

# Grand Traverse Band of Ottawa and Chippewa Indians Hazard Mitigation Plan Update

January 14, 2021



**Networks  
Northwest**

Talent / Business / Community

# Welcome

- Thank you for joining us!
- We will be discussing the following:
  - Community Profile
  - Survey and Hazard Identification
  - Historic Weather Events
  - Initial Mapping



# Introductions

- Networks Northwest Staff
  - Jennifer Neal, AICP
  - Stephanie Loria
- Tribal Agencies and Members

# Community Profile

The applicant agency is the Grand Traverse Band of Ottawa and Chippewa Indians (GTB, Grand Traverse Band), a federally recognized Indian Tribe having a government-to-government relationship with the United States by action of the Department of the Interior effective May 27, 1980. GTB has a total Tribal membership of 4,189 with 53.64% residing outside of the designated service area. The GTB's reservation and six-county Service Area is in the northwest section of the lower peninsula of Michigan, and includes Antrim, Benzie, Charlevoix, Grand Traverse, Leelanau, and Manistee counties. All counties in the service area are designated as rural by the U.S. Department of Agriculture. The Grand Traverse Band has 4,189 enrolled members, with 1,942 residing in the service area as follows: Antrim (97, or 4.99%), Benzie (144, or 7.41%), Charlevoix (203, or 10.45%), Grand Traverse (760, or 39.13%), Leelanau (690, or 35.53%), and Manistee (42, or 2.16%), (GTB Community Profile, May 2021).

# GTB Hazard Mitigation Community Survey Responses from 10/4/21 to 11/17/21

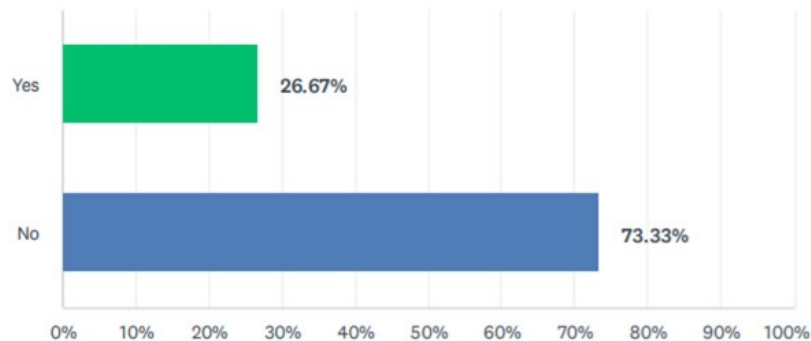
120 Responses!

Shared by GTB and Networks Northwest

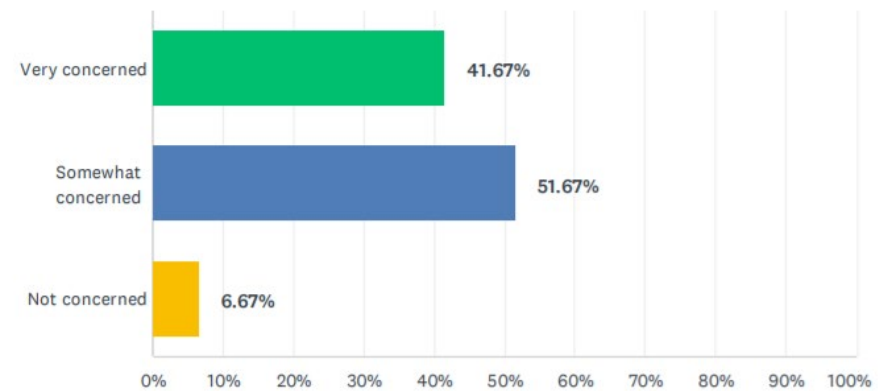
Representation:

|   |  |
|---|--|
| Tribal Government Employees and Citizens/Tribal Members |  |
| Housing Manger  | Lead Great Lakes Fisheries Biologist           |
| Teacher   | Public Works                                   |
| Fire/Police/Public Safety                               | Grand Traverse Band Economic Development Corp. |
| Behavioral Health Counselor                             | Tribal Prosecutor                              |
| Registered Nurse - Clinic                               | GTB Agricultural Coordinator                   |

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



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



Q4 What type of natural hazard events are likely to have the largest impact on your community (for example: fire, flood, drought, illness outbreak, etc.)?

events severe weather drought related Outbreak tornados  
flooding damage Illness Blizzard  
Illness outbreak power outages Fire water  
storms loss impacts winds snow Flood tornado weather

Q5 Does your community have concerns about the condition of existing infrastructure (dams, bridges, utilities, etc.) being able to withstand a natural hazard event in the future?  
Please describe.

water know electricity N community winter power road  
Utilities may Yes due sure storms bridges  
unknown concern power outages dams hazards going



Q6 Does your community have concerns that a natural hazard event in the future would require investment in new and/or upgraded infrastructure and technology (renewable energy, improved stormwater management, internet/cellular, etc.)? Please describe.

