Leelanau County Hazard Mitigation Plan Update

October 21, 2021

Networks Northwest

Talent / Business / Community

Welcome

- Thank you for joining us!
- We will be discussing the following:
  - Leelanau County and local jurisdictions' Community Profile
  - Results of the Community Survey

Introductions

- Networks Northwest Staff
  - Jennifer Neal, AICP
  - Stephanie Loria
  - Frank Post
- Community Partners

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*

Project Timeline

- Now through December 2023

From Fishtown To State Theatre, High Waters Wreak Havoc - With Trend Likely To Continue

By Beth Milligan | Nov. 18, 2019

The impacts of near-record lake levels will continue to be felt this winter, with major repair projects needed at sites ranging from Fishtown to the State Theatre, planning

Leelanau County LEPC/LPT Membership

Name	Organization	
William Bunek	County Board of Commissioners, Leelanau County	
Frank Keck	Michigan State Police, Cadillac Post	
Matt McCaul	Michigan State Police, Cadillac Post	
Jason Tropf	Michigan State Police, Cadillac Post	
Dave Priest	Transportation, Road Commission	
Brendan Mullane	Transportation, Road Commission	
Joe Huhn	Public Works, Tribal Public Works	
James Porter	Organized Labor, Suttons Bay-Bingham Fire & Rescue	
Mike Borkovich	Law Enforcement, Leelanau County Sheriff's Office	
James Kiessel	Law Enforcement, Leelanau County Sheriff's Office	
David Crockett	Law Enforcement, Tribal Police	
Russ Cavanaugh	Law Enforcement, Tribal Police	
Jolanda Murphy	Public Safety, Tribal Public Safety	
Michelle Klein	Public Health, Benzie-Leelanau District Health Department	
Bobbi Scott	Public Health, Benzie-Leelanau District Health Department	
Ron Plamondon	Cyber Security, Leelanau County IT	
Robert Sauer	Cyber Security, CISA	
Trudy Galla	County Planning, Leelanau County Planning Department	

Leelanau County LEPC/LPT Membership continued

Chet Janik	Public Information, Leelanau County Administration
Laurel Evans	Public Information, Leelanau County Administration
Matt Ansorge	Emergency Management, Leelanau County Emergency Management/9-1-1
Kelly LaCross	Emergency Management, Leelanau County Emergency Management/9-1-1
Stephanie Long	School Official, Leland Public School
Michael de Castro	Emergency Management, Michigan State Police
Gary Fredrickson	Agriculture, Fredrickson Farms
Andy Blake	Federal Law Enforcement, National Park Service
Phil Akers	Federal Law Enforcement, National Park Service
Brian Flickinger	Environmental, EGLE
Meghan Powers	NGO, American Red Cross
Haylee Winters	NGO, Salvation Army
Matthew Winters	NGO, Salvation Army
Dan Besson	Fire Chiefs Association, Leland Township Fire & Rescue
Pat Burguard	EMS Services, Leelanau Township Emergency Services
Amy Fairchild	EMS Services, Mobile Medical Response
Kris Ingrao	Tribal Agriculture, Grand Traverse Band of Ottawa & Chippewa Indians
Eric Dipetro	Tribal Agriculture, Grand Traverse Band of Ottawa & Chippewa Indians
Carloyn Rentenbach	Citizen, Retired County Board of Commissioners
Dan Petroskey	Citizen, Retired Fire Chief

Gayle Egeler	Land Preservation, Leelanau Conservancy
Barb MacGregor	Human Services, Hospice of Northern Michigan
Parker Ameel	Agriculture, MAEAP
Amber Weber	Building Safety, Leelanau County Building Safety
Andy Doornbos	Fire Services, Cedar Area Fire & Rescue
Bryan Ferguson	Fire Services, Glen Lake Fire Department
Garrett Fairchild	Fire Services, Grand Traverse Band Fire & Rescue
Hugh Cook	Fire Services, Leelanau Township Emergency Services
James Tuller	Fire Services, Traverse City Fire Department
Keith Tampa	Fire Services, Elmwood Township Fire & Rescue

