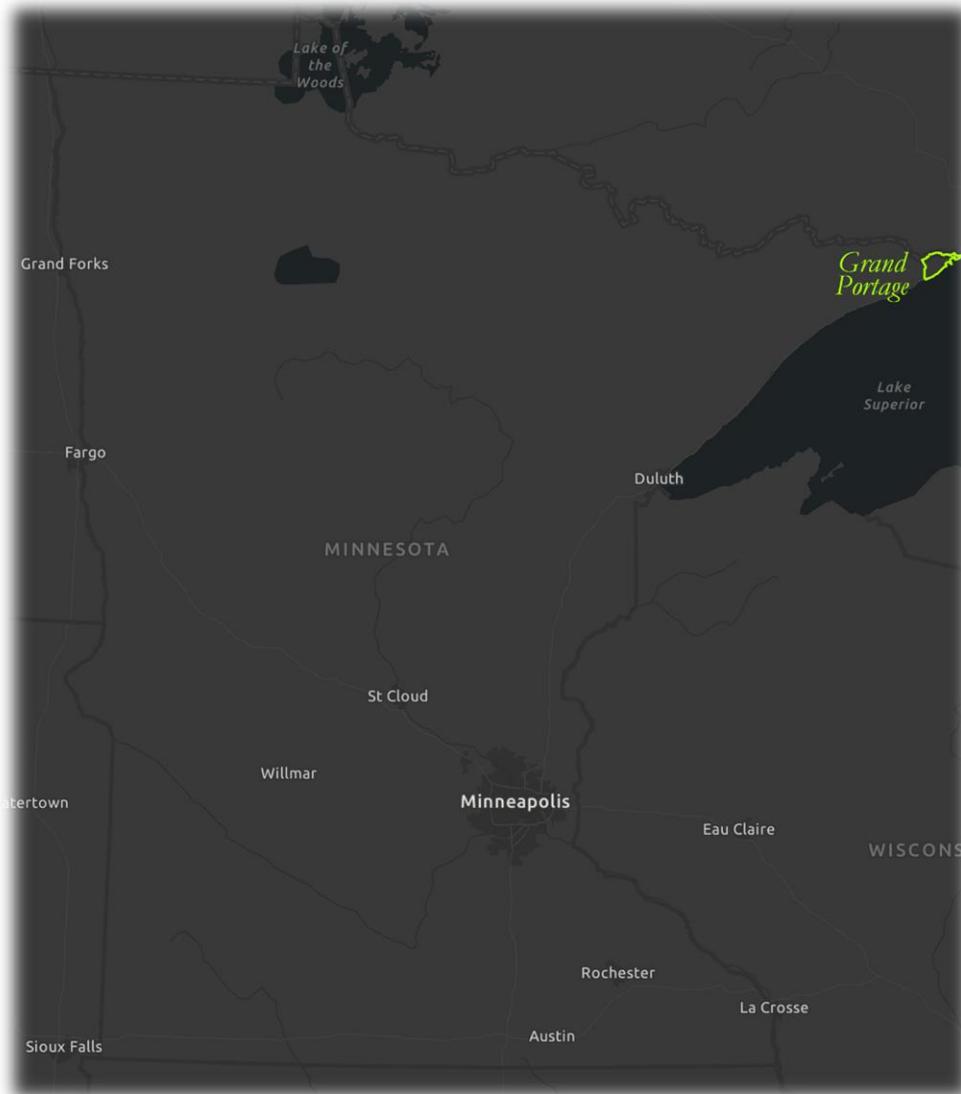


Grand Portage Reservation Tribal Hazard Mitigation Plan Annex (2019)



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This document is the Grand Portage Reservation's Tribal Hazard Mitigation Plan Annex to the 2019 Cook County Multi-Hazard Mitigation Plan.

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Section 1 – Introduction

1.1 Introduction

This document is the *Grand Portage Reservation Tribal Hazard Mitigation Plan Annex* to the Cook County Multi-Hazard Mitigation Plan (2019). The Grand Portage Band of Lake Superior Chippewa has prepared this tribal annex in order to develop mitigation strategies that will help reduce or eliminate the impacts of natural hazards that pose risk to the vulnerabilities of the Grand Portage Reservation.

As close jurisdictional neighbors, the Grand Portage Band and Cook County have sought to work in close coordination to develop and advance emergency preparedness capabilities. As part of these efforts, the Grand Portage Band participated in the development of the 2010 Cook County Multi-Hazard Mitigation Plan (MHMP) and adopted it by Tribal Council resolution (Resolution No. 36-10, October 6, 2010).

The Grand Portage Band has formally adopted the update of the 2019 Cook County Multi-Hazard Mitigation Plan as well as the Grand Portage Tribal Annex (GP Annex) (*see Appendix A: Adopting Resolution*).

The Grand Portage Band has an established emergency management program for the Reservation, which is led by the Grand Portage Emergency Manager/Safety Director. The Emergency Management Director oversees building and sustaining the Band's emergency preparedness capabilities, which includes participation in the Cook County CodeRed emergency notification system, update of the Grand Portage Reservation Emergency Operations Plan, participating in regional exercises, and establishing Reservation-wide emergency response resources and procedures. The addition of the GP Annex allows the Grand Portage Band to more closely assess how the hazards identified pose risk to our residents, tribal government facilities, critical infrastructure, and natural and cultural resources within the Reservation. The GP Annex identifies specific mitigation strategies and actions to implement within the Reservation to eliminate or reduce risk posed by future hazard events and contains additional information to meet the requirements for 44 CFR 201.7.

The mitigation actions identified in the plan are designed to be strategically integrated across other Grand Portage planning efforts (i.e., GP Forestry forest management). In addition, the Grand Portage hazard mitigation actions are developed to be integrated with current FEMA mitigation programs and initiatives by aligning eligible mitigation projects with FEMA's Hazard Mitigation Assistance (HMA) grant programs (i.e., Hazard Mitigation Grant Program, Flood Assistance Program, and Pre-Disaster Mitigation Grant Program).

This tribal annex to the Cook County MHMP has been developed in accordance with the FEMA "Tribal Mitigation Plan Review Guide" (2017) and meets the tribal planning requirements for the Standard Regulation Checklist. Approval of the GP Annex by the Federal Emergency Management Agency (FEMA) and formal adoption by the Grand Portage Reservation Tribal Council will allow the tribe to

apply for FEMA Hazard Mitigation Assistance (HMA) funding either through the State of Minnesota or directly to FEMA for eligible mitigation projects.

The Grand Portage Band Tribal Hazard Mitigation Plan Annex provides assurances that the Grand Portage Band will comply with all applicable federal statutes and regulations during the periods for which it may receive federal grant funding to implement eligible mitigation actions, in compliance with 44 CFR 13.11(c), and will amend this Annex whenever necessary to reflect changes in tribal or federal laws and statutes as required in 44 CFR 13.11(d).

1.2 Scope and Goals

The Grand Portage Reservation Hazard Mitigation Plan Tribal Annex serves as a tribal-specific attachment to the Cook County Multi-Hazard Mitigation Plan that the Band has adopted. It is not the development of an entirely new hazard mitigation plan; therefore, pertinent information from the Cook County MHMP is referenced throughout the Annex as necessary.

The scope of the GP Annex is to assess how the natural hazards identified in the Cook County MHMP pose risk to Reservation residents and properties, government facilities, critical infrastructure, the environment, and cultural resources and to determine mitigation strategies to eliminate or reduce risks posed by future hazard events.

The Grand Portage Band has identified the following goals for the Tribal Annex:

- Include more recent data documenting the critical infrastructure and hazards faced by the Grand Portage Reservation.
- Reformat and reorganize the plan to reflect definitions of hazards as expressed in the 2014 State of Minnesota Multi-Hazard Identification and Risk Assessment Plan.
- Reflect current hazard mitigation priorities in the Grand Portage Reservation.

1.3 Hazard Mitigation Definition

Hazard mitigation may be defined as any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards. Potential types of hazard mitigation measures include the following:

- *Planning* – Development of mitigation standards, regulations, policies, and programs.
- *Structure and Infrastructure Projects* – Structural retrofits, property acquisition, local flood reduction projects, and safe room construction.
- *Natural Systems Protection* – Sediment and erosion control, stream corridor restoration, forest and vegetative management, floodplain and stream restoration.
- *Education and Awareness Programs* – Outreach programs, hazard awareness campaigns, real estate disclosure, and promotion of family/personal emergency preparedness.
- *Mitigation Preparedness & Response Support* – Emergency planning and services such as warning siren systems, CodeRed, and installing generators for critical facilities.

1.4 Benefits of Mitigation Planning

The benefits of hazard mitigation planning include the following:

- Saving lives, protecting the health of the public, and reducing injuries
- Preventing or reducing property damage
- Reducing economic losses
- Minimizing social dislocation and stress
- Reducing agricultural losses (such as wild rice harvests)
- Maintaining critical facilities in functioning order
- Protecting infrastructure from damage
- Protecting mental health

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Section 2 – Planning Process

2.1 Steering Committee Information

The *Grand Portage Reservation Tribal Hazard Mitigation Plan Annex* steering committee is headed by the Grand Portage Emergency Management/Safety Director, who is the primary point of contact. Members of the GP Annex steering committee include representatives from the Grand Portage Tribal Council, key departments, and additional agency stakeholders from outside of the Grand Portage Reservation. Table 1 identifies the steering committee and the individuals and agencies they represent.

Table 1. *Multi-Hazard Mitigation Plan Annex Steering Committee*

Name	GP Department / Other Agency	Title
Mike Keyport	Emergency Management	Emergency Management / Safety Director
Polly James	Elder Nutrition Program	Director
William "Bill" Myers	Reservation Tribal Council	Councilman
Jack Freeman	Grand Portage Lodge & Casino	Chief of Security
Brian Sherburne	Grand Portage Lodge & Casino	Enterprise Administrator
Krishna Woerdheide	Trustlands	Environmental Specialist
Carmen Keyport	Oshki Omigaag Charter School	Director
Norman Deschampe	Reservation Tribal Council	Chair
April McCormick	Reservation Tribal Council	Secretary/Treasurer
Marie Spry	Reservation Tribal Council	Vice Chair
Erik Carlson	Wildfire	Fire Technician
Tony Swader	Trustlands	Administrator
Matt Tyler	Trustlands	Forester
Margaret Watkins	Water Quality	Water Quality Specialist
Valita Bockovich	Grants/Accounting	Accounting Clerk
Ann Hendricks	Community Member	GP Resident
Paula Schaeffbaur	Health/EMS	Director
John Twiest	Arrowhead Electric Cooperative	Operations Manager
Clinton Little	MN DNR Lake Superior Coastal Program	Coastal Program Specialist
Brandon Seitz	National Park Service	Resource Assistant

Grand Portage and other representatives participating on the steering committee were contacted throughout the plan update process to provide feedback on the hazards of concern to the Reservation and the mitigation actions which they would seek to implement upon plan adoption. The list of final mitigation actions for the Reservation can be found in Table 5 (*Grand Portage Reservation Mitigation Action Chart*).

2.2 Review of Existing Plans, Capabilities & Vulnerabilities

In the development of the Grand Portage Annex, the steering committee and UMD consultants reviewed and incorporated a variety of planning documents that direct community development and influence land use decisions for the Reservation. These documents include the Grand Portage Emergency Operations Plan, 1854 Ceded Territory Climate Adaptation Plan, Forest Management Plans, etc. (see Appendix E for a complete list). The planning process also consulted the previous 2010 Cook County All-Hazard Mitigation Plan, 2014 Minnesota All-Hazard Mitigation Plan, and the Minnesota Board of Soil and Water Resources “One Watershed, One Plan” (2018).

In addition, UMD consultants worked closely with the Grand Portage Emergency Management Director and other Grand Portage department staff to collect specific feedback on local mitigation capabilities and vulnerabilities that either support or hinder the ability to mitigate against natural hazards on the Reservation. Following is a summary of the assessment tools used to gather information on local capabilities and vulnerabilities during the planning process:

Capabilities Assessment (hazard specific) – In this assessment, detailed information was collected on current *Plans and Programs in Place* and *Program Gaps or Deficiencies* that currently exist to mitigate destruction caused by each natural hazard addressed in the plan. This information was used to inform where there were current mechanisms in place to incorporate or implement mitigation measures (i.e., existing programs, plans or policies) and where there were areas that needed to be addressed (see *Section 4.4 Hazard Profiles*).

