

Leelanau County/Grand Traverse Band Tribe

Hazard Mitigation – 4.14.22 Public Input Meeting Notes

- Matt Ansorge (Leelanau County EM/911 Director/Chair)
- Kelly LaCross (Leelanau County EM/911 Deputy Director)
- Undersheriff Jim Kiessel (Leelanau County Sheriff's Office)
- Tpr. Jason Tropf (Michigan State Police)
- Lt. Michael de Castro (MSP EMHSD)
- Brendan Mullane (Leelanau County Road Commission)
- Jim Calhoun (Leelanau County Road Commission)
- Trudy Galla (Leelanau County Planning Department)
- Bobbi Scott (Benzie-Leelanau Dist. Health Dept.)
- Joe Huhn (Grand Traverse Band DPW)
- Jolanda Murphy (GTB Public Safety)
- Chief Garrett Fairchild (GTB Fire & Rescue)
- Nicki Basch (GTB Housing Manager)
- Lori Savaso (GTB Risk Mgmt)
- Courtney Hessel (GTB Marina & Environmental Response Specialist)
- Chief Andy Doornbos (Cedar Area Fire & Rescue)
- Jim Schwantes (Centerville Twp.)
- Joe Mosher (Centerville Twp.)
- Amy Fairchild (Mobile Medical Response EMS)
- Chief Hugh Cook (Leelanau Twp. Emergency Services)
- Dana Boomer (Kasson Twp./Cedar Fire)
- Chief Dan Besson (Leland Twp Fire)
- Clint Mitchell (Leland Twp.)
- Chief Jim Porter (Suttons Bay-Bingham Fire & Rescue)
- Capt Mark Bowen (Suttons Bay-Bingham Fire & Rescue)
- Nick Florip (Harbor Hill Fruit Farm – Leelanau Peninsula)

Presenters from Networks Northwest:

Jennifer Neal, AICP – Community Planner; Zach Vega, AICP – Community Planner; Stephanie Loria – Community Planner

Sticky Note Exercise – Top 3 Hazards of Concern

Natural Hazard Event or Impact	# of Times Indicated
High Winds	10
Heavy Snow/Snowstorm	8
Electrical Grid Failure	6
Wildfire	5
Thunderstorm/Severe Storm/Tornado	4
Flood	3
Dam Failure	2
Communications Failure	2
Road Closures	2
Agriculture Loss	1
Invasive Species	1
Loss of Community Facilities	1
Shoreline Erosion	1
Sewer Failure	1
Extreme Cold	1

Group Discussions – Impacts on People, Economy, Natural Environment and Built Environment

Thunderstorms

- Power outages, trees down, wires down
 - Gas stations are closed; impacts commerce. Gas is needed to fuel generators!
 - Road closures due to downed trees, etc. prohibits EMS timely response to incidents; people can be stuck in their homes/neighborhoods. Also impacts local commerce if the roads are not able to be used to transport goods and services.
 - People living on oxygen or who have a low food supply or primarily perishable food supply are directly impacted
 - Glen Arbor, Peshawbestown and other areas of the County in 2015 – 5-day stretch without power after a thunderstorm. GTB had downed lines (they have a lot of overhead lines). Their sewer stations had pump failures at the main lift and had to supply generators to power them. Many negative impacts to commerce and transportation. Debris management is a cost to the county and to contract out at the State level.
 - Only have 1 power company in the County, which limits their ability to respond quickly to all outages in a wide-spread event.
 - Power outages are costly to emergency services and residents.
- Can result in big floods
- Lightning strikes can cause fires, impacting homes, woodlands

- Money and time spent on the extreme demand placed on local responders – pay overtime for increased manpower
- Leelanau County receives 1-2 events per year that meet the criteria of a severe thunderstorm, windstorm, hail, lightning, tornado... Given our seasonal influx of tourists and the high potential for these storms at the same time of the year this could have devastating impacts to the economy, infrastructure and environment.

Winter Storms

- Ice dams along rivers/lakes can damage adjoining properties
- Food pantry can lose their supplies if the power is out.
- Agricultural products (vineyards, cropland) can be impacted if there is a late spring heavy frost, ice or hail storm. This can negatively impact the local agriculture economy and people's personal property.
- People who aren't aware of storm damage to their seasonal homes and return in the spring/summer to find and report damaged property (perhaps they had a roof leak or water lines that froze)
- More vulnerable residents whose homes are not well insulated could have more problems with roof damage and frozen pipes.
- 2012 storms left businesses, government and roads closed for 5 days
- Have a lack of community shelters
- Winds and ice can pull electrical lines down
- Increased potential for car accidents
- Gas stations down if they don't have back up power
- Cell towers down causes challenges with communications
- Many people rely on wood/propane fuel to heat their homes and often live in rural areas that are difficult to access in an emergency to provide their fuel source if needed.
- Population stranded on rural properties; can't be accessed by emergency vehicles with heavy/drifted snow or ice.
- Erratic winter weather patterns recently – less consistent.
- Extra burden and cost placed on the Road Commission and emergency services.
- 1977 Blizzard MSP/Corp of Engineers – road closures
- GTB Tribe added generators since the 2012 winter storms