Community Profile*

- Demographics
- Housing
- Income
- Economy
- Agriculture
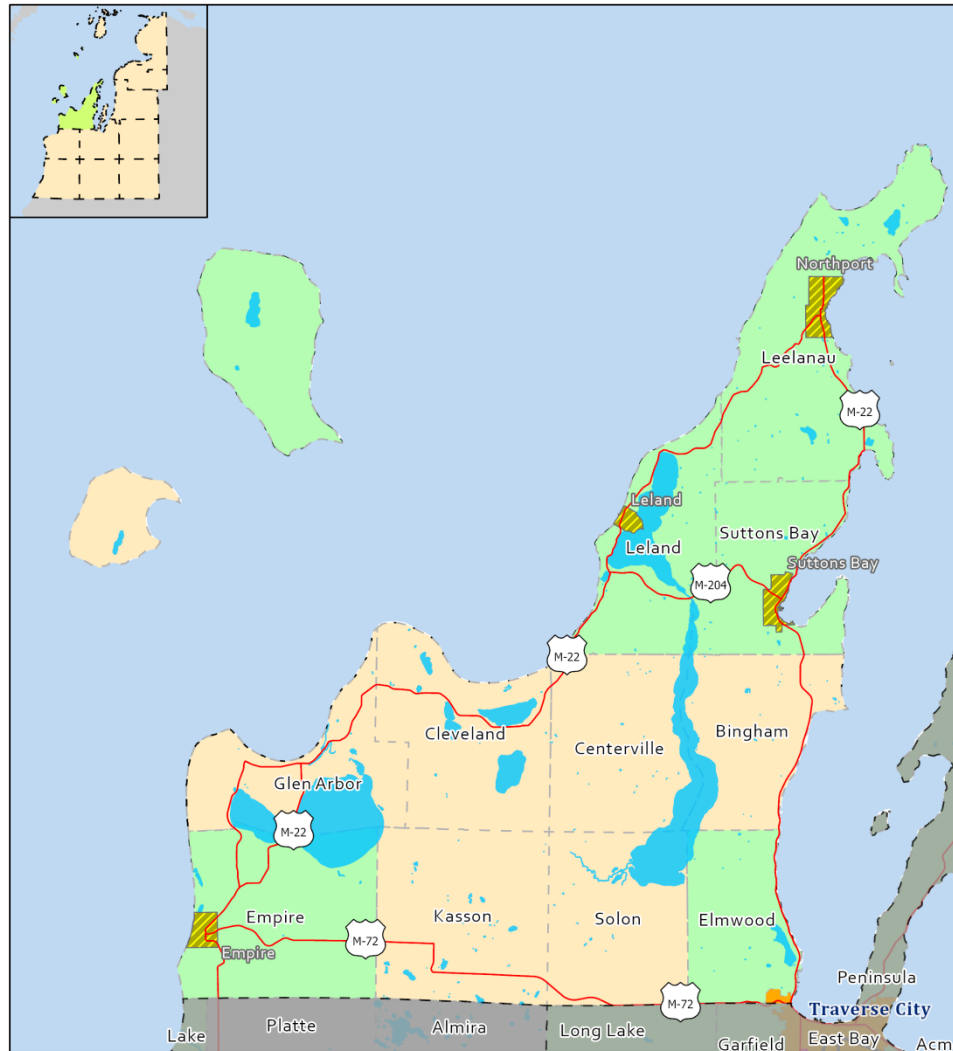
*2019 ACS data unless otherwise specified

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Great Lakes water levels surge, some record highs predicted

By ASSOCIATED PRESS · MAY 7, 2019

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CREDIT ROBERT FRANKLIN / SOUTH BEND TRIBUNE VIA AP

Leelanau County & Local Units of Government

Legend

Highways	G&I Areas Villages	All Villages
Hydrology	G&I Areas Cities	Leelanau County
Great Lakes	Surrounding G&I Twps.	Other NW MI Counties
Qualified Opportunity Zone	All Townships	Counties Outside Region

Miles
0 1.5 3 6

Map produced by Networks Northwest
Community Development 4/29/2021

N

Reference Documents

- Leelanau County General Plan (2019)
- Local Plans – Suttons Bay Community Joint Master Plan (2011)
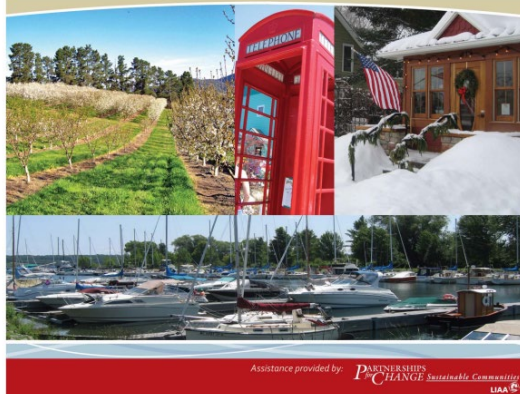- Other regional reports