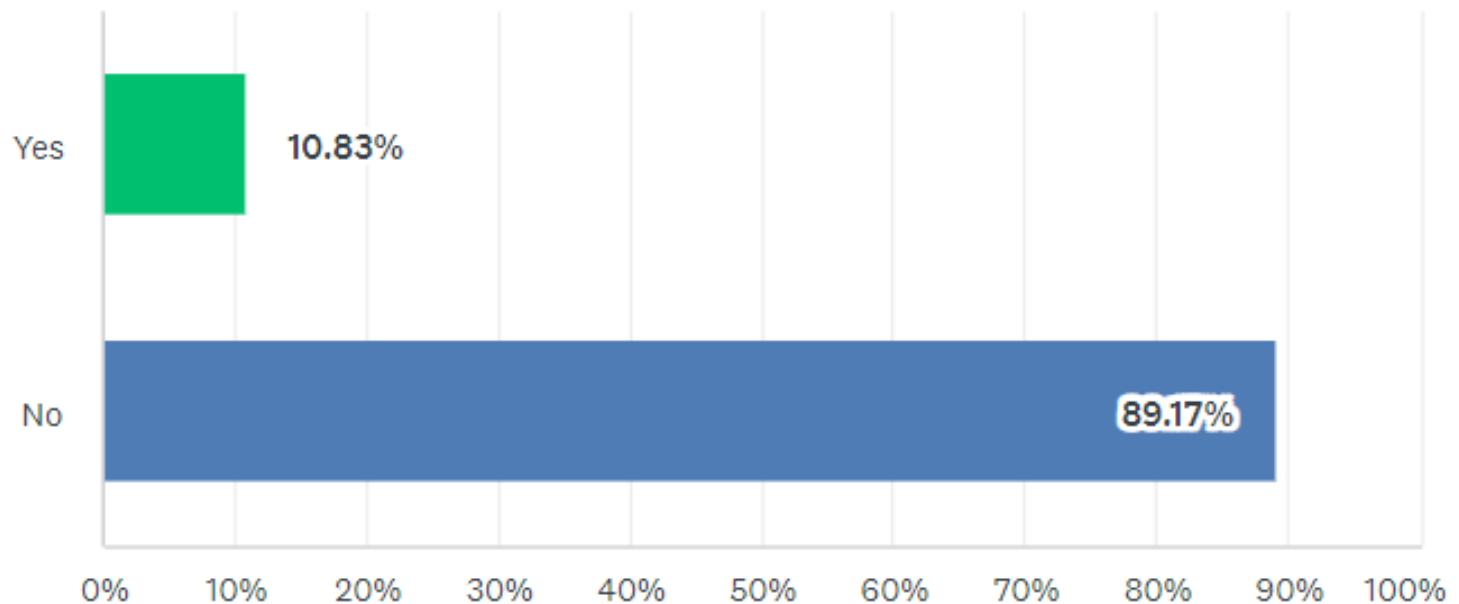
upgrade homes events housing help funds community  
upgraded infrastructure sure unknown need service Yes storms  
Renewable energy infrastructure internet Improved  
power well internet cellular Communication lines energy

Q7 Have there been any negative impacts on the public health and/or natural environment of your community that you attribute to climate change?

issues know fish due climate change people cold winters change  
impacts water aware Yes Erosion  
climate change invasive species sure n species  
public health causes warmer