Extreme Heat/Drought

- Brine on roads for dust control
- Electric grid is burdened by draw from lots of AC unit use
- Wildfire risk increases
- Crop and agricultural loss – orchards, vineyards, dairy and beef cattle
- Dehydration and heat stroke, especially in elderly and tourist populations
- Reduction in lake levels
- Concerns for fisheries, agriculture and livestock
- Extreme heat a concern for people who work outside.
- Need cooling shelters, welfare checks for vulnerable populations

- Increased demands on emergency services
- Possibly fewer tourists if it's too hot, or an increase in tourism creating a lack of resources for year-round citizens.
- Brine roads to keep dust down but is expensive and doesn't last long
- Excessive water usage; GTB has 3 wells at TCC; 2 at GTR; 2 wells on farms and 3 in Peshawbestown.

Invasive Species – Group Discussion

- Crowding out forests – Woolly adelgid; pests and diseases that affect ash, beech, maple trees
- Aquatic invasives damaging the Great Lakes ecosystem/local fishing.
- Considering what trees from southern latitudes to plant up here because they are adapted to our current climate. ½ the plant species that were here 30 years ago are gone due to climate change.
- Fisheries – invasive mussels; algal bloom on lake bottom causes fish not being able to spawn.

Pandemic – Group Discussion

- **Shortcomings/ Problems**
 - Located so far “up north” that they didn't have the resources and equipment needed to service large populations of sick people
 - Exposed reliability on Munson Healthcare hospitals – limited capacity of beds
 - They typically do not stockpile resources because they do not have the funds to do so.
 - Munson – mental stress on workers, constantly changing COVID protocols.
 - Effects of isolation, work stress...increased behavioral health problems in the community. There is a lack of mental health resources to support everyone.
 - This was a long process and taxed EM/Healthcare workers with protocol changes; difficult to inform people of what recommendations and rules were as they changed frequently.
 - The economic impact from reduced services/shutdown on businesses, housing, and EMS/healthcare. Need to plan for sustainability in these areas in a future scenario.
 - Still dealing with supply chain issues – vehicles and equipment down in EMS/Fire/Road Commission fleet because can't get repair parts.
- **What Worked Well**
 - Benzie-Leelanau Health Dept. testing and vaccination clinics – set up and service delivery – positive feedback
 - GTB – Health Dept. – positive feedback on vaccination and testing clinics and case monitoring. Collaboration with local, state, and federal partners.
 - Specific fire/EMS teams were dispatched to handle emergencies that were COVID-related. Had ambulances set up to only handle COVID patients.
 - They had never gone through this public health scenario before but they got what they needed.

- Had agreements and good coordination with other EMS departments for staffing – could share staff if one dept. was short staffed. Also coordinated with use and sharing of COVID-specific ambulances.
- Municipalities managed to the election process with health protocols
- Zoom meetings improved communication processes and will continue to be used in combination with in-person meetings

MAPPING EXERCISE – LEELANAU COUNTY

Flooding Risk/Issue Areas

- Empire Twp. – A seiche occurred on Glen Lake in August 2015. High winds from the west pushed the lake water from the west end to the east end. The west end of the lake was temporarily emptied, causing localized flooding along properties surrounding the south/southeast part of the lake.
- Glen Arbor Twp. – land on the north side of Glen Arbor Lake
- Cleveland Twp. – area located east of S. Bohemian Road (CR 669) between Lake Michigan Road and M-22; area located west of Bohemian Road between W. Harbor Highway and Lake MI Road; Traverse Lake Road near intersection with West Harbor Hwy. (M-22); E. Narlock Road, east of Maple City Road
- Leland Twp. – Downtown Leland; Leland Dam has improvements with 24/7 monitoring; flooding potential at the intersection of Duck Lake Road over the Lake Leelanau channel
- Leelanau Twp. – Northport Dam area and wetlands located east of Mill St., north of 7th street, south of E. Woolsey Lake Rd. and adjoining the coast of West Grand Traverse Bay; water/wetland areas in the area between Lighthouse Point Rd. and Forest Beach Shore Dr.; Gills Pier Road, south of Onomonee Rd.
- Suttons Bay Twp. – Belanger Creek overflow impacts M-22; Belanger Dam; CR 633 between E. Richter Road/S. Pineview Road and Eckerle Rd.
- Solon Twp. – Wet areas in the community of Cedar, near the intersection of E. Bellenger Rd., Railroad and Nelson Roads, Kasson St., S. Good Harbor Trail and S. Schomberg Rd.; East Traverse Road between Cedar Valley Road and Cedar Run Road.
- Centerville Township – Gatzke Road on east and west sides of intersection with Good Harbor Trail
- Centerville and Solon Townships – Cedar River area along Lake Leelanau.
- Elmwood and Solon Townships – S. side of Lake Leelanau in the Fouch Rd. area.
- Bingham Township – Adjoining the east coast of Lake Leelanau between Melissa Drive/East Sierra Drive and CR 641; S. Lee Point Road/ E. Hendryx Road area with West Grand Traverse Bay adjoining to the south
- Elmwood Township – Meeuwenberg Dam and Cedar Lake Dam; excessive rainfall runoff from roads in the SE part of the township; Center Highway near the intersection with Cherry Bend Road
- Kasson Township – Southwest corner of the township

