | 6/10/2020 | Flash Flood | \$90,000.00 | 0 | Heavy Rain |
| (TVC) Traverse City | 7/18/2020 | Flash Flood | \$15,000.00 | 0 | Heavy Rain |
| Traverse City | 10/22/2020 | Flood | \$35,000.00 | 0 | Heavy Rain |
| Traverse City | 7/24/2021 | Flash Flood | \$0.00 | 0 | Heavy Rain |
| TOTAL | | | \$2,361,000.00 | 0 | |

Source: NOAA: National Centers for Environmental Information

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.

Since 1950, Grand Traverse County has had 12 flooding events. There is a 17% chance of an annual flood. 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. Downtown Traverse City is also the epicenter for festivals and events such as the National Cherry Festival which takes place mid-summer over the Fourth of July holiday. The city's Downtown and Central Business District is located at the mouth of the Boardman River. Dense, urban development, including historical resources, vulnerable impoverished and elderly independent and assisted living facilities are located to the east and west of Boardman Lake. City infrastructure is also vulnerable where it intersects with the Boardman River. Erosion has caused the support to wear away leaving city water and sewer pipes exposed. Additionally, the Union Street Dam located in Downtown Traverse City is a high hazard potential dam.

Garfield Township, the most populated jurisdiction in the county, is located just south of Traverse City. Boardman Lake is located in the north-central portion of the township and the Boardman River traverses through to the south. Garfield Township has a number of elder care and independent living facilities and is expecting more residential development. Inadequate drainage infrastructure under South Airport road near the commercial/retail development Logan's Landing are causing frequent flooding of the road and nearby property, especially during heavy rain events and the spring snow melt season. Kids Creek is located in a heavily developed area of the township and experiences flooding regularly. Additionally, General Growth Dam near the Grand Traverse Mall is a significant hazard potential dam.

Specific flood hazard areas were identified during public meetings and are identified on the Hazard Areas Map provided in Appendix A. Flood hazard information may be obtained from the Flood Rate Insurance Maps (FIRM) available for jurisdictions. In order to delineate potential flood plain areas (seasonal floodplains) for each jurisdiction, Networks Northwest overlaid wetland, soils, and elevation data to determine the most likely flood prone areas. Once overlaid; isolated polygons (areas) were deleted in order to show a more accurate representation of potential flood prone areas along lakes, rivers, and streams. Sources: Temporary/Seasonally Flooded Areas data are from the National Wetland Inventory of the US Fish and Wildlife Service; Hydric soils data are from the county digital soil surveys (were available); and Digital Elevation Model data are from the Center for Geographic Information, Michigan Department of Information Technology.

NFIP Participation Status

Grand Traverse County participating communities received updated digital flood maps in 2018. The Village of Kingsley and Green Lake Township are sanctioned, and Union Township is sanctioned and suspended. These sanctioned and suspended communities did not achieve consensus to approve the maps, and therefore, are nonparticipants.

The county has only one property that has been identified by the National Flood Insurance Program as having suffered repetitive flood losses. The property is a single-family home located in Blair Township. It had been damaged by floods in 2012 and 2014, with similar amounts of damage occurring during each event. This property should be prioritized for flood mitigation activities, in order to prevent or reduce such losses in the future.

Table 22: NFIP Participation

| Municipality | NFIP | FIRM Effective Date | Sanctioned Date |
|------------------------------|-------------|----------------------------|------------------------|
| Acme Township | P | 8/28/2018 | |
| Blair Township | P | 8/28/2018 | |
| East Bay Township | P | 8/28/2018 | |
| Fife Lake Township | NP | | |
| Village of Fife Lake | NP | | |
| Garfield Township | P | 8/28/2018 | |
| Grant Township | NP | | |
| Green Lake Township | NP | 8/28/2018 | 8/28/2019 |
| Village of Kingsley | NP | 8/28/2018 | 8/28/2019 |
| Long Lake Township | P | 8/28/2018 | |
| Mayfield Township | NP | | |
| Paradise Township | P | 8/28/2018 | |
| Peninsula Township | P | 8/28/2018 | |
| City of Traverse City | P | 8/28/2018 | |
| Union Township | NP | 8/28/2018 | 8/29/2018 |
| Whitewater Township | P | 8/28/2018 | |

Source: FEMA Community Status Book Report

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 Grand Traverse County is at risk to the occurrence and impacts from lightning.

Extent

Since 1950, six lightning events have been reported to NOAA in Grand Traverse County. Those six events have caused \$170,000 in property damages, one injury, and one fatality. The fatality and injury occurred on September 1, 2000 where 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 paly had lengthy delays and many waited an hour or more before fans and players could return to the field.

Significantly, the March 8, 2000 lightning strike sparked a huge explosion at KCS Oil Company in Blair Township. More than 70 fire fighters from seven fire departments rushed to the scene. Fire fighters believe the lightning bolt struck an oil tank holding more than four hundred gallons of residue oil in it. Crews evacuated nearby houses and contained the fire, thereby preventing it from spreading to other tanks. This event caused \$20,000 in damages.

The event causing the most property damages occurred on April 18, 2002 on Old Mission Peninsula or Peninsula Township. A line of thunderstorms raced from west to east across northern Lower Michigan during the mid and late morning of the 18th. This line of storms produced scattered reports of severe wind gusts and wind damage. In addition, isolated large hail reports were received. A home was destroyed by fire caused by lightning strike. There were \$125,000 in damages.

Previous Occurrences

There have been six lightning strikes reported to NOAA since 1950. There was one injury and one fatality. Other events have resulted in damages to residential property. The following table is a record of lightning events in Grand Traverse County.

Table 23: Lightning Events

| LOCATION | DATE | DEATHS | INJURIES | PROPERTY DAMAGE |
|---------------|-----------|--------|----------|------------------|
| COUNTYWIDE | 3/8/2000 | 0 | 0 | \$20,000 |
| COUNTYWIDE | 9/1/2000 | 0 | 0 | \$0 |
| TRAVERSE CITY | 9/1/2000 | 0 | 0 | \$20,000 |
| TRAVERSE CITY | 9/1/2000 | 1 | 1 | \$0 |
| OLD MISSION | 4/18/2002 | 0 | 0 | \$125,000 |
| WILLIAMSBURG | 7/17/2006 | 0 | 0 | \$5,000 |
| TOTAL | | | | \$170,000 |

Source: NOAA: National Centers for Environmental Information

Probability of Future Events and Vulnerability Assessment

Since there have been six lightning events reported in the last 72 years, the data shows that there is a 8% chance a lightning strike would occur every year. However, not all lightning events may have been reported since events with injuries, deaths, and extensive damages 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.

Tornado

A tornado is a violently rotating column of air that extends from a thunderstorm to the ground, and can occur anytime during the day and throughout the year. It can only be seen if water droplets, dust, and debris form a funnel. The funnel cloud can have winds that reach up to 300 miles per hour with an interior air pressure that is 10-20% below the surrounding atmosphere's pressure. The length of a tornado path has been reported up to 200 miles. Tornado path widths are generally less than one-quarter mile wide. 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. According to the 2019 Michigan Hazards Plan, Michigan is located on the northern fringe of the nation's tornado belt and has a statewide expected annual loss of about \$19.6 million due to tornadoes. Michigan also has an average of 18 tornadoes, approximately 4 deaths, and approximately 50 injuries per year. Between 1999 and 2019, Michigan has had 314 reported tornado events with 52.9% as EF0 (weak) or EF1 (moderate), 38.9% reported as F0 or F1 (weak), 6.7% as EF2 (significant) or EF3 (severe), and 1.6% as F2 (strong). In Northern Michigan, tornados are most likely 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 Grand Traverse County is at risk to the occurrence and impacts from tornadoes. It should be noted that it is impossible to predict where and with what magnitude a tornado will touchdown.

The four tornadoes described in Table impacted different townships and cities in Grand Traverse County. The first reported tornado first touched down in Long Lake Township and headed northeast into Leelanau County. The second reported tornado began in Acme Township, headed east into Whitewater Township, and continued into Kalkaska County. The third tornado began in Peninsula Township and headed northeast into Antrim County. The fourth and last reported tornado in Grand Traverse County began in western Garfield Township and headed at a sharp northeast angle through the City of Traverse City and into Peninsula Township. All tornadoes reported in the county have occurred in the northern areas.

Extent

The Fujita Scale (Table 24) 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, Grand Traverse County's most damaging tornado occurred on April 3, 1956 with winds ranging from 210-261 mph. It caused no injuries or deaths, but \$ 250,000 in property damages.

Table 24: Fujita and Enhanced Fujita Scale Comparison

| Fujita Scale | | EF Scale | |
|--------------|---------------------------|----------|---------------------------|
| 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 2021, Grand Traverse County has had four (4) reported tornadoes touchdown, causing over \$ 775,000 in property damage (Table 25). As a result of these tornadoes, there were no deaths, no injuries, and no reported crop damage. Three of the four tornadoes caused \$ 250,000 in damage. They are tied for most destructive. The fourth tornado caused \$ 25,000 in property damages. The events in 1961, 1964, and 1969 each report property damage that consists of uprooted trees, farm building damage, and damages to residential structures.

Table 25: Tornado Events, 1950-2021

| Begin Location | Date | Deaths | Injuries | Scale | Property Damage | Crop Damage |
|---------------------------|-----------|--------|----------|-------|-------------------|-------------|
| Long Lake Township | 4/3/1956 | 0 | 0 | F4 | \$ 250,000 | |
| Acme Township | 9/13/1961 | 0 | 0 | F2 | \$ 25,000 | |
| Peninsula Township | 5/8/1964 | 0 | 0 | F2 | \$ 250,000 | |
| Garfield Township | 6/26/1969 | 0 | 0 | F3 | \$ 250,000 | |
| TOTAL | | | | | \$ 775,000 | \$ 0 |

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 higher magnitude tornado to touch down. All reported historic events have caused significant property damage. Due to increased residential growth in the county, the chances of a tornado touching down and causing residential damage is very high, especially in Traverse City and surrounding townships where population densities are highest.

The county has operational, manual sirens located at Fire Station 9 in East Bay Township and Station 5 in Blair Township as well as two state campgrounds: Interlochen and Traverse City. The Michigan Department of Natural Resources installed the sirens as well as a tornado shelter at each site with funding from FEMA.

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 have been 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.

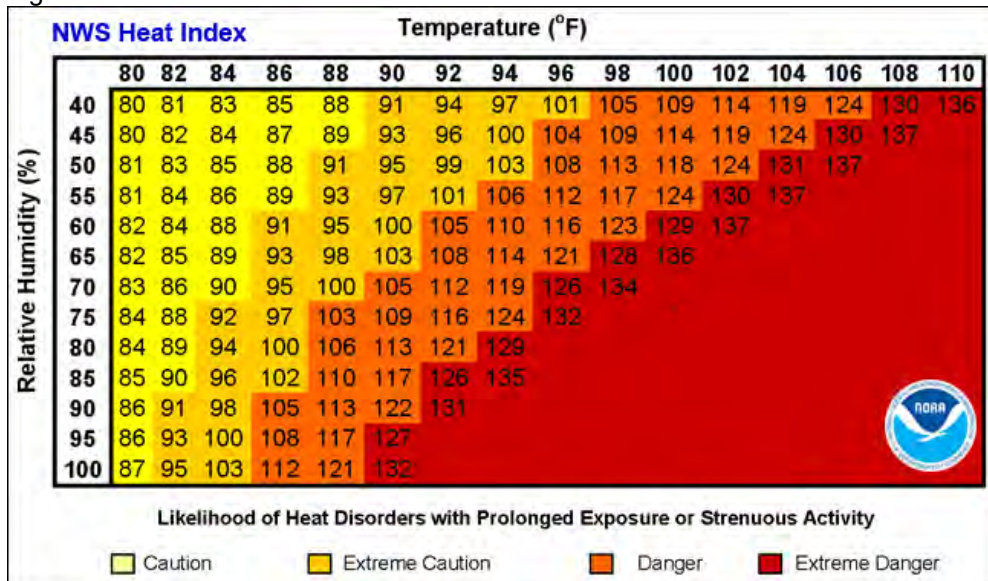
According to the 2019 Michigan Hazard Mitigation Plan, Michigan has 11 average annual extreme heat events with 0.4 average annual deaths and 41 average annual injuries.

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 7). 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 7: 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 8 shows the NOAA Wind Chill Chart as it corresponds to various temperatures and wind speeds.


Wind Chill Chart




Figure 9: Daily Temperature 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 Grand Traverse County is at risk to the occurrence and impacts from extreme temperatures.

The first instance of reported excessive heat occurred on August 1, 2001. 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. 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. There were estimated to be between 25 and 30 individuals who visited local hospitals due to heat-related illnesses.

Since 1950, there have been three extreme cold events reported in Grand Traverse 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 occurred on February 19, 2015. The second blast of extremely cold air into northern Michigan in about a week. This event featured colder air (including the coldest high temperature ever recorded in Gaylord), but not quite as much wind, as the event a week previous. As a result, wind chills were not quite as drastically cold. Still, 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.

The third and last 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

Grand Traverse County has had two extreme heat events in 2001 and 2018 (Table 26). 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 26: Heat Related Events

| | DATE | EVENT TYPE | INJURIES, DEATHS, DAMAGES | EVENT DESCRIPTION |
|------------------------------|-----------|----------------|---------------------------|---|
| GRAND TRAVERSE (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. |
| GRAND TRAVERSE (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. |

Source: NOAA: National Centers for Environmental Information

Since 1950, there have been three extreme cold events reported in Grand Traverse County. The events did not have any deaths, injuries, or property/crop damages. The low temperatures caused schools to close. However, since cold temperatures typically occur during winter months, many events may have gone unrecorded.

Governor Declared Emergency for extreme cold in the State was enacted in 2019 and included Grand Traverse County.

Table 27: Cold Related Events

| | DATE | EVENT TYPE | INJURIES, DEATHS, DAMAGES | EVENT DESCRIPTION |
|------------------------------|-----------|-------------------------|---------------------------|--|
| GRAND TRAVERSE (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. |
| GRAND TRAVERSE (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. |
| GRAND TRAVERSE (ZONE) | 1/29/2019 | Extreme Cold/wind chill | | 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. |

Source: NOAA: National Centers for Environmental Information

Probability of Future Events and Vulnerability Assessment

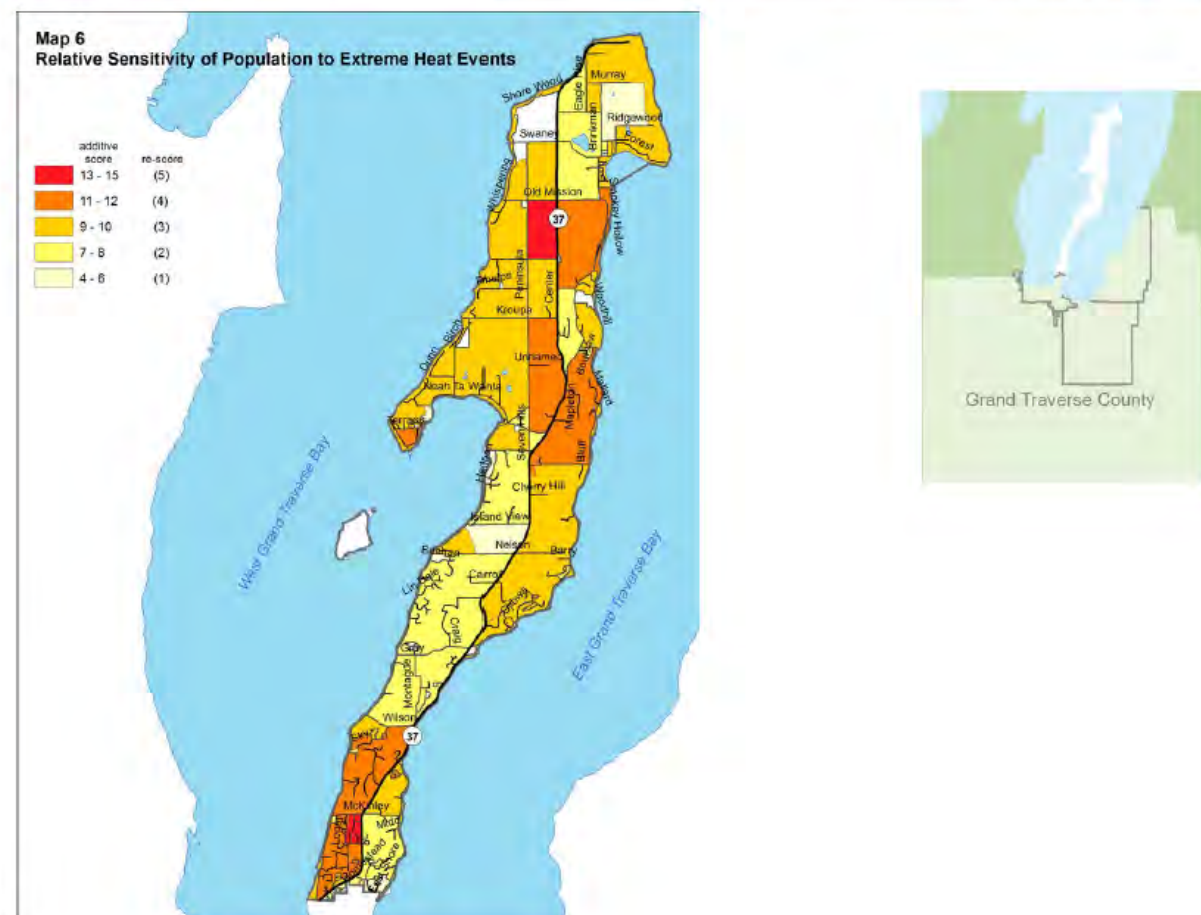
Since 1950, there have been two extreme heat events in Grand Traverse County. This data shows approximately one extreme heat event would occur every 36 years. Since 1950, there have been three extreme cold events in Grand Traverse County. This data shows approximately one event would occur every 24 years. Since extreme cold 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. Traverse City's homeless population is especially vulnerable. Seasonal Emergency Shelters such as Safe Harbor are essential services for the community. The *Northwest Lower Michigan Coastal Resilience Atlas* written by the Land Information Access Association completed a Heat Vulnerability Assessment³ 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)

Peninsula Township has the highest median age (55.2) of all Grand Traverse County communities. Their relative sensitivity to extreme heat events is pictured in Figure 10.

Figure 10: Peninsula Township Relative Sensitivity of Population to Extreme Heat Events



Source: LIAA *Northwest Lower Michigan Coastal Resilience Atlas*

³ Land Information Access Association. (2019). *Northwest Lower Michigan Coastal Resilience Atlas*. http://www.resilientmichigan.org/nw_atlas.asp

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, but losses from drought are as substantial as those from hurricanes, tornadoes and other faster-moving disasters. Drought causes losses to agriculture; affects domestic water supply, energy production, public health, and wildlife; and contributes to wildfire, to name a few of its effects.

Location

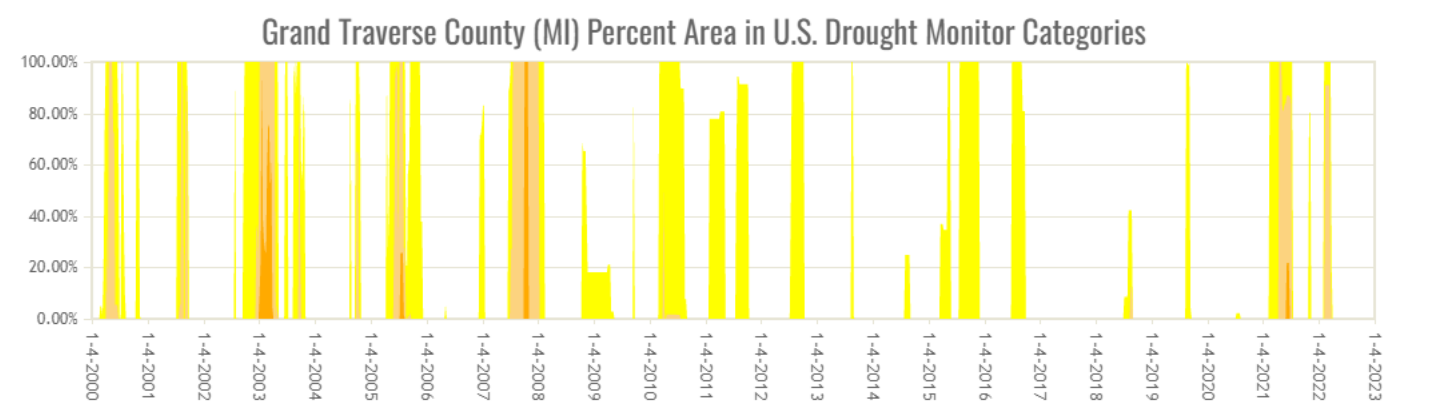
Drought is a regional event that is not confined to geographic boundaries and range in severity across the affected areas. All of Grand Traverse County is at risk to the occurrence and impacts from drought.

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 11) 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 12).

Figure 11: Grand Traverse County Historical Drought Levels



Source: US Drought Monitor

Figure 12: 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

Since 1950, there have been two instances of drought in Grand Traverse County. The first was a Presidential Declared Emergency for drought problems in the State was enacted in 1977 and included Grand Traverse County. The second occurred on August 1, 2001. It was preceded by a warmer than usual July 2001 with less than an inch of rainfall recorded in some areas. This lack of rain and warm conditions became serious during the first two weeks of August when little if any rain fell and temperatures jumped into the 90s. The stress on the crops was most noted in northern Michigan corn, but also hit hay crops to a lesser extent. As a result of the drought, the U.S.D.A. declared several counties disaster areas and granted farmers in counties where the crop losses were 30% or greater, special low interest loans.

Probability of Future Events and Vulnerability Assessment

There is a 2.8% annual chance for a drought event in Grand Traverse 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. Southern portions of Grand Traverse County are heavily forested and are therefore highly vulnerable to drought-related wildfire threats. 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 on elderly and low income people.

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, 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 (1) increased use of specialized equipment to suppress the fires, and (2) 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 the affected area or who 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 the high risk forest types (e.g. Red Pine, Eastern White Pine, and Jack Pine). Approximately 167,301.6 acres or 54% of Grand Traverse County is forested. Jack Pine forests make up 62,500 acres of forested land. As shown on the Environmental Features Map in Appendix A, Pine forests are located primarily in Blair, East Bay, Fife Lake, Grant, Green Lake, Long Lake, Mayfield, Paradise, Union and Whitewater Townships and Village of Kingsley and Village of Fife. These townships and villages are located in the southern area of the county where it is heavily forested and are highly susceptible to wildfire events.

Extent and Previous Occurrences

Extent can be measured by the number of acres burned and the cost of property damage. Between 1996 and 2017 there were no wildfires reported outside of MDNR lands in Grand Traverse County. Between 1981 and 2018 there were 435 reported fires on lands under MDNR jurisdiction. This resulted in 1,484.2 acres burned and 39.1 acres burned per year. No property damages were recorded.

Probability of Future Events and Vulnerability Assessment

There is a 100% chance there will be a wildfire on MDRN lands, and a small chance there will be a wildfire on lands outside of MDNR jurisdiction. Forest types (Red Pine, Eastern White Pine, and Jack Pine) within Grand Traverse County are susceptible to wildfires. Additional factors that increase fire risk include dead or dying Ash trees as a result of disease/invasive species, 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. Unfortunately, rural areas do not have enough fire suppression forces available to protect every

structure from wildfires. Residential development in rural Grand Traverse County is often isolated from town centers and emergency services. Those subdivisions that are located in rural areas near Jack Pine forests are identified on the Vulnerable Populations and Hazard Areas Map in Appendix A.

Shoreline Hazards (Coastal Flooding and Coastal Recession)

Shoreline hazards include coastal flooding and coastal recession. 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.

Shoreline flooding results when water levels rise and push inland or during rainfall or snowmelt accumulates and is not able to drain properly. Shoreline flooding may also be caused during storms and wind events with high-energy waves. 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 (Grand Traverse Bay) are impacted by shoreline hazards: Acme, East Bay, Peninsula Townships and City of Traverse City. The Land Information Access Association documented potential shoreline hazards for these communities in the *Northwest Lower Michigan Coastal Resilience Atlas*. Specific areas of shoreline hazards were identified during public input sessions. These are marked as a hazard area on the Hazard Area Map in Appendix A.

Grand Traverse County

Coastal Flooding Scenario Impacts

| Grand Traverse County | | | |
|-----------------------|------------------|-------------------|-------------------|
| Total SEV | Lucky | Expected | Perfect Storm |
| \$ 3,500,025,000.00 | \$ 75,857,200.00 | \$ 209,592,600.00 | \$ 465,142,900.00 |



Source: LIAA, Northwest Lower Michigan Coastal Resilience Atlas

More specifically, three incidents have been reported. The first occurred on February 21, 1986 during the last major high water event prior to 2019. A Governors Disaster Declaration for shoreline problems in the State was enacted in 1985-1986 and included Grand Traverse County.

The second event occurred on October 16, 2019. 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. Peninsula Drive was closed between McKinley and Wilson Roads due to coastal flooding and beach erosion. The east end of Marina Drive in Traverse City was also closed.

The third event occurred on October 21, 2019. 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. On Old Mission Peninsula, docks were washed out. Waves reached the parking lot at Haserot Beach.

Figure 13 describes the three potential flooding scenarios at Haserot Park and surrounding areas in Peninsula Township. “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 Grand Traverse’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 are shown in Figure 14 depicting the recession of the bluffline in Acme Township near the LochenHeath Golf Club.

Figure 13: Panel #97 Flooding Hazard, Peninsula Township

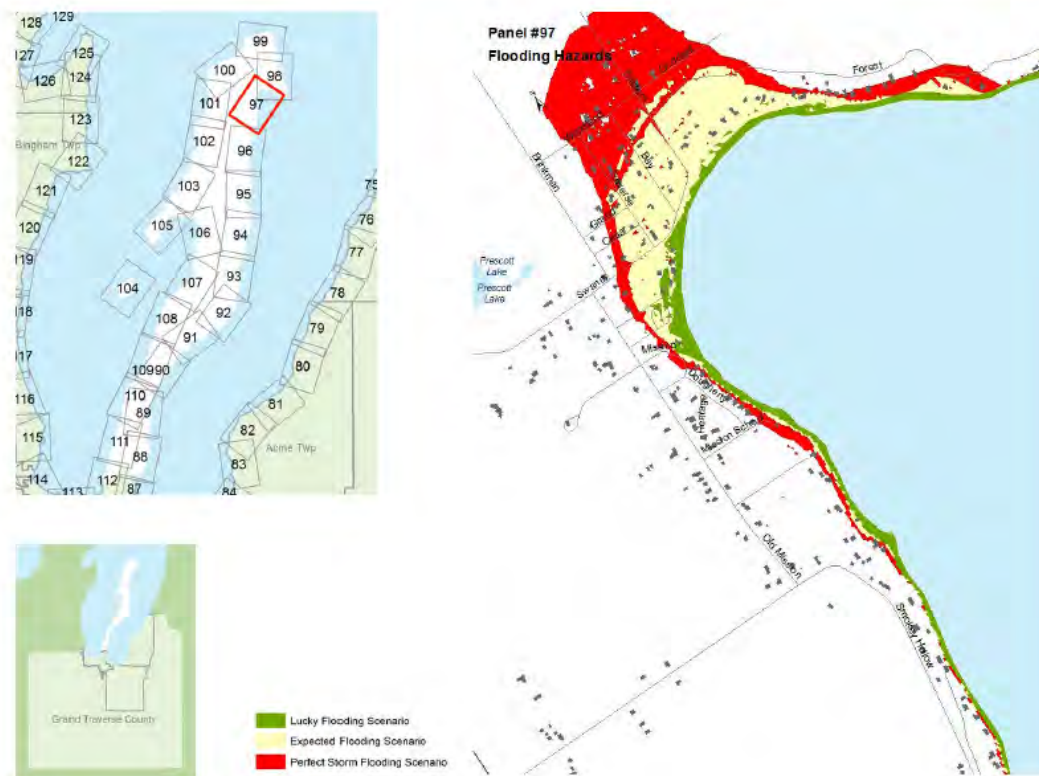


Figure 14: Panel #81 Shoreline Recession, Acme Township



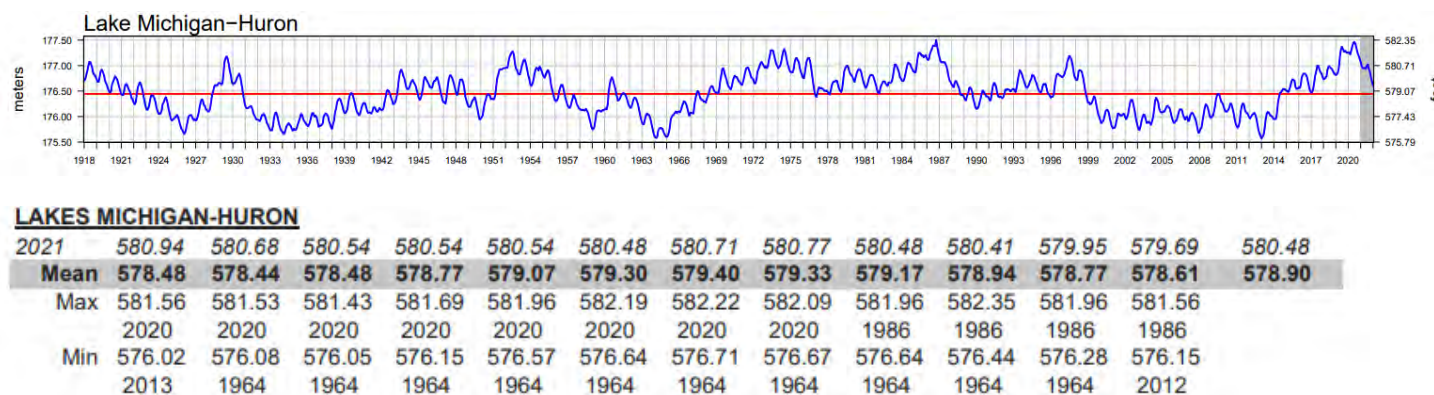
Source: LIAA, Northwest Lower Michigan Coastal Resilience Atlas

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 15), and damages. The two Lakeshore Flooding events in 2019 caused \$32,000 in property damages in Peninsula Township.