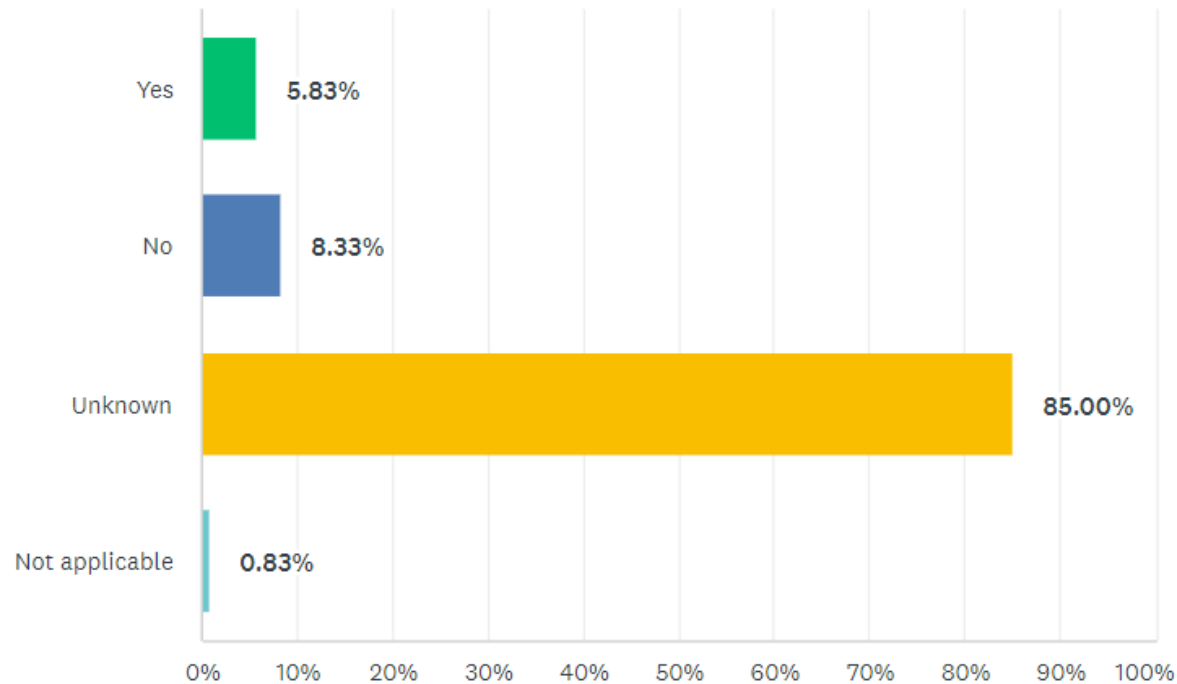
# Have you been involved in a natural hazard mitigation planning process before?

Answered: 120 Skipped: 0



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

Answered: 120 Skipped: 0

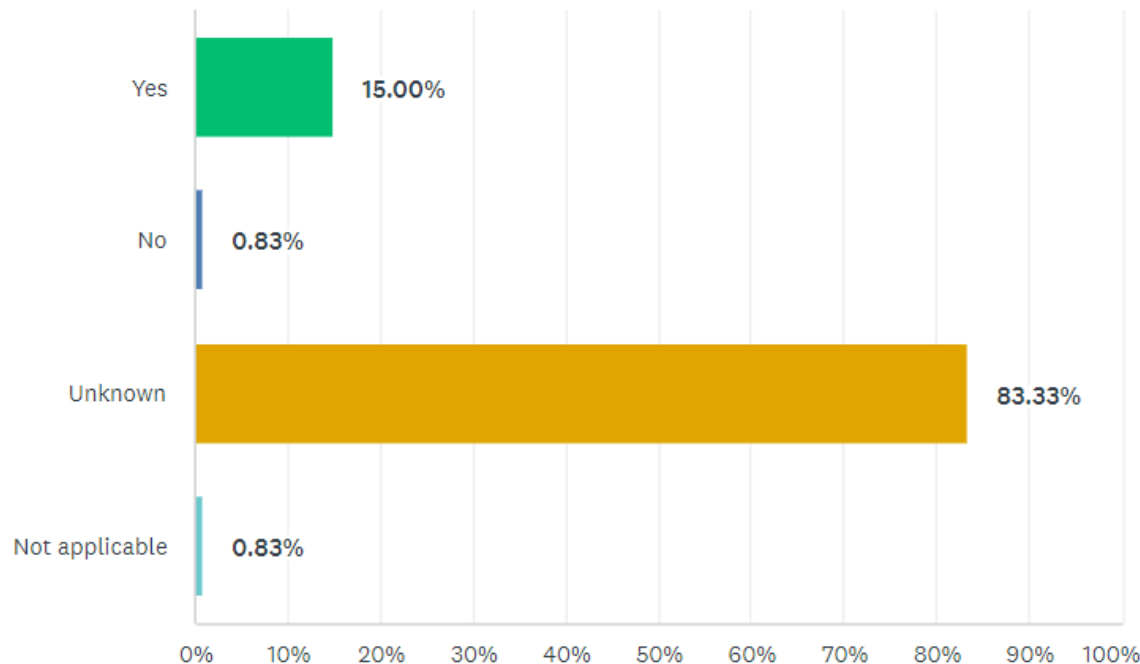


Q10 If so, was your request granted and what type of project did the request include?

sure request Unknown generators N<sub>grant</sub> NA know

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

Answered: 120 Skipped: 0



Q12 If so, please identify potential strategies you would like to explore in the near future.

