

Antrim County Hazard Mitigation Plan Update – Inland Communities Meeting

March 16, 2022



**Networks
Northwest**

Talent / Business / Community

Welcome

- Thank you for joining us!
- We will be discussing the following:
 - Purpose of the Natural Hazard Mitigation Plan
 - 2016 Natural Hazard Mitigation Plan Priorities
 - Results of the Community Survey
 - Severe Weather Event Frequency; Wildfire Risk; Dams; NFIP participation
 - Discussion of Hazard Areas in YOUR Community!



Introductions

- Networks Northwest - Community Planners
 - Jennifer Neal, AICP
 - Stephanie Loria
- Community Partners
 - Leslie Meyers, Antrim County Emergency Management Coordinator
 - Antrim County LPT/LEPC

Purpose

Hazard Mitigation Planning

“The effort to reduce loss of life and property by lessening the impact of disasters”

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Billion-Dollar Disasters Shattered U.S. Record in 2020

The 22 events that each caused at least \$1 billion in damage show the increasing costs of climate change

By Thomas Frank, E&E News on January 11, 2021



An aerial view of flood waters from Hurricane Delta surrounding structures destroyed by Hurricane Laura on October 10, 2020 in Creole, Louisiana. Credit: Mario Tama Getty Images

Purpose

- Mitigation planning breaks the cycle of disaster damage, reconstruction and repeated damage. It includes long-term solutions that reduce the impact of disasters in the future.
- Government entities must have a current 5-year Hazard Mitigation Plan, adopted by their local government and approved by FEMA, to be eligible to apply for FEMA grants for future hazard mitigation programs, such as:
 - Building Resilient Infrastructure & Communities (BRIC) Funding Program
 - Flood Mitigation Assistance Program

Examples of Hazard Mitigation Projects

- Acquisition of hazard prone homes and businesses which enable owners to relocate to safer areas (acquisition)
- Protecting homes and businesses with permanent barriers to prevent floodwater from entering (levees, floodwalls, floodproofing)
- Elevating structures above known flood levels to prevent and reduce losses (elevation)
- Reconstructing a damaged dwelling on an elevated foundation to prevent and reduce future flood losses
- Structural retrofits to make a building more resistant to floods, earthquakes, wind, wildfire and other natural hazards
- Retrofits to utilities and other infrastructure to enhance resistance to natural hazards (utility retrofits)
- Construction of [safe rooms](#) for both communities and individual residences in areas prone to hurricane and tornado activity
- Slope stabilization projects to prevent and reduce losses to structures
- Drainage improvement projects to reduce flooding (flood risk reduction projects)
- Post-disaster code enforcement

Potential *Natural* Hazard Events

Drought

Excessive Precipitation (*may cause dam failure, high lake and river water levels, lakeshore and streambank erosion, flooding, contaminated water, etc.*)

Extreme temperatures (*heat/cold*)

Hail

High winds/Straight-line winds
/Derecho

Invasive species (*can cause damage to forests, crops, native species, etc.*)

Public health emergency (i.e., *pandemic; contaminated water supply*)

Severe thunderstorms (*can produce hail, lightning, high winds, flooding, seiche, etc.*)

Tornado

Wildfire

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

Wildlife or zoonotic diseases (i.e., Bovine TB, Avian Influenza, Swine Flu)

2016 Antrim County Natural Hazards Mitigation Plan

Natural Hazards Mitigation Priority Areas

Priority Area 1: The Village of Bellaire (County Seat) area has a high damage potential from high winds and tornados; and flooding of residential areas.

Mitigation Strategies: *High Winds, Flooding*

Priority Area 2: Highway U.S. 31 through the Village of Elk Rapids and Torch Lake shoreline (Milton, Torch Lake, Central Lake, Forest Home, and Helena Townships). A high damage impact potential from severe thunderstorms and high winds affecting a high seasonal population rate and festivals in the summer. There are erosion concerns along Lake Michigan and Torch Lake coastal areas.

Mitigation Strategies: *Erosion, Severe Thunderstorm and High Winds*

Priority Area 3: Torch Lake shoreline (Central Lake, Helena, Milton, Torch Lake townships and Village of Central Lake) and Village of Mancelona - A high damage impact potential from extreme winter weather including snow and ice hazards.