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 15: Lake Michigan-Huron Historic Water Levels, 1918-2021



Source: US Army Corps of Engineers

Previous Occurrences

The Great Lakes experienced record high lake levels in 1985-86, and again in 1997-98. Currently the Great Lakes are experiencing record high lake levels again since 2019. Many cases of erosion are present and high lake levels causing rivers and tributaries to back up have caused infrastructure damage and failures throughout Grand Traverse County and many other areas in Michigan.

Probability of Future Events and Vulnerability Assessment

There is a 4% chance of shoreline flooding and an equally small chance erosion will cause shoreline damages. 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 Grand Traverse Bay (Peninsula, East Bay and Acme Townships; Traverse City) 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.

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 Grand Traverse 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. The Grand Traverse County Health Department reports, as of April 19, 2022, there are 17,282 cumulative cases of COVID-19 and 230 deaths. Those 80 years and older have the most deaths of any age range at 61 deaths.

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 Grand Traverse County 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.

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." Invasive species harmful to Michigan and Grand Traverse 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 (water-dwelling) species include non-native 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.

Location

Combined, terrestrial and aquatic invasive species may be present in Grand Traverse 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."

Extent

According to the 2013 Aquatic Invasive Species State Management Plan, "Since the 1800s, at least 182 nonindigenous aquatic organisms have colonized habitats of the Great Lakes ecosystem. These species include: algae (27), vascular plants (55), invertebrates (66), fish (28), and bacteria and viruses (6) (National Oceanic and Atmospheric Administration 2011). Roughly 55% of these species are native to Eurasia; 13% are native to the Atlantic Coast." The Great Lakes Regional Collaboration estimates that a new aquatic invasive species arrives in the Great Lakes at a rate of one every eight months. The State estimates that \$24 million per year is spent to control aquatic plants in Michigan, including Eurasian Watermilfoil. Additionally, an estimated \$200 million per year is lost by the Great Lakes region due to the effects of ship-born invasive species on sport fishing, commercial fishing, wildlife watching, and raw water usage.

Previous Occurrences

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, travelled across the ocean in ballast water carried by freighters, or entered from the ocean through human-built channels such as the Welland Canal. 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. Top priority plants in the region include garlic mustard, Japanese knotweed, invasive phragmites, and Oriental bittersweet.

Probability of Future Events and Vulnerability Assessment

The Great Lakes and connecting channels and rivers form the largest surface freshwater system in the world. This freshwater system, along with Michigan's inland lakes, streams, rivers, and wetlands represent an invaluable resource and are therefore justifiably a top natural resource management priority. The State of Michigan estimates 42% of threatened or endangered species are considered at risk due to non-native species. The Michigan Department of Environment, Great Lakes, and Energy produced the "Michigan Watch List Aquatic Invasive Plants: A Guide for Identification" for those species that have been identified as posing an immediate or potential threat to Michigan's economy, environment, or human health. Included in the watch list are ten species that have been found in limited parts of Michigan and surrounding states. The State TIS Management Plan provides a list of eleven terrestrial species on the watch list. The Northwest Michigan Invasive Species Network and Grand Traverse Conservation District and other partners "protect, enhance, and promote Northwest Michigan's natural communities through terrestrial invasive plant management and outreach."

Storm Surges (Seiches) and Rip Currents

While storm surges (seiches) and rip current events are a possibility in Grand Traverse County, the likelihood of an event is very small. There are no seiche events listed in the database from 1950 until present. This is the same for rip current events. Seiches and rip currents have been removed from the analysis.

V. Goals and Objectives

The mission of the Grand Traverse 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

- 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

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

Strategies

- 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

Strategies

- Provide a list of desired community mitigation measures to the State
- Encourage the application for project funding from diverse entities

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

Strategies

- Encourage public and business involvement in natural hazards mitigation projects

VI. 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 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 Grand Traverse 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, Vulnerability, and Hazard Maps in Appendix A can assist with the determining future problem areas.

Emergency Warning System Coverage

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

Radio warning system: Grand Traverse County uses radio channels 580 AM and 103.5 FM for emergency weather alerts.

Tornado/Severe Weather Systems: Manual sirens are located at Metro Station #9 (East Bay Twp), Rural Station #6 (Fife Lake), and Station #5 (Blair Twp.) fire departments. Automatic sirens were recently installed at Traverse City State Park Campground and Interlochen State Park Campground as part of a tornado shelter project at each park. Weather alert radios were purchased and distributed to all the schools, nursery schools, and senior homes.

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 and IPAWS alerts.

| Priority and Action Strategies | Responsible Parties | Timeframe | Priority |
|---|---|-------------------------------------|----------|
| Priority Area 1: Flood Mitigation Strategies | | | |
| Participating Jurisdictions: City of Traverse City, Acme Township, Blair Township, East Bay Township, Fife Lake Township, Garfield Township, Grant Township, Green Lake Township, Long Lake Township, Mayfield Township, Paradise Township, Peninsula Township, Union Township, Whitewater Township, Village of Fife Lake, and Village of Kingsley | | | |
| a. Replace older, damaged, or undersized culverts/bridges throughout the County as needed including S. Airport Rd at <i>Logan's Landing</i> | Drain Commissioner Road Commission (Lead) County Conservation District Emergency Management Department City of Traverse City Townships and Villages | 3-4 years from adoption of the plan | High |
| b. Replace culvert/road crossings with clear span bridges for increased river function and hydraulic efficiency | MDOT Road Commission City of Traverse City Townships and Villages | 3-4 years from adoption | Medium |
| c. Modification and replacement of Union Street Dam with a more hydraulically efficient new dam as part of the FishPass Project | City of Traverse City Grand Traverse Band of Ottawa and Chippewa Indians MDNR | 1-3 years from adoption | High |
| d. Adherence to City and Township Riparian Buffer Zone ordinances | City of Traverse City Garfield Township | Ongoing | Medium |
| e. Implementation of Unified Plan of the Lower Boardman River including restoration of the Boardman-Ottaway River | City of Traverse City Grand Traverse Band of Ottawa and Chippewa Indians MDNR | 3-4 years from adoption of the plan | High |
| f. Encourage identified flood prone areas be used for open space | City, Townships and Villages | Ongoing | Medium |
| g. Establish a "green infrastructure" link system that connects and expands existing parks, preserves, and greenways. | County, City, Townships and Villages Drain Commission Conservation District Grand Traverse County | 3-4 years from adoption of the plan | Medium |
| h. Drainage improvements in high flooding potential areas throughout the County, including upgrading aging storm water abatement infrastructure | City Water Dept. City Dept. of Public Services (Lead) County Drain Commissioner Watershed Foundation County Emergency Management Department City Planning Department Townships and Villages | 1-3 years from adoption of the plan | Medium |
| i. Continue enforcement of building codes and soil erosion regulations | County Building Inspector (Lead) Building Construction Code Dept. County Conservation District | Ongoing | Low |
| j. Incorporate green infrastructure and stormwater management into Master Plans and Parks and Recreation Plans | City, Townships, and Villages | 1-5 years from adoption of the plan | Medium |
| k. Educate developers and property owners about green infrastructure and floodplain management strategies | City, Townships, and Villages Grand Traverse County Construction Code | 1-3 years from adoption of the plan | Low |

| Priority Area 2: Thunderstorms and High Winds Mitigation Strategies | | | |
|---|---|-------------------------------------|--------|
| Participating Jurisdictions: City of Traverse City, Acme Township, Blair Township, East Bay Township, Fife Lake Township, Garfield Township, Grant Township, Green Lake Township, Long Lake Township, Mayfield Township, Paradise Township, Peninsula Township, Union Township, Whitewater Township, Village of Fife Lake, and Village of Kingsley | | | |
| a. Promote the establishment of the State of Michigan's Primary Radio Communication system for throughout the County | Emergency Management Department (Lead) Townships, Villages, City | Ongoing | High |
| b. Have a debris removal plan for safety | Emergency Management Department (Lead) County Building Inspector Townships, Villages, City | 2-4 years from adoption of the plan | High |
| c. Utilize ham radio channel for local warnings | Emergency Management Department | 1-2 years from adoption of the plan | Medium |
| d. Work with utility companies to identify and construct alternative sources of power | Emergency Management Department (Lead) County Building Inspector Utility Companies | 1-3 years from adoption of the plan | High |
| e. Perform regular tree trimming and removal of dead and dying trees | Utility Companies (Lead) Emergency Management Department Townships, Villages, Private Landowners | 1-3 years from adoption of the plan | High |
| f. Promotion of burying utility lines in new construction | County Building Inspector Utility Companies (Lead) Emergency Management Department Townships, Villages, City | 1-3 years from adoption of the plan | Medium |
| g. Burying power lines in high outage areas | County Building Inspector Utility Companies (Lead) Emergency Management Department Townships, Villages, City | 1-3 years from adoption of the plan | High |
| h. Identify potential wind damage areas | Emergency Management Department (Lead) Townships, Villages, City | 1-2 years from adoption of the plan | Medium |
| i. Establish new generators where needed | Emergency Management Department Townships, Villages, City (Lead) | 2-3 years from adoption of the plan | Medium |
| Priority Area 3: Extreme Winter Weather (Snow Load and Ice Build Up) Mitigation Strategies | | | |
| Participating Jurisdictions: City of Traverse City, Acme Township, Blair Township, East Bay Township, Fife Lake Township, Garfield Township, Grant Township, Green Lake Township, Long Lake Township, Mayfield Township, Paradise Township, Peninsula Township, Union Township, Whitewater Township, Village of Fife Lake, and Village of Kingsley | | | |
| a. Continue enforcement of building code regarding snow load limits through the permitting process | County Building Inspector (Lead) Townships, Villages, City Emergency Management Coordinator | Ongoing | Medium |
| b. Promote the establishment of the State of Michigan's Primary Radio Communication system for throughout the County | Emergency Management Department (Lead) Townships, Villages, City | Ongoing | High |

| | | | |
|--|---|-------------------------------------|--------|
| c. Utilize a ham radio channel for local warnings | Emergency Management Department RACES (Lead) | 1-2 years from adoption of the plan | Medium |
| Priority Area 4: Wildfire/Urban Interface Mitigation Strategies | | | |
| Participating Jurisdictions: Blair Township, Fife Lake Township, Grant Township, Mayfield Township, Paradise Township, Union Township, Whitewater Township, Village of Fife Lake, and Village of Kingsley | | | |
| a. Public education and awareness activities such as programs and brochures regarding fuel management, proper vegetation, fire breaks | Municipal Planners (Lead) Emergency Management Department Building Inspector County Soil Conservation District MI Department of Natural Resources Townships, Villages, City | Ongoing | High |
| b. Continue enforcement of state fire codes regarding setback requirements | Building Inspector (Lead) Townships, Villages, City | Ongoing | Medium |
| c. Public education utilizing the MI Department of Natural Resources flyers and the FEMA information at parks and campgrounds | Emergency Management Department (Lead) County Conservation District MI Department of Natural Resources Townships, Villages Parks and Campgrounds, public and private | Ongoing | Medium |
| d. Real estate and insurance agents to distribute information | Emergency Management Department Townships, Villages Real Estate Assoc. (Lead) | 1-3 years from adoption of the plan | Low |
| e. Assess fire suppression access and make improvements | Emergency Management Department County and local fire departments (Lead) | Ongoing | Medium |
| f. Research the MI Department of Natural Resources' State Forest wildfire/urban interface rules or plan | Emergency Management Department County and local fire departments (Lead) | 1-3 years from adoption of the plan | Medium |
| Priority Area 5: Shoreline Erosion Mitigation Strategies | | | |
| Participating Jurisdictions: Acme Township, East Bay Township, Peninsula Township, and City of Traverse City | | | |
| a. Drainage control projects | Building Construction Code Dept. Drain Commissioner (Lead) County Conservation District Emergency Management Department Townships and City | 2-4 years from adoption of the plan | High |
| b. Enforcement of soil erosion statutes/permits | Building Construction Code Dept. Drain Commissioner (Lead) County Conservation District County Planning Department Emergency Management Coordinator MI Department of Environmental Quality | Ongoing | High |

| | | | |
|---|--|---------|--------|
| | U.S. Army Corps of Engineers | | |
| c. Enforcement of the building codes | County Building Inspector (Lead) | Ongoing | High |
| d. Enforcement of the grading levels no more than 10% | Building Construction Code Dept. Drain Commissioner County Conservation District (Lead) | Ongoing | Medium |
| e. Restoration of native shoreline vegetation | County Building Inspector Building Construction Code Dept. (Lead) Drain Commissioner County Conservation District Townships and City | Ongoing | High |

Hail, Lightning, Extreme Temperatures, and Drought Mitigation Strategies

Participating Jurisdictions: City of Traverse City, Acme Township, Blair Township, East Bay Township, Fife Lake Township, Garfield Township, Grant Township, Green Lake Township, Long Lake Township, Mayfield Township, Paradise Township, Peninsula Township, Union Township, Whitewater Township, Village of Fife Lake, and Village of Kingsley

| | | | |
|---|---|-------------------------------------|--------|
| a. Mail safety brochures about the dangers of hail, lightning, extreme temperatures, and drought | Emergency Management Department City, Townships, and Villages | 2-4 years from adoption of the plan | High |
| b. Teach school children about the dangers hail, lightning, extreme temperatures, and drought and how to take safety precautions. | Emergency Management Department City, Townships, and Villages TCAPS | 1-3 years from adoption of the plan | High |
| c. Consider implementing additional safety standards in the building code for hail and lightning. | Building Construction Code Dept. (Lead) Emergency Management Department City, Townships, and Villages | 2-4 years from adoption of the plan | Medium |
| d. Monitor water supply and its functions to save water supply | Emergency Management Department City, Townships, and Villages | Ongoing | Medium |

Pandemic and Invasive Species Mitigation Strategies

Participating Jurisdictions: City of Traverse City, Acme Township, Blair Township, East Bay Township, Fife Lake Township, Garfield Township, Grant Township, Green Lake Township, Long Lake Township, Mayfield Township, Paradise Township, Peninsula Township, Union Township, Whitewater Township, Village of Fife Lake, and Village of Kingsley

| | | | |
|--|---|-------------------------------------|--------|
| a. Designate County website primary source for community information dispersal | Emergency Management Department City, Townships, and Villages | 1-3 years from adoption of the plan | High |
| b. Educate and promote awareness of potential threats | Emergency Management Department City, Townships, and Villages | 1-3 years from adoption of the plan | Medium |
| c. Continue to support County departments and action committees | Grand Traverse County Health Department Grand Traverse County Conservation District Northwest Michigan Invasive Species Network | 1-3 years from adoption of the plan | Low |

VII. 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 natural and technological 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 Management Coordinator and the Administration. The LPT is an inter-agency partnership and will collaborate to accomplish the goals and objectives of the Plan. The LPT 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 Grand Traverse County Emergency Management Coordinator and will coordinate with the County Board of Commissioners.

Natural Hazards Task Force will perform an annual review of the Grand Traverse 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.

- Grand Traverse County Government Staff
- Townships, cities, and villages
- Grand Traverse County Conservation District
- Grand Traverse County Drain Commissioner
- Grand Traverse County Road Commission
- Grand Traverse Band of Ottawa and Chippewa Indians
- Grand Traverse Regional Land Conservancy
- The Watershed Center Grand Traverse Bay
- Networks Northwest
- Michigan State University Extension
- Michigan Department of Environment, Great Lakes, and Energy
- Michigan Department of Natural Resources
- 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 townships and villages (whether or not they have their own zoning) 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 are issued by the Grand Traverse County Construction Code Department, except in Garfield and Fife Lake Townships where they are handled locally.

Funding the Implementation of the Plan

To assist with the funding of the proposed natural hazards mitigation strategies, the following is a list of potential financial assistance entities to help fund the implementation projects of the Plan.

- Federal Emergency Management Administration – Hazard Mitigation Grant and Building Resilient Infrastructure and Communities Programs
- U.S. Environmental Protection Agency
- U.S. Department of Agriculture Natural Resources Conservation Service
- U.S. Department of Agriculture Rural Development: Rural broadband opportunity – high speed telecommunication funding from the Public Telecommunications Facilities Planning and Construction grants
- U.S. Department of Housing and Urban Development
- Michigan Department of Environment, Great Lakes, and Energy
- Michigan Department of Natural Resources
- National Oceanic and Atmospheric Administration
- Community, Regional Foundations
- Businesses

Plan Integration

The City of Traverse City, all townships and villages in Grand Traverse County, and local and state agencies will consider integrating information from the hazard mitigation plan into their comprehensive and operations plans. The City of Traverse City and Garfield Township have indicated they will begin updating their plans in the near future, and they will consider incorporating appropriate hazard mitigation information into the plan. The city, all 13 townships, and the two villages administer zoning. As part of the education and outreach aspect of the hazard mitigation effort, the other townships and villages 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:

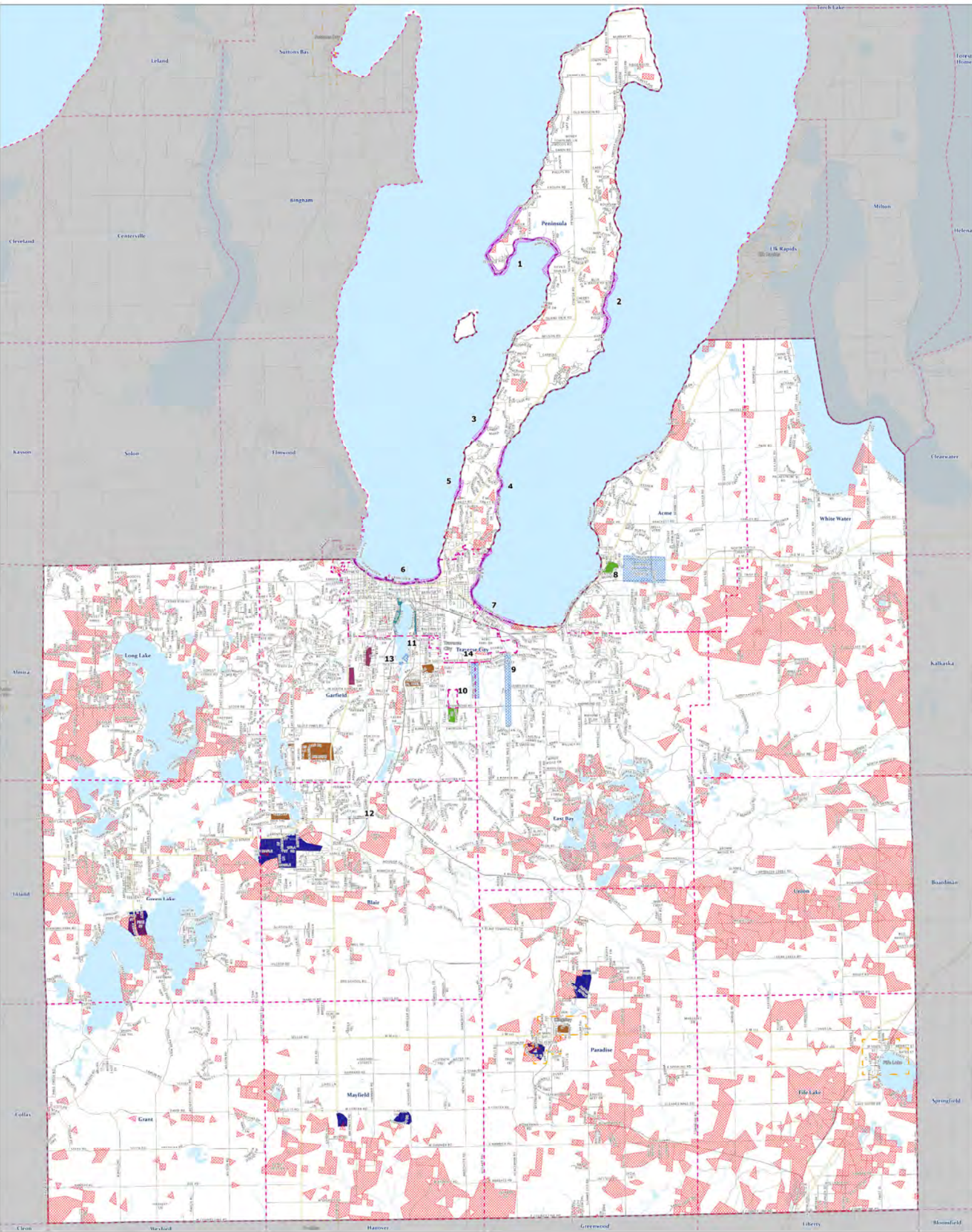
- Individual units of government modifying their ordinances simultaneously to include language that would incorporate aspects of protection
- Developing an overlay zoning district that would cross jurisdictional boundaries which would be incorporated into existing independent units of government's zoning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

Five Year Plan Review and Update

The Stafford Act, as amended by the Disaster Mitigation Act of 2000, requires the Grand Traverse 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 Grand Traverse Board of Commissioners can review, approve, and adopt the plan. In order to properly update the plan, Grand Traverse County will need to seek funding from appropriate state and federal agencies.

Continued Public Involvement

Grand Traverse 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 township 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.



**Grand Traverse County
Vulnerable Populations
& Hazard Areas**
2022 Hazard Mitigation Plan

Hazard Areas:

- 100 Year Flood
- 500 Year Flood
- 100 Year Flood
- 100 Year Flood

Vulnerable Populations:

- Age 65+
- Age 65+
- Age 65+
- Age 65+

Legend

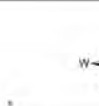
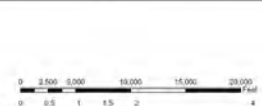
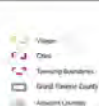
- Water Bodies
- Water Bodies
- Water Bodies
- Water Bodies

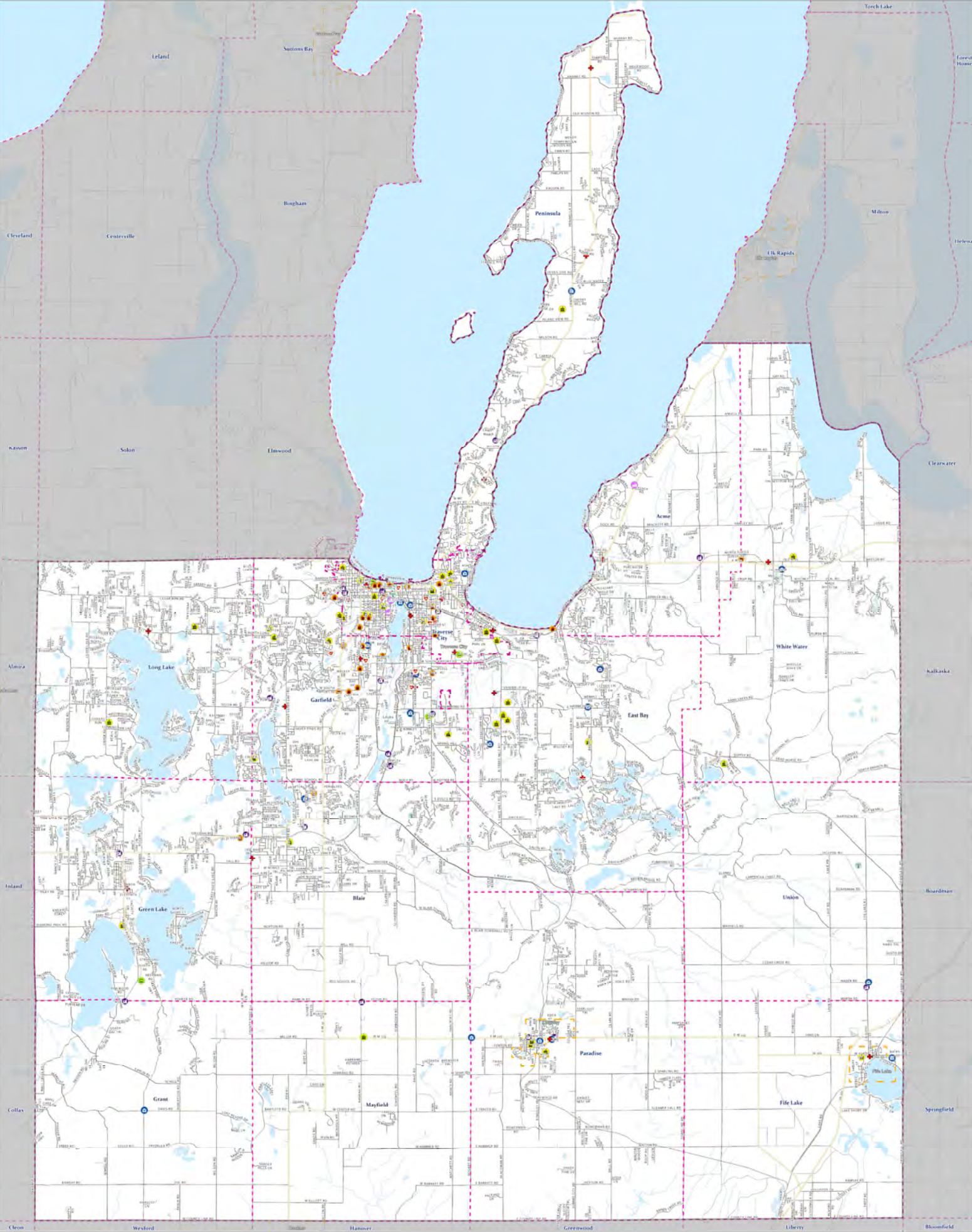
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North Arrow

Grand Traverse County is a member of the Michigan Emergency Management Association (MEMA). This map was created using data from the Michigan Department of Transportation (MDOT) and the Michigan Department of Natural Resources (DNR). The map is for informational purposes only and does not constitute a warranty or guarantee of accuracy.