MAPPING EXERCISE – LEELANAU COUNTY (cont'd)

Fire Hazard/Risk Areas

- Most of the Sleeping Bear Dunes (NPS) property in Glen Arbor, Empire, Cleveland Twps. and parts of Centerville Twp.
- Empire Twp. – NPS land surrounded by Welch Rd (CR 616), S. Leelanau Hwy (M-22), S. Dune Hwy (CR109) and Frederickson Rd.; Plowman Rd located south of W. MacFarlane Rd.
- Glen Arbor Twp – NPS land surrounded by Day Forest Rd., S. Glen Lake Rd., W. Harbor Hwy (M-109), S. Forest Haven Rd., and Stocking Rd.
- Glen Arbor/Cleveland Twps – land located north of Trumbull Rd., south of W. Harbor Hwy, and between Wheeler Rd, CR 675 and M-22
- Leelanau Twp – area surrounded by the following roads: Sugar Bush, Kehl, Snyder, Ottis, Howell, Woolsey Lake and Kitcherman.
- Elmwood Twp. - Bugai Rd. and Hoxie Rd.; Birch Point Rd.
- Solon Twp - S. Solon Road, located south of Rudolph Rd.; Where Darga Rd. from Kasson Twp. intersects the Twp. line.
- Centerville Twp. – Bodus Rd. between Schomberg and Good Harbor Trail.
- Leland Twp. - High Bluffs Drive area
- Kasson Twp. – Maple City Rd between Valley Rd and S. Olivia Drive; Baatz Rd at the intersection of Gilbert Rd.; Pettengill Rd. near the SW corner of the Township.
- Cleveland Twp – S. Hlavka Hills Drive; between Bohemian Rd. and Hlavka Rd; and area east of Bohemian Rd., between W. Harbor Hwy (M-22) and Lake Michigan Rd.

Lake Michigan Coastal Hazard Areas

- Empire Twp. and parts of Glen Arbor Twp. coastlines
- Empire Twp. – most of the coast from N. Bar Lake to Empire Bluffs area; Village of Empire where inland lake is closest to the coast of Lake MI.
- Glen Arbor Twp – Intersection with Harbor Highway and S. Ray St.
- Leland Twp. - coastline from Leland Dam up to Cathead Point; Leland Dam
- Elmwood and Bingham Townships - roadwork along parts of West Bay Shore Drive (M-22)
- Elmwood Twp - Intx. Cherry Bend Road and East Carter Road; M-22 and Sinclair Rd.
- Bingham Twp – West Bay Shore Dr (M-22) between Bingham Rd and Valley Hills Dr.
- Suttons Bay - roadwork along S. Shore Drive
- Leelanau Twp - roadwork along: M-22, southwest of Omena; W. Bay Shore Dr. (M-22) between Freeland and Tatch Rd; CR 640 on the northeast side of Northport Bay; Northport Point Rd. and Circle Drive; on the east side of the peninsula, along N. Forest Beach Shores Drive.
- S. Manitou Island – SE coast along Burdick Road and coastal area

MAPPING EXERCISE – PESHAWBESTOWN

Flooding Risk/Issue Areas

- The Belanger Creek Dam (at the end of Belanger Creek at the intx. with M-22)
- Belanger Creek, located southeast of Stallman Road to the outlet in the Bay – potential for overflow
- Stallman Road near the intersection with Belanger Creek, located SW of Strongheart Way.

Lake Michigan Coastal Hazard Areas

- 3 areas of concern along the shoreline; one is near a gas station – possible contamination source if impacted by rising lake levels

Fire Hazard/Risk Areas

- Putnam Road, east of Peshawbestown Rd., where the Natural Resources building, Fire Station and residences are located.

Ranking Question (18 people responded)

Please rank the infrastructure failures that would most concern you, with 1 being the most concerning and 9 being the least concerning. (Responses are listed from most concerning to least concerning in descending order).