Mitigation Strategies: *Extreme Winter Weather*

Priority Area 4: The Central Lake area (Village of Central Lake, Central Lake Township) has a high damage impact potential from severe thunderstorms and high winds, specifically affecting seasonal population increases at summer camps such as Camp Hayo-Went-Ha.

Mitigation Strategies: *Severe Thunderstorms*

Priority Area 5: The Cedar River area (Kearney and Custer Townships, Shanty Creek resort), has a high damage impact potential from severe thunderstorms and high winds; snow and ice hazards.

Mitigation Strategies: *Severe Thunderstorms, Extreme Winter Weather*

Antrim County Hazard Mitigation Community Survey



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ement

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Thursday, October 28, 2021 at 11:14 AM **ment**

Yesterday at 11:14 AM

Antrim County and Networks Northwest are currently working to update the Antrim County Hazard Mitigation Plan. Hazard mitigation planning reduces loss of life and property by minimizing the impact of natural disasters. The first phase of the update includes data collection and community input from all local jurisdictions in Antrim County. We are seeking input on past projects, hazard events in your community, and potential strategies that you would like to see considered in the plan. Please take a few moments to answer the following questions. Thank you in advance for your feedback!
<https://www.surveymonkey.com/r/PB8DMSK>



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we are thankful to Antrim County Emergency Management, Ccecpscoo, An... See more