Networks Northwest



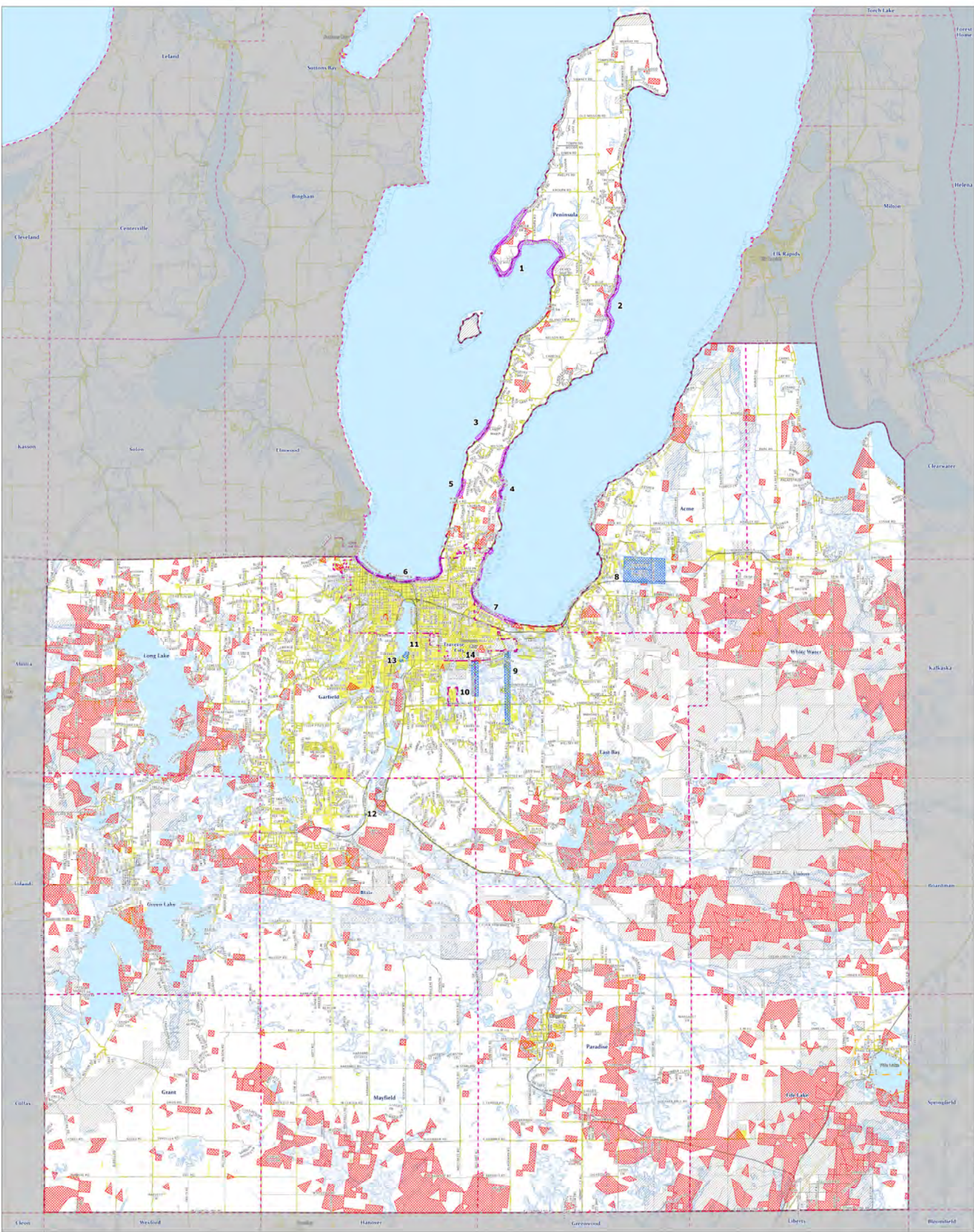


**Grand Traverse County
Critical Infrastructure Points**
2022 Hazard Mitigation Plan

- Legend**
- | | | |
|------------------|-------------------------|---------------------|
| Highway | Official Infrastructure | Station |
| Bus | Commercial | Government Facility |
| Water/Wastewater | Communication | Healthcare |
| Water Supply | Emergency Services | Library |
| | Transportation | School |

- | | |
|-----------------------|----------------|
| Township Boundary | Range Boundary |
| Grand Traverse County | Other County |





Grand Traverse County **Hazard Areas** 2022 Hazard Mitigation Plan

| Hazard Areas | | Legend | |
|--|----------|--|--|
| ■ Flood | Highway | ■ Wetlands | ■ 100 Year Flood |
| ■ Seismicity | At Risk | ■ State/Local | ■ 500 Year Flood |
| ■ Fire | Road | ■ National Wetlands | ■ 1000 Year Flood |
| ■ Ice | Waterway | ■ Private Wetlands | ■ 200 Year Flood |
| | | ■ Wetlands of Importance | ■ 500 Year Flood |
| | | ■ Wetlands of High Quality | ■ 1000 Year Flood |
| | | ■ Wetlands of Moderate Quality | ■ 200 Year Flood |
| | | ■ Wetlands of Low Quality | ■ 500 Year Flood |
| | | ■ Wetlands of Very Low Quality | ■ 1000 Year Flood |
| | | ■ Wetlands of Unknown Quality | ■ 200 Year Flood |
| | | ■ Wetlands of No Data | ■ 500 Year Flood |
| | | ■ Wetlands of No Data | ■ 1000 Year Flood |



Grand Traverse County Critical Infrastructure Points & Hazard Areas 2022 Hazard Mitigation Plan

Legend

Critical Infrastructure

- Health
- Police
- Fire
- Emergency Services
- Public Works
- Water
- Electricity
- School
- Government
- Religious
- Commercial
- Industrial
- Transportation
- Recreation
- Other

Hazard Areas

- 100 Year Flood
- 500 Year Flood
- Seismic
- Wildfire
- Other

Scale

0 2,500 5,000 10,000 15,000 20,000

0 0.5 1 1.5 2 Miles

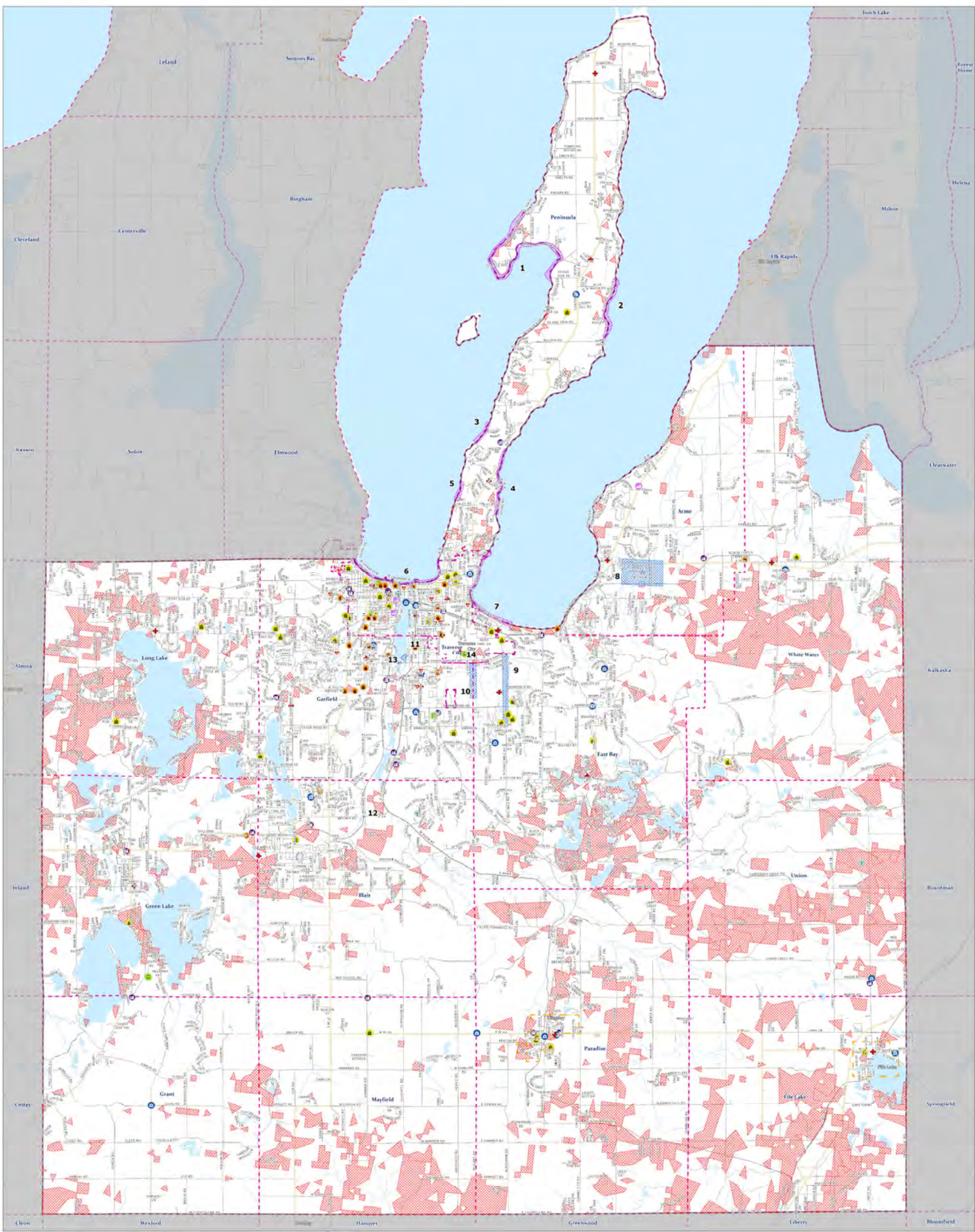
North Arrow

N
S
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Map generated by Networks Northwest Community Development GIS. Map data courtesy of Grand Traverse County GIS. Map data courtesy of Grand Traverse County GIS. Map data courtesy of Grand Traverse County GIS.

Networks Northwest

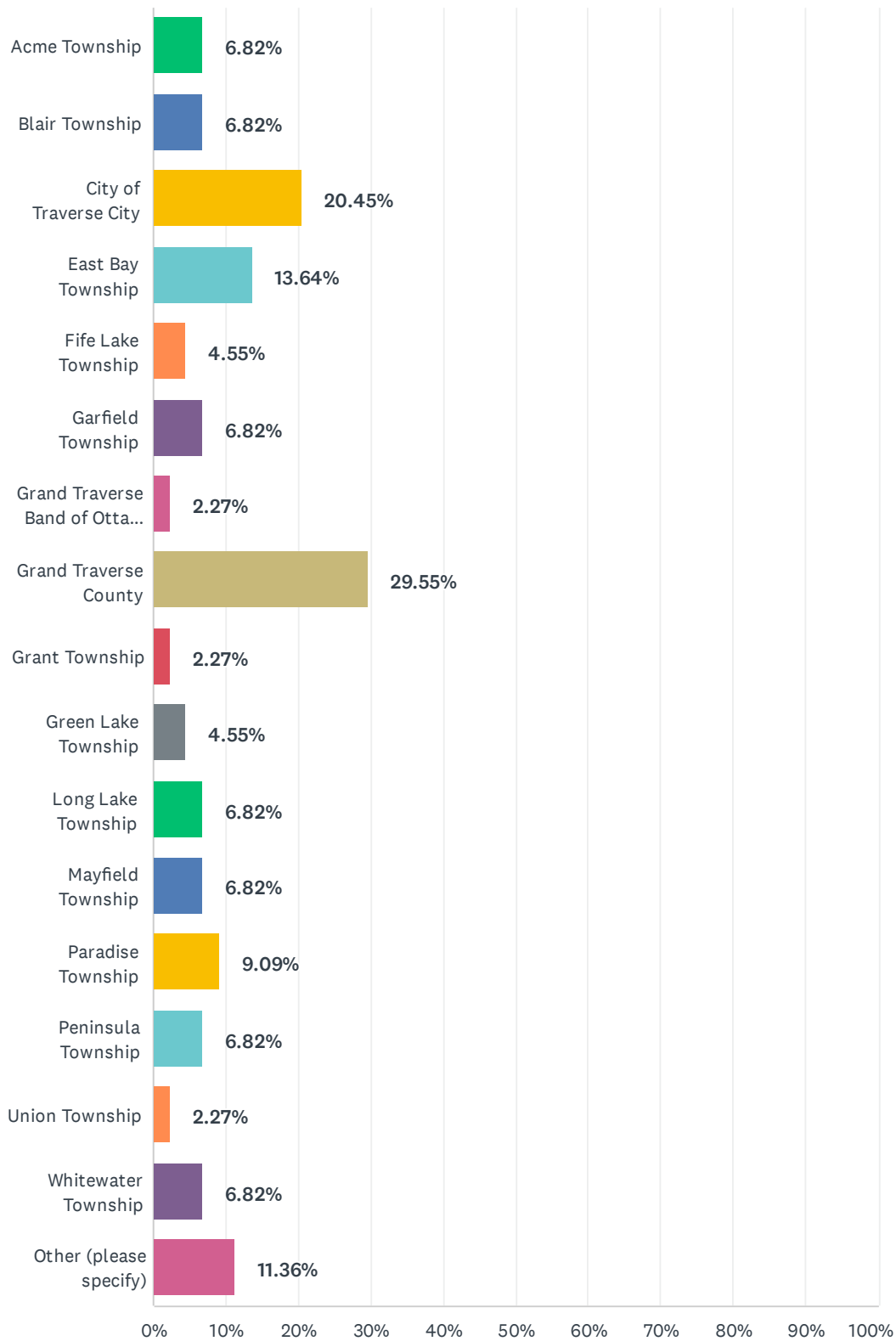
Community Development



Q1 Which community in Grand Traverse County do you represent and/or reside in? (You may select more than one answer.)

Answered: 44 Skipped: 0

Grand Traverse County Natural Hazard Mitigation Community Survey



Grand Traverse County Natural Hazard Mitigation Community Survey

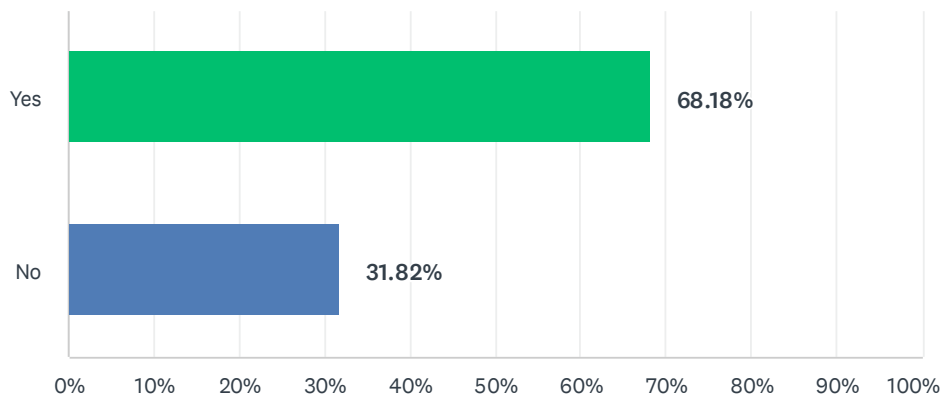
| ANSWER CHOICES | RESPONSES | |
|--|-----------|----|
| Acme Township | 6.82% | 3 |
| Blair Township | 6.82% | 3 |
| City of Traverse City | 20.45% | 9 |
| East Bay Township | 13.64% | 6 |
| Fife Lake Township | 4.55% | 2 |
| Garfield Township | 6.82% | 3 |
| Grand Traverse Band of Ottawa and Chippewa Indians | 2.27% | 1 |
| Grand Traverse County | 29.55% | 13 |
| Grant Township | 2.27% | 1 |
| Green Lake Township | 4.55% | 2 |
| Long Lake Township | 6.82% | 3 |
| Mayfield Township | 6.82% | 3 |
| Paradise Township | 9.09% | 4 |
| Peninsula Township | 6.82% | 3 |
| Union Township | 2.27% | 1 |
| Whitewater Township | 6.82% | 3 |
| Other (please specify) | 11.36% | 5 |
| Total Respondents: 44 | | |

| # | OTHER (PLEASE SPECIFY) | DATE |
|---|---|---------------------|
| 1 | Grand traverse county road commission | 1/6/2022 9:41 AM |
| 2 | All out county areas | 1/5/2022 8:23 PM |
| 3 | State of MI DNR Traverse City State Park/Arbutus State Forest Campground/Forks State Forest Campground/Scheck's Place State Forest Campground and Horse camp/Muncie Lake Pathway/VASA Single Track and numerous boat launches in the area | 1/3/2022 9:30 AM |
| 4 | Mobile Medical Response Inc. (MMR) ambulance that covers the City of Traverse City, Garfield, Acme and Whitewater Townships | 12/30/2021 1:59 PM |
| 5 | Northwest Regional Airport Authority | 12/30/2021 10:35 AM |

Q2 In the past 5 years, have you experienced a significant natural hazard event (i.e., flood, major winter storm, wind storm, etc.) that resulted in a negative impact on your home, business or community?

Answered: 44 Skipped: 0

Grand Traverse County Natural Hazard Mitigation Community Survey



| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|----|
| Yes | 68.18% | 30 |
| No | 31.82% | 14 |
| TOTAL | | 44 |

Q3 If so, please describe the type and impact of the natural hazard event, the location, and when you experienced it.

Answered: 30 Skipped: 14

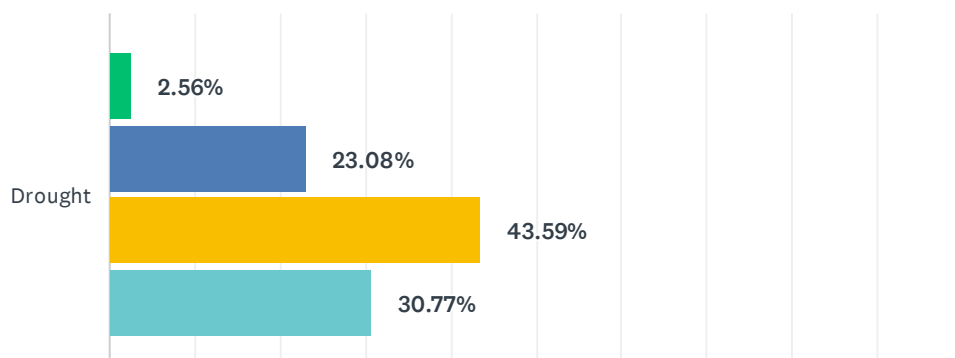
| # | RESPONSES | DATE |
|----|---|--------------------|
| 1 | High winds in December 2021 that took down multiple trees closing roads and many lost electricity. | 1/17/2022 10:35 AM |
| 2 | Straight line winds in the summer of 2015. I was working at Sleeping Bear Dunes at the time and was on clean up duty after the storm. | 1/17/2022 8:43 AM |
| 3 | Flooding that significantly impacted MMC | 1/14/2022 5:08 PM |
| 4 | Major tree and building damage | 1/14/2022 10:21 AM |
| 5 | High winds causing property damage throughout Village | 1/13/2022 4:12 PM |
| 6 | Major winter storm, makes it difficult for staff to make it into work and creates risk for power outages. | 1/13/2022 10:16 AM |
| 7 | Flooding, wind storms, high water tables, soil erosion | 1/13/2022 8:00 AM |
| 8 | Flooding needing Road repairs, high winds causing trees down, Blizzard making road clearing difficult | 1/12/2022 8:36 PM |
| 9 | Power outage 12/16/2021 to 12/18/2021 Leelanau and Grand Traverse counties. | 1/12/2022 4:51 PM |
| 10 | High Water Levels of Lake Michigan combined with severe rain events on several occasions | 1/12/2022 4:23 PM |
| 11 | Nearly every August we have a high wind, rain storm that takes down trees and damages power lines which results in lost power. | 1/12/2022 3:40 PM |
| 12 | Wind blew my fence over | 1/12/2022 3:35 PM |
| 13 | Wind storm, heavy rain with street-building flooding from runoff x 3. All within the City. | 1/11/2022 8:47 AM |
| 14 | n/a | 1/6/2022 9:41 AM |

Grand Traverse County Natural Hazard Mitigation Community Survey

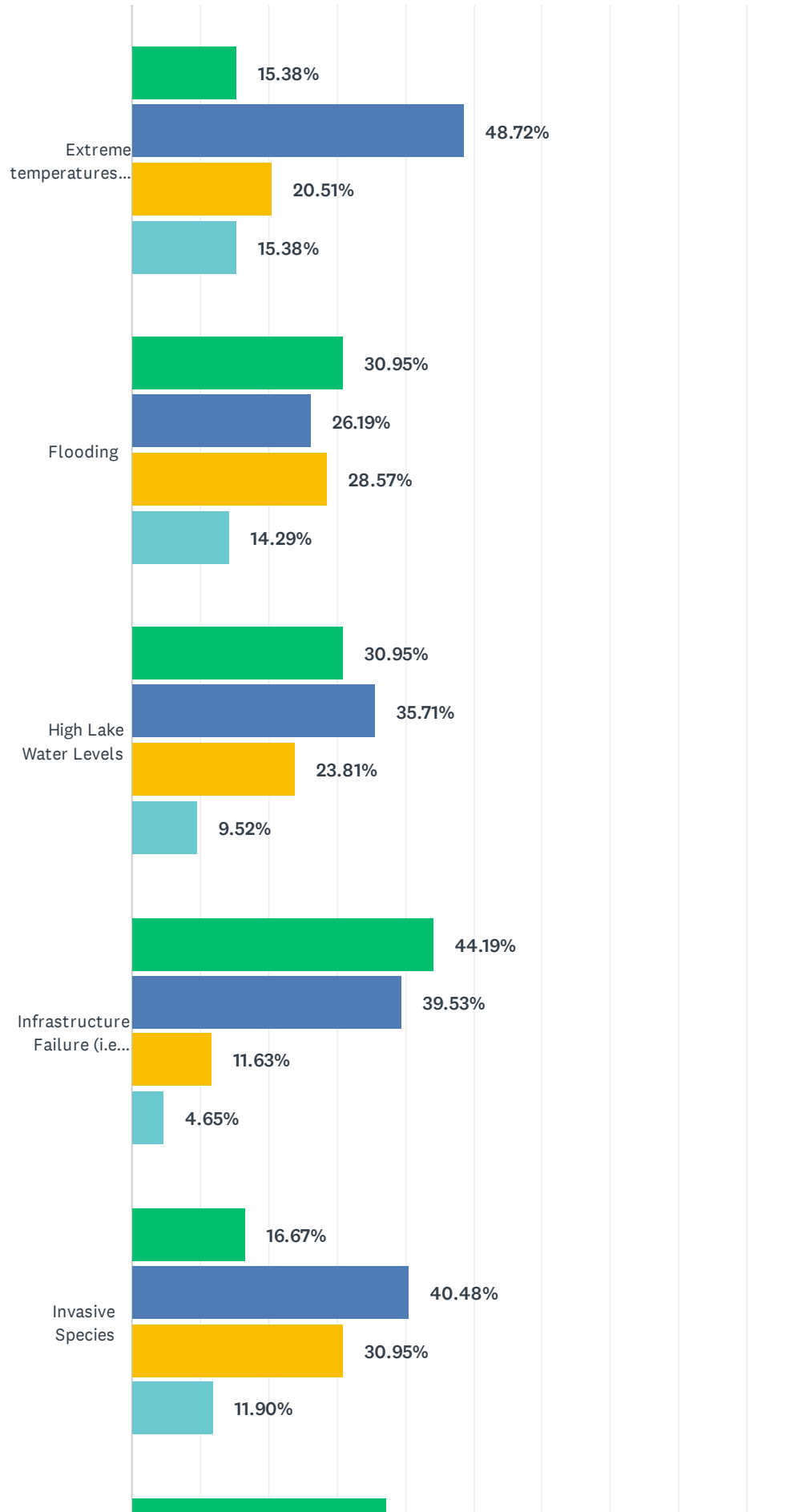
| | | |
|----|---|---------------------|
| 15 | We had damage to our apartment complex due to severe flooding from rain. Conclusion was our building was not built with the paper draining system in our courtyard to take the water away from the building. 2020 | 1/4/2022 4:00 PM |
| 16 | August 2021, wind event similar to the one in 2015. Whitewater Township most damage south end of Elk and Skegemog Lake | 1/4/2022 1:46 PM |
| 17 | Additional resources and staffing costs and use due to natural hazard event | 1/4/2022 11:19 AM |
| 18 | Several wind storms have affected Interlochen State Park leading to trees down and long-term power outages. | 1/4/2022 10:02 AM |
| 19 | Lake Michigan shoreline erosion - countywide - ongoing Increasing duration and intensity of rainfall events (3"+) - ongoing Covid-19 pandemic - ongoing High wind event (70+ mph) - December 2021 Severe thunderstorms - September 2021 Flooding of Acme Creek - August 2021 County-wide flooding - October 2020 County-wide flooding - May 2020 | 1/4/2022 8:55 AM |
| 20 | High waters affected the Beach Area at KJC Traverse City State Park. Caused damage to the seawall and eroded the beach access causing significant dropoffs. 2019/2020 | 1/3/2022 9:30 AM |
| 21 | Flooding from heavy rains in the summers of 2020 and 2021, especially on the west side around Slabtown and the Commons. Coastal flooding and erosion due to high water along Grand Traverse Bay (ongoing). | 1/3/2022 8:52 AM |
| 22 | High Winds and Severe Winter Weather | 1/2/2022 11:47 AM |
| 23 | August 2, 2015 Straight Line winds Numerous winter storms and wind events. | 12/31/2021 10:42 AM |
| 24 | Flooding from rain events in various locations throughout the City causing property damage. Shoreline erosion and flooding from high water levels in Lake Michigan which damaged beach areas and threatened roadways. Wind storms that uprooted trees and damaged power lines and buildings. Extreme cold weather that damaged water service lines. | 12/31/2021 7:09 AM |
| 25 | Whitewater Township, wind related events. We do not have any trees to cause damage but power outages due to poor tree maintenance (Consumers) was a problem resulting in loss of multiple appliances and personal refrigerated food and sensitive medications. When, regularly up to three in one week. | 12/30/2021 3:06 PM |
| 26 | Winter Storm and Wind Storm | 12/30/2021 1:59 PM |
| 27 | Multiple snow storms and wind s storms | 12/30/2021 1:31 PM |
| 28 | Winter weather always has an impact on flights and airport operations - summer time thunderstorms and high winds also cause disruptions | 12/30/2021 10:35 AM |
| 29 | Loss of power due to high wind causing trees to cut power. | 12/30/2021 9:01 AM |
| 30 | The County has experienced major rain events that has caused flooding in several areas. | 12/30/2021 8:50 AM |

Q4 How concerned are you about the following natural hazard events affecting your community?

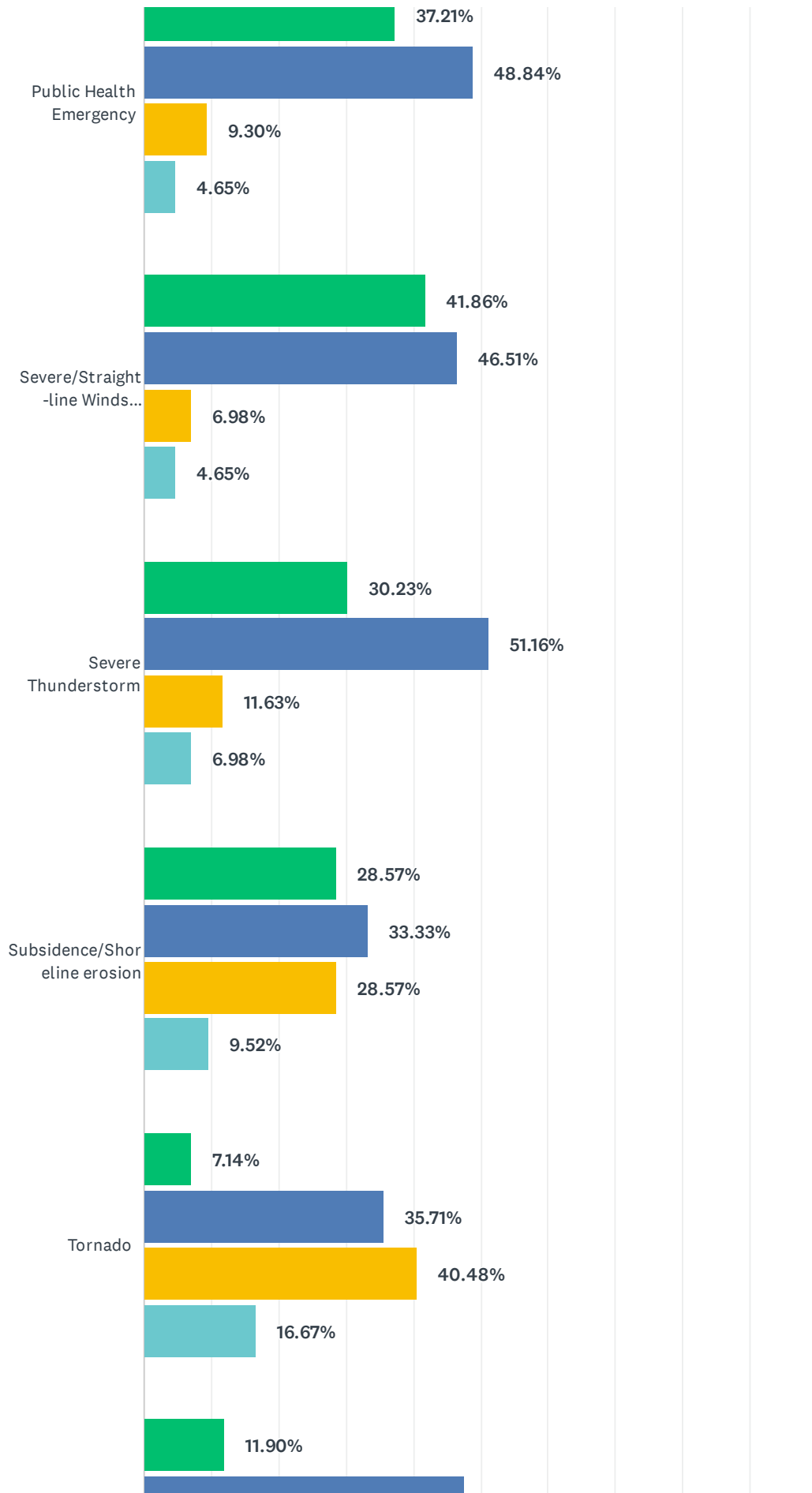
Answered: 43 Skipped: 1



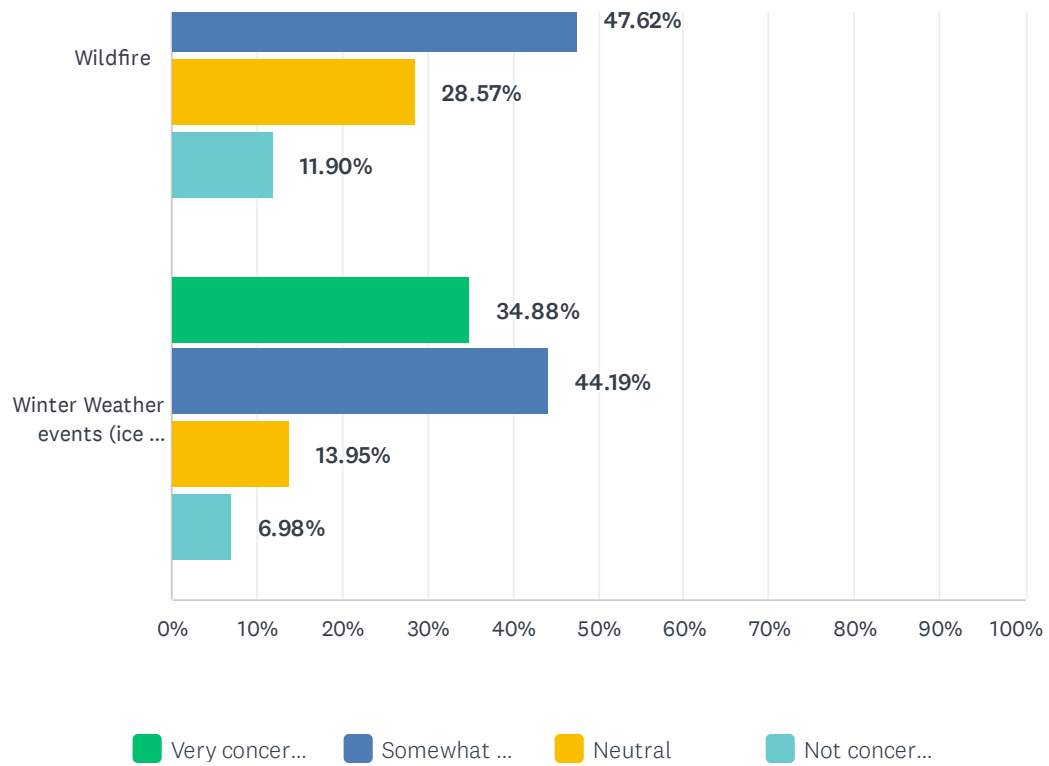
Grand Traverse County Natural Hazard Mitigation Community Survey



Grand Traverse County Natural Hazard Mitigation Community Survey



Grand Traverse County Natural Hazard Mitigation Community Survey



Grand Traverse County Natural Hazard Mitigation Community Survey

| | VERY CONCERNED | SOMEWHAT CONCERNED | NEUTRAL | NOT CONCERNED | TOTAL |
|---|----------------|--------------------|--------------|---------------|-------|
| Drought | 2.56% 1 | 23.08% 9 | 43.59% 17 | 30.77% 12 | 39 |
| Extreme temperatures (heat/cold) | 15.38% 6 | 48.72% 19 | 20.51% 8 | 15.38% 6 | 39 |
| Flooding | 30.95% 13 | 26.19% 11 | 28.57% 12 | 14.29% 6 | 42 |
| High Lake Water Levels | 30.95% 13 | 35.71% 15 | 23.81% 10 | 9.52% 4 | 42 |
| Infrastructure Failure (i.e., road washout, bridge collapse, dam failure, utility service loss) | 44.19% 19 | 39.53% 17 | 11.63% 5 | 4.65% 2 | 43 |
| Invasive Species | 16.67% 7 | 40.48% 17 | 30.95% 13 | 11.90% 5 | 42 |
| Public Health Emergency | 37.21% 16 | 48.84% 21 | 9.30% 4 | 4.65% 2 | 43 |
| Severe/Straight-line Winds (Derecho) | 41.86% 18 | 46.51% 20 | 6.98% 3 | 4.65% 2 | 43 |
| Severe Thunderstorm | 30.23% 13 | 51.16% 22 | 11.63% 5 | 6.98% 3 | 43 |
| Subsidence/Shoreline erosion | 28.57% 12 | 33.33% 14 | 28.57% 12 | 9.52% 4 | 42 |
| Tornado | 7.14% 3 | 35.71% 15 | 40.48% 17 | 16.67% 7 | 42 |
| Wildfire | 11.90% 5 | 47.62% 20 | 28.57% 12 | 11.90% 5 | 42 |
| Winter Weather events (ice and sleet, blizzard) | 34.88% 15 | 44.19% 19 | 13.95% 6 | 6.98% 3 | 43 |

| # | PLEASE ELABORATE ON THE ANSWERS YOU PROVIDED! | DATE |
|---|---|--------------------|
| 1 | We are very concerned about invasive species in our lakes and the process to control invasive species on land and in the water. There are some items on the list that at this time don't seem to be a concern, yet they might be in the future. Storms with high winds are always a threat to our infrastructure and resident's safety. | 1/17/2022 10:35 AM |
| 2 | Many of these events are certainly capable of greatly impacting my community. It is tricky to determine which ones I am more concerned about. In my mind, the straight line winds storm of 2015 had the greatest impact on the community, so it would be important to prepare for storms like that in the future. Likewise, other severe storm events, such as severe thunderstorms, tornados, and winter weather events are also a big concern. Flooding is another event that should be a concern. The flooding downtown has caused a lot of trouble in the past. High lake levels and shoreline erosion have caused many issues in recent years. While high lake levels and shoreline erosion have not seemed to be as potentially severe as flooding or storm events, I could see that it has the potential to be bad. The same can be said for invasive species. We currently have populations of zebra mussels and sea lamprey in the Grand Traverse Bay and both of these invasive species have an impact on the fish population. If the populations got out of control or if an even more aggressive invasive species was introduced (e.g. Asian Carp), then we could see huge impacts on our fishing industry, which would harm our local economy. | 1/17/2022 8:43 AM |
| 3 | Those that indicate "very concerned" I believe we have the highest risk and would have the most significant impact. | 1/13/2022 10:16 AM |
| 4 | I work for the Road Commission and am concerned with the impacts to the R-O-W | 1/12/2022 8:36 PM |
| 5 | GTB loses power in surrounding communities due to overhead lines down due to inclement | 1/12/2022 4:51 PM |

Grand Traverse County Natural Hazard Mitigation Community Survey

weather events (high winds, severe weather, snow storms and hot summer conditions) and trees falling on lines. Majority of tribal facilities do not have generators to support communitywide power failures for emergency shelters or warming shelters for community members. Public health emergency (Covid19) has been a constant issue to ensure health and safety standards are provided to keep public safe.