Demographics

- Population by local jurisdiction

Demographics

- Population by local jurisdiction

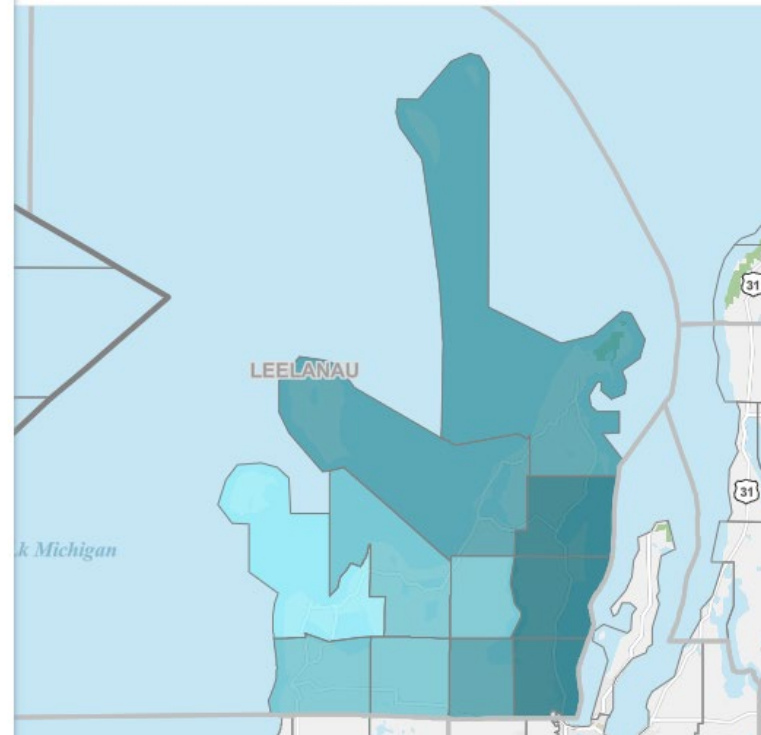| Leelanau County and Municipalities Population Estimates, 2010-2019				
Municipality	**2010 Estimated Population**	**2019 Estimated Population**	**Numeric Change**	**Percent Change**
Leelanau County	**21,757**	**21,652**	**-105**	**-0.5%**
Elmwood Charter Township	4,493	4,497	4	0.1%
Suttons Bay Township	2,999	2,985	-14	-0.5%
Bingham Township	2,574	2,496	-78	-3.0%
Leelanau Township	1,843	2,007	164	8.9%
Leland Township	2,280	1,756	-524	-23.0%
Solon Township	1,490	1,747	257	17.2%
Kasson Township	1,639	1,457	-182	-11.1%
Centerville Township	1,289	1,449	160	12.4%
Cleveland Township	1,113	1,197	84	7.5%
Empire Township	1,101	1,161	60	5.4%
Glen Arbor Township	772	668	-104	-13.5%
City of Traverse City	164	232	68	41.5%
Source: U.S. Census Bureau, ACS 5-Yr Estimates				
Note: Green text indicates an increase; Red text indicates decline				

Demographics

- Age Groups and Median Age by local jurisdiction

Leelanau County Age Distribution by Municipality																	
Community	< 9 Yea	Percent	10 to 19 Years	Percent	20 to 34 Years	Percent	35 to 54 Years	Percent	55 to 64 Years	Percent	65 to 74 Years	Percent	75 + Years	Percen	Median Age
Leelanau County	**1,838**	**8.5%**	**2,037**	**9.4%**	**2,906**	**13.4%**	**4,348**	**20.1%**	**4,021**	**18.6%**	**3,792**	**17.5%**	**6,502**	**30.0%**	**54.1**
Bingham Township	154	6.2%	290	11.6%	373	14.9%	572	22.9%	441	17.7%	387	15.5%	279	11.2%	51.2
Centerville Township	101	7.0%	164	11.3%	202	13.9%	400	27.6%	227	15.7%	285	19.7%	124	8.6%	48
Cleveland Township	82	6.9%	120	10.0%	150	12.5%	233	19.5%	227	19.0%	277	23.1%	136	11.4%	55.8
Elmwood Charter Twp.	497	11.1%	386	8.6%	641	14.3%	1,014	22.5%	727	16.2%	446	9.9%	643	14.3%	51.4
Empire Township	52	4.5%	77	6.6%	104	9.0%	156	13.4%	325	28.0%	329	28.3%	173	14.9%	62.1
Glen Arbor Twp.	0	0.0%	59	8.8%	52	7.8%	70	10.5%	143	21.4%	277	41.5%	129	19.3%	65.5
Kasson Township	110	7.5%	162	11.1%	213	14.6%	384	26.4%	251	17.2%	276	18.9%	128	8.8%	48
Leelanau Township	130	6.5%	121	6.0%	301	15.0%	95	4.7%	337	16.8%	485	24.2%	262	13.1%	59.6
Leland Township	148	8.4%	188	10.7%	168	9.6%	341	19.4%	346	19.7%	437	24.9%	345	19.6%	55.9
Solon Township	147	8.4%	240	13.7%	256	14.7%	350	20.0%	352	20.1%	310	17.7%	109	6.2%	51.2
Suttons Bay Twp.	375	12.6%	188	6.3%	446	14.9%	480	16.1%	569	19.1%	285	9.5%	370	12.4%	55.1
City of Traverse City	42	18.1%	42	18.1%	0	0.0%	60	25.9%	76	32.8%	388	167.2%	12	5.2%	44.7
Michigan	**1,162,159**	**11.7%**	**1,284,833**	**12.9%**	**1,972,568**	**19.8%**	**2,482,628**	**24.9%**	**1,396,734**	**14.0%**	**483,853**	**4.9%**	**690,926**	**6.9%**	**39.7**

* Figure shows the percentage that each age group represents of the local community's total population.
Source: U.S. Bureau of the Census, 2019 ACS 5-Yr Data