31

2 Comments 3 Shares



Amanda Jones Kik

February 24, 2020 at 6:27 AM

Thought folks here might be interested in this event about what to d... See more



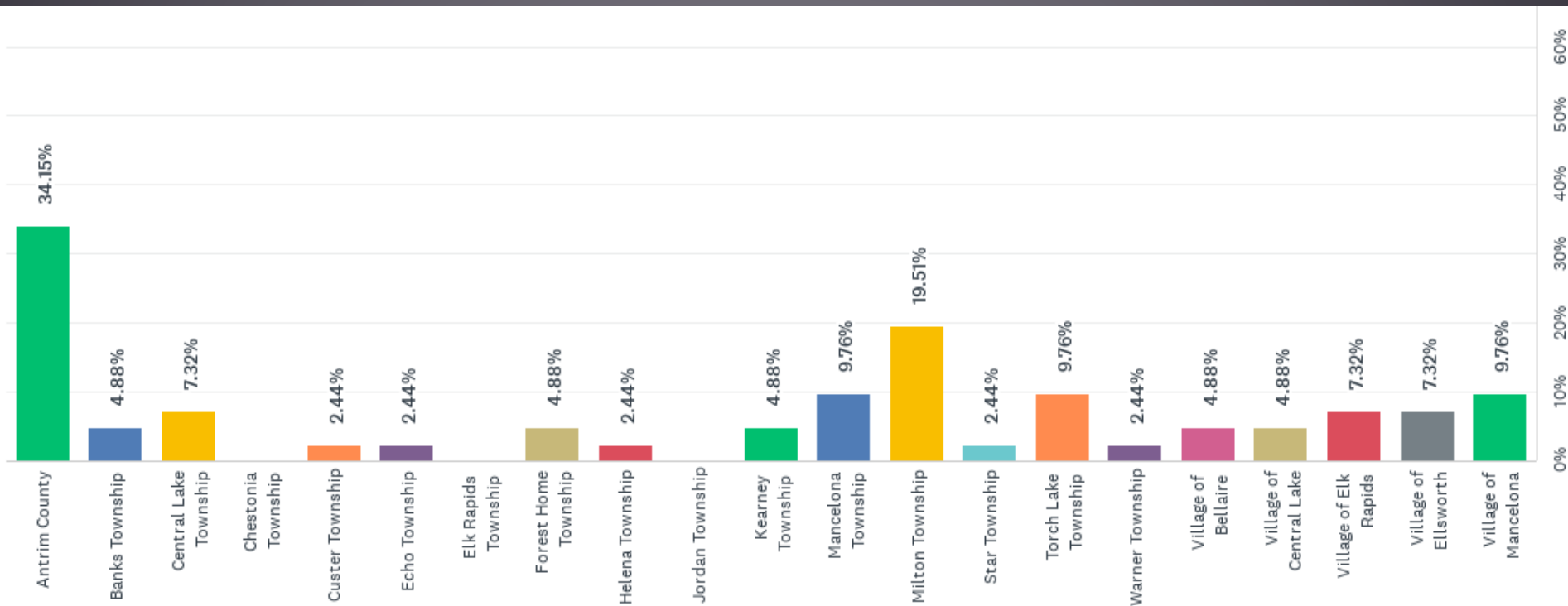
Deb McCulloch

February 8, 2020 at 5:23 PM

Roger is working on my car so we will have the plow truck

1

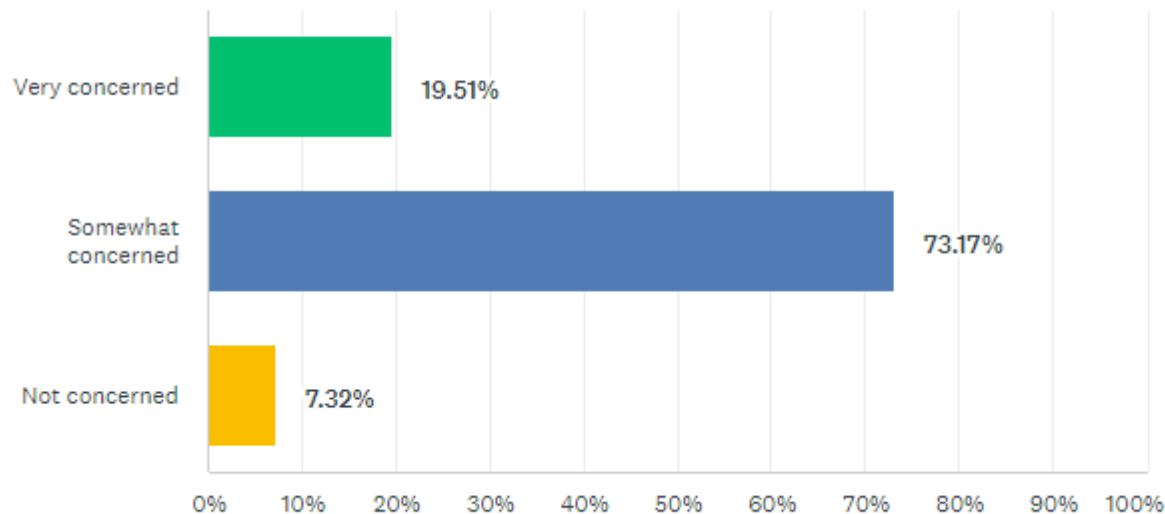
Community Survey Responses from 10/25/21 to 1/28/22 41 Responses



Community Survey Results

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

Answered: 41 Skipped: 0



Community Survey Results

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

Illness Outbreak (15)

Flooding/Heavy Rains/Erosion (15)

Wildfire (14)

High Winds (5)

Drought (5)

Blizzards/Winter Storms (4)

Power Outages (3)

Storm Damage/Weather Related/Severe Weather (3)

Tornado (3)

Community Survey Results

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

Entire County:

- All infrastructure out-of-date
- Culverts, bridges, dams, and roads
- Utilities withstanding storms
- Power outages are a regular occurrence
- Pandemic preparedness

Village of Ellsworth:

- There is a bridge/culvert that is impeding the flow of water from the upper chain of lakes.
- There is a culvert on a main trunkline that is deteriorated and in need of replacement
- Bridges/Culverts

Village of Central Lake:

- State Street Bridge

Village of Bellaire:

- 3 bridges and 2 dams that could cause some issues

Custer Twp.:

- Utility service during storms
- Flooding with bridges

Kearney Twp:

- Dams and bridges
- Power outages
- We only have one bridge that is connected to the one dam in our township; it was renovated about 20-25 years ago.

Helena Twp.:

- Parts of town and homes have flooded for 2 consecutive years.