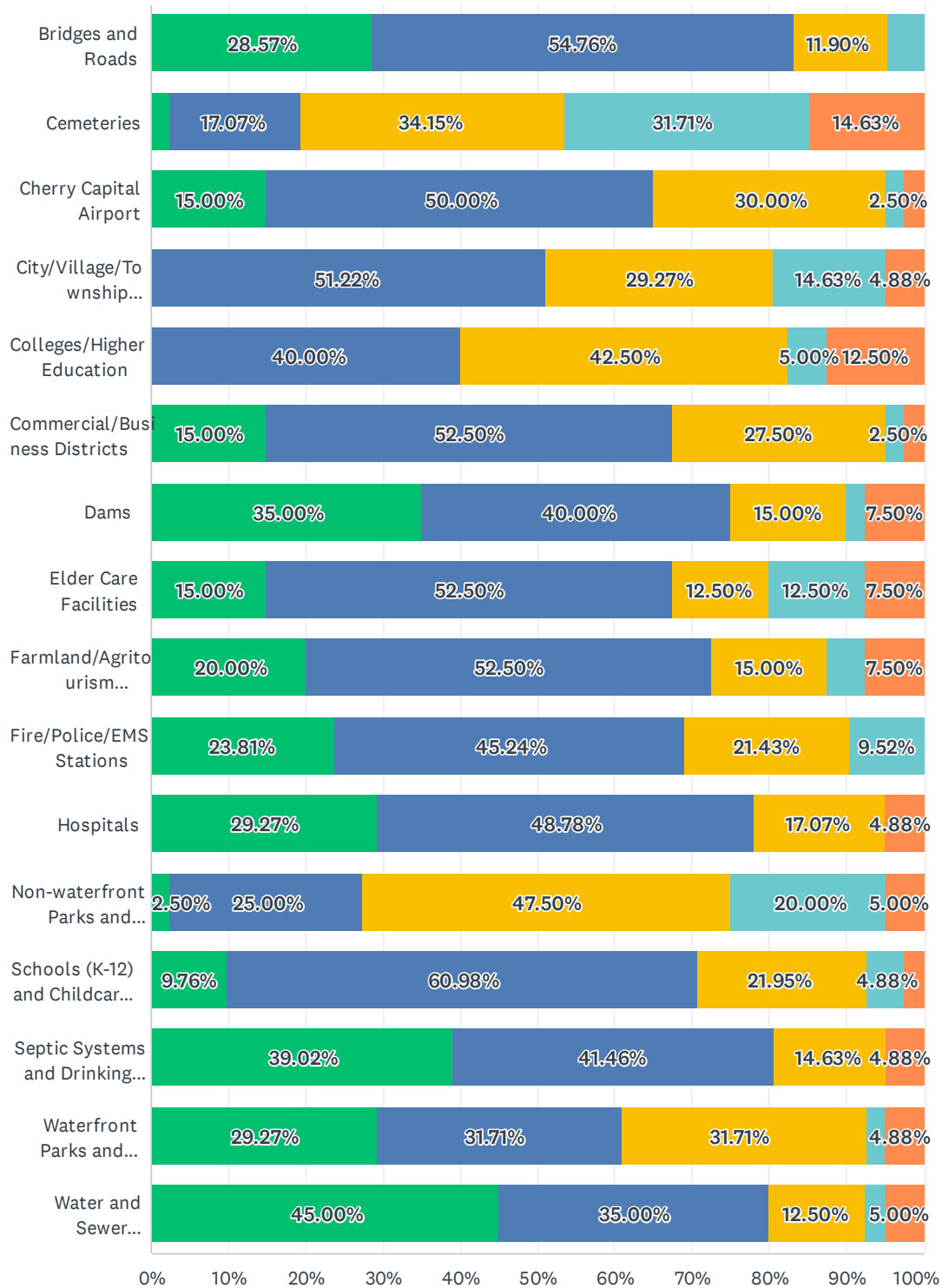
| | | |
|----|--|--------------------|
| 6 | We have had some very dry summers and then bad behavior on the trails in the woods with folks making fires. A wildfire could spread quickly and destroy historic structures at Lighthouse Park. | 1/12/2022 3:40 PM |
| 7 | I answered the above based on what I have seen happening in the community already. I am concerned about trickle down effects on agriculture and tourism. | 1/7/2022 9:55 AM |
| 8 | We have seen some extremes in this area and have weathered pretty well. Little to no loss of life. I believe it may be due to geographical reasons rather than emergency preparedness. Plane crash is more concerning to me having an airport so close to residential communities. | 1/6/2022 9:41 AM |
| 9 | We are a business that care of individuals with brain injuries that require 24 hour care. Our location has trees and open fields around it. | 1/4/2022 4:00 PM |
| 10 | During the 2015 event, a larger area of the Grand Traverse County was affected along with parts Leelanau County which triggered a response from Emergency Management. The 2021 event hit the Whitewater Township areas almost as hard, without any response. Elected local unit leaders need emergency management lite training on a regular basis. Possible develop a "mini disaster" plan for events that do not qualify for a larger response. | 1/4/2022 1:46 PM |
| 11 | Windstorms like we experienced in August 2015 and other weather related items are the main concern mainly due to the subtle changes in the weather that I have seen in my lifetime. | 1/3/2022 5:04 PM |
| 12 | Concerned about any event that would negatively effect the county road system and safety of the traveling public. | 1/3/2022 11:47 AM |
| 13 | high water levels- Causes damage on our beaches Infrastructure damage- we experience washouts at the Arbutus Lake Boat launch and campground that sometimes causes bad roads. Utility service loss causes cranky campers when they cant use the restrooms and run the air conditioning. Invasive Species- always a concern Public Health Emergency- It is super hard for us to access the beach from the campground when we get a call for an emergency at the beach. Taking a left hand turn out of the park to get to the beach is nearly impossible in the summer. Straight line winds- Causes damage to the trees in the park and causes campers to have damage to their camping units not to mention damage to our picnic tables/electrical pedestals, buildings and fire rings | 1/3/2022 9:30 AM |
| 14 | Areas of great concern are events that have greater likelihood of occurring, and that have a greater likelihood of causing loss of life. Areas of lesser concern have either a lesser likelihood of occurring, or a lesser likelihood of causing loss of life. | 12/31/2021 7:09 AM |
| 15 | Most of these items are simply part of life in a northern climate. Poor planning and lack of utility maintenance are what make them an issue. | 12/30/2021 3:06 PM |
| 16 | Most can affect Grand Traverse County. | 12/30/2021 1:59 PM |
| 17 | I would be concerned about all hazards, my answers would indicate priorities. | 12/30/2021 8:21 AM |

Q5 Please rank the following types of community infrastructure and assets on their level of vulnerability to damage/failure during a natural hazard event.

Answered: 43 Skipped: 1

Grand Traverse County Natural Hazard Mitigation Community Survey

Level of Vulnerability



■ Most Vulnerable
 ■ Somewhat Vulnerable
 ■ Neutral
 ■ Not Likely to be Vulnerable
 ■ Not Vulnerable

Grand Traverse County Natural Hazard Mitigation Community Survey

| Level of Vulnerability | | | | | | |
|---|-----------------|---------------------|--------------|-----------------------------|----------------|-------|
| | MOST VULNERABLE | SOMEWHAT VULNERABLE | NEUTRAL | NOT LIKELY TO BE VULNERABLE | NOT VULNERABLE | TOTAL |
| Bridges and Roads | 28.57% 12 | 54.76% 23 | 11.90% 5 | 4.76% 2 | 0.00% 0 | 42 |
| Cemeteries | 2.44% 1 | 17.07% 7 | 34.15% 14 | 31.71% 13 | 14.63% 6 | 41 |
| Cherry Capital Airport | 15.00% 6 | 50.00% 20 | 30.00% 12 | 2.50% 1 | 2.50% 1 | 40 |
| City/Village/Township Buildings | 0.00% 0 | 51.22% 21 | 29.27% 12 | 14.63% 6 | 4.88% 2 | 41 |
| Colleges/Higher Education | 0.00% 0 | 40.00% 16 | 42.50% 17 | 5.00% 2 | 12.50% 5 | 40 |
| Commercial/Business Districts | 15.00% 6 | 52.50% 21 | 27.50% 11 | 2.50% 1 | 2.50% 1 | 40 |
| Dams | 35.00% 14 | 40.00% 16 | 15.00% 6 | 2.50% 1 | 7.50% 3 | 40 |
| Elder Care Facilities | 15.00% 6 | 52.50% 21 | 12.50% 5 | 12.50% 5 | 7.50% 3 | 40 |
| Farmland/Agritourism Businesses | 20.00% 8 | 52.50% 21 | 15.00% 6 | 5.00% 2 | 7.50% 3 | 40 |
| Fire/Police/EMS Stations | 23.81% 10 | 45.24% 19 | 21.43% 9 | 9.52% 4 | 0.00% 0 | 42 |
| Hospitals | 29.27% 12 | 48.78% 20 | 17.07% 7 | 0.00% 0 | 4.88% 2 | 41 |
| Non-waterfront Parks and Recreation Areas | 2.50% 1 | 25.00% 10 | 47.50% 19 | 20.00% 8 | 5.00% 2 | 40 |
| Schools (K-12) and Childcare Facilities | 9.76% 4 | 60.98% 25 | 21.95% 9 | 4.88% 2 | 2.44% 1 | 41 |
| Septic Systems and Drinking Water Wells | 39.02% 16 | 41.46% 17 | 14.63% 6 | 0.00% 0 | 4.88% 2 | 41 |
| Waterfront Parks and Recreation Areas | 29.27% 12 | 31.71% 13 | 31.71% 13 | 2.44% 1 | 4.88% 2 | 41 |
| Water and Sewer Infrastructure | 45.00% 18 | 35.00% 14 | 12.50% 5 | 2.50% 1 | 5.00% 2 | 40 |

| # | PLEASE ELABORATE ON ANY OF YOUR ANSWERS PROVIDED! | DATE |
|---|--|--------------------|
| 1 | This is a vague question since everything is vulnerable depending on where the natural hazard occurs. I answered from what I know historically has happened here in FLT. | 1/17/2022 10:35 AM |
| 2 | I do not have much experience with the locations of all of these assets, which would be an important factor in determining how vulnerable they are. I marked things as most vulnerable if they are downtown, where flood issues occur. This is also where the union street dam is, which is at risk of failure. I also marked things as most vulnerable if I would be concerned if they lost power like elderly care facilities and child care facilities. | 1/17/2022 8:43 AM |
| 3 | We have a history of sewage ending up in the Boardman lake due to high water levels or significant rainfall. The marina floods as well. Most vulnerable indications are likely to have the most impact or most likely to occur in this county. | 1/13/2022 10:16 AM |
| 4 | Infrastructure needs to support roads, utilities, dams, floods, and housing of most vulnerable when water/sewer/utilities out. Pandemic concerns of any public health emergency and staffing | 1/12/2022 4:51 PM |

Grand Traverse County Natural Hazard Mitigation Community Survey

to support emergencies.

| | | |
|---|--|--------------------|
| 5 | We enjoy the look of Old Mission Peninsula and we need to make good decisions to keep the infrastructure from drastically changing the look of the farmland and beautiful views. | 1/12/2022 3:40 PM |
| 6 | Sewer and water infrastructure has been around for long time especially within the city with only repairs on a reactive basis. With the environmental sensitivity to the Great Lakes, this needs to be a priority. With the environmental sensitivity to the Great Lakes, this should be a major priority rather than more parking or additional retail building. Our road system has many miles of road segments which are in close proximity to water and the susceptibility of erosion from high water. Road funding is not nearly sufficient to address these concerns. Relocation of airport would be another future issue to address to prevent a large loss-of-life incident in the event of a plane crash. | 1/6/2022 9:41 AM |
| 7 | We are licensed by the state of Michigan to provide proper care and resources for the clients. | 1/4/2022 4:00 PM |
| 8 | All of these items are simply an issue with preparedness. I live in and do business in areas with private water and sewer. Loss of power is the only issue and that can be addressed with a generator. You cannot stop the snow, sleet, rain, or wind but you can maintain things properly. | 12/30/2021 3:06 PM |

Q6 What initiatives, improvements or efforts do you think could be implemented to reduce the impacts of natural hazard events in your community?

Answered: 29 Skipped: 15

| # | RESPONSES | DATE |
|----|---|--------------------|
| 1 | We can't stop most natural hazards, but we can better prepare for them by having a strong infrastructure. We can have strong bridges, dams and good emergency plans in place to protect our residents and infrastructure. | 1/17/2022 10:35 AM |
| 2 | I am not familiar enough with hazard preparedness plans to make any suggestions. | 1/17/2022 8:43 AM |
| 3 | Infrastructure improvements/updates. Plans and procedures | 1/13/2022 4:12 PM |
| 4 | Improvement of infrastructures to be able to withstand severe weather events. | 1/13/2022 10:16 AM |
| 5 | Be aware of your surroundings | 1/13/2022 8:00 AM |
| 6 | Underground utilities, drainage improvements, generators built into facilities, tree management, debris removal plan, soil erosion regulations, redundant interoperable communication system. | 1/12/2022 4:51 PM |
| 7 | Start with a plan and priorities | 1/12/2022 4:23 PM |
| 8 | Natural methods to deal with shoreline erosion and development of the farmland. | 1/12/2022 3:40 PM |
| 9 | I do not know | 1/12/2022 3:29 PM |
| 10 | Overall plan to reduce impact of rain-flood water events. Including improvements to infrastructure: Roads, storm sewers, re-shaping land, etc. | 1/11/2022 8:47 AM |
| 11 | Obtaining grants to assist agricultural community with mitigation of the effects of climate change. | 1/7/2022 9:55 AM |
| 12 | Many large grants and cohesion between local governments in a remedy. Politics aside. | 1/6/2022 9:41 AM |
| 13 | None | 1/4/2022 4:00 PM |
| 14 | Mini Disaster Plans | 1/4/2022 1:46 PM |
| 15 | Pre-planning and exercise events for response to natural hazard events; infrastructure improvements. | 1/4/2022 10:02 AM |
| 16 | Our county has a single person responsible for the health, safety, and welfare of residents via surface water management over 385,000 acres. Properly staffing and compensating a Drain | 1/4/2022 8:55 AM |

Grand Traverse County Natural Hazard Mitigation Community Survey

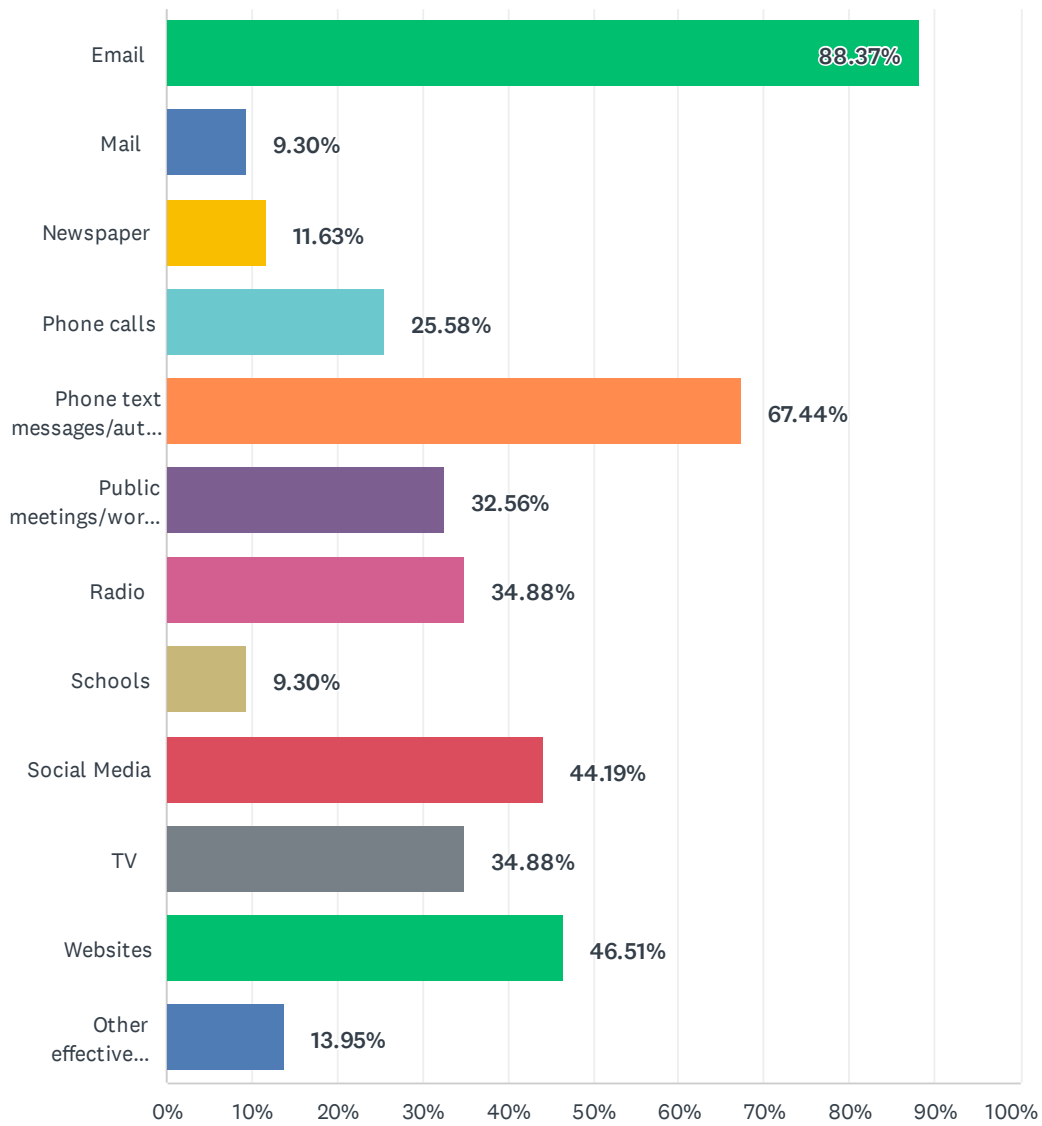
Commission would be a great step forward. Shoreline erosion continues to be an ongoing concern. Private residents, Townships, and other municipal agencies struggle both to understand responsibilities as well as funding-wise. A concerted effort with Army Corps. of Engineers and EGLE should be revisited (was previously in the works before Covid).

| | | |
|----|---|---------------------|
| 17 | Continued planning and risk mitigation exercises are valuable. | 1/3/2022 5:04 PM |
| 18 | proactive replacement of the twin culverts on S. Airport Rd crossing the Boardman River with a bridge located east of Logan's Landing | 1/3/2022 11:47 AM |
| 19 | maybe more trainings with community involvement. | 1/3/2022 9:30 AM |
| 20 | Improved stormwater management, better coastal planning and design of public and private properties, FishPass to replace the Union Street Dam, reduced carbon emissions, continue planting trees throughout the city. | 1/3/2022 8:52 AM |
| 21 | Being prepared and making an investment on mitigation. | 12/31/2021 10:42 AM |
| 22 | Improve watershed management activities. Improve maintenance of urban forest. Keep hazard mitigation plan current and routinely educate the public about the plan and about measures that individuals can take. | 12/31/2021 7:09 AM |
| 23 | Charge utility companies for outages. Right now it is easier and cheaper to just let the power go out than it is to invest in proper line maintenance. They also are not covering the cost of emergency fire and police crews baby-sitting their downed lines. | 12/30/2021 3:06 PM |
| 24 | Warning systems | 12/30/2021 1:59 PM |
| 25 | Utility infrastructure. A positive plan for shoreline erosion. Upgrades to public buildings. | 12/30/2021 1:31 PM |
| 26 | The JOC has been a great tool during the pandemic. | 12/30/2021 10:35 AM |
| 27 | Better communication between private and government sectors. | 12/30/2021 9:01 AM |
| 28 | Locally, adopt a countywide resilience plan that could be used by stakeholders to plan for or mitigate the impacts of natural hazards. On a statewide level, amend existing state incentive programs such as brownfield redevelopment program and the PACE energy efficiency program that would incentivize green infrastructure and storm water best management practices for private development. | 12/30/2021 8:50 AM |
| 29 | Improve redundancy in utilities, roads. | 12/30/2021 8:21 AM |

Q7 Which of the following methods are effective ways for you to receive information about how to be prepared for a natural hazard event? (You may select as many as you like.)

Answered: 43 Skipped: 1

Grand Traverse County Natural Hazard Mitigation Community Survey



Grand Traverse County Natural Hazard Mitigation Community Survey

| ANSWER CHOICES | RESPONSES | |
|--|-----------|----|
| Email | 88.37% | 38 |
| Mail | 9.30% | 4 |
| Newspaper | 11.63% | 5 |
| Phone calls | 25.58% | 11 |
| Phone text messages/automated alerts | 67.44% | 29 |
| Public meetings/workshops | 32.56% | 14 |
| Radio | 34.88% | 15 |
| Schools | 9.30% | 4 |
| Social Media | 44.19% | 19 |
| TV | 34.88% | 15 |
| Websites | 46.51% | 20 |
| Other effective communication method? (please specify) | 13.95% | 6 |
| Total Respondents: 43 | | |

| # | OTHER EFFECTIVE COMMUNICATION METHOD? (PLEASE SPECIFY) | DATE |
|---|--|--------------------|
| 1 | work networking | 1/13/2022 10:16 AM |
| 2 | I personally prefer push notifications from apps and text messages | 1/7/2022 9:55 AM |
| 3 | Regular webinars that are recorded and downloadable | 1/4/2022 1:46 PM |
| 4 | Organizational associations such as Michigan Townships Association or Michigan Association of Planning Local government resources through Michigan State University | 12/30/2021 8:46 PM |
| 5 | I'm already prepared but info would be the most helpful by phone for most individuals. Cell service and text are the least likely to go out and a phone can be charge in your car. Websites that people can search are also helpful. | 12/30/2021 3:06 PM |
| 6 | Put the options on the table, as well as the policies and process deemed essential to provide some clarity and avoid wasting resources. | 12/30/2021 8:21 AM |

Q8 Is there any additional information you would like us to consider as we update Grand Traverse County's Natural Hazard Mitigation Plan?