Jurisdictional Questionnaires – In this questionnaire, detailed information was collected from different Grand Portage Reservation department staff on: 1) Severe weather or disaster events & impacts that have occurred within the last 5 years; 2) Actions taken within the last 5 years that have helped to reduce local vulnerabilities to future disaster events; 3) Any changes within the last 5 years that have increased local vulnerabilities to future disaster events; and 4) Any concerns or specific ideas for mitigation projects to help reduce or eliminate risk resulting from future severe weather or disaster events. This information was used to inform Section 4, Risk Assessment and the development of Reservation-specific mitigation actions for the next 5 years (see *Appendix G: Jurisdictional Questionnaires* and *Table 5: Grand Portage Reservation Mitigation Action Chart*).

Local Mitigation Capabilities Assessment (LMCA) – In this assessment, detailed information was collected on key elements in place that help to accomplish mitigation on the Grand Portage Reservation, including: 1) Plans, authorities, or policies; 2) Staff (organizational capacity); 3) Programs; and 4) Funding or other resources. Information was further collected on what program gaps or deficiencies exist that are a barrier to accomplishing mitigation on the Reservation. This information was used to inform the development of Reservation-specific mitigation actions (see *Appendix F: Local Mitigation Capabilities Assessment* and *Table 5: Grand Portage Reservation Mitigation Action Chart*).

2.3 Planning Process Timeline and Steps

In order to develop the GP Annex, UMD consultants worked in coordination with the Grand Portage Emergency Management Director and members of the steering committee. Outreach was also

conducted to engage the public during the drafting stage of the plan. The Grand Portage Band tribal government has defined the “public” as “Grand Portage Reservation tribal community members and staff living or working on the Reservation as well as off of the Reservation. In addition are included non-tribal stakeholders from outside of the Reservation, such as neighboring jurisdictions or key agencies with a partnership role in emergency preparedness & response.”

On April 30, 2018, the Geospatial Analysis Center hosted a kickoff meeting online that was provided to both the Cook County and Grand Portage emergency management directors. The webinar included a project overview, GAC background, the roles and responsibilities of the Emergency Management Directors, contents of the Multi-Hazard Mitigation Plan and Tribal Annex, planning process and projected timeline (see *Appendix C: Steering Committee Meetings* for webinar slides).

In July 2018, the Grand Portage Band issued a news release internally via email to the Grand Portage Tribal Government and department staff inviting public feedback and participation for the Grand Portage Tribal Annex to the Cook County MHMP. A community flyer was also posted in key locations such as bulletin boards throughout the community for public information. For complete documentation, see *Appendix D: Public Outreach & Engagement Documentation*.

The first Grand Portage steering committee meeting took place on July 26, 2018, at the Grand Portage Log Community Building, which included the Grand Portage MHMP steering committee and the UMD planning team. During this meeting the steering committee was provided with an overview of the purpose, process and timeline for the Cook County Multi-Hazard Mitigation Plan update and the Grand Portage Tribal Annex, as well as the role and responsibilities of steering committee members. Appendix C provides documentation of steering committee meeting summaries, including participant sign-in sheets and presentation slides.

Steering committee members were engaged in providing feedback on plans and programs in place as they relate to hazards facing the Reservation, and they discussed potential mitigation actions to be included in the plan for the Reservation.

The steering committee meeting convened again with the UMD planning team on October 16, 2018, to conduct a review and discussion of the draft mitigation action charts developed for the Grand Portage Reservation. See Appendix C for a full meeting summary.

In order to provide opportunity for public input, the Grand Portage Reservation issued a second news release on **, 2019, inviting public review and feedback on the draft plan. The news release was issued both internally via email to the Grand Portage Tribal Government and department staff as well as through the posting of a community information flyer in key locations such as on bulletin boards. The news release provided information on the purpose and content of the plan as well as where the plan could be viewed and comments submitted. The UMD Geospatial Analysis Center hosted a webpage to post the full draft of the Cook County MHMP and Grand Portage Tribal Annex, including an excerpt of the Grand Portage Mitigation Action Chart, as well as an electronic feedback form.

Appendix D provides documentation of the public outreach for feedback on the draft plan by the Grand Portage Reservation. The public feedback period for the draft plan was open from **, 2019, to **, for a total of ** days.

Meeting Type	Date	Location
Public Outreach	7/2018	News release inviting public feedback and participation.
Kickoff Meeting	4/30/2018	Hosted online by GAC in Duluth
Steering Committee	7/26/2018	Grand Portage Log Community Building
Steering Committee	10/26/2018	Grand Portage Log Community Building
Public Outreach	**	Public review period for draft plan

At the close of the public outreach period, the UMD consultants worked with the Grand Portage Emergency Management Director and members of the steering committee to incorporate comments from the public into the Grand Portage Tribal Annex.

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Section 3 – Grand Portage Reservation Profile

3.1 Description of Tribal Planning Area

Grand Portage is located in the northeastern corner of the state on the Canadian border (Figure 1). The total population at the 2010 U.S. Census was 565. The majority of the population and services are located in Grand Portage Village. Highway 61 is the main transportation route through this sector and crosses into Canada. The Pigeon River is the main river in this sector and forms the border with Canada.

Figure 1. Grand Portage Location



The Grand Portage State Park and the Grand Portage National Monument are located within the Reservation’s boundaries. These sites interpret the historic heritage of the time when Grand Portage was an important trading post during the days of the fur trade as well as the natural and cultural heritage of the area. The “Grand Portage” was a travel route for traders from Lake Superior past the Pigeon River Falls, with the Pigeon River providing access to the Northwest Territories.

Grand Portage Lodge and Casino is the major employer on the Reservation and income from this operation supports a significant portion of the community services provided on the Reservation.

According to the 1854 Ceded Territory Climate Change Vulnerability Assessment and Adaptation Plan, the Grand Portage Reservation contains 56,000 acres with 38,239 acres in band and tribal trust, as well as 1,897 acres recently purchased by the Grand Portage Tribal Council being put into Trust status.

3.2 Climate Change

The climate projection data does not vary from the Cook County MHMP (Section 3.5.1, Climate Change). The Grand Portage Reservation has its own Climate Adaptation Plan (*Climate Change Vulnerability Assessment and Adaptation Plan: 1854 Ceded Territory Including the Bois Forte, Fond du Lac,*

and Grand Portage Reservations) which identified climate change impacts to wild rice, forest habitat and coastal habitat. The concerns associated with climate change for the Reservation were discussed by the steering committee and were factored into the development of the Band's 5-year mitigation action chart.

3.2.1 Climate Change and Wild Rice

Wild rice is highly sensitive to changes in climate and has a moderately adaptive capacity to climatic changes; therefore, wild rice has a medium vulnerability to existing as well as projected future changes in climate. Such high sensitivity is due to increased temperatures, increased suitability for invasive species and diseases, and increased rain events with increased intensity.

Increased temperatures are expected to negatively affect pollination, seed development, germination and location of wild rice. As warming increases, suitability for invasive species and diseases increases as well, leading to degradation of wild rice populations. In addition to increased temperatures, predictions indicate that climate change will lead to increased precipitation and intensity of rain events. Increased precipitation will cause flooding to the preferred shallow habitat of wild rice and increased intensity of rain events will cause uprooting of the plant.

3.2.2 Climate Change and Forest Habitat

Tribal staff foresters prioritized seven tree species for a review of projected climate change impacts that have been identified as medium-low to high vulnerability to existing as well as projected future changes in climate. Species selected included paper birch, black ash, northern white cedar, quaking aspen, northern red oak and American basswood, eastern white pine, and sugar maple. Species vulnerability is due to extended periods of drought, extreme precipitation events, changing fire seasons, and increased temperatures, limiting snow cover and increasing opportunities for insect and disease infestation.

Increased and extended periods of drought due to climate change leads to stress on tree populations as a result of reduced water availability. In return, extreme precipitation events can negatively impact nutrient cycling, increase nutrient imbalances, and shorten the summer fire return interval that are critical for species vitality. Changing fire seasons have the potential to reduce species growth and regeneration. In addition to changing fire seasons, increased temperatures will limit snow cover causing seed distribution changes, limit species distribution range through decreased habitat suitability, and increase opportunities for insect and disease infestation through increased pest suitability.

3.2.3 Climate Change and Coastal Habitat

Coastal habitats such as Lake Superior coastal regions and wetlands can be highly vulnerable to existing and future climatic changes. Habitat vulnerability is due to increased temperatures, increased suitability for invasive species, increased precipitation and intensity of rain events, and extended periods of drought. Increased temperatures due to climatic changes have been noted to increase mercury methylation rates in coastal habitats, leading to increased bioaccumulation in fish and other aquatic organisms. In addition to increased methylation rates, rising temperatures also increase the suitability for invasive species, increase the frequency and intensity of algal bloom events, increase turbidity in surface water bodies, and alter temperature-dependent watershed processes. Another

major threat to coastal habitat is increased precipitation and intensity of rain events, leading to soil erosion along coastal banks, increased storm water run-off toxifying water quality, and increased water levels altering the presence and distribution of species within the coastal habitat. Drought may also alter water levels within coastal habitats, negatively affecting the coastal ecosystem.

3.3 Cultural and Sacred Sites

Cultural and sacred sites on the Grand Portage Reservation include ceremonial sites, burial grounds, and sites used for traditional activities such as gathering maple syrup, wild rice, berries, medicinal plants, and wood fibers. These locations are a high priority to the Band for protection and were considered during the risk and vulnerability assessment process for the Reservation. A list of known locations is maintained by the Grand Portage Band and are not considered public information. Information on cultural and sacred sites on the Reservation is secured by the Band, separate from this document, and will be considered for any vulnerabilities due to natural hazard events and associated mitigation measures as deemed appropriate.

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Section 4 – Risk Assessment

A risk assessment consists of three components – hazard identification, risk profile, and vulnerability profile. This section reviews the hazards identified and prioritized in the Cook County Multi-Hazard Mitigation Plan (2019) that includes the Grand Portage Reservation tribal planning area; reviews how these hazards relate to the tribal planning area, including the history of related hazard events on the Reservation; includes a description of any Reservation-specific vulnerabilities to each hazard, and includes the capabilities in place by the Grand Portage Reservation as related to each identified hazard.

4.1 Hazard Identification and Prioritization

Section 4 – Risk Assessment of the Cook County Multi-Hazard Mitigation Plan (MHMP) details the process by which natural hazards were reviewed, identified and prioritized for assessment in the mitigation plan.

4.1.1 Identification of Hazards

The hazards included for focus in the Cook County MHMP are as follows and applies to the Grand Portage Reservation tribal planning area:

Table 2. Hazards Faced by Grand Portage Reservation

Natural Hazards
Wildfire
Severe Winter Storms
Severe Summer Storms (Thunderstorms, Lightning, Hailstorms, Windstorms, Tornadoes)
Extreme Heat/Extreme Cold
Flash Flooding & Riverine Flood
Drought
Erosion/Coastal Erosion/ Land Subsidence

Source: Cook County MHMP

4.1.2 Prioritization of Hazards

The prioritized list of hazards in the Cook County MHMP is as follows and applies to the Grand Portage Reservation tribal planning area:

Table 3. Priorities of Risks Faced by the Grand Portage Reservation

Natural Hazards	MHMP Hazard Ranking
Wildfire	High
Severe Winter Storms	High

Natural Hazards	MHMP Hazard Ranking
Severe Summer Storms (Thunderstorms, Lightning, Hailstorms, Windstorms, Tornadoes)	High
Extreme Heat/Extreme Cold	Moderate
Flash Flooding & Riverine Flood	Moderate
Drought	Moderate
Erosion/Coastal Erosion/ Land Subsidence	Moderate

Source: Cook County MHMP

4.1.3 FEMA Declared Disasters

The Grand Portage Reservation has not been part of any FEMA-declared disasters.

4.2 Hazard Profiles

Section 4.4 (Hazard Profiles) of the Cook County Multi-Hazard Mitigation Plan provides a detailed overview of each of the following identified natural hazards, including documentation of historical events within Cook County, vulnerabilities, relationship of the hazard to climate change, and plans and programs in place by the County and its jurisdictions as they relate to addressing those hazards. This following section covers how the hazards identified relate to the Grand Portage Reservation tribal planning area, including Reservation-specific vulnerabilities to each hazard, how impacts of such hazards would affect the Band, and programs in place / program gaps or deficiencies as they relate to each hazard. For each natural hazard, the Cook County Multi-Hazard Mitigation Plan provides hazard histories with historical data of events and maps of incident locations were applicable. Hazard histories are noted here where they have had specific impact to the Grand Portage Reservation.