Historic Severe Weather Events

- Sources: NOAA Storm Database and FEMA's records of Presidential- and Governor-Declared Emergencies or Disasters

Listed by Frequency (most often to least often)

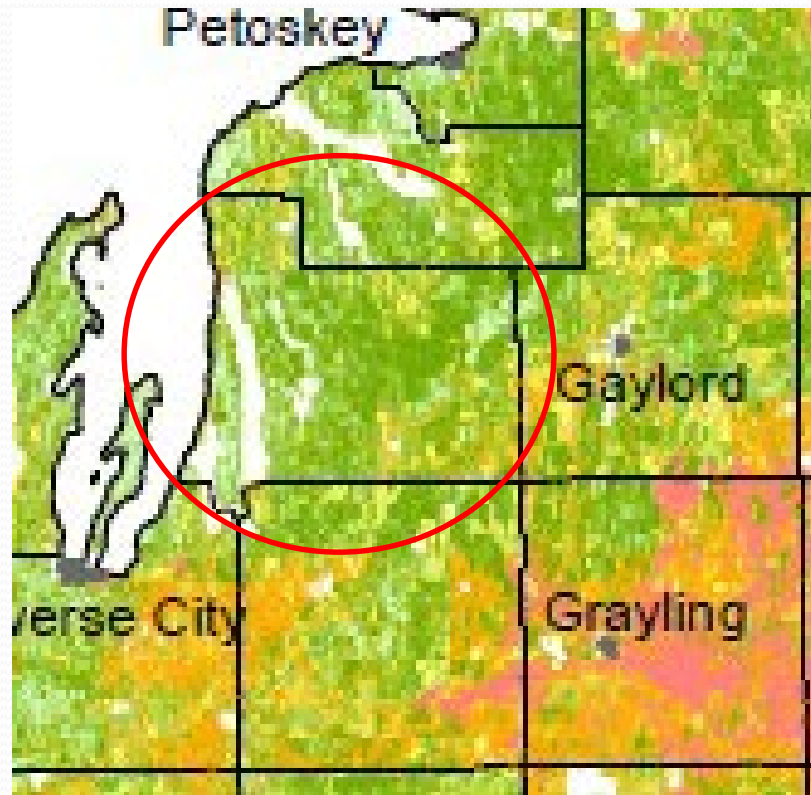
1. Extreme Winter Weather Events (events with ice covering, property damage, and/or up to/over 12 in. of snow)
2. Severe Thunderstorms/High Winds
3. Hail
4. Tornadoes
5. Flood/ Flash Flood
6. Extreme Heat
7. Drought

Wildfire Risk

- Higher risk areas:
 - Banks & Torch Lake Twps. (NW)
 - Jordan Twp (N)
 - Mancelona and Star Twps (SE)



Data includes Land Cover Type, Canopy Cover, Township Scaled Fire Risk, and Dry Soil types from SSURGO soils data.



Source: Wildfire Risk Map - MDNR Forest Resources Division

Antrim County Dams

Name	Height (ft.)	Storage (acre-feet)	Location	City/Township	Owner	Regulatory Agency	Dam Type	Year Completed	Dam Purpose	Hazard Potential
Bellaire Dam		1812,180	Intermediate River	Bellaire	Antrim County Board of Public Works	State	Earth, Gravity	1906n	Recreatio	High
Cedar River Dam		25475	Cedar River	Bellaire	Village of Bellaire	State	Earth, Gravity	1890n	Recreatio	High
Elk Rapids Dam		2175,000	Elk Creek	-	Antrim County	State	Gravity	1916tric	Hydroelec	Low