Demographics

- Disability Status In Leelanau County

LEELANAU COUNTY	Population Estimate with a Disability	Percentage
2019 Estimate of Total population with a Disability	2,806	13.10%
Age Groups with a Disability		
Under 5 years	10	1.10%
5 to 17 years	85	3.20%
18 to 34 years	254	7.90%
35 to 64 years	827	9.90%
65 to 74 years	707	18.70%
75 years and over	923	35.10%
Disability Type		
With a hearing difficulty	1,117	5.20%
With a vision difficulty	412	1.90%
With a cognitive difficulty	870	4.20%
With an ambulatory difficulty	1,193	5.80%
With a self-care difficulty	476	2.30%
With an independent living difficulty	928	5.20%

Demographics

- Population by Race

2019 ACS	White	Black	American Indian Alaskan Native	Asian	Hispanic or Latino	Native Hawaiian or Other Pacific Islander	Some Other Race	Two or More Races	Total
Leelanau County	94.7%	1.2%	4.3%	0.9%	4.4%	0.1%	0.9%	1.5%	21,652
Michigan	75.0%	13.6%	0.5%	3.1%	5.1%	0.1%	0.1%	2.5%	9,965,265

Housing

- Units by

local jurisdiction

Municipality	2010 Housing Units (ACS)	2019 Housing Units (ACS)	Percent Change	Percent of 2019 Total
Bingham Township	1341	1427	4%	9%
Centerville Township	846	925	12%	6%
Cleveland Township	866	926	0%	6%
Elmwood Charter Township	2066	2084	-6%	13%
Empire Township	1079	1191	9%	8%
Glen Arbor Township	1673	1766	8%	11%
Kasson Township	813	772	4%	5%
Leelanau Township	1928	1776	-9%	11%
Leland Township	1607	2113	17%	14%
Solon Township	795	849	8%	5%
Suttons Bay Township	1697	1711	7%	11%
Traverse City	124	98	0%	1%
Leelanau County	14835	15638	4%	

Housing

- ## County Occupancy Status

2019 ACS Estimates	Total Housing Units	Occupied Housing Units	Owner Occupied	Renter Occupied	Vacant Housing Units	Vacant Housing Units (%)
Bingham Township	1,427	1,078	937	141	349	24.5%
Centerville Township	925	587	512	75	338	36.5%
Cleveland Township	926	513	480	33	413	44.6%
Elmwood Charter Township	2,084	1,839	1,569	270	245	11.8%
Empire Township	1,191	572	524	48	619	52.0%
Glen Arbor Township	1,766	323	321	2	1,443	81.7%
Kasson Township	772	593	531	62	179	23.2%
Leelanau Township	2,113	938	835	103	1,175	55.6%
Leland Township	1,776	756	674	82	1,020	57.4%
Solon Township	849	676	627	49	173	20.4%
Suttons Bay Township	1,711	1,180	977	203	531	31.0%
Traverse City	98	84	84	0	14	14.3%
Leelanau County	**15,638**	**9,139**	**8,071**	**1,068**	**6,499**	**41.6%**

Housing

- Units by Year Structure Built

| Year Housing Structure Built, Leelanau County	
Year Built	Percentage of Units
Built 2000 or later	19.4%
Built 1990 to 1999	21.3%
Built 1980 to 1989	16.0%
Built 1960 to 1979	22.2%
Built 1940 to 1959	8.9%
Built 1939 or earlier	35.1%
Source: U.S. Census, ACS 2019 5-yr data	

66.2% of the housing is 40 or more years old

Income

- ## Median Household Income by County

Place	2019
Antrim County	$56,165
Benzie County	57,974
Charlevoix County	55,760
Emmet County	55,829
Grand Traverse County	63,575
Kalkaska County	46,898
Leelanau County	**65,249**
Manistee County	50,055
Missaukee County	47,194
Wexford County	47,193
Michigan	57,144