4.2.1 Tornadoes

Section 4.4.1 in the Cook County Multi-Hazard Mitigation Plan provides an overview of tornadoes and details previous occurrences that have affected Cook County. The information provided in this section discusses the hazard of tornadoes as it relates to the Grand Portage Reservation tribal planning area.

Vulnerability

The vulnerability of the Grand Portage Reservation to tornadoes does not differ from Cook County.

Plans and Programs in Place

Public Warning and Notification – Grand Portage participates in the CodeRED notification system through the Cook County Law Enforcement Center. WTIP, a local radio station located in Grand Marais, also assists in sending out emergency notifications. Grand Portage Community Health Nurses and

Representatives will travel door-to-door during severe weather to assure that Grand Portage elders and others with special needs are safe and in good health.

Grand Portage Congregate Care – The Grand Portage Emergency Operations Plan includes an annex for congregate care which describes how the congregate care for the needs of residents will be met in the event of an emergency or disaster that results in the displacement of people from their homes due to unsafe or uninhabitable conditions.

Emergency Sheltering – In the event that residents are displaced from their homes due to a severe spring or summer storm, the Grand Portage Community Center is the designated emergency shelter. This facility has backup generator power, two kitchens, showers, and all necessary emergency supplies.

Severe Weather Awareness Week – Grand Portage participates in the National Weather Service’s “Severe Weather Awareness Week” held in April each year. This provides education to residents on the dangers of severe spring and summer weather.

Generators – The following Grand Portage facilities currently have emergency backup generators: Tribal Government, Community Center, Charter School, Health Services, Daycare/Head start, IT, Lodge and Casino, and Elders assisted living.

Program Gaps and Deficiencies

Aboveground Power Lines – Aboveground power lines are susceptible to damage as a result of severe thunderstorms or wind storms. Grand Portage has predominately aboveground power lines due to the rocky terrain and are exposed to the elements of severe weather.

Outdoor Warning Sirens – Grand Portage does not have any outdoor warning sirens. Warning sirens serve an additional means of emergency notification to the public in the event of dangerous high winds.

4.2.2 Windstorms

Section 4.4.2 in the Cook County Multi-Hazard Mitigation Plan provides an overview of windstorms and details previous occurrences that have affected Cook County. The information provided in this section discusses the hazard of windstorms as it relates to the Grand Portage Reservation tribal planning area.

Vulnerability

The vulnerability of the Grand Portage Reservation to windstorms does not differ from Cook County.

Plans and Programs in Place

Public Warning and Notification – Grand Portage participates in the CodeRED notification system through the Cook County Law Enforcement Center. WTIP, a local radio station located in Grand Marais, also assists in sending out emergency notifications. Grand Portage Community Health Nurses and Representatives will travel door-to-door during severe weather to assure that Grand Portage elders and others with special needs are safe and in good health.

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Outdoor Warning Sirens – Grand Portage does not have any outdoor warning sirens. Warning sirens serve an additional means of emergency notification to the public in the event of dangerous high winds.

4.2.3 Lightning

Section 4.4.3 in the Cook County Multi-Hazard Mitigation Plan provides an overview of the hazard of lightning and details previous occurrences that have affected Cook County. The information provided in this section discusses the hazard of lightning as it relates to the Grand Portage Reservation tribal planning area.

Vulnerability

The vulnerability of the Grand Portage Reservation to lightning does not differ from Cook County.

Plans and Programs in Place

Public Warning and Notification – Grand Portage participates in the CodeRED notification system through the Cook County Law Enforcement Center. WTIP, a local radio station located in Grand Marais, also assists in sending out emergency notifications. Grand Portage Community Health Nurses and Representatives will travel door-to-door during severe weather to assure that Grand Portage elders and others with special needs are safe and in good health.

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Program Gaps and Deficiencies

Aboveground Power Lines – Aboveground power lines are susceptible to damage as a result of severe thunderstorms or wind storms. Grand Portage has predominately aboveground power lines due to the rocky terrain and are exposed to the elements of severe weather.

Outdoor Warning Sirens – Grand Portage does not have any outdoor warning sirens. Warning sirens serve an additional means of emergency notification to the public in the event of dangerous high winds.

4.2.4 Hail

Section 4.4.4 in the Cook County Multi-Hazard Mitigation Plan provides an overview of hail and details previous occurrences that have affected Cook County. The information provided in this section discusses the hazard of hail as it relates to the Grand Portage Reservation tribal planning area.

Vulnerability

The vulnerability of the Grand Portage Reservation to hail does not differ from Cook County.

Plans and Programs in Place

Public Warning and Notification – Grand Portage participates in the CodeRED notification system through the Cook County Law Enforcement Center. WTIP, a local radio station located in Grand Marais, also assists in sending out emergency notifications. Grand Portage Community Health Nurses and Representatives will travel door-to-door during severe weather to assure that Grand Portage elders and others with special needs are safe and in good health.

Grand Portage Congregate Care – The Grand Portage Emergency Operations Plan includes an annex for congregate care which describes how the congregate care for the needs of residents will be met in the event of an emergency or disaster that results in the displacement of people from their homes due to unsafe or uninhabitable conditions.

Emergency Sheltering – In the event that residents are displaced from their homes due to a severe spring or summer storm, the Grand Portage Community Center is the designated emergency shelter. This facility has backup generator power, two kitchens, showers, and all necessary emergency supplies.

Severe Weather Awareness Week – Grand Portage participates in the National Weather Service’s “Severe Weather Awareness Week” held in April each year. This provides education to residents on the dangers of severe spring and summer weather.

Generators – The following Grand Portage facilities currently have emergency backup generators: Tribal Government, Community Center, Charter School, Health Services, Daycare/Head start, IT, Lodge and Casino, and Elders assisted living.

Program Gaps and Deficiencies

Aboveground Power Lines – Aboveground power lines are susceptible to damage as a result of severe thunderstorms or wind storms. Grand Portage has predominately aboveground power lines due to the rocky terrain and are exposed to the elements of severe weather.

Outdoor Warning Sirens – Grand Portage does not have any outdoor warning sirens. Warning sirens serve an additional means of emergency notification to the public in the event of dangerous high winds.

4.2.5 Flash Flood & Riverine Flood

Section 4.4.5 in the Cook County Multi-Hazard Mitigation Plan provides an overview of flash flooding and riverine flooding and details previous occurrences that have affected Cook County. The information provided in this section discusses the hazard of flooding as it relates to the Grand Portage Reservation tribal planning area.

Vulnerability

The vulnerability of the Grand Portage Reservation to flooding is an increased concern due to its potential impacts to wild rice and water quality.

Wild rice is a shallow water plant, making it particularly sensitive to fluctuations in water levels. Heavy precipitation events, which have continuously increased in the region, have led to the uprooting of many wild rice plants. During early summer, wild rice is especially vulnerable to flooding while it is in the floating-leaf stage of germination. Rapid influxes of water during heavy precipitation events leads to a “bounce” in which water rises and falls rapidly. The result of such drastic water level changes causes the wild rice plants to be uprooted and therefore washed away. Wild rice plants may also drown during the floating-leaf stage if water levels remain high for extended periods in which the plant will not survive.

Flood events can lead to the degradation of water quality through soil erosion, increased storm water runoff, and increased frequency, intensity, and locations of algal blooms. Soil erosion due to flooding leads to the loading of sedimentary materials, which have detrimental effects on water quality and may allow more mercury already deposited to the watersheds of lakes, streambeds, and rivers to be released into additional waterbodies. The release of mercury to additional waterbodies results in the

transformation of mercury into methylmercury and bioaccumulation throughout the entire ecosystem. Furthermore, increases in storm water runoff due to flooding lead to water quality concerns in that increased runoff can carry excess loads of nutrients (nitrogen and phosphorus), toxic substances and pathogenic microorganisms that lead to increased frequency, intensity, and locations of harmful algal blooms.

Plans and Programs in Place

Public Warning and Notification – Notification of imminent flooding will generally be initiated by the Grand Portage Reservation Conservation Officers, Grand Portage Reservation Natural Resources Department, or the Cook County Emergency Management Office. Notification, especially of flash flooding, can come from state or local sources, including community members. Grand Portage participates in the CodeRED notification system through the Cook County Law Enforcement Center. WTIP, a local radio station located in Grand Marais, also assists in sending out emergency notifications. Grand Portage Community Health Nurses and Representatives will travel door to door during severe weather to assure that Grand Portage elders and others with special needs are safe and in good health.

Public Works/Construction – Grand Portage Construction/Public Works staff make sure that the water, wastewater, and road systems are safe and properly maintained. Activities include snow plowing, culvert replacements, roadside mowing, repairing water main breaks, replacing defective water and sewer components, and general maintenance to public works infrastructure.

Program Gaps and Deficiencies

Upsize Culverts – There is a need to continue to identify risk areas of concern where culverts are not adequately sized to handle the more frequent high-volume storm/rain events that are occurring. Culverts should be upsized to be able to handle a 500-year rain event instead of a 100-year rain event.

Stormwater Management for Sewer Ponds – To prevent untreated sewage from overflowing the ponds after an extreme storm event, it would be helpful to have a pumping system and location in place where the wastewater could safely and efficiently be moved to.

4.2.6 Severe Winter Storms

Section 4.4.6 in the Cook County Multi-Hazard Mitigation Plan provides an overview of severe winter storms and details previous occurrences that have affected Cook County. The information provided in this section discusses the hazard of severe winter storms as it relates to the Grand Portage Reservation tribal planning area.

Vulnerability

The vulnerability of the Grand Portage Reservation to severe winter storms does not differ from Cook County.

Plans and Programs in Place

Snow Removal – US Highway 61 is the main highway through the Grand Portage Reservation and is plowed and maintained by the Minnesota Department of Transportation. The Cook County Highway Department plows and maintains the county roads within the Reservation. The Cook County Highway

Department also has an agreement with Grand Portage to plow some designated BIA roads. Grand Portage Construction, Reservation Tribal Council Maintenance, Grand Portage Housing, and Grand Portage Lodge & Casino maintenance plow all other public areas throughout the Reservation.

Emergency Sheltering – In the event that residents are displaced from their homes due to a severe winter storm, the Grand Portage Community Center is the designated emergency shelter. This facility has backup generator power, two kitchens, showers, and all necessary emergency supplies.

School Closings – The Oshki Ogimaag Charter School and Head Start Program in Grand Portage have school closing policies in place as well as a communications plan to notify families in case of severe weather or other emergencies.

Winter Hazard Awareness Week – Grand Portage participates in the National Weather Service’s “Winter Hazard Awareness Week” held in November each year. This provides education to residents on the dangers of winter weather.

Generators – The following Grand Portage facilities currently have emergency backup generators: Tribal Government, Community Center, Charter School, Health Services, Daycare/Head start, IT, Lodge and Casino, and Elders assisted living.

Program Gaps and Deficiencies

Aboveground Power Lines – Aboveground power lines are susceptible to damage as a result of winter ice and windstorms. Grand Portage has predominately aboveground power lines due to the rocky terrain and are exposed to the elements of severe weather.

4.2.7 Extreme Cold

Section 4.4.4.7 in the Cook County Multi-Hazard Mitigation Plan provides an overview of extreme cold and details previous occurrences that have affected Cook County. The information provided in this section discusses the hazard of extreme cold as it relates to the Grand Portage Reservation tribal planning area.

Vulnerability

The vulnerability of the Grand Portage Reservation to severe cold does not differ from Cook County.

Plans and Programs in Place

Public Warning and Notification – Grand Portage participates in the CodeRED notification system through the Cook County Law Enforcement Center. WTIP, a local radio station located in Grand Marais, also assists in sending out emergency notifications. Grand Portage Community Health Nurses and Representatives will travel door to door during severe weather to assure that Grand Portage elders and others with special needs are safe and in good health.

Grand Portage Congregate Care – The Grand Portage Emergency Operations Plan includes an annex for congregate care which describes how the congregate care for the needs of residents will be met in the

event of an emergency or disaster that results in the displacement of people from their homes due to unsafe or uninhabitable conditions.

Emergency Sheltering – In the event that residents are displaced from their homes during a period of extreme cold (i.e., coupled with power outages), the Grand Portage Community Center is the designated emergency shelter. This facility has backup generator power, two kitchens, showers, and all necessary emergency supplies.