Answered: 16 Skipped: 28

| # | RESPONSES | DATE |
|---|---|--------------------|
| 1 | Yes, involve the local townships and provide them we functional plans for natural hazards. Have a training for township supervisors on what we should be providing to our residents during a natural hazard and how notify and provide the residents those provisions and services. | 1/17/2022 10:35 AM |
| 2 | No | 1/17/2022 8:43 AM |
| 3 | not sure | 1/14/2022 10:21 AM |
| 4 | Communication is a necessary tool in the times of a severe event, improving communication methods and ensuring consistent voices would improve response plans to emergencies, even | 1/13/2022 10:16 AM |

Grand Traverse County Natural Hazard Mitigation Community Survey

if we were otherwise unprepared.

| | | |
|----|--|---------------------|
| 5 | No | 1/13/2022 8:00 AM |
| 6 | Drainage improvements to reduce flood impacts, bury utility lines to reduce outages, tree management and generators in new construction and natural vegetation to reduce fires and flooding. | 1/12/2022 4:51 PM |
| 7 | Pursuing funding available to begin work on climate resilience. | 1/7/2022 9:55 AM |
| 8 | no. | 1/6/2022 9:41 AM |
| 9 | None | 1/4/2022 4:00 PM |
| 10 | How about a copy of the plan in advance of the survey? | 1/4/2022 1:46 PM |
| 11 | No | 1/4/2022 10:02 AM |
| 12 | Not that I can think of at this time. | 1/3/2022 5:04 PM |
| 13 | Thanks for being involved in this project. | 12/31/2021 10:42 AM |
| 14 | Locations where downed trees can be disposed of, would reduce the quantity of extra-large volumes of downed timber or half-downed timber on public and private property. Disposal can be a real issue and downed trees can be a cause or an issue getting access to the next outage. | 12/30/2021 3:06 PM |
| 15 | No | 12/30/2021 1:59 PM |
| 16 | No | 12/30/2021 9:01 AM |

APPENDIX C: 2015 PLAN MITIGATION STRATEGIES

| PRIORITY AND ACTION STRATEGIES | Responsible Parties | Timeframe |
|---|--|-------------------------------------|
| Priority Area 1: Flood Mitigation Strategies | | |
| a. Drainage improvements in high flooding potential areas, including upgrading the twin culverts on S. Airport Rd at <i>Logan's Landing</i> | Drain Commissioner Road Commission County Conservation District Emergency Management Department Townships, Villages, City | 2-4 years from adoption of the plan |
| <i>This strategy was modified and updated to reflect current needs.</i> | | |
| b. Removal of unsafe dams on the Boardman River | County Conservation District County Planning Department Emergency Management Department MI Department of Natural Resources Townships of Garfield, Blair, Paradise, East Bay, City of Traverse City | 4-8 years from adoption of the plan |
| <i>This strategy was modified and updated to reflect relevant dams.</i> | | |
| c. Continue enforcement of building codes and soil erosion regulations | County Building Inspector Building Construction Code Dept. County Conservation District | Ongoing |
| <i>This strategy was kept and is unchanged.</i> | | |
| Priority Area 2: Thunderstorms and High Winds Mitigation Strategies | | |
| a. Promote the establishment of the State of Michigan's Primary Radio Communication system for throughout the County | Emergency Management Department County Planning Department Townships, Villages, City | 1-2 years from adoption of the plan |
| <i>This strategy was kept and is unchanged.</i> | | |
| b. Have a debris removal plan for safety | Emergency Management Department County Planning Department County Building Inspector Townships, Villages, City | 2-4 years from adoption of the plan |
| <i>This strategy was kept and is unchanged.</i> | | |
| c. Utilize ham radio channel for local warnings | Emergency Management Department | 1-2 years from adoption of the plan |
| <i>This strategy was kept and is unchanged.</i> | | |
| d. Work with utility companies | Emergency Management Department County Planning Department County Building Inspector Utility Companies | 1-3 years from adoption of the plan |
| <i>This strategy was kept and is unchanged.</i> | | |
| e. Tree management | Utility Companies Emergency Management Department Townships, Villages, Private Landowners | 1-3 years from adoption of the plan |
| <i>This strategy was modified to be more specific.</i> | | |
| f. Promotion of burying utility lines in new construction | County Building Inspector Utility Companies | 1-3 years from adoption of the plan |

| | Emergency Management Department County Planning Department Townships, Villages, City | |
|---|---|-------------------------------------|
| <i>This strategy was kept and is unchanged.</i> | | |
| PRIORITY AND ACTION STRATEGIES | Responsible Parties | Timeframe |
| Priority Area 2: Thunderstorms and High Winds Mitigation Strategies (continued) | | |
| a. Burying power lines in high outage areas | County Building Inspector Utility Companies Emergency Management Department County Planning Department Townships, Villages, City | 1-3 years from adoption of the plan |
| <i>This strategy was kept and is unchanged.</i> | | |
| b. Identify potential wind damage areas | Emergency Management Department County Planning Department Townships, Villages, City | 1-2 years from adoption of the plan |
| <i>This strategy was kept and is unchanged.</i> | | |
| c. Establish new generators where needed | Emergency Management Department County Planning Department Townships, Villages, City | 2-3 years from adoption of the plan |
| <i>This strategy was kept and is unchanged.</i> | | |
| Priority Area 3: Extreme Winter Weather (Snow Load and Ice Build Up) Mitigation Strategies | | |
| a. Continue enforcement of building code regarding snow load limits through the permitting process | County Building Inspector Townships, Villages, City County Planning Emergency Management Coordinator | Ongoing |
| <i>This strategy was kept and is unchanged.</i> | | |
| b. Promote the establishment of the State of Michigan's Primary Radio Communication system for throughout the County | Emergency Management Department County Planning Department Townships, Villages, City | 1-2 years from adoption of the plan |
| <i>This strategy was kept and is unchanged.</i> | | |
| c. Utilize a ham radio channel for local warnings | Emergency Management Department | 1-2 years from adoption of the plan |
| <i>This strategy was kept and is unchanged.</i> | | |
| Priority Area 4: Wildfire/Urban Interface Mitigation Strategies | | |
| a. Public education and awareness activities such as programs and brochures regarding fuel management, proper vegetation, fire breaks | County Planning Department Emergency Management Department Building Inspector County Soil Conservation District MI Department of Natural Resources Townships, Villages, City | 1-3 years from adoption of the plan |
| <i>This strategy was kept and is unchanged.</i> | | |
| b. Continue enforcement of state fire codes regarding setback requirements | Building Inspector Townships, Villages, City | Ongoing |
| <i>This strategy was kept and is unchanged.</i> | | |
| c. Public education utilizing the MI Department of Natural Resources | Emergency Management Department County Conservation District | 1-3 years from adoption of the plan |

| | | |
|---|--|-------------------------------------|
| flyers and the FEMA information at parks and campgrounds | MI Department of Natural Resources Townships, Villages Parks and Campgrounds, public and private | |
| <i>This strategy was kept and is unchanged.</i> | | |
| d. Real estate and insurance agents to distribute information | Emergency Management Department County Planning Department Townships, Villages | 1-3 years from adoption of the plan |
| <i>This strategy was kept and is unchanged.</i> | | |
| e. Assess fire suppression access and make improvements | Emergency Management Department County and local fire departments | 1-3 years from adoption of the plan |
| <i>This strategy was kept and is unchanged.</i> | | |
| f. Research the MI Department of Natural Resources' State Forest wildfire/urban interface rules or plan | Emergency Management Department County and local fire departments County Planning Department | 1-3 years from adoption of the plan |
| <i>This strategy was kept and is unchanged.</i> | | |

| PRIORITY AND ACTION STRATEGIES | Responsible Parties | Timeframe |
|---|--|-------------------------------------|
| Priority Area 5: Shoreline Erosion Mitigation Strategies | | |
| a. Drainage control projects | Building Construction Code Dept. Drain Commissioner County Conservation District Emergency Management Department Townships, Villages, City | 2-4 years from adoption of the plan |
| <i>This strategy was kept and is unchanged.</i> | | |
| b. Enforcement of soil erosion statutes/permits | Building Construction Code Dept. Drain Commissioner County Conservation District County Planning Department Emergency Management Coordinator MI Department of Environmental Quality U.S. Army Corps of Engineers | Ongoing |
| <i>This strategy was kept and is unchanged.</i> | | |
| c. Enforcement of the building codes | County Building Inspector | Ongoing |
| <i>This strategy was kept and is unchanged.</i> | | |
| d. Enforcement of the grading levels no more than 10% | Building Construction Code Dept. Drain Commissioner County Conservation District County Planning Department | Ongoing |
| <i>This strategy was kept and is unchanged.</i> | | |
| e. Placement of vegetation and utilizing native vegetation | County Building Inspector Building Construction Code Dept. Drain Commissioner County Conservation District County Planning Department Townships of Peninsula, East Bay, Acme, City of Traverse City | Ongoing |
| <i>This strategy was kept and is unchanged.</i> | | |

APPENDIX D: LOCAL PLANNING TEAM MEETING DOCUMENTATION

A G E N D A
Grand Traverse County
Local Emergency Planning Committee (LEPC)
Community Partners Meeting
Thursday, October 29, 2020 - 8:30 am
400 Boardman Ave, 2nd Floor Training Room
Traverse City MI 49684
Or via Google Meet
<https://meet.google.com/zgk-defc-sbz>
Join by phone
[(US)] +1 567-236-0769 PIN: 322 557 558#

Chairman: Chief Pat Parker, MFD
Vice Chairman: Chief Jim Tuller, TCFD
Secretary: Deb Hunt, GTCRC

- 1. Call Meeting to Order**
- 2. Approval of Agenda**
- 4. Approval of Community Partner Minutes of March 19, 2020**
- 5. Agency Presentations & Schedule**
 - a. Nothing for today's meeting
 - b. John Stalmack, Lambda Energy – **to be scheduled at an upcoming Hazmat meeting**
- 6. Committee & Team Reports**
 - a. Regional Hazmat Team Report/Sara Title II & III (Jim Tuller – City Fire)
 - b. School Drill Schedule and Report (Mark Bak - TCAPS)
 - c. Emergency Manager/Planning Team (Gregg Bird – EM)
 - d. TBARG - (Glen Johnson)
- 7. Drills/Exercises and Training/Education**
- 8. Old Business**
- 9. New Business**
 - a. Natural Hazard Mitigation Plan Update
- 10. Open Discussion**
- 11. Future Meetings**

December 17, 2020, 8:30 am – HAZMAT
- 12. Adjournment**

MINUTES
Grand Traverse County
Local Emergency Planning Committee (LEPC)
Community Partners Meeting
Thursday, October 29, 2020 - 8:30 am
Via Google Meet, Traverse City MI 49684

Chairman: Chief Pat Parker, MFD
Vice Chairman: Chief Jim Tuller, TCFD
Secretary: Deb Hunt, GTCRC

1. Call Meeting to Order

The regular meeting was called to order at 8:30 am. The virtual meeting was called to order at 8:34 am by Chair Parker.

Attendees introduced themselves.

2. Approval of Agenda

The agenda was approved as distributed.

4. Approval of Community Partner Minutes of March 19, 2020

Motion by Jewett, seconded by B. Parker, to approve the Minutes of March 19, 2020.
CARRIED

5. Agency Presentations & Schedule

- a. No presentation was scheduled for this meeting.
- b. John Stalmack, Lambda Energy, will be scheduled for a future in-person, HazMat meeting.

6. Committee & Team Reports

a. Regional Hazmat Team Report/Sara Title II & III (Jim Tuller – City Fire)

In Tuller's excused absence, Chair Parker reported on Metro Fire has trained with the 51st Region and has been on-call to assist during svisits by candidates.

b. School Drill Schedule and Report (Mark Bak - TCAPS)

Bak reported the majority of first school drills are complete. Drill procedures will be modified to reflect Covid concerns. TCAPS continues to assist non-TCAPS schools.

c. Emergency Manager/Planning Team (Gregg Bird – EM)

In Bird's excused absence, Chair Parker reported on continued Covid efforts and the Natural Hazard Mitigation Plan by the Emergency Manager.

d. TBARG - (Glen Johnson)

Johnson reported assistance with given to the recent drowning off the Frankfort pier. Cost sharing partners are being sought to assist in acquiring the DRM/Talk Groups system. He also shared his efforts regarding possible application of the StarLink system.

7. Drills/Exercises and Training/Education

Chair Parker stated "300" classes are now available on line, with discussion underway about developing "400" classes on line. He advised attendees of the November 7, 2020 non-sanctioned "Non-Ice-Man Race." January 14 will be a planning meeting for the VASA events scheduled for February 13 and 15.

8. Old Business

There were no items of Old Business.

9. New Business

a. Natural Hazard Mitigation Plan Update

Chair Parker highlighted the updates to Grand Traverse County's *Natural Hazard Mitigation Plan*. A major change was to the top five priorities. Fires were eliminated from the top five and erosion was added to the top five. Draft copies have been supplied to townships and other involved agencies for their input.

10. Open Discussion

There were no items of open discussion.

11. Future Meetings

November 19, 2020 has been canceled.
December 17, 2020, 8:30 am – HAZMAT

12. Adjournment

The Committee adjourned at 9:05 am.

Submitted by Debra Hunt

A G E N D A
Grand Traverse County
Local Emergency Planning Committee (LEPC)
Community Partners Meeting
Thursday, January 21, 2021 - 8:30 am
Virtual Meeting

Google Meet Meeting ID
meet.google.com/dur-vrdw-nvd

Dial In
(US) +1 423-607-0073
PIN: 135 035 257#

Chairman: Chief Pat Parker, Metro Emergency Services
Vice Chairman: Chief Jim Tuller, Traverse City Fire Dept.
Secretary: Deb Hunt, Volunteer

1. Call Meeting to Order – G. Bird

2. Approval of Agenda

3. Election of Officers

Nominations for the positions of Chair, Vice-Chair and Secretary will be taken.

4. Approval of Community Partner Minutes of October 29, 2020

5. Agency Presentations & Schedule

The 2021 meeting schedule is enclosed for review and a call for 2021 presentations will be given

6. Committee & Team Reports

- a. Regional Hazmat Team Report/Sara Title II & III (Jim Tuller – City Fire)
- b. School Drill Schedule and Report (Mark Bak - TCAPS)
- c. Emergency Manager/Planning Team (Gregg Bird – EM)
- d. TBARG - (Glen Johnson)

7. Drills/Exercises and Training/Education

8. Old Business

- a. Natural Hazard Mitigation Plan renewal update discussion

9. New Business

10. Open Discussion

11. Future Meetings

12. Adjournment

MINUTES
Grand Traverse County
Local Emergency Planning Committee (LEPC)
Community Partners Meeting
Thursday, January 21, 2021 - 8:30 am
meet.google.com/dur-vrdw-nvd
Dial In (US)+1 423-607-0073 PIN: 135 035 257#

1. Call Meeting to Order

Meeting was called to order by Gregg Bird.

2. Approval of Agenda

Motion by Jewett, seconded by B. Parker, to approve the agenda.
CARRIED

3. Election of Officers

Bird called for nominations for the position of Chair. Pat Parker was the sole nominee and accepted the nomination. Pat Parker was elected as Chair by unanimous vote.

Pat Parker called for nominations for the position of Vice-Chair. Jim Tuller was the sole nominee and accepted the nomination. Jim Tuller was elected as Vice-Chair by unanimous vote.

Pat Parker called for nominations for the position of Secretary. Deb Hunt was the sole nominee and accepted the nomination. Deb Hunt was elected as Secretary by unanimous vote.

4. Approval of Community Partner Minutes of October 29, 2020

Motion by Jewett, seconded by Tuller, to approve the October 29, 2020 Community Partner meeting minutes.
CARRIED

5. Agency Presentations & Schedule

At this time, meetings are anticipated to be virtual. Bird extended the offer for community partners to do presentations.

The 2021 meeting schedule stands as distributed. Dates are subject to change as the need arises.

6. Committee & Team Reports

- a. Regional Hazmat Team Report/Sara Title II & III (Jim Tuller – City Fire)
Tuller reported on a December incident occurring in Leelanau County.

P. Parker commented on the local first responders joint efforts in hosting the Presidential/Vice-Presidential visit last November.

Both men reported they are currently developing capital equipment items.

- b. School Drill Schedule and Report (Mark Bak - TCAPS)
Bird reported schools have been rescheduling drills/lockdowns.

- c. Emergency Manager/Planning Team (Gregg Bird – EM)
Bird shared updates regarding vaccination efforts of the Health Department. The annual HazMat grant has been submitted. Bird have worked on the Local HazMat Mitigation Plan. The document was submitted to MSP EMHSD, rejected and an appeal was submitted. The appeal was denied as compliance to new, but not released requirements, is being required. More updates are being made and the plan will be re-submitted. The group discussed the ranking of the natural hazards affecting the county and the different jurisdictions and municipalities. Municipal liaisons were asked to take back the hazards to their planning staff again.

d. TBARG - (Glen Johnson)

Johnson shared Cherryland Electric has financially participated in a 2,000W generator. This generator will allow a wide range of online verbal and document transmission to occur by connecting to the StarLight satellite system once the final equipment is procured.

7. Drills/Exercises and Training/Education

All training for FEMA compliance is still be done via online learning. Most recent class offerings from state and federal consortium partners have been emailed to members and continue to be distributed as they are received.

Great Lake Homeland Security Meeting postponed until August 17- 19 in Grand Rapids.

MI Hazmat First Responders Conference will be held April 7 – 9 at Crystal Mountain.

8. Old Business

There were no items of Old Business.

9. New Business

There were no items of New Business.

10. Open Discussion

No topics were presented for Open Discussion.

11. Future Meetings

February 18 - HazMat

March 18 - Community Partners

April 15 - Community Partners

12. Adjournment

Motion by Jewett, seconded by Down, to adjourn.

The Committee adjourned at 9:02 a.m.

Submitted by Debra Hunt

A G E N D A
Grand Traverse County
Local Emergency Planning Committee (LEPC)
Thursday, March 18, 2021 - 8:30 am
Virtual Meeting

Google Meeting ID
meet.google.com/ixy-hteh-qgu

Phone Numbers
(US) +1 401-646-2312
PIN: 609 301 975#

Chairman: Chief Pat Parker, MFD
Vice Chairman: Chief Jim Tuller, TCFD
Secretary: Deb Hunt, Volunteer

- 1. Call Meeting to Order**
- 2. Approval of Agenda**
- 3. Approval of Minutes of January 21, 2021**
- 4. Agency Presentations & Schedule**
- 5. Committee & Team Reports**
 - a. Hazmat Team Report/Sara Title II & III)
 1. Tier II status 2021 update
 2. HAZMAT Elite training & equipment from Region 7 Homeland Security Grant Program
 3. Recent HAZMAT incident(s) review
 - b. School Drill Schedule and Report
 - c. Emergency Manager/Planning Team
 - d. TBARG / RACES
- 6. Drills/Exercises and Training/Education**
- 7. Old Business**
 - a. Natural Hazard Mitigation plan update discussion – input for projects
- 8. New Business**
- 9. Open Discussion**
- 10. Future Meetings**

April 15 -
May 21 -
June 17 -
- 11. Adjournment**

MINUTES
Grand Traverse County
Local Emergency Planning Committee (LEPC)
Community Partners Meeting
Thursday, March 18, 2021 - 8:30 am
Virtual Meeting
Google Meeting ID
meet.google.com/yfk-meav-iyt

Phone Numbers
(US) +1 707-395-8051
PIN: 999 681 189#

Chairman: Chief Pat Parker, MFD
Vice Chairman: Chief Jim Tuller, TCFD
Secretary: Deb Hunt, Volunteer

1. Call Meeting to Order

The meeting was called to order at 8:30 am Chair Parker.

2. Approval of Agenda

Motion by Jewett, seconded by Lemcool, to approve the agenda as presented.
CARRIED

3. Approval of Minutes of January 21, 2021

Motion by Jewett seconded by Dituri, to approve the January 21, 2021 minutes as presented.
CARRIED

4. Agency Presentations & Schedule

There was no agency presentation scheduled for this meeting. Bird extended the invitation for agencies to present their agency's operation and/or how they functioned during the 2020 pandemic. Thus far, Cherry Capital Airport is scheduled for the August presentation.

5. Committee & Team Reports

a. Hazmat Team Report/Sara Title II & III)

1. Tier II status 2021 update

Drewery stated the current 120 site as well as new sites, are reporting. Information is forthcoming for locations needing to update their correct fire department. This information will be relayed to Dispatch. He shared his experience with a local firm requesting oversight in disposing of a small, but critical chemical being phased out of service. An increase in oil well activity is possible with gas/oil prices escalating.

2. HAZMAT Elite training & equipment from Region 7 Homeland Security Grant Program

Tuller reported training is continuing as usual. A vent was purchased for the trailer and a gas monitor. Several trucks are up for replacement.

Drewery reported similar activity for Metro. He is working with B. Parker to develop tart solutions, with two full drill scenarios planned. Other agencies were invited to participate.

Drewery stated his gratitude to Region 7 for their \$73K equipment grant for an Ideal Lead. The ability of this device to identify materials is as ample exceeds some local agency's similar equipment. It is also blue tooth compatible.

3. Recent HAZMAT incident(s) review

There were no recent Hazmat incidents to review.

b. School Drill Schedule and Report

Chair Parker reported that school drills are occurring weekly with no issues arising.

c. Emergency Manager/Planning Team

Bird reviewed the issues associated with gaining approval of our Natural Hazmat Mitigation Plan. With some revisions, our plan has been **denied** approval by the State and is currently under FEMA review. Approval of this plan will allow many municipalities the ability to apply for grants. A review of projects – both completed and proposed for the new plan was conducted with much discussion.

CODE RED has expanded the base of their services, including One Notification Express (ONE). Grand Traverse County was requested to be a test site for this service, which will allow simple text/email notification to predetermined groups. Once setup, this improves the timing of efficient notification in a simplified method. Bird with working with Hornacek on the setup.

d. TBARG / RACES

No report was provided.

6. Drills/Exercises and Training/Education

Drewery has scheduled March 24-26 has individual 8-hour training days for the new Ideal Lead equipment.

Bird anticipates a new Local Officials training, as MiSIMS. (MI Critical Incident Management System MICIMS)

Chair Parker indicated ICS 300/400 may return in April to face-to-face training.

7. Old Business

There were no items of Old Business.

8. New Business

The group commented on Jewett's statement that Grand Traverse County is expected to receive \$18M in Stimulus Funds. The funds will be limited to four categories of expenditures which are not yet fully defined. Members were encouraged to prepare potential uses.

9. Open Discussion

There were no topics of Open Discussion.

10. Future Meetings

Bird is hopeful face-to-face meeting may resume in April. He will locate a site to safely seat up to 25 participants. Each future meeting agenda will have a Hazmat component.

April 15

May 21

June 17

11. Adjournment

The Committee adjourned at 9:00 am.

Submitted by Secretary Hunt.



**Grand Traverse County
Local Planning Team (LPT)**

May 10, 2021

1300hrs

EOC

Agenda

Chair: Chief Jim Tuller

Vice Chair: Chief Fred Gilstroff

Secretary: Director Nick Lemcool

1. Meeting Call to Order:

2. Approve Today's Agenda:

3. R7HSPB Updates:

a) 2018, 2019, & 2020 Grants –

- LETPA – robots project (Law Enforcement) – at Crawford Co Sheriff's Office. Training on 5/12/21

b) 2021 Grant (utilizing National Priority Area Project ideas from MSP)
Region 7 allotment \$318,362.00

- Hazmat – training & robot piece (emerging threats)
- Cyber summit (enhancing cyber security & elections)
- Contractor Active Shooter training (Soft Targets & Crowded Spaces)
- MIOC Fusion Center Training (Intelligence & Info Sharing)
- Field Force Training for LE (Combating Domestic Violent Extremism)
- OWL Pro meeting system (EOC improvements)

4. Old Business:

- a) COVID-19 update (if GT HD personnel are available)
- b) Natural Hazard Mitigation Plan renewal update

5. Training & Exercises

- a) Local (elected) Officials EM Orientation **5/11/21**
- b) Michigan Critical Incident Management Software (MICIMS) class update
- c) Joint FSX w/USCG
- d) RTF functional exercises

6. New Business:

- a) 2021 event planning
 - 1. NCF (Gillis / Tuller)
- b) Planning team interest for countywide Special Operations Teams consolidation

7. Open Discussion / Round Table:

8. Next Meetings: June 21, 2021

Called to order – 13:01

Approval –

R7HSPB Updates

a) 2018, 2019, & 2020 Grants –

- LETPA – robots project (Law Enforcement) – at Crawford Co Sheriff's Office. Training on 5/12/21

b) 2021 Grant (utilizing National Priority Area Project ideas from MSP)
Region 7 allotment \$318,362.00

- Hazmat – training & robot piece (emerging threats)
 - Completed in GTC.
- Cyber summit (enhancing cyber security & elections)
 - Training and summits in region coming soon.
- Contractor Active Shooter training (Soft Targets & Crowded Spaces)
 - Same contractor as Upper Peninsula, more to come.
- MIOC Fusion Center Training (Intelligence & Info Sharing)
- Field Force Training for LE (Combating Domestic Violent Extremism)
- OWL Pro meeting system (EOC improvements)

Potential for 5% cut in training funding.

Old Business.

- a) No GT HD personnel present
- b) Natural Hazard Mitigation plan update: Submitted to FEMA three months ago. Came back last week, not approved. Eight criteria not met. Gregg beginning to go through process to break down issues and correct.
 - a. Two more municipalities joined between this renewal and last.
 - b. Flood maps not updated between 1988 and 2013.
 - c. 63 counties have expired plans that are attempting to renew however, have been denied.
 - d. Many counties beginning to opt out of renewing plans.
 - e. Some issues between BETA software and what actually happens. Want a breakdown of why. (growth density in individual municipalities).
 - f. Gregg has a copy of rejected plan if anyone would like to review.

Training Exercise –

- a) 5/11 Local elected officials
- b) MICIMS – Emailed out today 5/10 – Limited spots
- c) Joint FSX w/ USCG
 - a. Would like to do more training.

- b. Agency specific trainings
- c. Large Scale exercise
- d) RTF functional exercises.
- e) Family Assistance Center Training – Tabletop

New Business:

- a) 2021 Event Planning
 - a. NCF
 - i. No official meeting as of today.
 - ii. Boom Boom Club going through final preps for July 4.
 - 1. Plan going to City Commission 5/17
 - iii. No fireworks, no airshow, no concerts for 2021.
 - iv. Still some type of event at open space.
 - v. Festival of Races is being planned.
 - b. Fife Lake
 - i. Planning fireworks on 4th.
- b) Planning team interest for countywide Special Operations Team.
 - a. Brought up to County Chiefs. Gregg willing to host and coordinate leadership.
 - b. Thoughts on all teams becoming one regional team like Law Enforcement ERT.
 - i. Trench, Hazmat, Ropes, SAR ect.
 - ii. MABAS requirement potentially coming.
 - c. J. Torrey – Thoughts from dispatch and coordinating teams with ease of dispatch.
 - d. Creating County based team to help with personnel and building a robust team.
 - e. Much like ERT.
 - f. Questions to G. Bird.

Open Discussion/ Round Table –

- a) Eagle View Pictometry – Coordinating those images into emergency response. Many local communities already utilize this program.
 - a. GT Dispatch looking at how to coordinate a rollout to responders and looking at options.
- b) Chief B. Parker
 - a. May 31, 2021 – Turtle Creek Baseball stadium open. Unknown of capacity due to recent Executive Orders.
 - b. Concerts Pushed back again.
 - c. Fair up and running for 2021.
- c) MSP Advised state IPAWS contract.
 - a. EMENET previously. OnSolved – new contact.
 - i. Gregg, Leah and Jason working on new features and options. More to come.

Adjourn @ 13:38 by Chair Chief Tuller.

Next meeting June 21, 2021.

A G E N D A
Grand Traverse County
Local Emergency Planning Committee (LEPC)
Thursday, June 17, 2021 - 8:30 am
Government Center, 400 Boardman Ave, 2nd Floor Training Room

Chairman: Chief Pat Parker, Grand Traverse Metro Emergency Services
Vice Chairman: Chief Jim Tuller, Traverse City Fire Dept
Secretary: Deb Hunt, Volunteer

1. Call Meeting to Order

2. Approval of Agenda

3. Approval of Minutes of March 18, 2021

4. Agency Presentations & Schedule

5. Committee & Team Reports

- a. Hazmat Team Report/Sara Title II & III)
 - 1. Tier II status 2021 update
 - 2. 2020-21 Hazardous Materials Emergency Preparedness (HMEP) grant status
 - 3. Recent HAZMAT incident(s) review
- b. School Drill Schedule and Report
- c. Emergency Manager/Planning Team
- d. TBARG / RACES

6. Drills/Exercises and Training/Education

7. Old Business

- a. Natural Hazard Mitigation plan update discussion – accepting further comments on draft plan

8. New Business

9. Open Discussion

10. Future Meetings

August 19 – Annual Cherry Capital Airport plan review
September 16 -
October 21 -

11. Adjournment

MINUTES
Grand Traverse County
Local Emergency Planning Committee (LEPC)
Thursday, June 17, 2021 - 8:30 am
Government Center, 400 Boardman Ave, 2nd Floor Training Room

Chairman: Chief Pat Parker, Grand Traverse Metro Emergency Services
Vice Chairman: Chief Jim Tuller, Traverse City Fire Department
Secretary: Deb Hunt, Volunteer

1. Call Meeting to Order

Chief Pat Parker called the meeting to order at 8:30 am.

2. Approval of Agenda

Motion by Jewett, seconded by Sal, to approve the agenda as presented.

CARRIED

3. Approval of Minutes of March 18, 2021

Motion by Jewett, seconded by Lemcool, to approve the minutes as amended.

CARRIED

4. Agency Presentations & Schedule

There was not an agency presentation. Two presentations were scheduled.

5. Committee & Team Reports

a. Hazmat Team Report/Sara Title II & III)

1. *Tier II status 2021 update*

Flynn reported his efforts, along with Bird's to resolve the Tier II issue as to reporting the proper fire department. It was determined the drop-down menu was quite errant and is now current.

P. Parker commented on the changes on how PFAS acceptable levels continue to minimize. EGLE will begin a second phase of pickups.

2. *2020-21 Hazardous Materials Emergency Preparedness (HMEP) grant status*

Bird reported the 2021 HEMP was approved for submittal. This is the \$1500 annual grant we apply for to fund the Tier II reporting system.

3. *Recent HAZMAT incident(s) review*

Bird shared Tuller's report of the two Sky Tracks tipping over during the Cass Dam Project. Very minimal hydrocarbons and diesel were released and then were contained.

b. School Drill Schedule and Report

There was no report from TCAPS. The concept of a potential annual School Safety Event was discussed. Superintendents, law enforcement, emergency management and fire departments were suggested attendees. The session could last two-four hours, with a meal provided. August 15 is the date.

c. Emergency Manager/Planning Team

Event planning is well underway. National Cherry Festival will feature two new offsite venues to be reviewed. The expansion of the Horseshow in volume and venue size was discussed. Turtle Creek/Pit Spitter large event has an exhaustive plan in place already. Impacts from the Benzie County Ironman Race may impact Grand Traverse County's response teams.

P. Parker commented on Grand Traverse County's preparedness to provide mutual aid for adjoining municipalities.

Bird stated efforts are underway to have a third-party EOC review conducted. This would address technology, security and organizational structure of the facility.

d. TBARG / RACES

A report was not provided from TBARG/RACES.

6. Drills/Exercises and Training/Education

In the fall, Lambda will conduct boom training.

7. Old Business

a. Natural Hazard Mitigation plan update discussion – accepting further comments on draft plan

Bird requested all participants in the plan to provide written comments on the plan; even if what is “No comment.” Most Municipal representatives, (Fire/EMS chiefs), verbally identified no issues with the draft plan.

Explicit examples of the difficulties encountered to obtain an approved plan were shared. It was clear to all attending, essentially, until either or both FEMA/MSP either/both publish/share the standards agencies are required to meet, all efforts are merely “our best shot.”

Some agencies have been successful if a COG was the plan author. Bird is working with Networks Northwest regarding this type of venture.

8. New Business

Bolde asked attendees to share that Munson and its health care partners are subject to a higher standard of COVID restrictions. All those who work/attend one of MMC's facilities are required to wear a Munson-provided mask.

Sal added TSA requires all persons inside an airport facility to also wear a mask.

Oosee stated Grand Traverse Sheriff deputies will begin wearing body cameras in 20 days.

Powers stated the Red Cross nationally requires masking. Additionally, the social distance for cots has doubled since use of hotels is diminishing.

P. Parker will contact C. Clark regarding advance training for GTSD regarding RTF. This is scheduled for October 13-15.

Bird stated Grand Traverse County was put under a Red Flag Warning this morning.

It was suggested a comparison of infrastructure to HazMat Site for evacuation purposes be conducted.

Winter offered Salvation Army resources to the Red Cross if needed.