2019 Northwest Michigan Household Income — Median
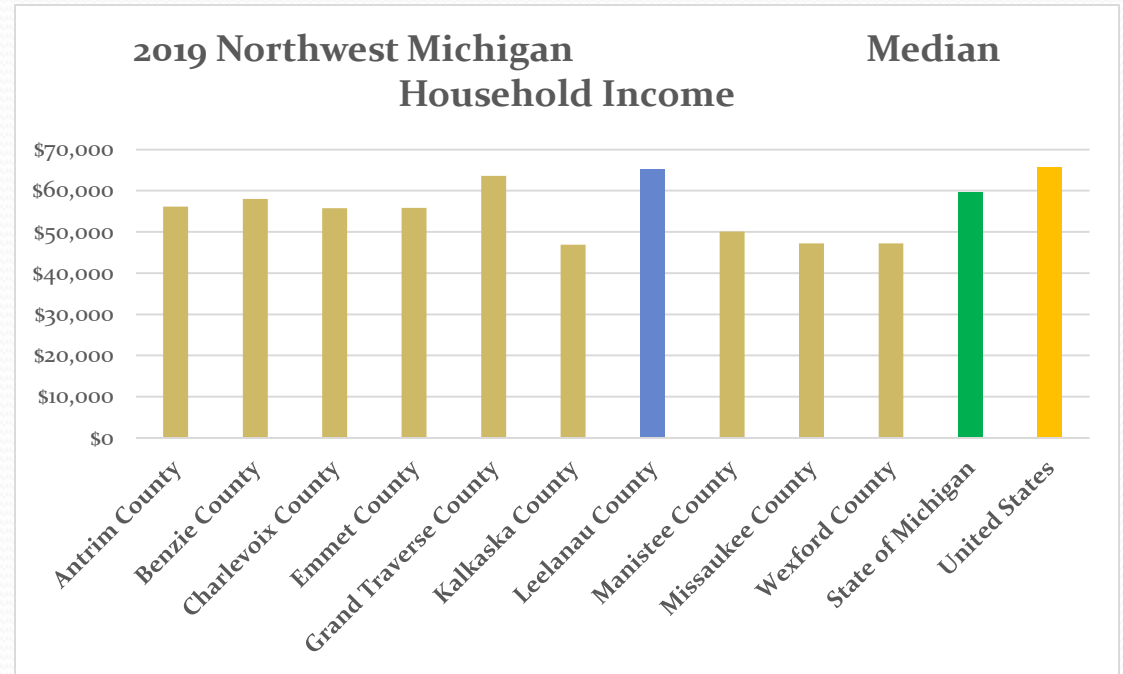
Income

- Poverty Rates by County

	Leelanau County		
	Total	Below poverty level	Percent below poverty level
Population for whom poverty status is determined	21,437	1,310	6.10%
Under 18 years	3,466	238	6.90%
18 to 64 years	11,565	793	6.90%
65 years and over	6,406	279	4.40%
Source: US Census Bureau 2019 ACS Data			

Agriculture

- 2017 USDA Census of Agriculture – Leelanau County

Leelanau County Profile, 2017 USDA Agriculture Census		
	2017	**% Change since 2012**
Number of farms	470	-5
Land in farms (acres)	50,053	-16
Average size of farm (acres)	106	-12
Total market value of products sold	$42,442,000	107
Market value of products sold (per farm avg.)	$90,302	118
Total farm production expenses (per farm avg.)	$94,146	34
Net cash farm income (per farm avg.)	$3,945	135
Percent of state agricultural sales	1%	
Share of sales by type (%)		
Crops	94%	
Livestock	6%	

Market Value of Agricultural Products Sold	Sales	Rank in State	% of Total Sales for the County	Rank in U.S.
Fruits, tree nuts, berries	$35,292,000	5 out of 81 counties	83%	76 out of 2,748 counties producing item

Leelanau County Hazard Mitigation Community Survey Responses from 10/4/21 to 10/20/21

26 / 188 responses = 14% completion rate

Representation:

Townships	Cities	Villages	County	Other
Kasson Twp	Traverse City	Northport Village	Road Commission	Leland Public Schools
Centerville Twp		Village of Empire	Department of Building Safety	Heartland-ProMedica Hospice
Solon Twp			Planning	Michigan State Police
Suttons Bay Twp			Emergency Management/911	Leelanau Conservancy
Glen Arbor Twp				American Red Cross of Northern Michigan
Elmwood Twp				Grand Traverse Band of Ottawa and Chippewa Indians

Leelanau County Hazard Mitigation Community Survey Responses from 10/4/21 to 10/20/21

Aim to get more responses from representatives of:

Townships	Village	Others on the LEPC Contact List
Empire	Village of Suttons Bay	Benzie-Leelanau Health Dept.
Cleveland		County Board of Commissioners
Bingham		County Sherriff's Office
Leland		Other Fire Departments
Leelanau		
		OTHER SUGGESTIONS?