Generators – The following Grand Portage facilities currently have emergency backup generators: Tribal Government, Community Center, Charter School, Health Services, Daycare/Head start, IT, Lodge and Casino, and Elders assisted living.

Program Gaps and Deficiencies

No program gaps or deficiencies were identified.

4.2.8 Extreme Heat

Section 4.4.8 in the Cook County Multi-Hazard Mitigation Plan provides an overview of the hazard of extreme heat and details previous occurrences that have affected Cook County. The information provided in this section discusses the hazard of extreme heat as it relates to the Grand Portage Reservation tribal planning area.

Vulnerability

The vulnerability of the Grand Portage Reservation to extreme heat does not differ from Cook County.

Plans and Programs in Place

Public Warning and Notification – Grand Portage participates in the CodeRED notification system through the Cook County Law Enforcement Center. WTIP, a local radio station located in Grand Marais, also assists in sending out emergency notifications. Grand Portage Community Health Nurses and Representatives will travel door to door during severe weather to assure that Grand Portage elders and others with special needs are safe and in good health.

Grand Portage Congregate Care – The Grand Portage Emergency Operations Plan includes an annex for congregate care which describes how the congregate care for the needs of residents will be met in the event of an emergency or disaster that results in the displacement of people from their homes due to unsafe or uninhabitable conditions.

Emergency Sheltering – In the event that residents are displaced from their homes during a period of extreme heat (i.e., coupled with power outages), the Grand Portage Community Center is the designated emergency shelter. This facility has backup generator power, two kitchens, showers, and all necessary emergency supplies.

Generators – The following Grand Portage facilities currently have emergency backup generators: Tribal Government, Community Center, Charter School, Health Services, Daycare/Head start, IT, Lodge and Casino, and Elders assisted living.

Program Gaps and Deficiencies

No program gaps or deficiencies were found for extreme heat.

4.2.9 Drought

Section 4.4.9 in the Cook County Multi-Hazard Mitigation Plan provides an overview of drought and details previous occurrences that have affected Cook County. The information provided in this section discusses the hazard of drought as it relates to the Grand Portage Reservation tribal planning area.

Vulnerability

The vulnerability of the Grand Portage Reservation to drought is not discussed extensively enough in the 1854 Ceded Territory Climate Change Vulnerability Assessment and Adaptation Plan to be able to discuss the impacts.

Plans and Programs in Place

Wild Rice Management – The Grand Portage Natural Resources and Biology department are responsible for wild rice management and restoration activities.

Burning Bans – When risk of wildfire is very high due to drought, burning is not permitted in order to reduce the chance of wildfires. The Grand Portage DNR Forestry Division has its own burning permits that are issued to community members. Regulation of open burning and the use of burning permits has been an important tool in preventing wildfire on the Grand Portage Reservation.

Program Gaps and Deficiencies

Wild Rice Management and Drought – For the Grand Portage Reservation, forest lands share equal vulnerability to the rest of Cook County forests for the risk of wildfire as a result of drought conditions. However, drought conditions would pose specific risk to the vulnerability of our lakes that support the growth of wild rice. Lakes that support wild rice are ecologically sensitive to both high and low water levels and periods of flooding or drought can destroy a wild rice harvest. Climate change-weather pattern changes, annual precipitation, and temperature changes (which may contribute to either flooding or drought) all may impact the viability of wild rice lakes.

4.2.10 Wildfire

Section 4.4.10 in the Cook County Multi-Hazard Mitigation Plan provides an overview of wildfire and details previous occurrences that have affected Cook County. The information provided in this section discusses the hazard of wildfire as it relates to the Grand Portage Reservation tribal planning area.

Vulnerability

The vulnerability of the Grand Portage Reservation to wildfire does not differ from Cook County.

Plans and Programs in Place

Public Warning and Notification – Grand Portage participates in the CodeRED notification system through the Cook County Law Enforcement Center. WTIP, a local radio station located in Grand Marais, also assists in sending out emergency notifications. Grand Portage Community Health Nurses and

Representatives will travel door to door during severe weather to assure that Grand Portage elders and others with special needs are safe and in good health.

Forest Management Plans – Grand Portage Forestry develops and maintains the following plans for forest and fire management on the Reservation: Grand Portage Forest Resources Management Plan (1987), Grand Portage Fire Management Plan (1999) and Wildfire Prevention Plan for the Grand Portage Reservation (2014). Planning activities include identifying areas for harvest of timber stands as well as annual prescribed fire treatments and mechanical fuels treatments. The 2017-2021 Harvest Plan details areas on the Reservation for timber harvest in the next 5+ years. Grand Portage wildfire prevention activities are outlined in the Wildfire Prevention Plan. Firewise is part of the Prevention plan.

Cook County CWPP & Firewise Initiatives – Grand Portage Forestry has participated in multiple updates to the Cook County Community Wildfire Protection Plan (CWPP) and also participates on the Cook County Firewise Committee. A Firewise education booth with personnel to answer questions is provided at the Grand Portage Health Fair every year.

Timber Harvests (Fuels Reduction & Defensible Space) – The harvesting of timber is a fuel reduction practice, especially the commercial thinning of conifer stands, or when a timely harvest of aspen or birch prevents the ingrowth of thick balsam fir and white spruce in the understory. Keeping forests healthy and vigorous through timely thinning and harvest also reduces the risk of creating large areas of very thick blowdown in the event of a severe storm. Grand Portage Forestry has a 2017-2021 Harvest Plan in place that details areas on the Reservation for timber harvest in the next 5+ years. Grand Portage Forestry also uses timber harvests to act as strategic fire breaks, providing significant amounts of defensible space in the event of a fire start. Where possible they are designed to butt up to other natural or man-made fire breaks. Most years GP Forestry completes 10-100 acres of fuels reduction related to forest stand improvement, usually in the form of pre-commercial thinning or balsam fir removal. The number of acres varies from year to year.

Prescribed Burns – Each spring Grand Portage Forestry uses prescribed fire to remove easily ignitable dead vegetation near buildings and infrastructure within the Wildland Urban Interface (WUI). Each prescribed burn requires a Burn Plan or Burn Permit issued thru GP Forestry. Burn Plans are reviewed and approved by the BIA. During prescribed burns assistance for structure protection is provided by the Grand Portage Volunteer Fire Department (VFD). Personnel and equipment resources from other Reservations are also utilized.

A rough outline of annual prescribed burns planned for the next several years include:

- Slash Pile Burns (burn fuels from forest harvests): 10 acres annually
- Misc. WUI Wildfire fuel reduction project (e.g. Blaze's Pit): 11 acres annually
- Village Burns (reduce grass and brush fuels along roads in the village): 60 acres annually
- Blueberry Burns (blueberry production for community members, wildlife and to reduce fuels): 25-60 acres annually depending on a planned five unit rotation

Assistance to Land Owners – Grand Portage Forestry provides hazardous wildfire fuels reduction for homeowners upon request.

Grand Portage Forestry Firefighting Capabilities – Grand Portage Forestry maintains (2) type-6 wildland fire engines: one is supplied by the BIA and the other is owned by the Band. GP Forestry has additional equipment including a JD450 dozer, dump truck and trailer, a Muskeg all terrain track vehicle with water and pump, numerous all-terrain vehicles and chainsaws. Other trust lands and natural resources departments, volunteer fire departments, and construction companies have additional equipment to help suppress wildfires that occur within or near Reservation boundaries.

Burning Permits/Restrictions – The Grand Portage Forestry Department issues burning permits to all residents on the Reservation. Regulation of open burning and the use of burning permits has been an important tool in preventing wildfire on the Grand Portage Reservation. When risk of wildfire is very high, burning is restricted or banned.

Funding Programs/Sources – The Grand Portage Fire Management program mitigation activities are funded by the Reservation Tribal Council, Cooperative agreement with the Bureau of Indian Affairs and more recently with supplemental funding from the Natural Resources Conservation Service's Environmental Quality Incentives Program (EQIP). Projects completed with these funding sources include:

- Fuels Reduction – Mechanical and prescribed fire treatments in the Wildland Urban Interface (WUI) and in the Non WUI.
- Prevention Activities – Including open burning permits, fire weather monitoring and providing public awareness (fire danger signs and public announcements).
- Firewise and other public education activities.

Program Gaps and Deficiencies

Aging Wildfire & Forestry Facilities – While we have a good inventory of wildland fighting equipment, the Muskeg vehicle and dozer are outdated and in need of replacement to more modern equipment. We are also working on getting funding to purchase a tracked vehicle with mulching head (“chipper head”) so that we can build our capacity and greatly expand the number of acres we can do for pre-commercial thinning or understory removal each year. This may be done either jointly with the construction company we work with or on our own as the Forestry Department.

Fuels Reduction & Prescribed Burns – We need to continue our wildfire fuel reduction and prescribed burning programs. We also need to expand our capacity for larger prescribed burns to better control hazardous fuels.

We have limited capacity for larger prescribed burns due to:

- Lack of adequate medical plan for large, remote prescribed burns.
- Fractionated ownership that makes planning large prescribed burns difficult.
- Limited access to aerial resources for large prescribed burns.

4.2.11 Landslides and Soil Erosion

Section 4.4.11 in the Cook County Multi-Hazard Mitigation Plan provides an overview of the hazard of landslides and soil erosion and details previous occurrences that have affected Cook County. The information provided in this section discusses the hazard of landslides and soil erosion as it relates to the Grand Portage Reservation tribal planning area.

Vulnerability

The vulnerability of the Grand Portage Reservation to landslides and soil erosion does not differ from Cook County.

Plans and Programs in Place

There are no plans or programs in place relating to landslides or soil erosion.

Program Gaps and Deficiencies

Erosion Control – Storms with high winds and heavy rainfall result in erosion along the Lake Superior shoreline and other areas throughout the Reservation, such as Hollow Rock Creek and Red Rock Creek.

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Section 5 – Mitigation Strategy

5.1 Mitigation Goals

In Section 4 of this Annex, the risk assessment identified the Grand Portage Reservation as prone to a number of natural hazards. The steering committee members understand that although hazards cannot be eliminated altogether, the Grand Portage Band can work toward building a disaster-resistant community.

The goals, strategies and objectives listed in **Section 5** of the Cook County Multi-Hazard Mitigation Plan have been adopted for use in the Grand Portage Annex. This framework will allow for integration of the mitigation actions that are listed by the Grand Portage Reservation into the state plan and the county plan.

5.2 Community Capability Assessment

The capability assessment identifies current activities used to mitigate hazards. The capability assessment identifies the policies, regulations, procedures, programs and projects that contribute to the lessening of disaster damages. The assessment also provides an evaluation of these capabilities to determine whether the activities can be improved in order to more effectively reduce the impact of future hazards. The following sections identify existing plans and mitigation capabilities within the Grand Portage Reservation:

- *Appendix E*: Lists the plans and programs in place for the Reservation as related to hazard mitigation.
- *Appendix F*: As part of the GP Annex development, key GP department staff were asked to participate in filling out a “Local Mitigation Capabilities Assessment” (LMCA) form to report on their current mitigation capabilities and program gaps. Appendix K lists the LMCA reports gathered for the Reservation.

In addition, *Section 4.2 Hazard Profiles* of this Annex provides a capabilities assessment that was conducted in relationship to each hazard, reviewing both “Plans and Programs in Place” and “Program Gaps or Deficiencies.”

5.3 Funding Capabilities

This section discusses the capabilities of the Grand Portage Band to implement hazard mitigation projects through current and potential sources of tribal, federal, or private funding.

5.3.1 Current Mitigation Funding

Current hazard mitigation activities on the Grand Portage Reservation are primarily funded through internal tribal program funding as directed by the Reservation Tribal Council (RTC).

The Grand Portage Emergency Management Program is funded by the RTC, which provides for the staffing of a full-time Grand Portage Emergency Management/Safety Director. The Director's responsibilities related to hazard mitigation for the Reservation include planning, project coordination with other tribal departments, public education, and coordination with Cook County for use of the CodeRed emergency notification system.

The Grand Portage Fire Management program mitigation activities are funded by the Reservation Tribal Council, a Cooperative agreement with the Bureau of Indian Affairs and more recently with supplemental funding from the Natural Resources Conservation Service's "Environmental Quality Incentives Program" (EQIP). Projects completed with these funding sources include:

- Fuels Reduction – Mechanical and prescribed fire treatments in the Wildland Urban Interface (WUI) and in the non-WUI.
- Prevention Activities – Including open burning permits, fire weather monitoring and providing public awareness (fire danger signs and public announcements).
- Firewise and other public education activities.