9. Open Discussion

Case reported on the increase in state park occupancies. Interlochen is the largest. Concerts are resuming in August at the Interlochen Arts Academy.

Powers asked if fire safety literature was available regarding resident outdoor facilities.

A Road Construction Summit was proposed by P. Parker. It would involve the City, MDOT, and GTCRC. A date prior to November 15 was suggested by Tuller. A joint list of the new season construction projects would be developed at this meeting. Detours and signage could be discussed to aid first responders. This could be in the form a special LPT meeting as the sole topic. This may encourage those participants to attend.

10. Future Meetings

August 19 – Annual Cherry Capital Airport plan review

September 16 – Central Dispatch, Hornacek

October 21 – Munson Medical Center, Bolde

11. Adjournment

The Committee adjourned at 9:38 am.

Submitted by Debra Hunt.



**Grand Traverse County
Local Planning Team (LPT)**

June 21, 2021

1300hrs

EOC

Agenda

Chair: Chief Jim Tuller

Vice Chair: Chief Fred Gilstroff

Secretary: Director Nick Lemcool

1. Meeting Call to Order:

2. Approve Today's Agenda:

3. R7HSPB Updates:

a) 2018, 2019, & 2020 Grants –

- LETPA – robots project (Law Enforcement) – at Crawford Co Sheriff's Office. Training on 5/12/21

b) 2021 Grant (utilizing National Priority Area Project ideas from MSP)
Region 7 allotment \$318,362.00

- Hazmat – training & robot piece (emerging threats)
- Cyber summit (enhancing cyber security & elections)
- Contractor Active Shooter training (Soft Targets & Crowded Spaces)
- MIOC Fusion Center Training (Intelligence & Info Sharing)
- Field Force Training for LE (Combating Domestic Violent Extremism)
- OWL Pro meeting system (EOC improvements)

4. Old Business:

- a) COVID-19 update (if GT HD personnel are available)
- b) Natural Hazard Mitigation Plan renewal update

5. Training & Exercises

- a) Joint FSX w/USCG
- b) RTF functional exercises
- c) School Safety Summit – PROPOSED Aug???

6. New Business:

- a) 2021 National Cherry Festival IAP
- b) NW MI Fair planning update
- c) Old Dominion concert @ Turtle Creek Stadium planning update

7. Open Discussion / Round Table:

8. Next Meetings: July 19, 2021 (if needed)



**Grand Traverse County
Local Planning Team (LPT)**

June 21, 2021

1300hrs

EOC

Minutes

Chair: Chief Jim Tuller

Vice Chair: Chief Fred Gilstroff

Secretary: Director Nick Lemcool

- 1. Meeting Call to Order:** 13:01 – By Chair Tuller
- 2. Approve Today's Agenda:** Add approval of May Minutes. Motion – B. Jewett, Chief B. Parker – All aye.
- 3. Approve May Minutes:** Motion – B. Jewett, Jason Torrey – All aye.
- 4. R7HSPB Updates:**
 - a) 2018, 2019, & 2020 Grants –
 - LETPA – robots project (Law Enforcement) – at Crawford Co Sheriff's Office. Training on 5/12/21-
 - Still have questions about Robot Grant. May have extra equipment ordered in Roscommon and not in GT. Original plan was to have both robots the same.
 - Robots will have hazmat capability. Waiting on parts that have been ordered to connect to hazmat team monitors.
 - Training will follow
 - b) 2021 Grant (utilizing National Priority Area Project ideas from MSP)
Region 7 allotment \$318,362.00
 - Hazmat – training & robot piece (emerging threats)
 - Cyber summit (enhancing cyber security & elections)
 - Contractor Active Shooter training (Soft Targets & Crowded Spaces)
 - MIOC Fusion Center Training (Intelligence & Info Sharing)
 - Field Force Training for LE (Combating Domestic Violent Extremism)
 - OWL Pro meeting system (EOC improvements)
- 5. Old Business:**
 - a) COVID-19 update
 1. Mike L.
 - a. Numbers in right direction. Spent time planning Cherry Festival events old practices and new practices due to COVID-19.
 - b. Testing site set up at Health Department
 - c. Vaccination site set up at Cherryland Center.
 - d. Many extra supplies – PPE available. Get with Gregg or Mike to obtain if needed.



b) Natural Hazard Mitigation Plan renewal update

1. Will be reoccurring. Gathering feedback from municipalities. Working on finding some consultants to help finish up project. Will have open forum and open meeting to review and approve when complete. Asked Fire/EMS chiefs to confirm w/their municipalities if they are still the representative. Invite also sent out to municipal planners. Plans are more extensive than ever before. Over half of state do not have updated plans. Currently delay due to COVID-19 and new requirements that have not been released publicly as of yet.

6. Training & Exercises

a) Joint FSX w/USCG

1. Still in planning stages.

b) RTF functional exercises

1. Thursday 24th 0900-1200, TCFD Station 1 initial RFT training for those that have not been involved with yet.
2. FSX planning for this fall. Planning team will be set up prior. Before September 30th.
3. Thoughts on setting up remote training “sites” where certain skills can be practiced while officers/ deputy/ EMS and fire crews can do (Door entry, movements.

c) School Safety Summit – PROPOSED

1. August 18th noon-1600.
 - a. Admin Staff – overview of County policies. Lockdowns, drills, law enforcement presentation, fire presentation. Group all together in one place to discuss.

d) MICIMS training completed last week. Certificates should be in MITRAIN.

7. New Business:

a) 2021 National Cherry Festival IAP

1. Draft sent out Friday. Still missing EMS category from MMR. MMR Admin is currently working on their portion. Will plan 204 for EMS mutual aid.
 - a. Motion to approval IAP without EMS-plan and will publish on Wednesday awaiting EMS Plan – Motion B. Jewett, Chief P. Parker. All aye.

b) NW MI Fair planning update

1. Planning meeting last Thursday. Normal Schedule with full concerts. Round-about completion is only concern. Command Trailer will be on site starting the 3rd.

c) Old Dominion concert @ Turtle Creek Stadium planning update

1. Planning meeting last week. Solid robust plan for parking. Estimating just under 10,000 people. 4,000 people on field. Extra exits and first aid tent on field. Concern of parking. Unified Command Post in conference center and secondary command post onsite. September 17th. Gates open at 16:30.

8. Open Discussion / Round Table:

- a. NWRTC – Blue Card training over last few weeks. Meeting tomorrow to discuss how that plays into Fire Scene command for GT County.

9. Next Meetings: July 19, 2021



Adjournment 13:57 by Chair Chief Tuller



A G E N D A
Grand Traverse County
Local Emergency Planning Committee (LEPC)
Thursday, August 19, 2021 - 8:30 am
Government Center, 400 Boardman Ave, 2nd Floor Training Room

Chairman: Chief Pat Parker, Grand Traverse Metro Emergency Services
Vice Chairman: Chief Jim Tuller, Traverse City Fire Dept
Secretary: Deb Hunt, Volunteer

1. Call Meeting to Order

2. Approval of Agenda

3. Approval of Minutes of June 17, 2021

4. Agency Presentations & Schedule

August 19 – Annual Cherry Capital Airport plan review

5. Committee & Team Reports

a. Hazmat Team Report/Sara Title II & III)

1. Tier II status 2021 update
2. 2020-21 Hazardous Materials Emergency Preparedness (HMEP) grant status
3. Recent HAZMAT incident(s) review

b. School Drill Schedule and Report

c. Emergency Manager/Planning Team

d. TBARG / RACES

6. Drills/Exercises and Training/Education

7. Old Business

- a. Natural Hazard Mitigation plan update discussion – status of draft plan

8. New Business

9. Open Discussion

10. Future Meetings

September 16 – Hornacek, Central Dispatch - “Three Words”

October 21 – Bolde, Munson – Emergency Plan

11. Adjournment

MINUTES
Grand Traverse County
Local Emergency Planning Committee (LEPC)
Thursday, August 19, 2021 - 8:30 am
Government Center, 400 Boardman Ave, 2nd Floor Training Room

Chairman: Chief Pat Parker, Grand Traverse Metro Emergency Services
Vice Chairman: Chief Jim Tuller, Traverse City Fire Department
Secretary: Deb Hunt, Volunteer

1. Call Meeting to Order

Chief Pat Parker called the meeting to order at 8:30 am.

2. Approval of Agenda

Motion by Jewett, seconded by Lemcool, to approve the agenda as presented.

CARRIED

3. Approval of Minutes of June 17, 2021

Motion by Jewett, seconded by Lemcool, to approve the minutes as amended.

CARRIED

4. Agency Presentations & Schedule

Dan Sal, Cherry Capital Airport presented the airport's Emergency Action Plan for annual review

5. Committee & Team Reports

a. Hazmat Team Report/Sara Title II & III)

1. Tier II status 2021 update – 115 sites current, 9 of which need some type of revision for 2021 yet.

2. *2020-21 Hazardous Materials Emergency Preparedness (HMEP) grant status*

Bird reported the 2021 HEMP was approved. \$1,500 should be direct deposited to the county from MSP EMHSD soon.

b. School Drill Schedule and Report

Bird reported that the first Grand Traverse School Safety Summit was held and deemed a success. Presentations were presented by Emergency Management, TCPD & GTSO, TCFD & Grand Traverse Metro (on behalf of all county fire/EMS). There were 36 school leadership and faculty from all 5 school districts present. The School Drill Schedule form for the 2021-22 school year is live until September 15

c. Emergency Manager/Planning Team

1) Thirlby Field plan is to be reviewed and revised by TCAPS, TCFD, TCPD, and Emergency Management

2) FirstNet and Rugged Depot representative meeting w/Gregg about possible technology upgrades in the EOC.

3) Awarded a USCG Spill Response Trailer from Sector Sault Ste. Marie. Transfer of ownership paperwork processing through Cleveland Region USCG command.

d. TBARG / RACES

A report was provided from TBARG/RACES and is attached.

6. Drills/Exercises and Training/Education

Numerous upcoming routine drills/exercises to be conducted. Need to work on scheduling ICS-300 & 400 again in winter/spring 2022

7. Old Business

a. Natural Hazard Mitigation plan update discussion – GT County accepted a proposal from Networks Northwest to finish and hopefully get the plan approved by 1/2022. To date, there have not been any comments received from municipalities or citizens.

8. New Business

None presented

9. Open Discussion

None

10. Future Meetings

August 19 – Annual Cherry Capital Airport plan review

September 16 – Central Dispatch, Hornacek

October 21 – Munson Medical Center, Bolde

November or December – Mobile Medical Response, Mark Thompson, CEO

11. Adjournment

The Committee adjourned at 9:24 am.

Submitted by Gregg Bird for Deb Hunt.



A G E N D A
Grand Traverse County
Local Emergency Planning Committee (LEPC)
Thursday, September 16, 2021 - 8:30 am
Government Center, 400 Boardman Ave, Commission Chambers

Chairman: Chief Pat Parker, Grand Traverse Metro Emergency Services
Vice Chairman: Chief Jim Tuller, Traverse City Fire Dept
Secretary: Deb Hunt, Volunteer

1. Call Meeting to Order

2. Approval of Agenda

3. Approval of Minutes of August 19, 2021

4. Agency Presentations & Schedule

September – Leah Hornacek, Central Dispatch – “Three Words”

5. Committee & Team Reports

a. Hazmat Team Report/Sara Title II & III)

1. Tier II status 2021 update

3. Recent HAZMAT incident(s) review

b. School Drill Schedule and Report

c. Emergency Manager/Planning Team

d. TBARG / RACES

6. Drills/Exercises and Training/Education

7. Old Business

8. New Business

9. Open Discussion

10. Future Meetings

September 16 – Hornacek, Central Dispatch - “Three Words”

October 21 – Bolde, Munson – Emergency Plan

November or December – Mobile Medical Response, Mark Thompson, CEO

11. Adjournment



MINUTES
Grand Traverse County
Local Emergency Planning Committee (LEPC)
Thursday, September 16, 2021 - 8:30 am
Government Center, 400 Boardman Ave, Commission Chambers

Chairman: Chief Pat Parker, Grand Traverse Metro Emergency Services
Vice Chairman: Chief Jim Tuller, Traverse City Fire Dept
Secretary: Deb Hunt, Volunteer

1. Call Meeting to Order

The Chair called the meeting to order at 8:30 am.

2. Approval of Agenda

Motion by Tuller, seconded by B. Parker, to approve the agenda.

CARRIED

3. Approval of Minutes of August 19, 2021

Motion by Tuller, seconded by Lemcool, to approve the August 19, 2021 minutes.
CARRIED

4. Agency Presentations & Schedule

Leah Hornacek, Central Dispatch, gave a detailed overview of Central Dispatch's operations, software programs and equipment used in performing their duties. She also explained the theory and use of the "three words" locating system developed for global use. The program is available to all and can be downloaded to various devices. Hornacek stated their dispatchers have received calls for persons using this program.

5. Committee & Team Reports

a. Hazmat Team Report/Sara Title II & III)

1. Tier II status 2021 update

There were no items to report.

2. Recent HAZMAT incident(s) review

Tuller commented on the PFAS Project by Department of Homeland Security.

Bird stated the State's HazMat Roster is being updated.

b. School Drill Schedule and Report

Bak reported the 2021 School Drill calendar is 90% complete. Greenspire High School emergency plan falls under two different set of regulations, but is sorted out. He shared a concern regarding one school's position on lockdown drills.

c. Emergency Manager/Planning Team

Natural Hazard Mitigation Plan update: Bird stated Networks Northwest work on the Natural Hazard Mitigation Plan is approximately 80% complete. The plan should be submitted to MSP/FEMA by the end of the year. Bird has recently provided draft copies to municipality representatives again to solicit additional comments/changes, etc.

Emergency teams are geared up for two local major events being held this Friday. Grand Traverse County's Critical State Infrastructure data base is underway; this is a massive project. Region 7 has donated a radiological backpack monitor; training and details are forthcoming. Transferring title of the Coast Guard's Spill Response Trailer to the County is in progress. The Coast Guard Auxiliary HazMat team is willing to partner with us on public safety responses.

d. TBARG / RACES

Johnson stated TBARG is a 501C agency. A digital antenna is now located in Munson which allows communication throughout their facility.

6. Drills/Exercises and Training/Education

There were not items to report.

7. Old Business

There were no items of Old Business.

8. New Business

There were no items of New Business.

9. Open Discussion

There were no topics for Open Discussion.

10. Future Meetings

October 21 – Bolde, Munson – Emergency Plan

November 18/December 16 – Mobile Medical Response, Mark Thompson, CEO

11. Adjournment

Upon a motion to adjourn, the Committee adjourned at 9:06 am.

Submitted by Secretary Hunt



**Grand Traverse County
Local Planning Team (LPT)**

October 11, 2021

1300hrs

EOC

Agenda

Chair: Chief Jim Tuller

Vice Chair: Chief Fred Gilstroff

Secretary: Director Nick Lemcool

1. Meeting Call to Order:

2. Approve Today's Agenda:

3. Special Orders of Business:

- a) MDOT presentation on 2023 Grandview Parkway construction project

4. R7HSPB Updates:

- a) 2019, 2020, 2021 Grants –
 - See attached reference from Oct 7 R7HSPG meeting

5. Old Business:

- a) COVID-19 update (if GT HD personnel are available)
- b) Natural Hazard Mitigation Plan renewal update

6. Training & Exercises

- a) North American Active Assailant Conference, Troy – Oct 13-15
- b) International Association of Emergency Managers (IAEM), Grand Rapids – Oct 18-20

7. New Business:

- a) Critical Infrastructure & Key Resources (CIKR) list for GT County
- b) Readiness: Emergency Management for Schools (REMS) "SiteAssess" school vulnerability assessment app for smart phones and tablets

8. Open Discussion / Round Table:

9. Next Meetings: December 20, 2021



**Grand Traverse County
Local Planning Team (LPT)**

October 11, 2021

1300hrs

EOC

Minutes

Chair: Chief Jim Tuller – Absent

Vice Chair: Chief Fred Gilstorff

Secretary: Director Nick Lemcool

1. Meeting Call to Order: October 11th, 2021 @ 13:01 – by Vice Chair Chief Gilstorff, Introductions.

2. Approve Today's Agenda: Motion Brad J., Second Nick L.

3. Special Orders of Business:

- a) MDOT presentation on 2023 Grandview Parkway construction project
 - 1. Two halves – Delmar Resort to Garfield, done before Cherry Fest. Pause for Cherry Fest and Complete west half after two week break.
 - 2. One lane of traffic (west or east, not both) From Garfield to Delmar. Potential to use railroad. To 8th street for west bound detour. Larger detour planned for commercial traffic.
- b) 2024 – Plan reconstruction from Division to M72 and M72 to Cherry Bend. More to come.

4. R7HSPB Updates:

- a) 2019, 2020, 2021 Grants –
 - See attached reference from Oct 7 R7HSPG meeting
 - Grant closes out in May with some money left over. Have projects however cannot spend monies until approved. Still waiting on approval.
 - HazMat project approved for funding – 2 Backpacks like 51st support team. One GT and one with Otsego County. Extra monies spent further down the road.
 - FY2020 New criteria attached in packet.
 - 2021 allotment down almost \$20k. Questions asked to the state, awaiting answers.
 - Many requests for funding. Law Enforcement trainings and Radio discussions.

5. Old Business:

- a) COVID-19 update (if GT HD personnel are available) – No one present.
- b) Natural Hazard Mitigation Plan renewal update
 - 1. Contract with Networks Northwest to complete the last 20% of the project. Completion date is in May. Actively starting re-gathering of data



6. Training & Exercises

- a) North American Active Assailant Conference, Troy – Oct 13-15
- b) International Association of Emergency Managers (IAEM), Grand Rapids – Oct 18-20

7. New Business:

- a) Critical Infrastructure & Key Resources (CIKR) list for GT County
 - 1. 130 CIKR's listed.
 - a. Consumers has given all requested information
 - b. Others Requesting FOIA to release information.
 - c. Needs help with Ag and Manufacturing facilities.
 - 2. This is how funding will be awarded for community grants and AFG.
- b) Readiness: Emergency Management for Schools (REMS) "SiteAssess" school vulnerability assessment app for smart phones and tablets
 - 1. Link sent out. All schools got newsletter from MSP regarding REMS. Not very many of local schools have completed project. Idea for school to do their own vulnerability assessment and then work with EM to complete the project. Gregg working with schools to complete this. EOP and vulnerability studies due in January 2022.
- c) Approval of Meeting Minutes
 - 1. Should meeting minutes be taken and approved. Discussion, decided to start today with approval and making it number 3 on Agendas.
 - 2. Motion Brad J. Second By Brandon F. Of June meeting minutes.

8. Open Discussion / Round Table:

- a) None

9. Next Meetings: December 20, 2021

Adjourn @ 14:06 Motion by Pat P. Second by Brad J.



A G E N D A
Grand Traverse County
Local Emergency Planning Committee (LEPC)
Thursday, November 18, 2021 - 8:30 am
Government Center, 400 Boardman Ave, 2nd Floor Training Room

Chairman: Chief Pat Parker, Grand Traverse Metro Emergency Services (Absent & Excused)
Vice Chairman: Chief Jim Tuller, Traverse City Fire Dept
Secretary: Deb Hunt, Volunteer

1. Call Meeting to Order

Chief Tuller called the meeting to order at 8:20 am.

2. Approval of Agenda

Motion by Bill Parker, seconded by Dan Sal, to approve the agenda as presented.

CARRIED

3. Approval of Minutes of September 16, 2021

Motion by N. Lemcool, seconded by B. Flynn, to approve the minutes of September 16, 2021 as presented.

CARRIED.

4. Agency Presentations & Schedule

Bolde, Munson – Emergency Plan, to be presented at the February 2022 meeting.

Glen Johnson, RACES/TBARG, reviewed of series of several future communication devices and the features. His handout is attached.

5. Committee & Team Reports

a. Hazmat Team Report/Sara Title II & III)

1. Tier II status 2021 update

There are three dates for webinar training for Tier I and Tier II. Each date will address separate topics.

b... Recent HAZMAT Incident(s) Review

No incidents were reported in the City. DH4 -Trucks and personnel, and equipment.

b. School Drill Schedule and Report

M. Bak auto systems are working which cover locks, audio and voice and blue lights. He reported two drills at private schools went well. Camera replacements are at 70% complete. These cameras will increase the resolution for wide angle view.

c. Emergency Manager/Planning Team

Bird reported on the school online drill schedule/forms.

Facilities and outside vendors will be upgrading the EOC.

Networks Northwest plans to have the Natural Hazard Mitigation Plan to FEMA by May 2022.

EMPG and SHSP Grants are in various stages of opening/closing.

d. TBARG / RACES

Johnson's update was given under Item 4, Agency Presentation.

6. Drills/Exercises and Training/Education

2021

December 9 – Lanmda Energy hosting a table top in Manistee Co.

2022 Draft

January 12, 19 and 26 – Series of Tier I and Tier II training via webinar

August 20-222 – Cherry Capital Airport full-scale drill.

7. Old Business

There were no items of Old Business.

8. New Business

There were no items of New Business.

9. Open Discussion

Amy Fairchild - MMR stated the Tribe has received \$30K that is eligible for local distribution.

Discussion regarding the Airport's August full drill evolved into consideration of an expanded event among various agencies. The concept was well received.

10. Future Meetings

December 16, 2021 ~~is canceled~~ – As the minutes were drafted, this cancelation is under review.

January 20 – Mobile Medical Response, Mark Thompson, CEO

February 17 – John Bolde, Munson Medical

11. Adjournment

The Committee adjourned at 9:34 am.

Submitted by Deb Hunt



A G E N D A
Grand Traverse County
Local Emergency Planning Committee (LEPC)
Thursday, December 16, 2021 - 8:30 am
Government Center, 400 Boardman Ave, 2nd Floor Training Room

Chairman: Chief Pat Parker, Grand Traverse Metro Emergency Services
Vice Chairman: Chief Jim Tuller, Traverse City Fire Dept
Secretary: Deb Hunt, Volunteer

1. Call Meeting to Order

2. Approval of Agenda

3. Approval of Minutes of November 18, 2021

4. Agency Presentations & Schedule

Networks Northwest – Jenni Neal, Grand Traverse Co. Natural Hazard Mitigation Plan

5. Committee & Team Reports

- a. Hazmat Team Report/Sara Title II & III)
 - 1. Tier II status 2021 update (if any)
 - 2. Recent HAZMAT incident(s) review (if any)
- b. School Drill Schedule and Report
- c. Emergency Manager/Planning Team
- d. TBARG / RACES

6. Drills/Exercises and Training/Education

7. Old Business

8. New Business

- a. Election of Officers for 2022
- b. 2022 Meeting dates

9. Open Discussion

10. Future Meetings

January 20, 2022 – Mobile Medical Response, Mark Thompson, CEO

February 17, 2022 – Munson Medical Center, John Bolde

11. Adjournment



MINUTES
Grand Traverse County
Local Emergency Planning Committee (LEPC)
Thursday, December 16, 2021 - 8:30 am
Government Center, 400 Boardman Ave, 2nd Floor Training Room

Chairman: Chief Pat Parker, Grand Traverse Metro Emergency Services
Vice Chairman: Chief Jim Tuller, Traverse City Fire Dept
Secretary: Deb Hunt, Volunteer

1. Call Meeting to Order

The meeting was called to order by Bird at 8:39 am. Chair Parker arrived at 8:57 am due to providing emergency service relative to the windstorm.

2. Approval of Agenda

Motion by Jewett, seconded by Lemcool, to approve the agenda as presented.
CARRIED

3. Approval of Minutes of November 18, 2021

Motion by Lemcool, seconded by Jewett, to approve the November 18, 2021 minutes as presented.
CARRIED

4. Agency Presentations & Schedule

Networks Northwest – Jenni Neal, Grand Traverse Co. Natural Hazard Mitigation Plan

Neal and attendees introduced themselves. A review of the first chapter on “Community Profile” was conducted page-by-page, with attendees questioning several statistics as to accuracy and timing, as well as overall asking for explanations. The handout will be attached.

5. Committee & Team Reports

a. Hazmat Team Report/Sara Title II & III)

1. Tier II status 2021 update (if any)

No report was required.

2. Recent HAZMAT incident(s) review (if any)

There were no incidents to report. P. Parker reported Michigan MABAS is working on the credential process. An inventory of our equipment is being prepared.

b. School Drill Schedule and Report

Bird reported the first round of lockdown drills is nearly done.

c. Emergency Manager/Planning Team

d. TBARG / RACES

No report was provided.

6. Drills/Exercises and Training/Education

No report was provided.

7. Old Business

There were no items of Old Business.

8. New Business

a. Election of Officers for 2022

Call for Chair nominees resulted in the sole nomination of Pat Parker to remain as Chair. P. Parker accepted the nomination

Unanimously elected.

Call for Vice-Chair nominees resulted in the sole nomination of Jim Tuller to remain as Vice-Chair. (Tuller accepted electronically as nominated.)

Unanimously elected.

Calls for Secretary resulted in the sole nomination of Nick Lemcool. Lemcool accepted the nomination.

Unanimously elected.

b. 2022 Meeting dates

The draft 2022 Meeting Schedule was approved as presented. Dates may change as the need arises.

9. Open Discussion

B. Parker commented on how well Cherryland Electric, and Consumers Energy did to restore power during the windstorm.

10. Future Meetings

January 20, 2022 – Mobile Medical Response, Mark Thompson, CEO

February 17, 2022 – Munson Medical Center, John Bolde

11. Adjournment

The meeting adjourned at 9:45 am.

Submitted by:

Debra Hunt

VI. COMMUNITY PROFILE

Natural Features

Grand Traverse County is located in northwest lower Michigan, and is bordered by Leelanau County, the Grand Traverse Bay and Antrim County to the north, Kalkaska County to the east, Wexford County to the south, and Benzie County to the west. The county is approximately 384,640 acres or 601 square miles in area. A portion of the county area includes 137 square miles of area in the water. County residents take advantage of diverse environments ranging from dense, urban areas to rural communities and unspoiled natural areas. Its landscape features rolling and hilly forest uplands, extensive wetlands and low areas, numerous inland lakes and streams, and the shorelines of East and West Grand Traverse Bay. The Boardman River, considered one of the top trout streams in Michigan, bisects the County as it outlets into the Bay. The influence of glacial activity is clearly evident in the outwash plains and steep gravel and clay slopes that make up the majority of the southern two-thirds of the County. With 1,071 feet in elevation and 620 feet in depth in Grand Traverse Bay, these geographies lend special character to the County – lofty vistas of the bay, lakes, farmlands, and deep wooded valleys.

In addition to the lakes and rivers, the county is blessed with 66.72 miles of shoreline on the Grand Traverse Bay. Approximately 60% of the county is located in the Grand Traverse Bay Watershed. According to the 2017 Census of Agriculture, the county had 50,886 acres of land in farms for a total of 497 farms. Fruits, tree nuts, and berries had the highest market value of agriculture products sold with \$ 19,175,000. This ranks 8th in the State of Michigan overall. The predominant land use is residential followed by other types of land not classified as agricultural, commercial, industrial, or residential (Table).

Table : Land Use Classifications, 2020

| | Total Acres | % of Total |
|--------------|-------------------|------------|
| Agricultural | 41,858.91 | 14.15% |
| Commercial | 12,037.24 | 4.07% |
| Industrial | 3,310.79 | 1.12% |
| Residential | 144,542.91 | 48.85% |
| Other | 94,161.64 | 31.82% |
| Total | 295,911.48 | |

Source: Grand Traverse County GIS

Population

Grand Traverse County is the most populated county in the ten county region (Table) and is the 22nd most populated county in the state. The 2019 American Community Survey estimated the county population to be 92,181 people. A comparison of the 2010 and 2019 indicates an upward county population growth trend with a 7.1% increase from 2010 where the population was an estimated 86,061 (Table). The 2010 population per square mile is 187.3 people.

Grand Traverse County is comprised of thirteen (13) townships, two (2) villages, and one (1) city. The City of Traverse City, which is also the county seat, makes up 17% of the population. However, nearby Garfield Township is the most populated jurisdiction in the county with 17,319 people (19% of the population). The combined populations of Traverse City, Garfield Township and portions of other surrounding jurisdictions including Blair Township, East Bay Township, and Long Lake Township are likely to create a new metropolitan statistical area with the result of the 2020 decennial Census. All communities, with the exception of Kingsley Village, Fife Lake Township, and Union Township, experienced growth during the subject years (shown in green). Grant Township, located in the southwest part of the county, saw the largest percent growth with 17.6%.

Table : Regional Population by County, State 2019

| County | 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 | 9,986,857 |

2020
Census

Table : Population Change by Municipality, 2010, 2019

| Municipality | 2010 Estimated Population | 2019 Estimated Population | Numeric Change | Percent Change |
|-----------------------|---------------------------------|---------------------------------|-------------------|-------------------|
| Grand Traverse County | 86,061 | 92,181 | 6,120 | 7.1% |
| Fife Lake Village | 357 | 382 | 25 | 7.0% |
| Kingsley Village | 1,511 | 1,352 | -159 | -10.5% |
| Acme Township | 4,416 | 4,694 | 278 | 6.3% |
| Blair Township | 7,956 | 8,933 | 977 | 12.3% |
| East Bay Township | 10,617 | 11,492 | 875 | 8.2% |
| Fife Lake Township | 2,617 | 1,978 | -639 | -24.4% |
| Garfield Township | 15,939 | 17,319 | 1,380 | 8.7% |
| Grant Township | 1,034 | 1,216 | 182 | 17.6% |
| Green Lake Township | 5,688 | 6,213 | 525 | 9.2% |
| Long Lake Township | 8,565 | 9,321 | 756 | 8.8% |
| Mayfield Township | 1,506 | 1,612 | 106 | 7.0% |
| Paradise Township | 4,655 | 5,085 | 430 | 9.2% |
| Peninsula Township | 5,445 | 5,776 | 331 | 6.1% |
| City of Traverse City | 14,608 | 15,338 | 730 | 5.0% |
| Union Township | 439 | 411 | -28 | -6.4% |
| Whitewater Township | 2,576 | 2,793 | 217 | 8.4% |

Source: US Census, 2019 ACS Estimate

Like many northwest Michigan communities, Grand Traverse County experiences an influx of seasonal residents and tourists during the summer months. However, the decennial Census and the American Community Survey only consistently and comprehensively track the permanent population. The *Northwest Michigan Seasonal Population Analysis*, a 2014 report by the Michigan State University Land Policy Institute, analyzed the 2012 seasonal population for ten counties in northwest Michigan. The data collected for Monthly Permanent, Seasonal and Transient Residents by County estimates the population of Grand Traverse County increases by 19% in the month of July from 89,112 to 110,557. The following ten counties were included in the study: Antrim, Benzie, Charlevoix, Emmet, Grand Traverse, Kalkaska, Leelanau, Manistee, Missaukee, and Wexford.