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

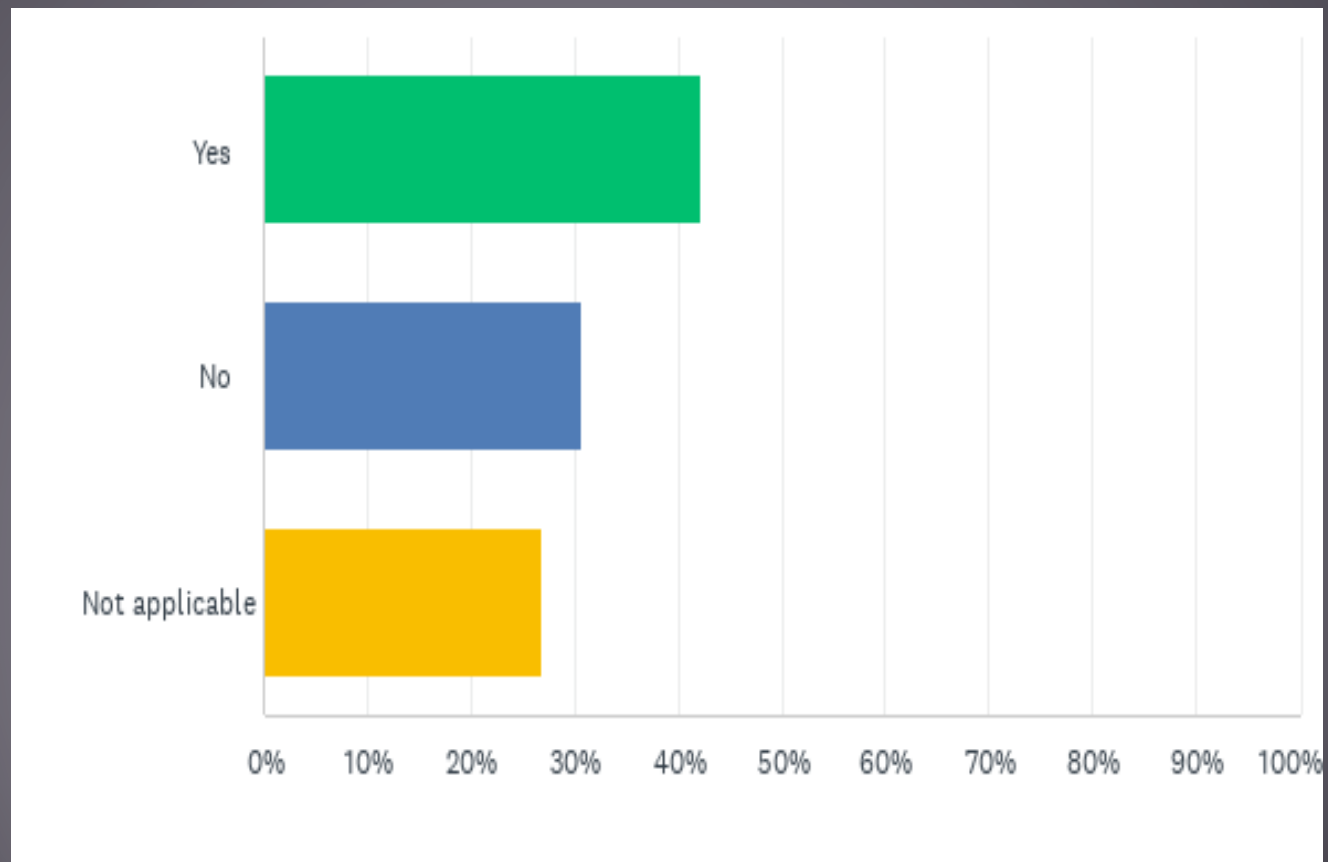Yes – 38.46%   No – 61.54%
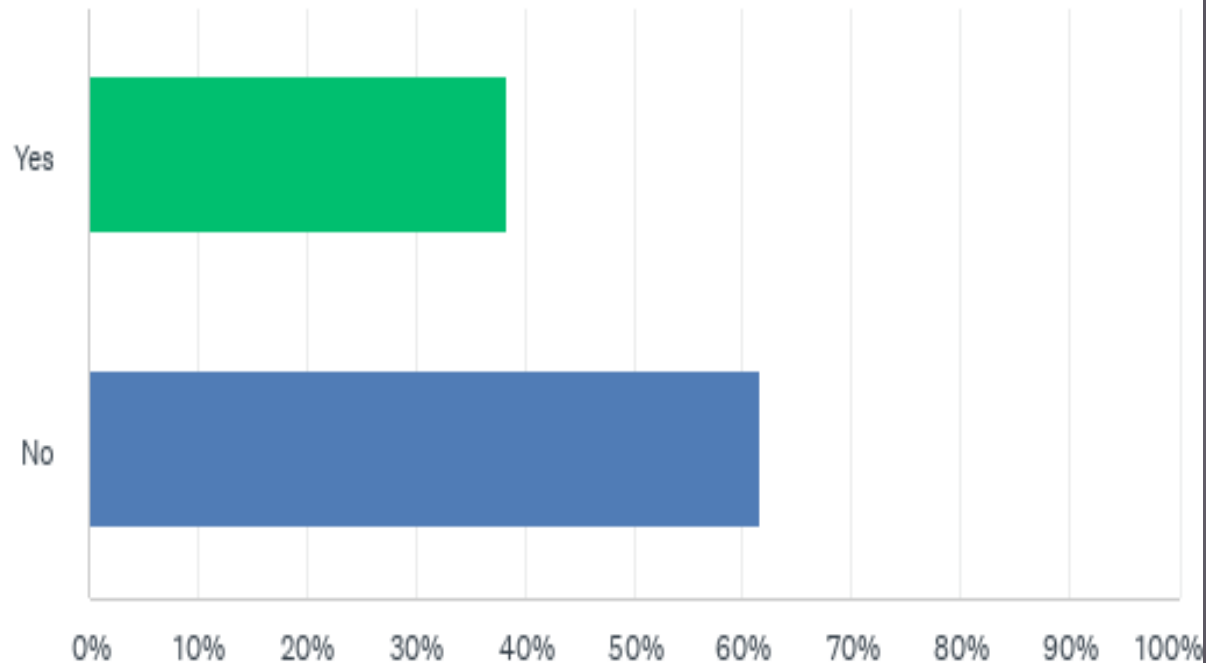
Q4: Does the community you represent have an adopted Master Plan?