communication Renewable energy Plan future sure need Unknown  
power N water NA Emergency community Improvement know GTB increase

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

- Clean up strategy for heavy snow storms
- Assess impact of Covid 19
- Tree assessments both private and public property
- Include 6 county area
- Belanger Creek bridge – potential washout
- Energy efficiency, solar/wind power, generators readily available for power outages
- Incorporate traditional Anishinaabek values when considering future endeavors and long-term impacts on the environment
- Food sovereignty – sustainable agricultural practices and development
- Lakeshore erosion
- Community shelter space
- Public education on planning for potential or imminent natural threats
- Transparency and communication to the community on the Hazard Mitigation Plan

# Hazard Identification

1. Illness Outbreak, 35.29%
2. Fire, 15.97%
3. Flooding, 13.45%
4. Storms, 10.08%
5. Snow, 6.72%

# Potential Hazard Events

Drought

Extreme temperatures (*heat/cold*)

Flooding

High lake water levels

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/Derecho

Severe thunderstorms (*Can produce hail, lightning, high winds, flooding*)

Subsidence or Shoreline erosion

Tornado

Wildfire

Winter Storm (*can produce ice, sleet, heavy snowfall, high winds, etc.*)

Dam Failure



# Historic Weather Events

## NOAA Storm Event Database Report for Leelanau County, 2015 through 2021

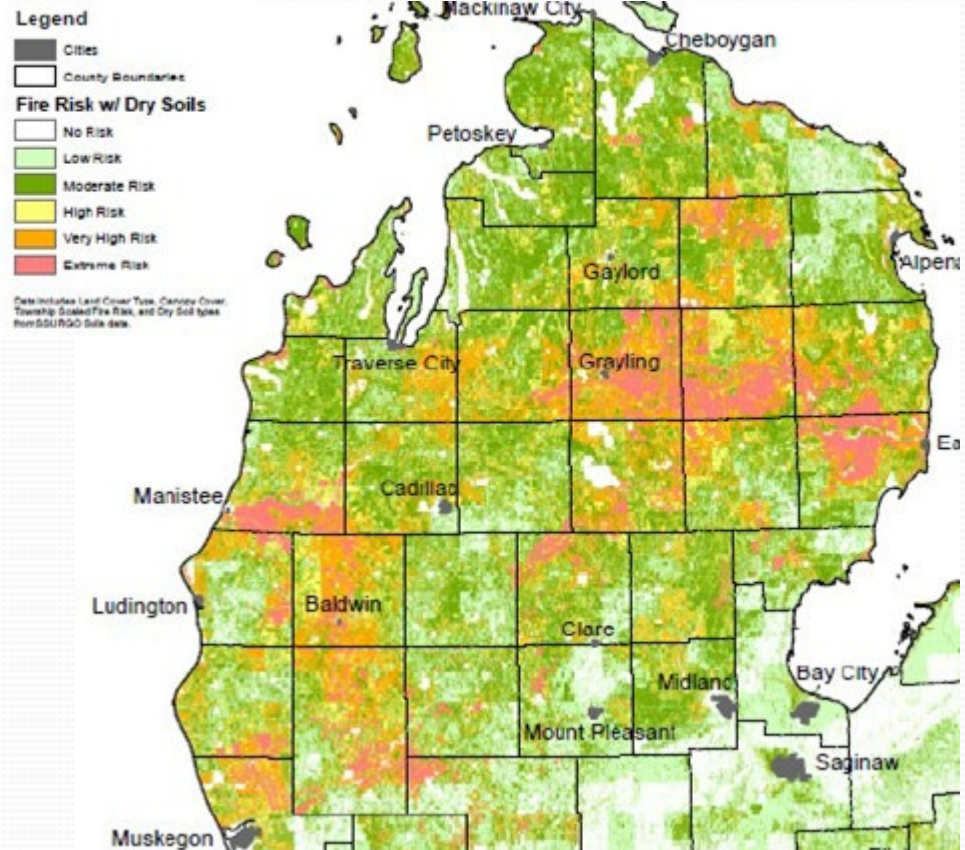
- **Winter Storm Events: 22**
- **Thunderstorm Wind/ High Wind Events: 20** (property damages range generally up to \$20,000 per event; a couple were in the multi-millions \$ range.)
- **Hail Events: 6** (one storm in Empire est. \$85,000 in property damage; other storms caused up to \$2 million in crop damage)
- **Flooding Events: 6** (one seiche in 2019 = \$5K property damage in Fishtown section of Leland; 3 Lakeshore flooding events 2019-2020 resulting in up to \$175K in property damage; and 2 Flash floods in August 2021 in Solon and Empire)
- **Excessive Heat Event: 1** June 2018