Additional mitigation efforts by the Band to reduce the vulnerability of natural resources (i.e., wild rice habitat) and critical facilities (i.e. Grand Portage Lodge & Casino, tribal government buildings, Reservation stormwater system and roads) to hazards such as high winds and flooding are under the direction of specific departments and funded through Reservation Tribal Council program funding.

5.3.2 Potential Mitigation Funding

The Grand Portage Reservation 5-year Mitigation Action Chart (Table 5) identifies possible funding sources for each of the mitigation actions listed, which would be investigated further in the process of project development. Potential sources of funding identified during the planning process include:

- Grand Portage RTC (internal program funding)
- FEMA Hazard Mitigation Assistance (HMA) Grant Funding - The Grand Portage Band will be eligible to apply for FEMA HMA mitigation funds either directly to FEMA or as a sub-grantee through the State of Minnesota upon final approval by FEMA that the plan meets requirements 44CFR 201.7.
- MN Department of Natural Resources - Minnesota Lake Superior Coastal Program (MLSCP)
- Bureau of Indian Affairs (Roads Program, Wildland Fuels Reduction)
- Minnesota Department of Transportation (MnDOT)
- USDA - Natural Resources Conservation Service (NRCS)
- Great Lakes Restoration Initiative (GLRI)
- Minnesota Cleanwater Legacy
- Minnesota Pollution Control Agency (MPCA)
- Cook County Firewise Program
- Arrowhead Electric Coop
- United States Forest Service (U.S.F.S.)

- 1854 Treaty Authority

5.4 Mitigation Action & Project Strategies

The Grand Portage Mitigation Action Chart is provided in Table 5. The chart details the hazard, the mitigation strategy and action to address it, the priority ranking for implementation (High Priority, Moderate Priority; Low Priority; see Table 4), its current stage of implementation, the timeframe for implementation going forward, the responsible parties to carry through with implementation, and comments on how the plan will be implemented through existing planning mechanisms and potential funding to make implementation happen.

Table 4. Criteria for Mitigation Action Priority Ranking

Ranking	Criteria
High Priority	<ul style="list-style-type: none"> • Methods for reducing risk from the hazard are technically reliable. • The county has experience in implementing mitigation measures. • Mitigation measures are eligible under federal grant programs. • There are multiple mitigation measures for the hazard. • The mitigation measure(s) are known to be cost effective. • The mitigation measures protect lives and property for a long period of time, or are permanent risk reduction solutions.
Moderate Priority	<ul style="list-style-type: none"> • Mitigation methods are established. • The county has limited experience with the kinds of measures that may be appropriate to mitigate the hazard. • Some mitigation measures are eligible for federal grants. • There is a limited range of effective mitigation measures for the hazard. • Mitigation measures are cost-effective only in limited circumstances. • Mitigation measures are effective for a reasonable period of time.
Low Priority	<ul style="list-style-type: none"> • Methods for reducing risk from the hazard are not well-established, are not proven reliable, or are experimental. • The state or counties have little or no experience in implementing mitigation measures, and/or no technical knowledge of them. • Mitigation measures are ineligible under federal grant programs. • There is a very limited range of mitigation measures for the hazard, usually only one feasible alternative. • The mitigation measure(s) have not been proven cost effective and are likely to be very expensive compared to the magnitude of the hazard. • The long-term effectiveness of the measure is not known, or is known to be relatively poor.

In addition to ranking the hazard mitigation actions, the steering committee also reports on the status of the mitigation action. The status designations are:

- New – New actions that have been identified since the last plan
- Ongoing – Actions from the last plan that require continuing application
- In Progress – Actions from the last plan that are currently being acted upon

The mitigation types are defined as follows:

- Local Planning and Regulations
- Structure and Infrastructure Projects
- Natural Systems Protection
- Education and Awareness Programs
- Mitigation Preparedness and Response Support

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Table 5. Grand Portage Reservation Mitigation Action Chart (2019-2023)

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Responsibility	Comments on Planning Mechanisms for Implementation	Possible Funding
1	All-Hazards	Education & Awareness Programs	EMERGENCY NOTIFICATION Continue to ensure that all Grand Portage residents are aware of and sign-up for the Cook County CodeRed Emergency Notification System, and continue to promote additional outreach delivery systems that are in place.	Ongoing	High	2019-2023	GP Emergency Management	Grand Portage participates in the CodeRED notification system through the Cook County Law Enforcement Center. GP Emergency Management will use the annual Grand Portage Wellness Fair to have an Emergency Management education booth to educate residents on CodeRed and provide assistance in getting people signed up.	Grand Portage, MLSCP Grants
2	All-Hazards	Local Planning & Regulations	EOP UPDATE Continue to update the Grand Portage Emergency Operation Plan to ensure it adequately details the personnel, plans and procedures in place to respond to all-hazards.	Ongoing	High	2019-2023	GP Emergency Management	Grand Portage has an EOP in place for the Reservation, however it is outdated and requires an update. The GP Emergency Management Director will work to update the EOP and also bring it into closer alignment with Cook County, as we work very closely together.	Grand Portage, MLSCP Grants (Planning)
3	All-Hazards	Local Planning & Regulations	COMMUNITY PLANNING Update Tribal Comprehensive Plans and Zoning Ordinances to include mitigation considerations that help to reduce risk from natural hazards. Utilize data of past hazard events and future climate projections to help inform updates.	New	Moderate	2019-2023	GP Emergency Management, GP Tribal Council, GP Trustlands, GP Land Use Committee	The Grand Portage Band has its own climate change plan and also participated in the 1854 Treaty Authority's "Climate Change Vulnerability Assessment and Adaptation Plan" (2016). The tribe works to factor in considerations regarding climate change and hazard mitigation into tribal plans and polices for the Reservation.	Grand Portage, MLSCP Grants (Planning, Regulations)

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Responsibility	Comments on Planning Mechanisms for Implementation	Possible Funding
4	All-Hazards	Local Planning & Regulations / Mitigation Preparedness & Response Support	MASS CARE Ensure sheltering plans and facilities are in place to care for residents temporarily displaced from a severe weather event such as flooding, severe wind storms, or power outages during extreme cold/heat events.	Ongoing	High	2019-2023	GP Emergency Management & GP Public Health in partnership with American Red Cross	The Grand Portage Emergency Operations Plan includes an annex for congregate care which describes how the congregate care for the needs of residents will be met in the event of an emergency or disaster that results in the displacement of people from their homes due to unsafe or uninhabitable conditions. The Grand Portage Community Center is the designated emergency shelter. The Casino/Lodge is an additional backup facility.	Grand Portage, MLSCP Grants (Planning)
5	All-Hazards	Local Planning & Regulations / Natural Systems Protection	HABITAT PROTECTION & FOOD RESOURCE SUSTAINABILITY Work to protect wetlands habitat for subsistence species (moose, bear, deer, and fish) and tribal gardens, orchards, and sugarbush resources from the effects of extreme storms, flooding, or drought.	Ongoing	Moderate	2019-2023	GP Trustlands, GP Ag Dept. – Cultural Coordinator	Habitat and food resource protection is an ongoing programmatic area of the GP Trustlands Department as well as the GP Ag Department – Cultural Coordinator. The protection of habitat for subsistence species is a priority to the GP Band. This includes hatchery operations and fish habitat.	Grand Portage, MLSCP Grants (Planning, Regulations), NRCS, USDA
6	All-Hazards	Local Planning & Regulations	HAZMAT SPILL - HWY. 61 Learn what hazardous materials are hauled on Hwy. 61 and understand how to respond to a spill.	Ongoing	High	2019-2023	GP Emergency Management in coordination with Cook County Emergency Management and MnDOT	GP Emergency Management will work with Cook County Emergency Management on this shared concern for transportation accidents on Hwy. 61.	Grand Portage, MLSCP Grants (Planning – spill response)

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Responsibility	Comments on Planning Mechanisms for Implementation	Possible Funding
7	Severe Winter & Summer Storms	Local Planning & Regulations	TREE & BRUSH MANAGEMENT Regularly inspect and trim/remove trees as needed near power lines and along roads to reduce power outages and the danger to motorists due to falling trees or tree limbs during severe storms.	Ongoing	Moderate	2019-2023	GP Construction / Public Works, GP Trustlands, Cook County Highway Dept., Arrowhead Electric Coop, NPS, MnDOT	GP Construction/Public Works and GP Trustlands keeps the main Reservation roadsides trimmed back to improve visibility and drivability. This assists in keeping trees and branches from falling into the roadway. Cook County, Arrowhead Electric, the National Park Service, and MnDOT also work on this effort to improve roadway safety.	Grand Portage, Arrowhead Electric, MnDOT, MLSCP Grants (Planning, Regulations)
8	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	GENERATORS Inventory the current locations of generators throughout the Reservation and identify additional critical facilities that should have backup generators. Also seek to obtain portable generators that can be deployed for medical needs.	Ongoing	High	2019-2023	GP Emergency Management	<p>The AT&T cell tower that serves the GP Reservation is a key piece of critical infrastructure the Band would like to see have a permanent backup generator. The tower has battery backup power, which is limited in the event of an extended power outage.</p> <p>The Band would also like to obtain several portable generators to deploy in times of power outages to assist those with medical needs.</p> <p>Our inventory of current generator locations include: Tribal Government Center, Community Center, Charter School, Health Services, Daycare/Head start, IT, Lodge and Casino, and Elders Assisted Living.</p> <p>The National Park Service – GP National Monument has generators to assist in the event of an extended power outage.</p>	Grand Portage residents (independent funding)

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Responsibility	Comments on Planning Mechanisms for Implementation	Possible Funding
9	Severe Winter & Summer Storms	Structure & Infrastructure Projects	<p>POWER LINE STRENGTHENING/BURIAL</p> <p>Continue to work with Arrowhead Electric to ensure delivery of reliable power to the Grand Portage Reservation. This may include power line strengthening or burial where feasible and cost effective.</p>	New	High	2019-2023	GP Construction / Public Works, Arrowhead Electric Coop	Arrowhead Electric Coop is the electrical service provider for the Grand Portage Reservation. Arrowhead Coop conducts regular ROW management and cyclical inspections as ongoing maintenance to ensure the system is as reliable as possible. Arrowhead Coop will assist the GP Band in evaluation of possible power line strengthening or burial where power lines are deemed vulnerable or experience other than normal failure. Supportive grant funding will be required for projects that are feasible as such projects are extremely expensive and difficult in the rocky terrain of the North Shore.	Grand Portage
10	Severe Winter & Summer Storms	Education & Awareness Programs	<p>SEVERE WEATHER AWARENESS</p> <p>Provide/promote education and awareness on severe winter, spring, and summer storms to residents and visitors and promote personal & family emergency preparedness.</p>	Ongoing	High	2019-2023	GP Emergency Management	GP Emergency Management will use the annual GP Wellness Fair to have an Emergency Management education booth to educate residents on severe storms and personal emergency preparedness. GP Emergency Management also participates annually in the National Weather Service's "Winter Hazard Awareness Week" held in November and the "Severe Weather Awareness Week" held in April. Both week-long events seek to educate residents on the dangers of severe storms and the importance of preparing for severe weather before it strikes.	Grand Portage, MLSCP Grants

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Responsibility	Comments on Planning Mechanisms for Implementation	Possible Funding
11	Severe Winter & Summer Storms	Local Planning & Regulations	NEW DEVELOPMENT (NEW CONSTRUCTION / RETROFIT) Ensure all new development or retrofit of tribal government or residential buildings incorporate considerations to mitigate against natural hazard events and improve public safety.	Ongoing	Moderate	2019-2023	GP Construction / Public Works	Drainage improvements were made when the Lodge/Casino facilities were remodeled. The new construction included design factors to improve drainage and reduce the risk of slip/fall potential for the public during winter weather ice & snow events.	Grand Portage, MLSCP Grants (Design, Planning, Regulations for Tribal Buildings)
12	Severe Winter & Summer Storms	Local Planning & Regulations	DEBRIS MANAGEMENT PLAN Ensure a debris management plan is in place for the Grand Portage Reservation to manage downed trees and other hazards to public safety following a severe storm event.	New	Moderate	2019 - 2023	GP Trustlands Dept. & GP Emergency Management	Development of a debris management plan is a current effort underway by the GP Trustlands Dept in coordination with GP Emergency Management.	Grand Portage, MLSCP (Planning, Regulations)