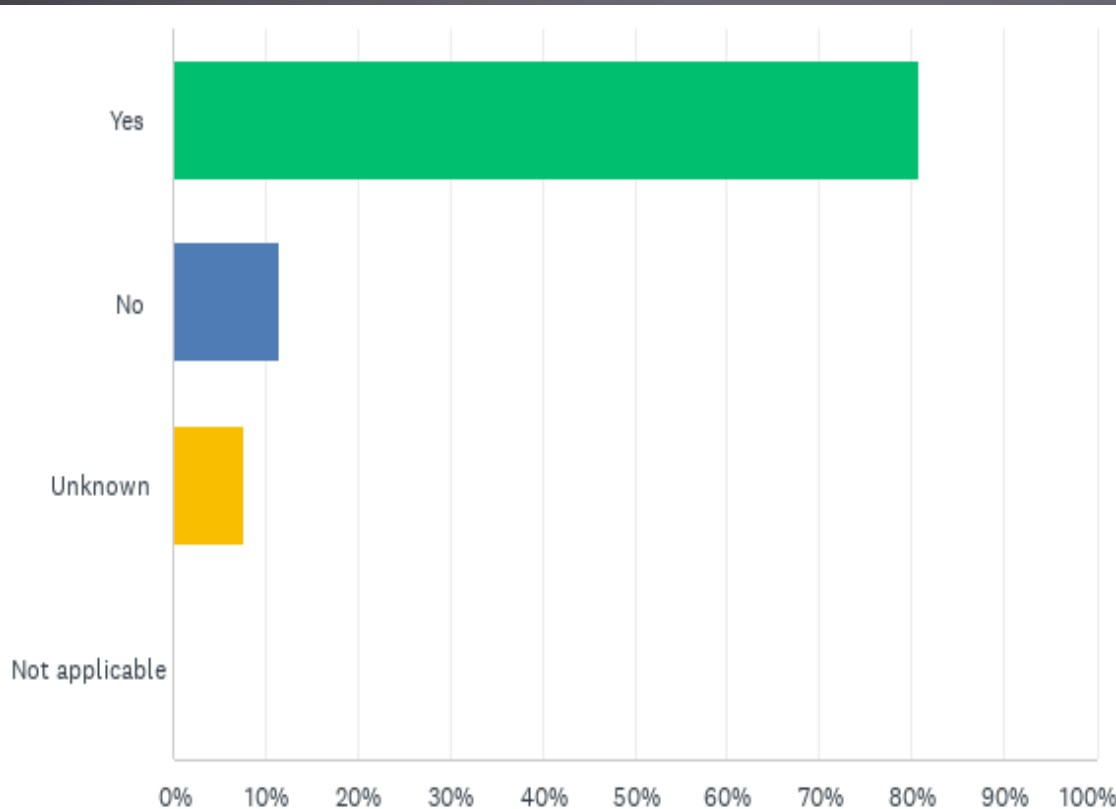
Yes – 72% No – 8% Not Applicable – 20%
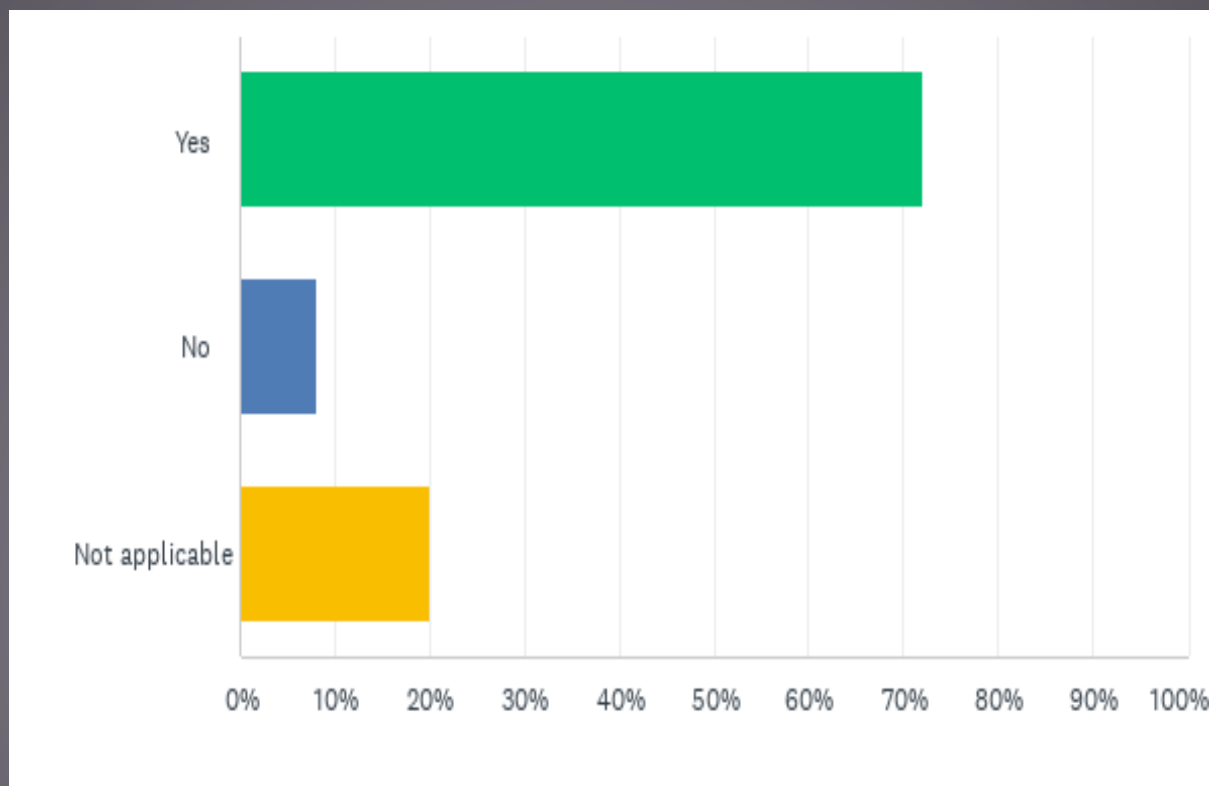
Q5: Does the community you represent have an adopted Capital Improvements Plan?