Although the data in this report is several years old, anecdotally, the influx of seasonal residents and tourists has not decreased. While the population staying in overnight accommodations such as motels, hotels, and bed and breakfasts was considered, the boom of short term rental accommodations changed the overnight stay market considerably. The implications of seasonal and short term rental accommodations on hazard mitigation planning are included in discussions throughout this plan.

Age, Race & Disability

Understanding the age distribution and median age of Grand Traverse County can help identify social, economic, and public service needs in the community. The county's total 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. The cohort group with the largest population is the 20 to 44 year old group. This is closely followed by the 45 to 64 years cohort. As shown in Figure , the median age (the midpoint where half the population is younger and half the population is older) of Grand Traverse County is older (42.8) than the State (39.7). The youngest community in the county is Blair Township with a median age of 34.4; the oldest community in the county is Peninsula Township with a median age of 55.2 (Figure).

Figure : Grand Traverse County Population by Age Cohort, 2019

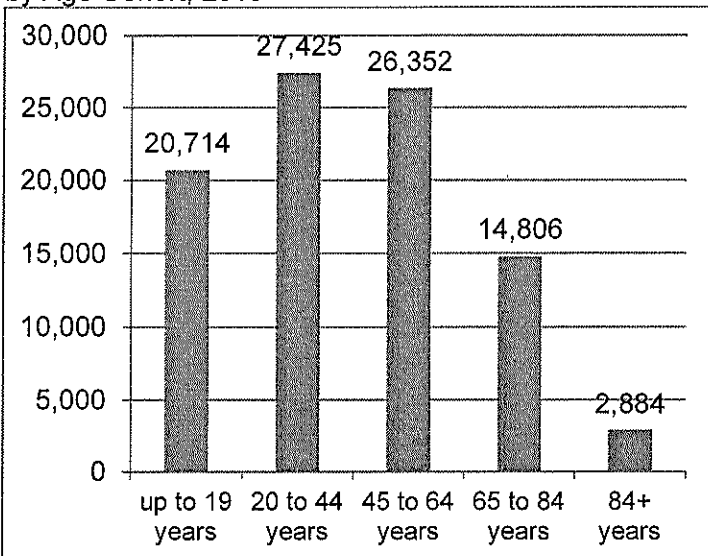
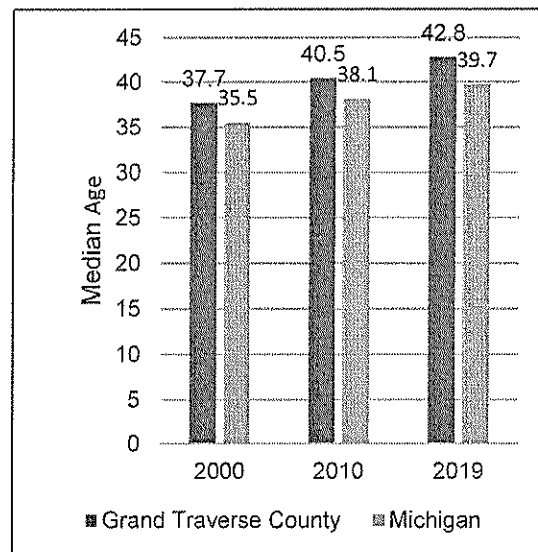
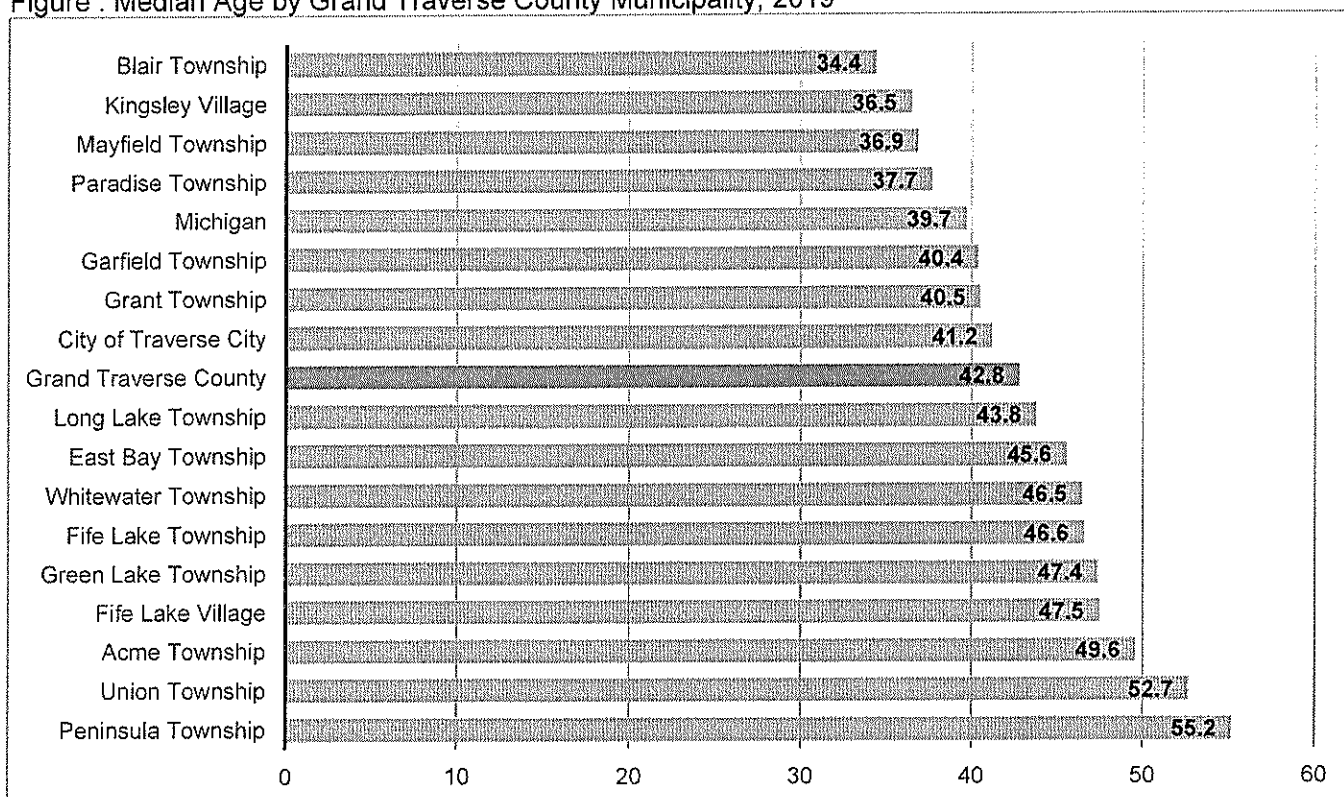


Figure : Median Age Trend, 2000, 2010, and 2019



Source: U.S. Census Bureau, 2000 Decennial Census and 2010 and 2019 5 Yr ACS

Figure : Median Age by Grand Traverse County Municipality, 2019



Source: US Census, 2019 ACS Estimate

The racial makeup of Grand Traverse County is predominantly white. 94.8% of the population is white while the American Indian and Alaskan Native population is 1.0%, the Black population is 0.9%, and those of two or more races is 2.3%.

Table represents the number of persons with a disability by age group. 11,288 or 12.4% of people are estimated to have a disability. 30.5% of persons 65 years and over are reported to have a disability.

Table : Persons with a Disability, 2019

| | |
|---|---------------|
| Total Civilian Noninstitutionalized Population | 90,808 |
| With a disability | 11,288 |
| Under 18 with a disability | 805 |
| 18 to 64 years with a disability | 5,223 |
| 65 years and over with a disability | 5,260 |

Source: US Census, 2019 ACS Estimate

Housing Characteristics and Development Trends

In 2019, there were 43,942 housing units reported in the 2019 ACS 5-Year Estimates in Grand Traverse County (Table), of which 37,319 are occupied. Garfield Township has the largest percentage of housing units of all municipalities in the county (18.7%). 72% (31,837) of units are 1-unit, detached structures or commonly referred to as single-family homes. 76% of structures were built in 1979 or earlier (Table). The average household size is 2.41 persons.

Table : Housing Units by Municipality, 2019

| Municipality | 2019 Housing Units (ACS) | Percent of 2019 Total |
|------------------------------|--------------------------|-----------------------|
| Grand Traverse County | 43,942 | |
| Fife Lake Village | 277 | |
| Kingsley Village | 586 | |
| Acme Township | 2,634 | 6.0% |
| Blair Township | 3,629 | 8.3% |
| East Bay Township | 5,527 | 12.6% |
| Fife Lake Township | 936 | 2.1% |
| Garfield Township | 8,203 | 18.7% |
| Grant Township | 590 | 1.3% |
| Green Lake Township | 3,190 | 7.3% |
| Long Lake Township | 4,295 | 9.8% |
| Mayfield Township | 706 | 1.6% |
| Paradise Township | 1,873 | 4.3% |
| Peninsula Township | 3,371 | 7.7% |
| City of Traverse City | 7,325 | 16.7% |
| Union Township | 249 | 0.6% |
| Whitewater Township | 1,414 | 3.2% |

Source: US Census, 2019 ACS Estimate

Table : Year Structure Built, 2019

| Year Built | Housing Units | Percentage of Units |
|----------------------------|---------------|---------------------|
| Built 2010 or later | 2,740 | 6% |
| Built 2000 to 2009 | 7,503 | 17% |
| Built 1980 to 1999 | 15,047 | 34% |
| Built 1960 to 1979 | 10,140 | 23% |
| Built 1940 to 1959 | 3,662 | 8% |
| Built 1939 or earlier | 4,850 | 11% |
| Total Housing Units | 43,942 | |

Source: US Census, 2019 ACS Estimate

Housing Tenure, Table , summarizes the status of housing units, whether occupied or vacant, as well as the median housing value (\$212,500) and the median gross rent (\$ 951). Of the 43,942 total housing units, 37,319 or 84.93% are occupied.

Table : Housing Tenure, 2019

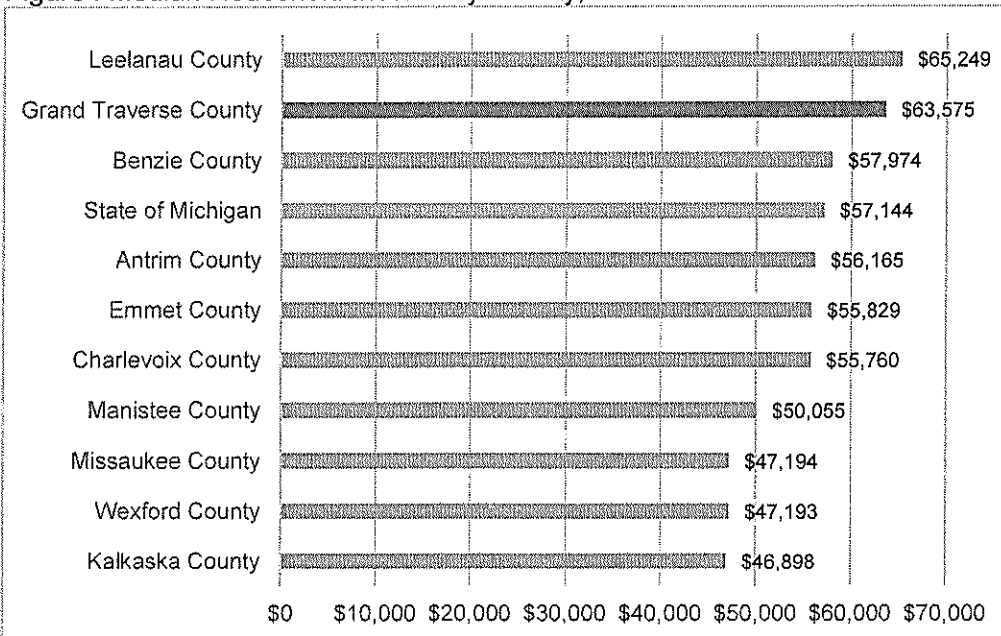
| Total housing units | 43,942 | % |
|------------------------|------------|--------|
| Occupied housing units | 37,319 | 84.93% |
| Owner-occupied | 28,480 | 87.10% |
| Median Housing Value | \$ 212,500 | |
| Renter-occupied | 8,839 | 12.90% |
| Median Gross Rent | \$ 951 | |
| Vacant housing units | 6,623 | 15.07% |

Source: US Census, 2019 ACS Estimate

Income and Poverty

Figure presents a comparison of the median household income across the ten county region and the State of Michigan. Grand Traverse County has the second highest median household income (\$ 63,575) behind Leelanau County (\$ 65,249). The economic profile can be further described by the affordability index when you consider the ratio of the Median Housing Value to the Median Household Income. An affordability index of no more than 2.6 is considered an affordable community. Grand Traverse County's affordability index is 3.3. An ideal affordability index of 2.6 is derived from historic data of nationwide averages under healthy economic conditions. This was cited by Forbes, Bloomberg and many others as well as being stated to be used widely by real estate agents

Figure : Median Household Income by County, 2019



Source: US Census, 2019 ACS Estimate

The following tables describe the population with the lowest incomes. It is estimated, in 2019, that 9.6% of all people in the county lived at or below the poverty level. The Census describes poverty thresholds differently based on the size of the family and the number of related children living together. 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 living. Based on a calculation of the actual costs of basic necessities such as child care, transportation, housing, and healthcare, the report establishes the ALICE Threshold, "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, 2). Table identifies the number of ALICE and poverty households for each municipality in the county.

Table : Poverty Statistics, 2019

| Poverty | Statistics |
|---|------------|
| Families in poverty | 6.3% |
| Families in poverty with related children | 11.2% |
| Family income less than \$15,000 | 4.1% |
| All people in poverty | 9.6% |

Source: US Census, 2019 ACS Estimate

Table : United Ways of Michigan ALICE Report Findings, 2019

| ALICE and Poverty Households | Total Households | % of HH in Poverty and ALICE |
|------------------------------|------------------|------------------------------|
| Acme Township | 2,039 | 19% |
| Blair Township | 3,204 | 43% |
| East Bay Township | 4,575 | 27% |
| Fife Lake Township | 618 | 40% |
| Garfield Township | 7,666 | 43% |
| Grant Township | 451 | 30% |
| Green Lake Township | 2,525 | 30% |
| Long Lake Township | 3,589 | 19% |
| Mayfield Township | 565 | 31% |
| Paradise Township | 1,632 | 37% |
| Peninsula Township | 2,554 | 22% |
| City of Traverse City | 6,697 | 40% |
| Union Township | 175 | 30% |
| Whitewater Township | 1,029 | 24% |
| Grand Traverse County | 37,319 | 33% |

Economic Profile

The Economic Profile of Grand Traverse County is described in Table. The table provides the county's industry makeup divided into 20 different sectors as well as industry's annual average wage. The industry with the largest percent distribution is Health care, social assistance with 19.80% followed by Retail trade with 15.40%. The annual average wage for Health care, social assistance is \$ 54,081 while Retail trade is \$ 30,742. Retail trade ranks 17 out of the 19 wage figures available. The industry with the highest annual average wage is Mining with \$ 114,461 followed by Utilities with \$ 103,481.

Table : Economic Census by Industry, 20XX

| Industry Description | Percent Distribution | Annual Average Wage |
|---|----------------------|---------------------|
| Total Covered Employment | 100% | |
| Agriculture, forestry, hunting | 0.70% | \$ 37,193 |
| Mining | 0.30% | \$ 114,461 |
| Construction | 5.20% | \$ 49,056 |
| Manufacturing | 10.50% | \$ 51,684 |
| Wholesale trade | 2.60% | \$ 55,392 |
| Retail trade | 15.40% | \$ 30,742 |
| Transportation, warehousing | 1.80% | \$ 47,573 |
| Utilities | 0.40% | \$ 103,481 |
| Information | 1.70% | \$ 52,805 |
| Finance and Insurance | 4.40% | \$ 80,220 |
| Real Estate, rental, leasing | 1.10% | \$ 40,845 |
| Professional, technical services | 3.90% | \$ 60,399 |
| Administrative, waste services | 2.80% | \$ 37,186 |
| Educational services | 2.20% | \$ 33,175 |
| Health care, social assistance | 19.80% | \$ 54,081 |
| Arts, Entertainment, recreation | 1.20% | \$ 24,621 |
| Accommodation and food services | 12.00% | \$ 20,599 |
| Other services, exc. Public admin. | 3.20% | \$ 31,971 |
| Public administration | 2.80% | \$ 51,527 |
| Other includes (private, management of business, and unallocated) | 8.00% | N/A |

Source: 2021 Comprehensive Economic Development Strategy, Networks Northwest

LEPC

Location: 400 Boardman, Trng Rm

Date: 12/16/2021

Time: 0800

| | Name | Email | Agency Representing |
|----|---------------|------------------------------|---------------------|
| 1 | Gregg Bird | gbird@gtcounty.mi.gov | GT EM |
| 2 | Jennifer Neal | jennifer.neal@networks | Networks Northwest |
| 3 | Brian Jewett | bjewett@gtcounty.mi.gov | GT BOC |
| 4 | Mrs. Cosse | ccosse@gtsheriff.org | GT SO |
| 5 | Debi Hunt | djhunt@charltonet | Volunteer |
| 6 | Erin Scherer | escherer@traverscitymi.gov | TZPD |
| 7 | Nick Lemmon | nlemmon@eastbayambulance.org | EAST Bay |
| 8 | Frank D'Amico | | CITY OF TC |
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MINUTES

Grand Traverse County Hazard Mitigation Plan Stakeholder Meeting
Tuesday, January 11, 2022 - 10:00-11:30 am
Government Center, 400 Boardman Ave, 2nd Floor Commission Chambers

Attendees:

Networks Northwest (Stephanie Loria and Zach Vega)
Gregg Bird, GT County E.M.
Bill Parker, Blair Twp Fire Dept. (serving Blair, Paradise, Grant, Mayfield and part of Union Twps)
John Bolde, Munson Healthcare
Travis House, Michigan State Police
Krista Tharp, Traverse Health Clinic
Leslie Bibley, Traverse City, Planning Assistant
Jim Tuller, Traverse City Fire Dept.
Jim Baker, Grand Traverse County Equalization Dept.
Josh Green, Grand Traverse County Equalization Dept.

Stephanie Loria and Zach Vega, Community Planners with Networks Northwest, introduced themselves and gave a brief background on the purpose of updating the Natural Hazards Mitigation Plan for Grand Traverse County. The purpose of today's meeting was to get more insight into the natural hazards and resulting issues of most concern in the county. An online survey link was emailed out on 12/30/21 to all LEPC/LPT members as well as pertinent local government officials/employees and other stakeholders (i.e., Grand Traverse County Watershed Center, GT County Conservation District). The survey link is currently available on the Grand Traverse County E.M. website.

The meeting attendees were provided a list of potential natural hazards in the County and asked to pick their top 5 events of concern, and write each on the provided 5 sticky notes. A summary of the discussion points stemming from those results is as follows:

- Dams – only two on the map report annually to the county – the Union St. Dam in TC and a privately owned dam in Whitewater Township (Bissell Pond Dam owned by Angela Kirby). The Union St. Dam is an earthen dam that is failing. City hired a consultant to monitor it. Dam replacement per FishPass project is held up by litigation challenging that it is public parkland. The City also hired a consultant to work on reinforcing the failing riverwall nearby (100-200 blocks).
- It was also noted that three of the dams on the Boardman River indicated on the county map provided by NN to the meeting are no longer existing; will note on the map.

- Historic major rainfall on the west side of the County/city, near Meijer. Glacial moraine forms streams that overflow during historic major rainfall events, causing flooding of basements/1st story buildings, Munson Healthcare Center, etc. into TC. Around the streets of Madison, Jefferson and Monroe, road reconstruction is planned in next few years and storm water retention/reconstruction will be evaluated as part of that project. Shawn Winter – City TC Planner – involved.
- Also there is a deteriorating wastewater main that overflows into the Boardman River – can contaminate the river and bay.
- Gregg's top concerns:
 - 1: Straight-line winds from Derecho/Severe T-Storm¹ happens every year or every other year. Affect major portions of the county or the entire county at one time – power outage. Leads to flash flooding, erosion, road closures, downed trees, power outages, property damage. Have had to close down major ingress/egress routes into the city; Has contributed to sewer overflows.
 - 2: Winter Storms with high winds = electrical failure. Endangers people left without power in cold temperatures. Also warmer temps in the winter = heavier snow loads, leading to roof collapse (happened in 2012).
- Infrastructure failure – (power, water, sewer, phone, internet, transportation, etc.) can occur from many different types of events, but can severely impact the whole region at a time. Of particular importance is Munson Healthcare Center as it is a Level 2 Trauma Facility. It has been affected by localized flooding from Kid's Creek overflow.

¹ When most people think about winds associated with a thunderstorm, they think tornadoes; however, most years there are far more damage reports from thunderstorm straight line winds than from tornadoes. **Straight line winds** are thunderstorm winds that have no rotation, i.e. not a tornado.

Downbursts are a common cause of wind damage from a thunderstorm. They can reach over 100 mph and are caused by air being dragged down by precipitation. When the air reaches the ground, it spreads outward across the surface of the land it encounters in a straight line.

A Derecho is a very long lived and damaging thunderstorm. A storm is classified as a derecho if wind damage swath extends more than 240 miles and has wind gusts of at least 58 mph or greater along most of the length of the storm's path.

<https://www.weather.gov/safety/wind-thunderstorms-derecho>

Antrim • Benzie • Charlevoix • Emmet • Grand Traverse • Kalkaska • Leelanau • Manistee • Missaukee • Wexford
PO Box 506 • Traverse City, MI 49685-0506 • Phone (231) 929-5000 • Fax (231) 929-5012 networksnorthwest.org

Networks Northwest and Northwest Michigan Works! are supported by the State of Michigan and are proud partners of the American Job Center Network. Projects may be funded with the authorized and appropriate use of federal funds. Contact Networks Northwest for additional information. Equal opportunity employer/program. Auxiliary aids and service are available upon request to individuals with disabilities. Individuals with speech or hearing impairments may call the Michigan Relay Center by dialing 711.

- Kid's Creek Area storm water improvement planning has just begun – (this was not in Gregg's last draft plan) but would be a pre-disaster mitigation project that should be included in this plan. At the cross roads of where the city limits are and Garfield Twp. A good example of City/County government collaboration. Shawn Winter (TC Planning Director) and Marty Colburn (City Manager) are working collaboratively with the County on this. Project will prevent localized flooding running into the NW part of the city and causing localized flooding (like in Munson Hospital).
- Extreme temps can lead to high lake levels and shoreline erosion. Keep in mind that this ebbs and flows over periods of time (levels have been declining in past year).
- High Water levels in 2019-20 affected the City and Peninsula Township the most. A section of Bluff Road failed in Peninsula Twp., adjoining the bay. Currently about 5 residents have to drive around the area to get to their homes. No homes where the road failure occurred. Sidewalks, Clinch Park, waterfront rec areas affected the most in the city. Some lower levels of buildings along East Front Street were affected with water intrusion; had to be [temporarily] abandoned.
- As indicated in the last draft plan, the City has shovel ready BRIC grant projects to address storm water runoff and sewer overflow issues.
- City of TC just submitted their draft 6 year CIP for council approval (*get a copy*)
- Gregg noted it's beneficial to place parkland where there are flood-prone areas to prevent loss of life/personal property damage.
- Tree Trimming/Removal: The RC does not have the equipment (or possibly the staff time) to do this, so they contract with Elmer's as needed. A potential HM project might be to buy tree debris removal/tree trimming equipment.
- TCPLP is currently looking into the possibility of installing underground power in the road R.O.W, which is beneficial to preventing power outages during storms.
- Also, the City Parks Dept. has just completed a Tree Canopy Assessment, which proposes options (?) to get tree trimming done when able to.
- Impacts to local agriculture products (cherries/ apples/ grapes) and agri-tourism industry is also a big concern. In 2015, a hailstorm resulted in the loss of almost all the fall's Honeycrisp apples. Extreme temp changes (false spring, return of winter) can also negatively affect the crops.

- Power Grid Concerns:
 - The county recently tried to obtain data on power grid assets from all 4 power companies serving the county (Cherryland Electric, Consumer's Energy, TCLP and Great Lakes Energy) but only got sparse data from Consumer's (30% correct) on infrastructure assets). Difficult to make progress with upgrading the grid as many of the providers are private companies. A potential example HM Grant Project?
- Invasive Species – not really considered a concern by the group present
- Drought and Wildfire:
 - Drought is a bigger hazard than a wildfire – kills agricultural crops (economic impact) more than wildfire.
 - Biggest agricultural centers in the county are in Acme Twp, Peninsula Twp., and in the southern portions of the county.
 - Fire danger area would be in the part of county generally south of the Boardman River and in the E. parts of the county. This is approximately 2/3 of the County. Lots of State land there and agricultural fields (often wheat fields dried in place and not harvested due to state/fed subsidies, possible fire danger?) Adjoining the county in these areas is continued Federal/State forest lands.
 - Concern with safety of who build their homes deep in the woods regarding potential fire evacuation/fire safety; there is increasing commercial/residential development in those areas.
 - Gas wells/power substations for main distribution come into the County from the south (fire prone area) from Wolverine Power Cooperative.
 - USDA does an evaluation every year – County always gets a drought qualification designation
 - Last major fire in the county was on the east side of the county in the early 1990's; a 3-day fire.
- Public Health Emergency:
 - Munson Hospital representative indicated the following top issues of the COVID epidemic:
 - Staffing crisis – have to import staff
 - Mixed actions of the public on vaccination/masking
 - There is a transportation issue with EMS staffing availability
 - The county is surviving a 10-20% workforce reduction; but they have not had to cut any life-saving services
 - Consider that other infrastructure improvement projects “on the books” have been delayed

- Consider schools being open or closed at various times – changes local staff levels if they don't have childcare
- Potential HM Project? – Improve Internet Connectivity Access - this goal could tie in with goals in other existing plans!
- Potential HM Project? – Enable Emergency Services personnel to have access to basic PPE to better protect themselves from a future pandemic. Have an appropriate 30-60 day supply of general multipurpose items so that local first responders don't have to wait for State/Federal supplies to come in when the emergency starts. This would result in a nimbler and quicker process to address the emergency situation and minimize impact to services.
- Potential HM Project? – Improving Communication Systems Gaps With Alert Systems Could use the County General Messaging Alert Systems in a better way with other agencies? Need one consistent message system "One Voice, One Message".

There are many potential natural hazard events that can impact daily life and societal functions within Grand Traverse County. Please indicate the top five hazards from the list below that are that are most relevant to you and write each one on the provided five sticky notes.

- ☐ Drought
- ☐ Extreme temperatures (*heat/cold*)
- ☐ Flooding
- ☐ High lake water levels
- ☐ Infrastructure failure (*i.e., road washout, bridge/dam failure, power outage*)
- ☐ Invasive species (*can cause damage to forests, crops, native species, etc.*)
- ☐ Public health emergency (*i.e., pandemic; contaminated water supply*)
- ☐ Severe winds/Straight-line winds/Derecho¹
- ☐ Severe thunderstorms (*Can produce hail, lightning, high winds, flooding*)
- ☐ Subsidence² or Shoreline erosion
- ☐ Tornado
- ☐ Wildfire
- ☐ Winter Storm (*can produce ice, sleet, heavy snowfall, high winds, etc.*)

¹ Derechos are usually large-scale storm systems that travel hundreds of miles and are many counties wide. They can happen any time of the year, but are most common in Michigan during the warmer half of the year. Wind speeds in derechos can exceed 100 mph at times and often result in damage that is more widespread than most other storms and tornadoes in Michigan.

² Subsidence is the lowering or collapse of a land surface, due to the loss of subsurface support.