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Responsibility	Comments on Planning Mechanisms for Implementation	Possible Funding
13	Severe Winter & Summer Storms	Local Planning & Regulations	<p>WINTER ROADS TREATMENTS</p> <p>Continue to provide for public safety on roads through snow removal, salting and sanding to minimize the impacts of snow/ice accumulation on roadways.</p>	Ongoing	High	2019 - 2023	MnDOT, Cook County Hwy, Dept, GP Construction, RTC Maintenance, GP Housing, GP Lodge & Casino	US Highway 61 is the main highway through the Grand Portage Reservation and is plowed and maintained by the Minnesota Department of Transportation. The Cook County Highway Department plows and maintains the county roads within the Reservation. The Cook County Highway Department also has an agreement with Grand Portage to plow some designated BIA roads. Grand Portage Construction, Reservation Tribal Council Maintenance, Grand Portage Housing, and Grand Portage Lodge & Casino maintenance plow all other public areas throughout the Reservation.	Grand Portage, MnDOT, Cook County Highway Dept., MLSCP (Planning, Regulations – Salt mgmt. to protect streams)
14	Severe Winter & Summer Storms	Local Planning & Regulations	<p>SCHOOL CLOSINGS (PUBLIC SAFETY)</p> <p>Ensure the safety of Grand Portage students and staff during periods of extreme weather.</p>	Ongoing	Moderate	2019-2023	GP OOCS and GP Head Start, Cook County Schools /Day Cares, Great Expectations	All schools have closing policies in place as well as a plan to notify families in case of severe weather or other emergencies.	Grand Portage, school & day care facilities
15	Severe Summer Storms	Mitigation Preparedness & Response Support	<p>WARNING SIRENS</p> <p>Evaluate the feasibility of installing warning sirens in locations throughout the Reservation to help warn residents to take shelter in the event of straight-line winds.</p>	New	High	2019-2023	GP Emergency Management	Grand Portage does not have any outdoor warning sirens. Warning Sirens serve an additional means of emergency notification to the public in the event of dangerous high wind events.	Grand Portage, USDA Rural Development -Community Facilities Direct Loan & Grant Program (covers warning sirens)

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Responsibility	Comments on Planning Mechanisms for Implementation	Possible Funding
16	Severe Summer Storms	Structure & Infrastructure Projects	COMMUNITY SAFE ROOMS Construct community safe rooms to protect the public during periods of severe storms or high winds at our Community Center, the GP Lodge/Casino, and other areas as identified.	New	High	2019-2023	GP Emergency Management	Grand Portage Emergency Management will work to investigate construction opportunities for these critical facilities that serve both visitors and tribal residents.	Grand Portage, Possible FEMA HMA Grant for Safe Rooms
17	Extreme Temps (Hot/Cold)	Education & Awareness Programs	EXTREME TEMPS- PUBLIC SAFETY Provide outreach & education to vulnerable populations in the community (i.e., senior citizens, young adults) on personal safety measures to take during periods of extreme heat / cold.	Ongoing	Moderate	2019-2023	GP Emergency Management & GP Public Health, Oshki Ogimaag Charter School and Head Start	GP Emergency Management, GP Public Health and the schools continue to provide awareness and education to the whole community on the dangers associated with extreme cold or heat events, particularly to vulnerable populations such as the elderly.	Grand Portage

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Responsibility	Comments on Planning Mechanisms for Implementation	Possible Funding
18	Flooding	Structure & Infrastructure Projects	<p>UPSIZE CULVERTS Upsize culverts where needed to handle a 500-year flood event, not 100-year. Identify risk areas of concern, such as Red Rock Creek, and MN Hwy. 61.</p>	New	High	2019-2023	GP Construction/ Public Works in coordination with MnDOT, as well as NPS (Stone Bridge project)	<p>GP Public Works will continue to identify risk areas of concern where culverts are not adequately sized to handle upsize the culverts to be able to handle the more frequent high-volume storm/rain events that are occurring.</p> <p>The MN DNR has a Culvert Inventory Suite available for all to use (stormwater infrastructure, culvert inventory).</p>	<p>Grand Portage, possible FEMA HMA funding for Localized Flood Reduction Projects, Great Lakes Restoration Initiative (GLRI) funding (habitat), MN Cleanwater Legacy, MPCA, MPSCP Grants (Design, Planning), and NPS</p>

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Responsibility	Comments on Planning Mechanisms for Implementation	Possible Funding
19	Flooding	Structure & Infrastructure Projects	STORMWATER MANAGEMENT / WASTEWATER TREATMENT Mitigate wastewater treatment for our sewer ponds to exposure to high volumes of stormwater.	New	High	2019-2023	GP Trustlands	To prevent untreated sewage from overflowing the ponds after an extreme storm event, it would be helpful to have a pumping system and location in place where the wastewater could safely and efficiently be moved to.	Grand Portage, possible FEMA HMA funding for Localized Flood Reduction Projects, MLSCP Grants (Planning)
20	Flooding	Structure & Infrastructure Projects	MITIGATE HIGH-RISK FLOODING Address high-risk areas for flooding (Lodge/Casino, Bay Homesites/Lakeside, transportation routes (Hwy. 61/old Hwy.)	New	High	2019-2023	Grand Portage Construction / Public Works	Grand Portage Construction/ Public Works staff make sure that the water, wastewater, and road systems are safe and properly maintained. Activities include snow plowing, culvert replacements, roadside mowing, repairing water main breaks, replacing defective water and sewer components, and general maintenance to the Band's public works infrastructure.	Grand Portage, MLSCP (possible)
21	Flooding	Natural Systems Protection	BEAVER DAMS Mitigate against the release of beaver dams near roads and subsequent flooding	Ongoing	Moderate	2019-2023	GP Trustlands, GP Construction / Public Works	Grand Portage monitors areas of beaver dam concerns near roadways to mitigate against flooding of roadways.	Grand Portage, UMD Research funding

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Responsibility	Comments on Planning Mechanisms for Implementation	Possible Funding
22	Flooding	Natural Resource Protection	<p>WILD RICE MANAGEMENT Monitor and manage wild rice lakes for impacts of high-rain events and flooding conditions that may affect the growth and harvest of Wild Rice.</p>	Ongoing	High	2019-2023	GP Trustlands, possible partnerships could include other agencies (i.e., MN DNR, NOAA, USFWS and 1854 Treaty Authority)	The Grand Portage Natural Resources and Biology department are responsible for wild rice management and restoration activities. High water or flood conditions would pose specific risk to the vulnerability of our lakes that support the growth of wild rice. Lakes that support wild rice are ecologically sensitive to both high and low water levels and periods of flooding or drought can destroy a wild rice harvest. There could be the possibility to partner with NOAA and 1854 Treaty Authority for a Wild Rice Study, and with the U.S.F.W.S. regarding coastal wetland monitoring.	Grand Portage, MLSCP, Other possible: NOAA, USFWS, 1854 Treaty Authority
23	Coastal Erosion	Natural Systems Protection / Local Planning & Regulations	<p>COASTAL EROSION Work to identify erosion hazard areas along the Lake Superior shoreline and Hollow Rock Creek and work to mitigate against further erosion damages.</p>	New	High	2019-2023	GP Trustlands in partnership with Cook County SWCD, MN DNR Coastal Program, and the NPS	GP will seek to work with key partners such as Cook County SWCD and the MN DNR Coastal Program to identify areas of concern and potential mitigation strategies to reduce coastal and streambank erosion. The Grand Portage and Cook County "Lake Superior North" watershed is a part of the MN Board of Water & Soil Resources "One Watershed/One Plan" (1W1P).	Grand Portage, Cook County SWCD, MLSCP Grants, NPS, MN BSWR

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Responsibility	Comments on Planning Mechanisms for Implementation	Possible Funding
24	Wildfire	Local Planning & Regulations / Education & Awareness Programs	FIREWISE Participate in the Cook County Firewise Program and implement local program efforts for the Grand Portage Reservation.	Ongoing	High	2019-2023	GP Forestry in coordination with Cook County Firewise Program	GP Forestry is an active member of the Cook County Firewise Committee, which oversees the identification, prioritization, and implementation of wildfire mitigation projects for Cook County. Grand Portage Forestry implements Firewise-related efforts locally as they apply to the Reservation. Firewise information is shared annually at the GP Wellness Fair to educate residents on wildfire safety.	GP Forestry, Cook County Firewise
25	Wildfire	Local Planning & Regulations	BURN PERMITS/BANS Enforce burning permits and burn bans during periods of high-risk for wildfire.	Ongoing	High	2019-2023	GP Forestry	The Grand Portage DNR Forestry Division has its own burning permits that are issued to community members. Regulation of open burning and the use of burning permits has been an important tool in preventing wildfire on the Grand Portage Reservation. When risk of wildfire is very high due to drought, burning is not permitted in order to reduce the chance of wildfires.	Grand Portage
26	Wildfire	Natural Systems Protection	HOMEOWNER FUELS REDUCTION ASSISTANCE Provide assistance to homeowners for Firewise Level 1 defensible space assessments and wildfire fuels reduction (upon request).	Ongoing	Moderate	2019-2023	GP Forestry	This is an ongoing effort of the GP Forestry Dept. Homeowners may request assistance to reduce & remove wildfire fuels from their property.	Grand Portage

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Responsibility	Comments on Planning Mechanisms for Implementation	Possible Funding
27	Wildfire	Natural Systems Protection	PRESCRIBED BURNS Expand capacity for larger prescribed burns to better control hazardous fuels.	Ongoing	High	2019-2023	GP Forestry	GP Forestry maintains an active prescribed burn program on an annual basis. Example upcoming projects over the next few years include: Slash Pile Burns (burn fuels from forest harvests), Misc WUI Wildfire fuel reduction projects, Village Burns (reduce grass and brush fuels along roads in the Village, Blueberry Burns (for blueberry production for community members and wildlife, and to reduce fuels).	Grand Portage BIA, NRCS
28	Wildfire	Natural Systems Protection	WILDLAND FUELS REDUCTION Identify and implement strategic hazardous wildfire fuel reduction projects on Grand Portage Band lands.	Ongoing	High	2019-2023	GP Forestry	GP Forestry maintains an active Forest Management Program on an annual basis, including projects such as forest understory reduction, timber sales, and pile burning. The 2017-2021 Harvest Plan details areas on the Reservation for timber harvest in the next 5+ years.	Grand Portage, BIA, NRCS
29	Wildfire	Mitigation Preparedness & Response Support	IMPROVE EQUIPMENT CAPACITY Update aging Wildfire & Forestry facilities and equipment.	New	High	2019-2023	GP Forestry	While we have a good inventory of wildland fighting equipment, the Muskeg vehicle and dozer are outdated and in need of replacement to more modern equipment. We are also working on getting funding to purchase a tracked vehicle with mulching head ("chipper head") so that we can build our capacity and greatly expand the number of acres we can do for pre-commercial thinning or understory removal each year. This may be done either jointly with the construction company we work with or on our own as the Forestry Department.	GP Forestry, possible partnership funding from construction company

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Responsibility	Comments on Planning Mechanisms for Implementation	Possible Funding
30	Wildfire	Structure & Infrastructure Projects	IMPROVE WATER ACCESS Identify areas within the Reservation where dry hydrants or underground water holding tanks are needed to support wildland firefighting.	New	High	2019-2023	GP Forestry	Increasing capabilities for rural wildland fire fighting is a high priority for the GP fire departments, as well for Cook County, MN DNR and USFS. The Cook County CWPP identifies areas within the County where improved water access (such as underground tanks and dry hydrants) is needed for fighting wildfire. These areas are rural and not supported by a municipal water source.	Grand Portage, MN DNR Firewise, Possible FEMA HMA Grant funding for wildfire fuels reduction
31	Wildfire	Education & Awareness Programs	AIR QUALITY Work to reduce particulate emissions and the impact to air quality during fire management activities. Also ensure the ability to monitor air quality during wildfire events and alert the public to health risks.	Ongoing	High	2019-2023	GP Emergency Management, GP Public Health, GP Forestry	The Grand Portage Band of the Minnesota Chippewa Band – <i>Strategic Wildland Fire Management Plan and Environmental Assessment (1999)</i> includes general strategies to reduce wildfire management activity impacts to air quality both within and off-site of the Reservation. During any local wildfires or fires outside of the Reservation air quality is monitored that may threaten public health.	Grand Portage
32	Wildfire	Structure & Infrastructure Projects	FIRE-RESISTANT BUILDING RETROFITS Promote opportunities for homeowners living in high-risk areas to reduce their vulnerability to wildfire through installing metal roofs or external wildfire sprinkler systems where possible.	New	High	2019-2023	GP Emergency Management, GP Forestry, and GP Housing Authority	GP Emergency Management and GP Forestry will work with the GP Housing Authority to provide information to homeowners living in high-risk wildfire areas to consider undertaking retrofit projects to reduce their risk to wildfire.	Grand Portage, possible FEMA HMA grant funding for wildfire mitigation