Yes – 42.31% No – 30.77% Not applicable – 26.92%

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

Yes – 80.77%
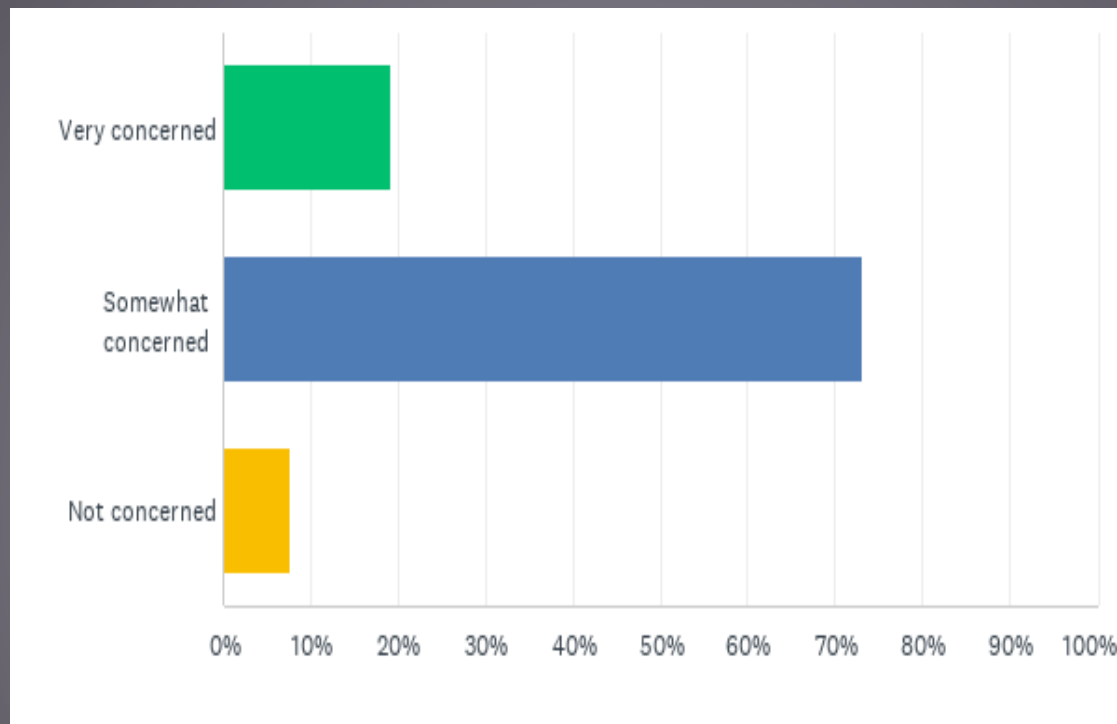Straight line wind storm, erosion, flooding, COVID 19

No – 11.54%

Unknown – 7.69%

Not applicable – 0%

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

Very Concerned – 19.23% Somewhat Concerned – 73.08%
Not concerned – 7.69%

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.?

storms events ice storm snow wind winter storm flooding
blizzards Fire weather pandemic illness outbreak

Q10. Concerns about infrastructure (dams, bridges, utilities, etc.) and the potential for a hazardous event in the future?

Bridges and Dams
- Minimal concerns
- More concerned with road washouts; erosion of coastal roadways

Utility Impacts
- Prolonged power outages and downed power lines

Other
- Storm water drainage

Responses to Questions 11-15

Involved in a natural hazard mitigation planning process before?
Yes: 34.62% No: 65.38%

Requested assistance for mitigation projects before?
Yes: 23.08% No: 15.38% Unknown: 61.54% Not applicable: 0%
- Project request granted? No/Unknown
- Requests include: Infrastructure improvements (parks, light houses, shoreline protection)

Considered mitigation strategies for potential hazards: Yes: 48% No/Unknown: 52%

Strategies you want to explore in the future:
- Improvements to protect utilities
- Protect shorelines from erosion
- Improve storm water drainage

Next Steps

- Identify potential Advisory Team members
- Solicit additional Community Survey responses
- Establish web presence
- Prepare hazard analysis
- Next group meeting

Thank you!

- Any questions??