Antrim County Dams – Listed on the National Inventory of Dams

3 Dam(s) Found

Cedar River Dam

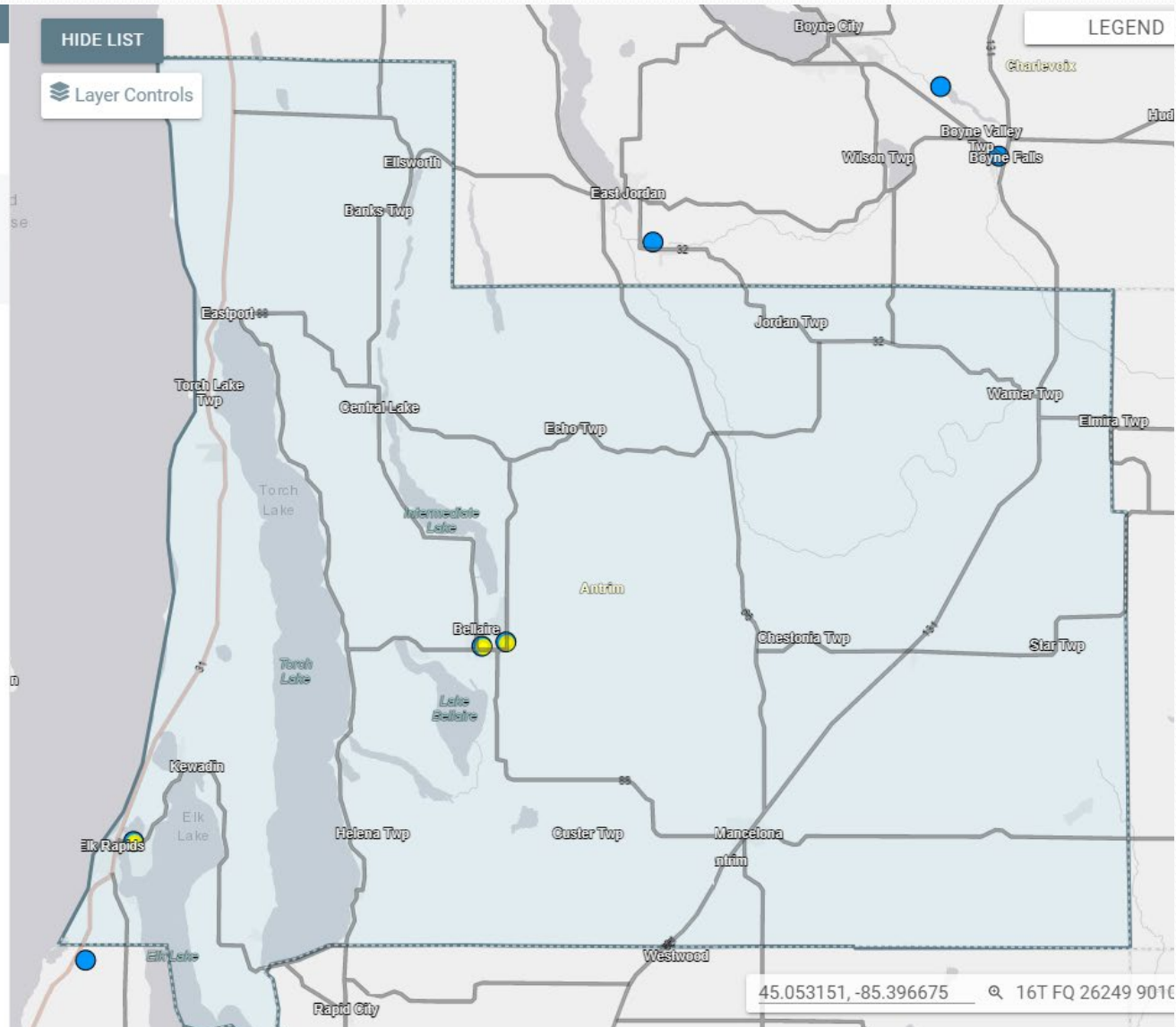
Hazard Potential Classification: High
Emergency Action Plan: Yes
Owner Name: Village of Bellaire
Primary Purpose: Recreation

Bellaire Dam

Hazard Potential Classification: High
Emergency Action Plan: Yes
Owner Name: Antrim County Board of Public Works
Primary Purpose: Recreation