#	Hazard	Mitigation Strategy	Mitigation Action	Status	Priority Ranking	Time-frame	Responsibility	Comments on Planning Mechanisms for Implementation	Possible Funding
33	Wildfire	Local Planning & Regulations / Natural Systems Protection	NEW DEVELOPMENT Develop proposed guidelines to strengthen areas at risk for wildfire prior to development of residential areas and present them to the land use committee.	New	High	2019-2023	GP Forestry & GP Land Use Committee, GP Emergency Management	The Grand Portage Band of the Minnesota Chippewa Band – <i>Strategic Wildland Fire Management Plan and Environmental Assessment</i> (1999) includes working with the Land Use Ordinance Committee regarding housing development near forest plantations and/or other wildland fuel situations.	Grand Portage
34	Wildfire	Local Planning & Regulations / Mitigation Preparedness & Response Support	EVACUATION PLANNING Work with MnDOT and Cook County to explore how to improve the ability to evacuate Grand Portage when Hwy. 61 is not passable.	New	High	2019-2023	GP Land Use, GP Emergency Management, Cook County Highway Dept., MnDOT	GP Emergency Management includes evacuation planning as part of the Emergency Operations Plan. Grand Portage needs an alternate route for evacuation; there is one road in/out of Grand Portage. Inland road upgrades are needed and new connections to other roads.	Grand Portage, BIA Roads Program, MnDOT, MLSCP Grant possibility (Planning)
35	Drought	Natural Systems Protection	HABITAT RESTORATION Assess the relative drought resistance of various sugar bush and paper birch sites and prioritize them for restoration treatments.	Ongoing	Moderate	2019-2023	GP Trustlands	This is an ongoing effort of the GP Trustlands Department. Monitoring and care of our sugarbush habitats is a high priority.	Grand Portage, MLSCP, The Nature Conservancy (TNC) & UMD Partnership funding
36	Drought	Education & Awareness Programs	DROUGHT-DANGER AWARENESS During drought conditions, provide active outreach to raise public awareness of dry conditions and the increased risk of wildfire.	Ongoing	High	2019-2023	GP Emergency Mgmt., GP Forestry	In the event of drought conditions, Grand Portage Emergency Management and GP Forestry work to raise public awareness of the dry conditions and increased danger of wildfire.	Grand Portage

Section 6 – Annex Maintenance

6.1 Monitoring, Evaluation, and Updating the Annex

The *Grand Portage Reservation Tribal Hazard Mitigation Plan Annex* (GP Annex) should be considered a living document. In coordination with the Cook County Multi-Hazard Mitigation Plan review cycle, the GP Annex should be updated and approved by FEMA at a minimum of every 5 years. The guidance in this section will function as the primary tool when reviewing progress on the implementation of the GP Annex.

The Grand Portage Emergency Management/Safety Director is the individual responsible for leading all efforts to monitor, evaluate and update the tribal hazard mitigation plan within the 5-year window. Throughout the 5-year planning cycle, the Grand Portage Emergency Management/Safety Director will work with the Reservation Tribal Council and key GP Division directors and staff to monitor, review, evaluate and update the tribe's Annex. Through these discussions, mitigation actions in Table 5 (*Grand Portage Reservation Mitigation Action Chart*) will be monitored for success in achieving goals, implementing activities and projects, and determining progress for continuation or closeout of actions identified.

If necessary, the Grand Portage Emergency Management/Safety Director will convene members of the steering committee to reassess needs and opportunities. This could be done in response to funding cycles of programs that provide resources for hazard mitigation activities. If there is a need for a special meeting due to new developments or a declared disaster occurring on the Reservation, the committee will meet to update pertinent mitigation strategies.

Mitigation measures and project closeouts will be monitored by the Grand Portage Emergency Management/Safety Director. In cases where projects are incorporated into existing GP programs and implemented using local tribal funds (i.e., GP Forestry Division fuel reduction practices), the respective division director or designated staff will be responsible to track and report on project status, closeout, and costs as per Grand Portage policy. For mitigation projects that are implemented with outside grant funds, (such as BIA, MLSCP, or FEMA), the Grand Portage Emergency Management/Safety Director will follow the monitoring and reporting requirements of the respective grant program. Commonly applied grant management processes and procedures include submission of quarterly reports that detail project progress, documentation of local match (cash or in-kind), maintaining records of costs incurred, spending plans, and reporting updates to the Reservation Tribal Council.

The Grand Portage Emergency Management/Safety Director will continue to participate on the Cook County Emergency Preparedness Committee and will share updates on the progress of the Grand Portage hazard mitigation efforts. By serving on this committee, the GP Emergency Management/Safety Director will serve as a tribal liaison to Cook County and be in a position to carry information back to the Reservation Tribal Council as well as provide information on the status of mitigation progress on the Reservation. Sharing information on the status of mitigation projects will

allow Cook County and the Grand Portage Band to share best practices and work together where common mitigation projects exist. The risk assessment for Cook County and the Grand Portage Reservation will also be reviewed and considered for update or modification in response to any changing conditions.

Any formal updates or modifications made to the Cook County MHMP or GP Annex during the 5-year planning process will require a public notice and a meeting prior to submitting revisions. The plan will be updated via written changes, submissions as the committee deems appropriate and necessary, and as approved by tribal leaders.

Once approved by FEMA, the GP Annex will fall within the current timeline of the Cook County MHMP 5-year planning cycle and shall be scheduled for a formal update at the same time as the Cook County MHMP. At the time of the 5-year update, the Grand Portage Band may decide to continue to have a tribal annex to the county plan or to develop its own MHMP for the Grand Portage Reservation.

6.2 Implementation

The GP Annex provides a comprehensive chart of mitigation actions for the Reservation (see Table 5). A number of implementation tools are available to address hazards. Many of these tools are below, however, in some cases additional discussion is needed in order to identify what strategies are most appropriate to use.

This will be part of an ongoing discussion as the Grand Portage Reservation looks for opportunities for plan implementation. The following tools should be considered:

Education: In many cases, education of residents has been identified as one of the most effective mitigation strategies.

Capital Investments: Capital investments such as fire equipment, sprinkler systems, and water sources for firefighting (underground water tanks, water towers, or dry hydrants) are tools that can limit risks and impacts of natural and man-made hazards.

Data Collection and Needs Assessments: Data collection and needs assessments can aid in gaining a better understanding of threats and allow planning for mitigation strategies accordingly. As resources are limited for this part of the planning process, additional data collection is likely to be an ongoing activity as resources become available.

Coordination: Responsibilities for mitigation strategies run across various tribal departments and often include coordination with Cook County, state, or federal agencies. Ongoing coordination is an important tool to ensure resources are used efficiently. Coordination can also avoid duplication of efforts or prevent gaps that are created because of unclear roles and responsibilities. The mitigation plan review process can function as a tool to have an ongoing discussion of roles, responsibilities, and opportunities for coordination.

Regional Cooperation: Public safety services providers throughout the northeastern region of Minnesota often share similar challenges and concerns. In some cases, a regional approach may be warranted as a mitigation strategy in order to save resources. Mutual aid agreements are a tool already in use for a number of services. Cooperation with neighboring jurisdictions in northeast MN to plan and implement similar mitigation strategies will maximize positive efforts.

Regulation: Regulation is an important mitigation tool for the Grand Portage Reservation. Regulation plays a particularly important role for land use, access to structures and the protection of water resources and public health.

6.3 Continued Public Involvement

Continued public and stakeholder involvement is critical to the successful implementation of the GP Annex. The Grand Portage Band tribal government has defined the “public” as “Grand Portage Reservation tribal community members and staff living or working on the Reservation as well as off of the Reservation. In addition are included non-tribal stakeholders from outside of the Reservation, such as neighboring jurisdictions or key agencies with a partnership role in emergency preparedness & response.”

The Grand Portage Band will continue to engage tribal departmental staff, local residents, and non-tribal agency partners in planning discussions and project implementation during the 5-year cycle of this plan. During the 5-year cycle, the GP Emergency Management/Safety Director will provide updates on the implementation of mitigation actions through sharing news in the Grand Portage community newspaper (Moccasin Telegraph), tribal community events, Reservation Tribal Council meetings, and updates at the Cook County Emergency Preparedness Committee meetings. Grand Portage tribal leaders and community members will be invited to provide comments, ask questions, and discuss the issues related to natural hazards and possible solutions. Stakeholders in state and federal agencies such as the MN Department of Natural Resources, MN Department of Transportation, and U.S. Forest Service will also be invited by direct outreach to participate in discussion on the concern of hazards and associated mitigation actions being undertaken for the Grand Portage Reservation.

Appendix A

Adopting Resolution

Text goes here

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Appendix B

Critical Facilities

Banking & Finance

North Shore Federal Credit Union	77 Mile Creek Road	Grand Portage	MN	55605
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Commercial Facilities

Grand Portage Lodge & Casino	70 Casino Drive	Grand Portage	MN	55605
Grand Portage Trading Post	77 Mile Creek Road	Grand Portage	MN	55605
Ryden's Border Store	9301 Ryden Road	Grand Portage	MN	55605

Dams

Dutchman Lake	<i>Grand Portage River tributary</i>			
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Emergency Services

Grand Portage Fire Department	105 Store Rd.	Grand Portage	MN	55605
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Healthcare and Public Health

Grand Portage Outpatient Clinic	62 Upper Road	Grand Portage	MN	55605
Grand Portage Human Services	2 Casino Drive	Grand Portage	MN	55605

Postal and Shipping

Grand Portage Post Office	77 Mile Creek Road	Grand Portage	MN	55605
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Water

Grand Portage Waste Water Treatment Plant		Grand Portage	MN	55605
Grand Portage Water Treatment		Grand Portage	MN	55605

National Monuments

Grand Portage National Monument		Grand Portage	MN	55605
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Appendix C

Steering Committee Meetings

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Cook County Hazard Mitigation Plan Update Kick-off Orientation Webinar

UNIVERSITY OF MINNESOTA GEOSPATIAL ANALYSIS CENTER

SWENSON COLLEGE
OF SCIENCE & ENGINEERING
UNIVERSITY OF MINNESOTA, DULUTH
Driven to Discover

Webinar Goals

Goals:

- Introduce the UMD Team and County contacts.
- Provide an overview of the project.
- Clarify roles and responsibilities.
- Outline the planning process, discuss key tasks and timelines.
- Discuss next steps and answer your questions.

Introductions

Who We Are (UMD Project Team)



Stacey Stark, Director, Geospatial Analysis Center (GAC)



Micabella Penning, Research Associate, GIS Specialist, Cartographer, and Editor (GAC)



Steve Graham, Research Associate and Flood Modeling Specialist (GAC)



Zach Vavra, GIS Specialist (GAC)



Bonnie Hundrieser, Emergency Management Planning Consultant (Hundrieser Consulting LLC)



Why UMD-GAC?

- **Proven experience**
GAC has extensive experience in the comprehensive review and update of county MHMPs, as well as update of the State MHMP.
- **Advanced Capabilities**
GAC has expertise in the application of GIS, HAZUS, and research to support MHMP development and meeting all FEMA requirements.
- **Ability to Expedite**
GAC has the ability to expedite the MHMP update process for multiple counties through a consistent approach and format, which also supports State and FEMA review of draft plans.
- **Planning Team**
GAC project team includes working with advanced GIS students and experienced consultants to effectively complete tasks.