# Historic Weather Events

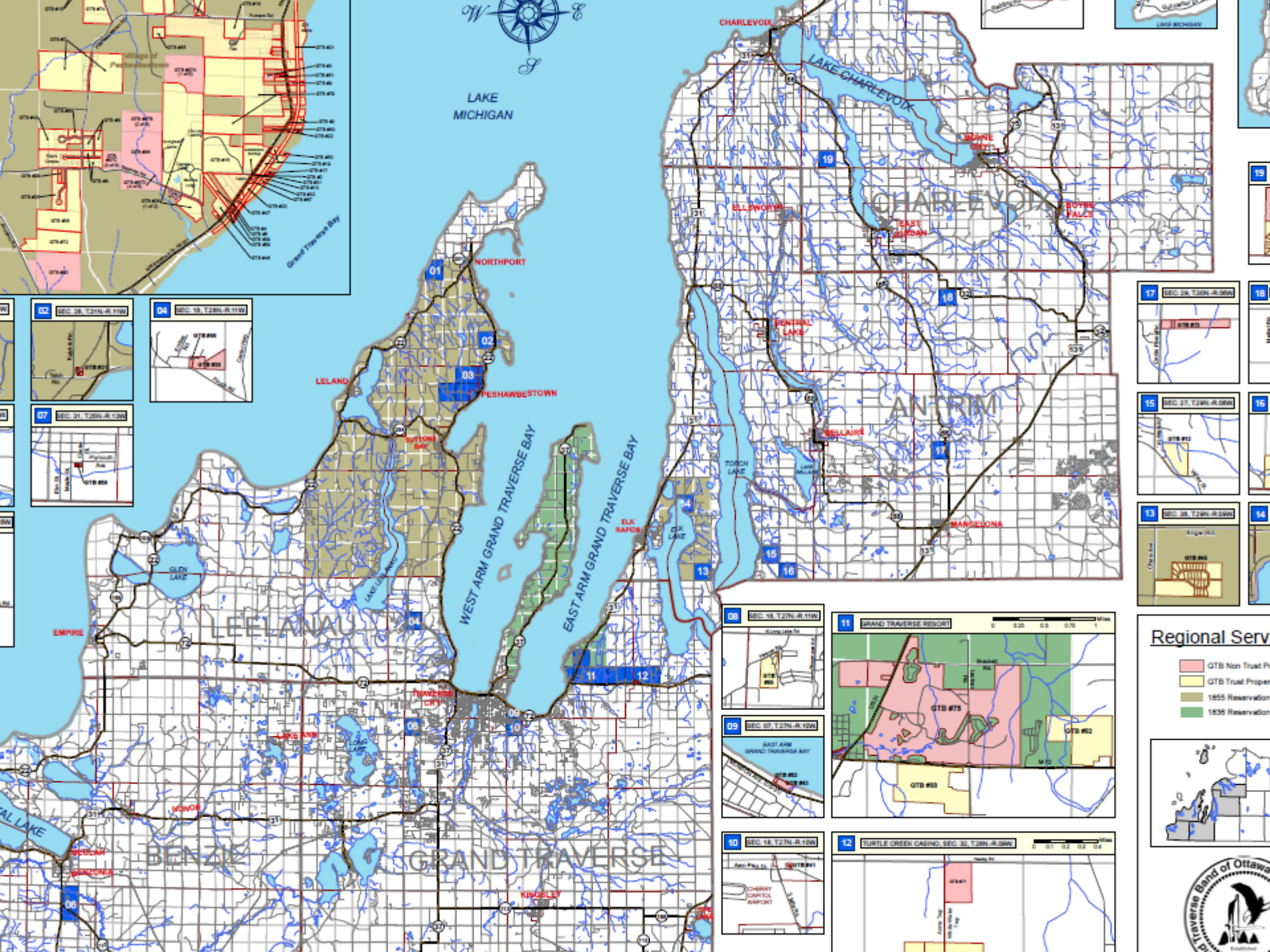
**Wildfires:** The *Michigan Hazard Analysis of 2019* estimated that 60 wildfires have occurred on lands under MDNR jurisdiction within Leelanau County from 1981 to 2018.

This number is relatively low compared to other counties in northern MI.

Most of the county has a moderate fire risk with dry soil conditions, while a few areas in the west/southwest portions of the county are under high to extreme fire risk with dry soil conditions.









# Next Steps

- Hazard impact analysis
- Infrastructure and other vulnerabilities
- Risk assessment
- Mapping of resources and facilities



# Thank you!

- Any questions??