Natural Hazard Mitigation Plan meeting

Location: Commission Chambers

Date: 1/11/2022

Time: 1000

| Name | Email | Agency Representing |
|-----------------|-----------------------------|-------------------------------|
| 1 Gregg Bird | gbird@gtcountymi.gov | G+Co. Emerg. mgmt. |
| 2 Bill Parker | fire@blair-Township.org | Blair & Paradise |
| 3 John Dolidge | jboldel@nbc.net | MUNSON HEALTHCARE |
| 4 Travis House | house1@michigan.gov | Mich. State Police |
| 5 Krista Tharp | ktharp@traversehcc.org | Traverse Health Clinic |
| 6 Leslie Bilkey | lsbilkey@traversecitymi.gov | City of TC |
| 7 Jim Tuller | jtuller@tcfire.org | TRAVERSE City Fire Department |
| 8 Jim Baker | jbaker@gtcountymi.gov | GTC Equalization |
| 9 Josh Green | jgreen@gtcountymi.gov | GTC Equalization |
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RE: Natural Hazard Mitigation Meeting

Gregg Bird <gbird@gtcountymi.gov>

Tue, Jan 11, 2022 at 1:04 PM

To: Jennifer Neal <jennifer.neal@networksnorthwest.org>, Stephanie Loria <stephanie.loria@networksnorthwest.org>

The meeting notice was sent to the following:

Jennifer Neal - Networks Northwest

Andy Down Chief, Long Lake Township Fire & Rescue

Bagby, Joe - MDHHS

Bill Parker - Blair Twp Fire & EMS (also representing Grant, Union, Paradise, and Mayfield)

Bob Siekman – GT Pavilions

Brad Jewett – GT Commissioner (Public Safety Committees)

Brad Kluczynski – GT Co. Roads Commission

Brandon Flynn – Whitewater Twp

Brian Belcher – GT Metro Emergency Services (Fire Marshall for Garfield, East Bay, & Acme Twps)

Bruce Remai – GT Soil & Erosion

Chris Barsheff – GTSO Jail Warden

Chris Clark – GTSO Patrol Capt.

Chris Oosse – GTSO Patrol Lt.

Grant Johnson – Blair Twp EMS Director (also Grant, Union, Paradise, & Mayfield)

Dan Sal – TVC

Daryl Case – Green Lake Fire & EMS

Dave Grattopp- Long Lake Twp EMS Director

Dee Wilkingson – NW MI Area Agency on Aging

Eric Send- WTCM – Northern MI Emergency Alert System chair

Erica Dense – Lighthouse Rehab Center

Erich Bohrer – TCPD Lt

Fairchild, Amy – Mobil Medical Response

Frank Dituri- Traverse City Public Services

Garrett Fairchild- Grand Traverse Band of Ottawa & Chippewa Indians

Glen Johnson- Grand Traverse Amateur Radio Association

1/LT Travis House – MSP Cadillac

James Baker – GT Co. Equalization

Jason Torrey – Grand Traverse 911

Jeff Pataky – BATA

Jim Tuller – TCFD

Jim White- NMC

Joe McCarthy – Interlochen Arts Academy

Joe Slonecki- GT Co. Roads Commission

John Bolde- Munson Medical Center

John S. Rogers – GT Roads Commission

Justin Roy- Traverse City Waste Water

Karen Griggs- Traverse City Health Clinic

Kasey Mahony -DNR

Kevin Klein – TVC

LISA A. DOUGLAS- Consumers Energy

Mark Bak-TCAPS

Mark Thompson- Mobil Medical Response

Marty Colburn-City Manager, Traverse City

Mary Vollink- Salvation Army

Matt McCaul – MSP Cadillac

Matthew Winters- Salvation Army

Meghan Powers- American Red Cross

Michael de Castro- MSP Emerg. Mgmt

Michael Lahey- GT Health Dept

Michelle Hunt- Traverse City Parks

Mike Harbin- USCG Air Station Traverse City

Nick Lemcool- East Bay EMS

Owens, Paul- Mobil Medical Response

Pat Parker – GT Metro Chief (Garfield, East Bay, Acme Twps)

Penny Hill- City of Traverse City Dept. City Manager

Ralph Dollhopf – US EPA, Traverse City office

Robert Hentschel – Chair, GT Co. Board of Commissioners

Robert Hipp - Traverse City Light & Power

Ruth Blick – Salvation Army

Ryan Hannon – Goodwill Industries (Homeless Outreach)

Scott Tinker – Fife Lake Twp Fire

Sheri Pilate - DHS

Stark, Christopher- DNR

Tom Youker- Grand Traverse Resort

Wendy Hirschenberger – GT Health Dept

Also sent to all Township Supervisors and Clerks

Regards,

Gregg

Gregg Bird PEM, NEMP

Emergency Management Coordinator

Office: (231) 995-6059

Cell: (231) 590-2373

Email: gbird@gtcountymi.gov

www.grandtraverse.org/EM

www.Fb.com/GTCemergency



[Enroll for CodeRED here](#)

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A G E N D A
Grand Traverse County
Local Emergency Planning Committee (LEPC)
Thursday, February 17, 2022 - 8:30 am
Government Center, 400 Boardman Ave, 2nd Floor Training Room

Chairman: Chief Pat Parker, Grand Traverse Metro Emergency Services
Vice Chairman: Chief Jim Tuller, Traverse City Fire Dept
Secretary: Nick Lemcool, East Bay EMS

1. Call Meeting to Order

2. Approval of Agenda

3. Approval of Minutes of January 20, 2022

4. Agency Presentations & Schedule
Munson Medical Center - John Bolde

5. Committee & Team Reports

- a. Hazmat Team Report/Sara Title II & III
 - 1. Tier II status 2022 update (if any)
 - 2. Recent HAZMAT incident(s) review (if any)

b. School Drill Schedule and Report

c. Emergency Manager/Planning Team

d. TBARG / RACES

6. Drills/Exercises and Training/Education

- a. Michigan Hazmat Responder Conference – Crystal Mountain, April 11 – 13, 2022
- b. Great Lakes Homeland Security Conference - Grand Rapids, May 9 – 12, 2022
If you are a school employee and interested in the School Track, please register using course MI-Tran
ID 1102329.

7. Old Business

- a. Natural Hazard Mitigation Plan updates – Jenni Neal, Networks Northwest

8. New Business

9. Open Discussion

10. Future Meetings

March 17, 2022 - Open

11. Adjournment



MINUTES
Grand Traverse County
Local Emergency Planning Committee (LEPC)
Thursday, February 17, 2022 - 8:30 am
Government Center, 400 Boardman Ave, 2nd Floor Training Room

Chairman: Chief Pat Parker, Grand Traverse Metro Emergency Services
Vice Chairman: Chief Jim Tuller, Traverse City Fire Dept
Secretary: Nick Lemcool, East Bay EMS

1. Call Meeting to Order – 08:31 by Vice Chair Chief Tuller. Chair Chief P. Parker absent and excused.

2. Approval of Agenda – Removed Munson update due to staff not being available today, placed Networks Northwest into agency presentations. Motion by Brad Jewett Seconded by Chief B. Parker

3. Approval of Minutes of January 20, 2022 – Motion by Brad Jewett – Chief B. Parker

4. Agency Presentations & Schedule

Natural Hazard Mitigation Plan updates – Jenni Neal, Networks Northwest

- Presentation updating on community survey results.
 - o Discussion on Infrastructure failure not being a natural hazard, also public health.
 - o Discussion on dam locations

5. Committee & Team Reports

a. Hazmat Team Report/Sara Title II & III

1. Tier II status 2022 update (if any)
 - No report
2. Recent HAZMAT incident(s) review (if any)
 - None currently

b. School Drill Schedule and Report

- Halfway through K9 Searches for the year.
- Drills going well per K. O'Brian.
- TCAPS excited to be part of new school safety committee.

c. Emergency Manager/Planning Team

- Continuing to work with Networks Northwest.

d. TBARG / RACES

- Email from Glen.
- Received grant from Cherryland Electric to fund Starlink.

6. Drills/Exercises and Training/Education

- a. Michigan Hazmat Responder Conference – Crystal Mountain, April 11 – 13, 2022
 - Region 7 funding 7 personal to this conference.
- b. Great Lakes Homeland Security Conference - Grand Rapids, May 9 – 12, 2022
 - Schools have separate track.
- c. North American Active Assailant Conference – Troy, MI – August 16 – 19, 2022

7. Old Business – None.



8. New Business – None.

9. Open Discussion – None

10. Future Meetings

March 17, 2022 – MABAS report from Chief B. Parker.

11. Adjournment – 09:30.

LEPC

Location: 400 Boardman Ave

Date: 2/17/2022

Time: 0830

Name

Email

Agency Representing

1 Lewis Bird
2 Brandon Flynn
3 Barrett Fairchild
4 Brad J. Smith
5 Jim Tuller
6 Bill Parry
7 Coree Belmont
8 Mark Bink
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Emerg Mgmt
Whitewater Twp. F.D.
GTBC
GTBC
TAVENUE EMT F.D.
Blair
GTCD
TEADS
Equalization
Twp
Grand Traverse Sheriff
East Bay
Salvation Army Traverse City

Natural Hazard Mitigation Plan community meetings

Gregg Bird <gbird@gtcountymi.gov>

Tue, Feb 15, 2022 at 9:34 AM

To: Andy Down <chief@longlaketownship.com>, "Bagby, Joe (DHS)" <Bagby.J@michigan.gov>, "Bill Parker (fire@blairtownshipmi.gov)" <fire@blairtownshipmi.gov>, Bob Siekman <bsiekman@gt pavillions.com>, Brad Jewett <bjewett@gtcountymi.gov>, Brad Kluczynski <bkluczynski@gtcr.org>, Brandon Flynn <firechief@whitewatertownship.org>, Brian Beicher <bbeicher@gtmetrofire.org>, Bruce Remai <bremai@gtcountymi.gov>, Bruce Taylor <bruce.taylor@dhs.gov>, Chris Barshoff <cbarshef@gtsheriff.org>, Chris Clark <CClark@gtsheriff.org>, Chris Oosse <COosse@gtsheriff.org>, Corey LeCureux <clecureux@gtcountymi.gov>, Dan O'Brien <ems@blairtownship.org>, Dan Sal <dan.sal@tvcairport.com>, Daryl Case <chief@greenlaketownship.org>, Dave Grattopp <dgrattopp@longlaketownship.com>, Dee Wilkingson <newmandol@aaanm.org>, Eric Send <erics@wtcmradio.com>, Erica Dense <edense@lighthouse rehab.com>, Erich Bohrer <ebohrer@traversectymy.gov>, "Fairchild, Amy" <afairchild@mobilemedical.org>, Garrett Fairchild <Garrett.Fairchild@gtbindians.com>, Glen Johnson <gtskywarn@gmail.com>, "house1@michigan.gov" <house1@michigan.gov>, James Baker <jbaker@gtcountymi.gov>, Jason Torrey <jtorrey@gtcountymi.gov>, Jeff Pataky <patakyj@bata.net>, Jim Tuller <jtuller@cfire.org>, Jim White <jwhite@nmc.edu>, Joe McCarthy <joseph.mccarthy@interlochen.org>, Joe Stonecki <JStonecki@gtcr.org>, John Bolde <jbolde@mhc.net>, "John S. Rogers" <jrogers@gtcr.org>, Justin Roy <jroy@traversectymy.gov>, Kevin Klein <kevin.klein@tvcairport.com>, "LISA A. DOUGLAS" <LISA.DOUGLAS@cmsenergy.com>, Mark Bak <bakma@tcaps.net>, Mark Thompson <mthompson@mobilemedical.org>, "mcolburn@traversectymy.gov" <mcolburn@traversectymy.gov>, Mary Vollink <mary.vollink@usc.salvationarmy.org>, Matt McCaul <mccaalm@michigan.gov>, Matthew Winters <mthw.winters@usc.salvationarmy.org>, Meghan Powers <meghan.powers3@redcross.org>, Michael de Castro <DecastroM@michigan.gov>, Michael Lahey <milahey@gtcountymi.gov>, Michelle Hunt <mhunt@traversectymy.gov>, Mike Harbin <mikeharbin.uscgau@gmail.com>, Nick Lemcool <nlemcool@eastbayambulance.org>, "Owens, Paul" <powers@mobilemedical.org>, Pat Parker <pparker@gtmetrofire.org>, Penny Hill <phill@traversectymy.gov>, Ralph Dollhopf <dollhopf.ralph@epa.gov>, Robert Hentschel <rhentschel@gtcountymi.gov>, Robert Hipp <rhipp@tclp.org>, Ruth Blick <ruth.blick@usc.salvationarmy.org>, Ryan Hannon <ryanh@goodwillnmi.org>, Scott Tinker <chief.flaesa@gmail.com>, Sheri Pilate <sheri.pilate@dhs.gov>, "Stark, Christopher (DNR)" <STARKC@michigan.gov>, Tom Youker <youker@gtresort.com>, Wendy Hirschenberger <whirsch@gtcountymi.gov>, "bmarente@traversectymy.gov" <bmarente@traversectymy.gov>, "ckorn@garfield-twp.com" <ckorn@garfield-twp.com>, "clerk@longlaketownship.com" <clerk@longlaketownship.com>, "clerk@paradisewp.org" <clerk@paradisewp.org>, "clerk@peninsulatownship.com" <clerk@peninsulatownship.com>, "clerk@whitewatertownship.org" <clerk@whitewatertownship.org>, "corety@forestarea.com" <corety@forestarea.com>, "dougem@centurytel.net" <dougem@centurytel.net>, "dougem@maaeaps.com" <dougem@maaeaps.com>, "ftclerk@gmail.com" <ftclerk@gmail.com>, "ftsupervisor@gmail.com" <ftsupervisor@gmail.com>, "gilie@eastbaytpw.org" <gilie@eastbaytpw.org>, "kschumacher@garfield-twp.com" <kschumacher@garfield-twp.com>, "kvclerk@villageofkingsley.com" <kvclerk@villageofkingsley.com>, "kvmanger@villageofkingsley.com" <kvmanger@villageofkingsley.com>, "morairty1984@gmail.com" <morairty1984@gmail.com>, "nbroering@charter.net" <nbroering@charter.net>, "supervisor@blairtownship.org" <supervisor@blairtownship.org>, "ritadinger@greenlaketownship.org" <ritadinger@greenlaketownship.org>, "scourtade@eastbaytpw.org" <scourtade@eastbaytpw.org>, "supervisor@greenlaketownship.org" <supervisor@greenlaketownship.org>, "supervisor@peninsulatownship.com" <supervisor@peninsulatownship.com>, "supervisor@whitewatertownship.org" <supervisor@whitewatertownship.org>, "akrueger@traversectymy.gov" <akrueger@traversectymy.gov>, "swinter@traversectymy.gov" <swinter@traversectymy.gov>, "fdituri@traversectymy.gov" <fdituri@traversectymy.gov>, "dwhite@acmetownship.org" <dwhite@acmetownship.org>, "zoning@acmetownship.org" <zoning@acmetownship.org>, "ckarner@eastbaytpw.org" <ckarner@eastbaytpw.org>, "jsych@garfield-twp.com" <jsych@garfield-twp.com>, Christina Deeren <zoning@peninsulatownship.com>, "zoning@greenlaketownship.org" <zoning@greenlaketownship.org>, "planner@longlaketownship.com" <planner@longlaketownship.com>, "planner@peninsulatownship.com" <planner@peninsulatownship.com>, "planner@peninsulatownship.com" <planner@peninsulatownship.com>, Jolanda A Murphy <jolanda.murphy@gtbindians.com>, Garrett Fairchild <garrett.fairchild@gtbindians.com>, Nate Alger <nalger@gtcountymi.gov>, Jennifer Neal <jennifer.neal@networksnorthwest.org>, "esdirector@blairtownship.org" <esdirector@blairtownship.org>, "supervisor@fifelakewp.com" <supervisor@fifelakewp.com>, "djs6505@aol.com" <djs6505@aol.com>, "bdbogard@gmail.com" <bdbogard@gmail.com>, "zoning@paradisewp.org" <zoning@paradisewp.org>, "manne.erickson@gmail.com" <manne.erickson@gmail.com>, "zoning@whitewatertownship.org" <zoning@whitewatertownship.org>, "mcgoughdavid16@gmail.com" <mcgoughdavid16@gmail.com>, "kvmanger@villageofkingsley.com" <kvmanger@villageofkingsley.com>, "kingsleydpw@gmail.com" <kingsleydpw@gmail.com>, Andy Smits <asmits@gtcountymi.gov>, Brian Flickinger <bflickinger@michigan.gov>, Steve Cameron <camerons@michigan.gov>, "AsmusT@michigan.gov" <AsmusT@michigan.gov>, "CURTISL@michigan.gov" <CURTISL@michigan.gov>

The Grand Traverse County Emergency Management Department invites you to a meeting of local municipality officials to discuss natural hazards and mitigation strategies. Local participation is crucial to the planning process and a requirement of FEMA, the approval agency.

We request that at least one representative from each community attend the meeting. We look forward to seeing you on -

Wednesday March 23, 2022 at 10am-12pm at the Kingsley Village Council Room, 207 S. Brownson Ave, Kingsley, MI 49649

Or

Thursday, March 24, 2022 at 10am-12pm at the Government Center Commission Chambers, 400 Boardman Ave, Traverse City, MI 49684

The County's Natural Hazard Mitigation Plan will identify natural disaster risks and vulnerabilities to the community, develop long-term strategies for protecting people and property from similar events, and establish a coordinated process to implement the plan. Feel free to contact Gregg Bird, Emergency Management Coordinator, at gbird@gtcountymi.gov or Jennifer Neal, Community Planner at jennifer.neal@networksnorthwest.org.

Regards,

Gregg

Gregg Bird PEM, NEMP
Emergency Management Coordinator

Office: (231) 995-6059
Cell: (231) 590-2373
Email: gbird@gtcountymi.gov

www.grandtraverse.org/EM
www.Fb.com/GTCemergency




Enroll for CodeRED here

MINUTES

**Grand Traverse County Hazard Mitigation Plan Community Meeting
Wednesday, March 23, 2022 – 10:00 AM – 12:00 PM
Village of Kingsley Council Room, 207 S. Brownson Ave. Kingsley MI 49649**

Attendees:

Networks Northwest (Jennifer Neal and Zach Vega)
Gregg Bird, GT County E.M.
Dan Hawkins, Village Manager
Deb Nickerson, Treasurer
Terry Almquist, Supervisor, Department of Public Works
Todd Weaver, Department of Public Works
Norm Fenton, Department of Public Works
Jim Tuller, Fire Chief, City of Traverse City, formerly a resident of Mayfield Township

Planner Neal opened with a slide presentation to the group. Ms. Neal answered questions from the group and Mr. Bird provided additional background about the project scope and requirements.

Following the presentation, meeting participants were asked to group around the large maps provided to identify vulnerable population areas such as mobile home parks and isolated neighborhoods. They were also asked to identify potential hazards in the area. Meeting participants marked the maps provided. The group discussed flooding potential, damage from thunderstorms and wind causing power outages, and other issues specific to the Village of Kingsley. Planner Neal encourage the group to provide input on any potential hazard to ensure it is covered in the plan. The Village mentioned a good relationship with the Grand Traverse County Road Commission and will continue to work with them on infrastructure concerns and repairs. Planner Neal will incorporate the feedback received into the plan.

MINUTES

Grand Traverse County Hazard Mitigation Plan Community Meeting
Thursday, March 24, 2022 – 10:00 AM – 12:00 PM
Government Center, 400 Boardman Ave, 2nd Floor Commission Chambers

Attendees:

Networks Northwest (Jennifer Neal, Zach Vega, and Hannah Yurk)
Gregg Bird, Emergency Management Coordinator, Grand Traverse County
Matthew Winters, Lieutenant, Salvation Army
Fred Gilstorff, Peninsula Township Fire Department
Jolanda Murphy, Grand Traverse Band Public Safety Department
Lori Savaso, Grand Traverse Band Risk Management Department
Amy Fairchild, Paramedic Supervisor, Mobile Medical Response
Dee Wilkinson, Housing/EMT, Area Agency on Aging of Northwest Michigan
John Sych, Planning Director, Garfield Township
Stephen Hannon, Deputy Planning Director, Garfield Township
Beth Friend, East Bay Township
Art Krueger, Utility Director, City of Traverse City
Frank Dituri, Public Services Director, City of Traverse City
Andy Smits, Drain Commissioner, Grand Traverse County

Planner Neal opened with a slide presentation to the group. Ms. Neal answered questions from the group and Mr. Bird provided additional background about the project scope and requirements.

Following the presentation, meeting participants were asked to group around the large maps provided to identify vulnerable population areas such as mobile home parks and isolated neighborhoods. They were also asked to identify potential hazards in the area. Meeting participants marked the maps provided. Networks Northwest Community Planners listened to the input from the representatives of the participating organizations and made notes on the maps. Common topics that were brought up included common flooding areas, damage from thunderstorms and wind causing power outages, locations of critical infrastructure, and other issues specific to the organizations represented. Planner Neal will incorporate the feedback received into the plan.

HAZARD MITIGATION SIGN-IN 3/24

| <u>NAME</u> | <u>ROLE/ORGANIZATION</u> |
|-----------------|--|
| Matthew Winters | Lieutenant / The Salvation Army |
| Fred Gilstorff | Chief Peninsula Twp. Fire |
| Jolanda Murphy | GTB Public Safety Dept. |
| Lori SAVASO | GTB Risk Management Dept. |
| Amy Fairchild | mnr Paramedic Supervisor |
| Dee Wilkinson | Housing/EMT - Area Agency on Aging NW MI |
| John Sych | Garfield Twp. Planning Director |
| Stephen Hannon | Garfield Twp. Deputy Planning Dir |
| Beth Friend | East Bay Township |
| Art Krueger | City of TC - Utility Director |
| ANDY SMITS | GRAND TRAVERSE Co. DRAIN COMMISSIONER |



A G E N D A
Grand Traverse County
Local Emergency Planning Committee (LEPC)
Thursday, April 21, 2022 - 8:30 am
Government Center, 400 Boardman Ave, **Commission Chambers**

Chairman: Chief Pat Parker, Grand Traverse Metro Emergency Services
Vice Chairman: Chief Jim Tuller, Traverse City Fire Dept
Secretary: Nick Lemcool, East Bay EMS

1. Call Meeting to Order

2. Approval of Agenda

3. Approval of Minutes of March 17, 2022

4. Agency Presentations & Schedule

Networks Northwest – Jennifer Neal – DRAFT Natural Hazard Mitigation Plan

5. Committee & Team Reports

a. Hazmat Team Report/Sara Title II & III

1. Tier II status 2022 update (if any)
2. Recent HAZMAT incident(s) review (if any)

b. School Drill Schedule and Report

c. Emergency Manager/Planning Team

d. TBARG / RACES

6. Drills/Exercises and Training/Education

a. Michigan Hazmat Responder Conference – Crystal Mountain, April 11 – 13, 2022 – Report out

b. Great Lakes Homeland Security Conference - Grand Rapids, May 9 – 12, 2022

If you are a school employee and interested in the School Track, please register using course MI-Tran ID 1102329.

c. Full Scale Exercise – Cherry Capital Airport, Emergency Management, Grand Traverse Schools – August 10, 2022

d. ~~North American Active Assailant Conference – Troy – August 16 – 19, 2022~~ Postponed until spring 2023

7. Old Business

8. New Business

9. Open Discussion

10. Future Meetings –

SPECIAL Meeting for Natural Hazard Mitigation Plan – Thursday, May 26, 10am Commission Chambers
LEPC – August 18, 2022

11. Adjournment



MINUTES
Grand Traverse County
Local Emergency Planning Committee (LEPC)
Thursday, April 21, 2022 - 8:30 am
Government Center, 400 Boardman Ave, **Commission Chambers**

Chairman: Chief Pat Parker, Grand Traverse Metro Emergency Services
Vice Chairman: Chief Jim Tuller, Traverse City Fire Dept
Secretary: Nick Lemcool, East Bay EMS

- 1. Call Meeting to Order – 08:32** by Vice Chair Chief J. Tuller
- 2. Approval of Agenda –** Motion by Commissioner B. Jewett, Second by Lt. C. Oosse – All Aye.
- 3. Approval of Minutes of March 17, 2022 –** Motion by Chief B. Parker, Second by Commissioner B. Jewett – All Aye.
- 4. Agency Presentations & Schedule**
 - Networks Northwest – Jennifer Neal – DRAFT Natural Hazard Mitigation Plan Presentation of draft plan. Discussion of data and sources. Questions posed.
- 5. Committee & Team Reports**
 - a. Hazmat Team Report/Sara Title II & III
 1. Tier II status 2022 update – 15% not up to date yet. No other updates.
 2. Recent HAZMAT incident(s) review - None reported.
 - b. School Drill Schedule and Report
 - TCAPS - Lull with lockdowns. Finishing up drills in May. Some K9 Searches. Working out exterior number plan to identify rooms from an exterior point. Discussion to create county wide plan for numbering rooms creating consistency.
 - PAO meeting with TCAPS Marketing departments to promote that threats to a school will equal a 20-year felony.
 - c. Emergency Manager/Planning Team
 - April 9 – Potential of private DAM breach on Williams Road, Blair Township. Affecting three properties, however, does not appear to affect homes or structures.
 - d. TBARG / RACES
 - Report on Starlink.
- 6. Drills/Exercises and Training/Education**
 - a. Michigan Hazmat Responder Conference – Crystal Mountain, April 11 – 13, 2022 – Report out
 - 150 participants, targeted to Hazmat and WMD response. Good Conference.
 - b. Great Lakes Homeland Security Conference - Grand Rapids, May 9 – 12, 2022
 - If you are a school employee and interested in the School Track, please register using course MI-Tran ID 1102329.
 - c. Full Scale Exercise – Cherry Capital Airport, Emergency Management, Grand Traverse Schools – August 10, 2022 – *All school districts locally will be participating with Family Unification center drill portion.
 - d. ~~North American Active Assailant Conference – Troy – August 16 – 19, 2022~~ Postponed until spring 2023



7. Old Business

8. New Business

9. Open Discussion

10. Future Meetings –

No May, June or July meetings scheduled.

SPECIAL Meeting for Natural Hazard Mitigation Plan – Thursday, May 26, 10am Commission Chambers
LEPC – August 18, 2022

11. Adjournment – 09:45 by Chair.

LEPC

Location: 2nd Floor Training Rm

Date: 4/21/2022

Time: 0830

| Name | Email | Agency Representing |
|---------------|--------------------------------|-------------------------|
| Greg Bird | gbird@gtcounty.mi.gov | Emergency Mgmt |
| Brad Jensch | bjensch@gtcounty.mi.gov | GT BOC |
| Mark Byle | mbyle@fema.us.net | TEHPS |
| Greg LeGier | gregle@gtcounty.mi.gov | 911 |
| Alan Johnson | GT SKWarn@gsmsi.com | TSARC |
| Krista Thayer | ktaylor@traversehcl.org | Traverse Health Clinic |
| Nick Conner | nlconner1@eastbayambulance.com | East Bay EMS |
| DAN SA | dan.sade@theairport.com | Airport |
| Tony Poyer | TPoyer@cmteachiefire.org | CTMESA |
| Jason Dammann | clarkinj2@midlegon.gov | MSP |
| Bill Parker | fireblm@township.mi.gov | Blain/Panama |
| Josh Green | jgreen@gtcounty.mi.gov | County Equalization/GES |
| Brandon Flynn | fireaid@traversehcl.org | Interlender |
| Rick Wenzel | rwenzel@lear.com | Learn Corp TC |
| Tony Martin | marton1206@lear.com | lear corp |
| Jim Toller | jtoller@tcfire.org | Traverse City FD |
| Brandon Brink | brinkscapt@tcfire.org | Grand Traverse Co |

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

Grand Traverse 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 on May 26, 2022. The meeting will be at Grand Traverse County Government Center Commission Chambers, 400 Boardman Ave. Traverse City MI 49684 at 10:00 AM. 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 Jennifer.neal@networksnorthwest.org. The draft plan is available for review on the Grand Traverse County's website and Network Northwest's website.

LEPC Grand Traverse County
Sign in Sheet
May 26, 2022

| <u>Name</u> | <u>Title</u> | <u>Organization</u> |
|--------------|--|---------------------|
| PAT PARKER | FIRE CHIEF | GR TRAV METRO FD |
| Steve Hannon | Deputy Planning Director, Grandfield Township | |

MINUTES

Grand Traverse County Hazard Mitigation Plan Public Meeting

Thursday, May 26, 2022 - 10:00-11:30 am

Government Center, 400 Boardman Ave, 2nd Floor Commission Chambers

Attendees:

Chair, Pat Parker, Fire Chief, Grand Traverse Metro Fire Dept. (serving Acme, East Bay, and Garfield Twps)

Networks Northwest (Jennifer Neal)

Steve Hannon, Deputy Planning Director, Garfield Township

Chief Pat Parker opened the meeting at 10:00 AM. Open discussion followed. Chief Parker discussed the recent tornado event in Antrim County and Otsego County. He and Planner Neal discussed emergency notification systems, including the availability of tornado sirens.

Deputy Planning Director Hannon arrived and Planner Neal reviewed the draft plan with Mr. Hannon. Garfield Township is most concerned with the designated flood areas, potential mitigation strategies, and potential projects in these areas. Deputy Planning Director Hannon identified strategies Garfield Township was currently including in their normal day-to-day operations, but there were opportunities to include additional strategies. Planner Neal listened to comments and will incorporate those suggestions into the plan.

No other comments were received.

Memo

To: Whitewater Township Board of Trustees

CC: None

Date: 12.02.2022

Re: Schedule Next Budget Work Session

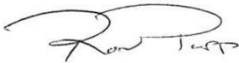
Board Members –

During our 11.30.2022 Budget Work Session, the Board asked for a reminder to schedule the next budget work session.

This is that reminder, please bring your calendars.

No motion at this time pending Board scheduling of a special meeting

Respectfully submitted,



Whitewater Township FOIA Coordinator
Supervisor, Whitewater Township

Memo

To: Whitewater Township Board
From: Ron Popp, Supervisor
CC: None
Date: 12-2-2022
Re: Hybrid Meeting Configuration -

Board Members,

It is time again to ask the question of should we continue the remote participation platform (Zoom) in 2022.

I have not changed my opinion that the application allows for greater public participation and a higher degree of transparency of the Board's actions. For a few dollars per month the service is a great value and worth continuing in 2023.

A motion could like: Motion for Whitewater Township to continue the Zoom Application thru 12.31.2023 as a service to the residents of Whitewater Township.

Respectfully submitted,



Ron Popp

Supervisor, Whitewater Township