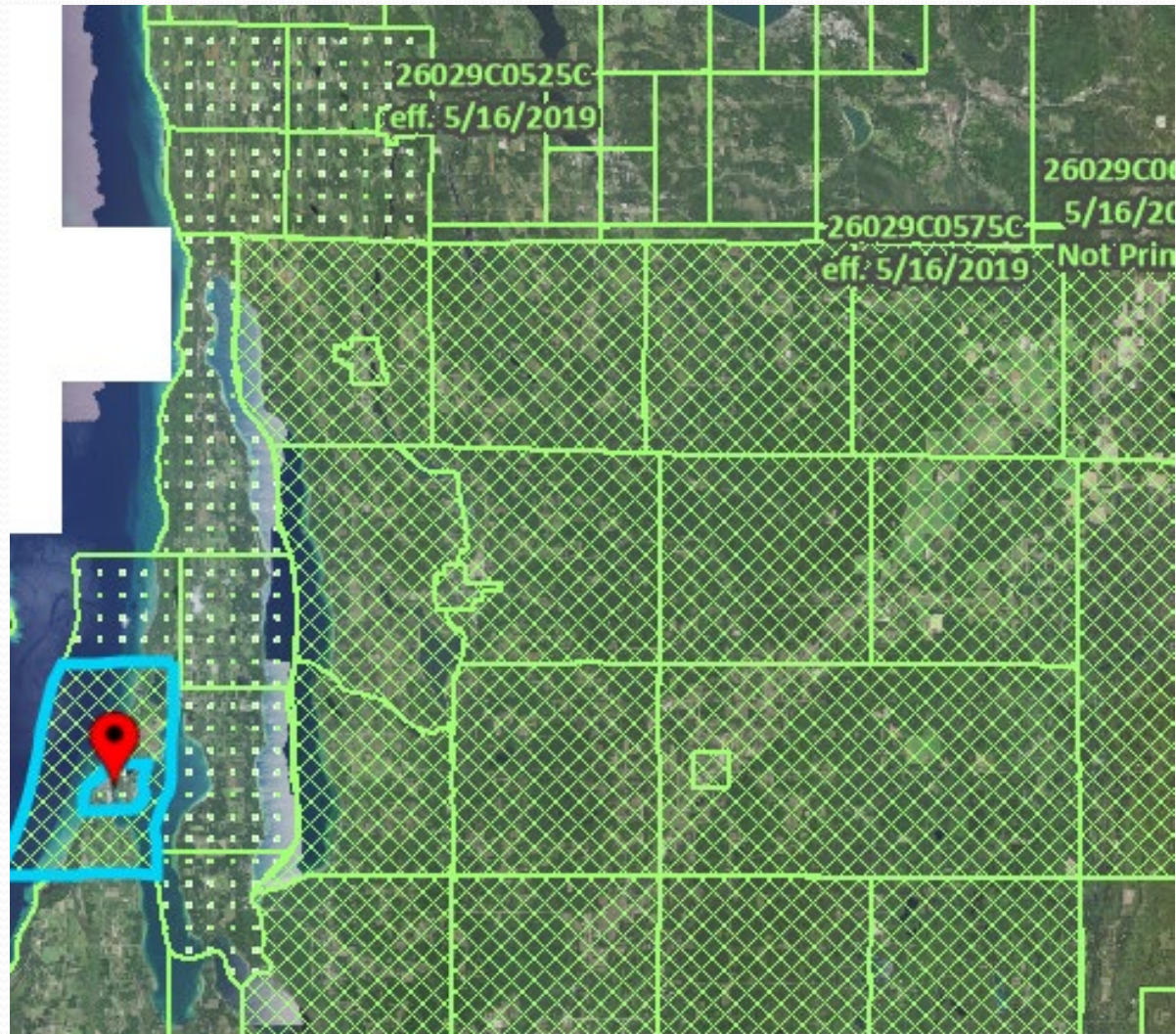
Elk Rapids

Hazard Potential Classification: Low
Emergency Action Plan: Not Required
Owner Name: Antrim County
Primary Purpose: Hydroelectric



Local NFIP Status

Municipality	NFIP	FIRM	Effective
Banks Township	Y	Y	9/1/1988
Central Lake Township		N	
Chestonia Township		N	
Custer Township		N	
Echo Township		N	
Elk Rapids Township	Y	N	
Forest Home Township		N	
Helena Township		N	
Jordan Township		N	
Kearney Township		N	
Mancelona Township		N	
Milton Township	Y	Y	2/2/1983
Star Township		N	
Torch Lake Township	Y	Y	1/17/1997
Warner Township		N	
Village of Bellaire		N	
Village of Central Lake		N	
Village of Elk Rapids	Y	Y	9/30/1988
Village of Ellsworth		N	
Village of Mancelona		N	





What are YOUR concerns?

- Discussion of natural hazard vulnerabilities in your community.