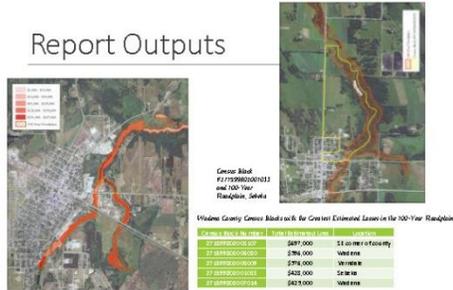
Overview of MHMP Update Process

Key Considerations for Discussion

EM Roles & Responsibilities

- Act as main Point of Contact.
- Track required local match and submit to HSEM.
- Coordinate communication and outreach to engage local planning team, additional key stakeholders, and the public.
- Review past mitigation actions and provide status update.
- Provide information for Capabilities Assessment (Plans & Programs in Place, Program Gaps or Deficiencies) for each hazard.
- Assist in development of new mitigation action chart (must be county and jurisdictionally specific) that includes projects for HMA eligibility.
- Provide information for Critical Facilities forms.
- Provide coordination with GIS and assessor's data managers in order to obtain GIS and parcel information for GIS analyses.
- Assist in timely review of material throughout the plan update process via phone, email, and in-person meetings.

Report Outputs



Mitigation Strategy

Key activities to support the update of the Mitigation Strategy will include a capabilities assessment for mitigating against natural hazards, as well as a comprehensive review of the status of mitigation actions in the previously approved plan.

Key Considerations:

- Plans and Programs in Place that support mitigation.
- Program Gaps or Deficiencies that hinder mitigation.
- Past Mitigation Action Review (Completed, Deleted, or Ongoing)
- Identification of projects that may be eligible for HMA funding.
- Local Mitigation Capabilities Assessment (LMCA) for jurisdictional-level mitigation actions.

Plan Adoption

After FEMA has provided "APA" status (Approval Pending Adoption), the county and all participating jurisdictions must formally adopt the plan.

Key Considerations:

- This step is often a difficult challenge for Emergency Managers after the plan is completed, and can bog down the process of final plan adoption and thus eligibility for FEMA HMA funding.
- Engaging County and City personnel throughout the planning process will help to ensure understanding of the purpose and process of the MHMP update, including expectation of follow-through to adopt the plan.

EM Tasks

➤ All county Emergency Managers will be provided with resources to complete the following tasks:

- ✓ Plans & Programs in Place Checklist
- ✓ Capabilities Assessment by each Natural Hazard
- ✓ Past Mitigation Action Review (Status Update)
- ✓ Public News Releases
- ✓ Compilation of Critical & Essential Facilities in Each Jurisdiction
- ✓ Coordination of Local Mitigation Capabilities Assessment
- ✓ Building Attribute Checklist for Flood Economic Loss Analysis (GIS and Assessor's office contact)

Next Steps

UMD Team members (Bonnie/Micaella) will follow up with each EM to provide & discuss the following assignments you can begin to work on:

- Plans & Programs in Place Checklist
- Capabilities Assessment (CA)
- Past Mitigation Action Review (PMAR)
- Listing of Critical Facilities
- Obtain building data from Assessor and parcels from GIS dept
- "Section 6" text (How the plan will be monitored, evaluated and updated within a 5-year cycle, and how public participation will continue).
- Scheduling of 1st Planning Team Meeting

Questions?

What questions do you have about the MHMP Update process?

Contact Information

Stacey Stark, MS, GISP
Geospatial Analysis Center
slstark@d.umn.edu
218-726-7438

Example Plans:
<https://z.umn.edu/hazardmitigation>



Grand Portage Reservation Multi-Hazard Mitigation Plan Update

July 26, 2018 MHMP Planning Team Meeting #1
Grand Portage Log Community Building – Grand Portage, MN
10:00 a.m. – 12:00 p.m.

Meeting Summary:

On Thursday, July 26, 2018, key tribal representatives, as well as other stakeholders were convened to participate in a Planning Team Meeting for the development of the new Grand Portage Reservation Tribal Annex to the Cook County Multi-Hazard Mitigation Plan (MHMP). The meeting was facilitated by the University of Minnesota – Duluth Geospatial Analysis Center (GAC) staff and Bonnie Hundrieser who are leading the update of the Cook County MHMP. A total of 15 people attended the meeting.

The opening presentation covered:

- The purpose of hazard mitigation planning.
- The role & responsibilities of the Planning Team.
- An overview of content in the MHMP and the Tribal Annex (County/Reservation: physical & social profile, Asset Inventory, Hazard Assessment and Vulnerability Analysis, Capability Assessment and Mitigation Actions).
- Group review and discussion of hazards that pose risk to the Grand Portage Reservation and their risk rankings.
- A review of mitigation strategies and considerations for developing local mitigation actions.
- An overview of the FEMA Hazard Mitigation Assistance (HMA) Grants program.

Following the presentation a facilitated Mitigation Action Working Session was held. Participants discussed the natural hazards of concern to the Grand Portage Reservation and filled out Mitigation Action Worksheets to identify specific mitigation actions to be included in the Tribal Annex. Mitigation actions were required to fall within one of the 5 mitigation action strategies:

1. Local Planning and Regulations
2. Structure and Infrastructure Projects
3. Natural Systems Protection
4. Education and Awareness Programs
5. Mitigation Preparedness and Response Support

Following the Mitigation Action Working Session, the group then discussed the upcoming process and anticipated timeline for engaging the public and other key stakeholders in an open plan review period and public meetings. Meeting attendees were told that they would be contacted for additional information and kept informed on the upcoming steps in the planning process, including opportunities for draft plan review and final selection of mitigation actions for inclusion in the plan.

Attached to this meeting summary are the following documentation items:

- 7-26-18 Grand Portage Meeting Email Invite
- 7-26-18 Meeting Agenda
- 7-26-18 Meeting Sign-in Sheets (electronic / hardcopy scanned)
- 7-26-18 Power Point Presentation Slides
- 7-26-18 Meeting Handouts (Mitigation Strategies, HMA Grants, Mitigation Ideas Worksheet)
- 7-26-18 Mitigation Ideas Working Session Notes

Meeting Summary Prepared By: Bonnie Hundrieser, UMD Project Team, (Hundrieser Consulting LLC)

From: Mike Keyport
To: [Shawna Premo](#)
Cc: [Bonnie Hundrieser](#)
Subject: Tribal Multi-Hazard Mitigation Plan
Date: Monday, July 9, 2018 10:43:35 AM

Greetings,

The Grand Portage Band is currently starting development of a **Tribal Multi-Hazard Mitigation Plan** for the Grand Portage Reservation. Our plan will serve as a Tribal Annex to the Cook County Multi-Hazard Mitigation Plan.

Your presence is requested at a Planning Team meeting for this plan to be held on:

Date: **Thursday, July 26, 2018**
Time: **10:00 a.m. – 12:00 p.m.**
Location: **Grand Portage Log Community Building**

I would like to invite the Grand Portage Tribal Council, Grand Portage Trust Lands Wildfire, Public Works, Public Health. Other key facilities such as Community Center, Charter School, Grand Portage Lodge & Casino, and the National Park Service.

This is not a meeting designed for the public, however please invite any stakeholders you may deem appropriate.

The development of this plan will address the natural hazards that face the Grand Portage Reservation and will result in mitigation actions for implementation that will reduce or eliminate loss of life or damage to property as a result of natural hazard events. Our adoption of the plan will also make the Grand Portage Band eligible to apply for FEMA hazard mitigation grant program funds for the implementation of mitigation projects. Your input as needed as being part of a Grand Portage Reservation community.

Your participation in this hazard mitigation plan is important for several reasons:

1. You will have input on projects we can implement on the Reservation that will help to eliminate or reduce the impacts of future natural disaster events.
2. The Grand Portage Band will be eligible to apply for significant federal mitigation funding from FEMA to implement specific projects that meet eligibility requirements.
3. Mitigation planning is a fundamental element in emergency management and local planning that we all must address to keep our community safe and resilient.
4. FEMA requires that the community participate in the planning process. Your participation is important so that the Tribe can ensure that we meet this requirement.

During this meeting we will discuss & rank the hazards that face the Grand Portage Reservation and discuss mitigation actions to include in the plan. The meeting will be facilitated by the University of Minnesota – Duluth Geospatial Analysis Center and Bonnie Hundrieser, an emergency management planning consultant working closely with us on this project.

If you cannot attend, please seek to send someone in your stead to represent you.

If you have any questions, please do not hesitate to contact me.

Thank you,

Mike Keyport
Grand Portage
Emergency Management Director
218-475-2129
218-387-4718
mikek@grandportage.com



Grand Portage Reservation Tribal Multi-Hazard Mitigation Plan

Planning Team Meeting #1

Thursday, July 26, 2018, 10:00 a.m. – 12:00 p.m.
Grand Portage Log Community Building – Grand Portage, MN

Presenting:

- Stacey Stark, University of Minnesota –Duluth, Geospatial Analysis Center
- Bonnie Hundrieser, Hundrieser Consulting LLC (UMD MHMP Project Team)

Agenda:

1. Welcome and Introductions
2. Grand Portage MHMP Tribal Annex Development
 - *About the Plan*
 - *Planning Team*
 - *Plan Content & Prioritization of Natural Hazards*
3. Review of Mitigation Strategies and Developing Mitigation Actions
4. Hazard Mitigation Assistance (HMA) Grants
5. Mitigation Action Working Session

Contact:

For more information on the Grand Portage MHMP, please contact:

- Mike Keyport, Grand Portage Emergency Management Director
218-475-2129 / mikek@grandportage.com
- Bonnie Hundrieser, UMD Project Team Member
218-343-3468 / hundrieserconsulting@gmail.com

Grand Portage 7/26/18 Planning Team Meeting #1
Participant Sign-in List (15 attendees)

Grand Portage Tribal MHMP Annex Thursday, July 26, 2018 Planning Team Meeting #1 - 10:00 a.m. to 12:00 p.m. Participant Sign-in List			
Name	Grand Portage Dept./ Agency/Organization	Title	Email
Clinton Little	MN DNR Coastal Program	Coastal Program Specialist	clinton.little@state.mn.us
Polly James	Elder Nutrition Program	Director	enpdirector@grandportage.com
William "Bill" Myers	Grand Portage Tribal Council	Councilmen	billm@grandportage.com
Jack Freeman	Grand Portage Lodge & Casino	Chief of Security	jfreeman@grandportage.com
Brian Sherburne	Grand Portage Lodge & Casino	Enterprise Administrator	bsherburne@grandportage.com
Krishan Woerdheide	Trustlands	Environmental Specialist	kwoerdeide@grandportage.com
Carmen Keyport	Oshki Ojimaag Charter School	Director	director@oshkiogimaag.org
Norman Deschampe	Reservation Tribal Council	Chair	norman@grandportage.com
April McCormick	Reservation Tribal Council	Secretary/Treasurer	aprlm@grandportage.com
Marie Spry	Reservation Tribal Council	Vice Chair	mariespry@grandportage.com
Erik Carlson	Wildfire	Fire Technician	erikc@boreal.org
Tony Swaber	Trustlands	Administrator	tswaber@grandportage.com
Matt Tyler	Trustlands	Forester	mtyler@grandportage.com
Mike Keyport	Emergency Management	Emergency Manager	mikek@grandportage.com
Margaret Watkins	Water Quality	Water Quality Specialist	mwatkins@grandportage.com

Grand Portage Reservation – Tribal Multi Hazard Mitigation Plan
 Planning Team Meeting – Thursday, July 26, 2018 – 10:00 a.m. to 12:00 p.m.

PARTICIPANT SIGN IN SHEET

Name	Grand Portage Dept. or Agency/Organization	Title	Email
1. Clinton Little	MNDNR - Coastal Program	Coastal Program Specialist	Clinton.Little@state.mn.us
2. Folke James	ENP	Director	penpdirector@grandportage.mn
3. William Ben Myers	Grand Portage Council	Councilman	billm@grandportage.com
4. JACK FOLEMYER	GPLC	CHIEF of SECURITY	jack@grandportage.com
5. Brian Skerburne	GPLC	EA	bskerburne@gp
6. Kristina Washburne	Trustlands	Special Spec. Director	kristina@grandportage.com
7. Carmen Kendorc	DOCS	Director	director@oshkiogimig.org
8. Alanna Desjardis	RTC	CHAIR	
9. April McCarroll	RTC - Tribal Council	Secretary/Treasurer	aprilmc@grandportage.com
10. Laurie Spory	RTC	Vice Chair	laurie@grandportage.com
11. Erik Carlisle	Wildfire	Fire Tech	eric@blushland.org
12. Tony Swabeer	Trustlands Administrator	Forester	tswabeer@grandportage.com
13. Matt Tyler	Trustlands		mttyler@grandportage.com
14. MIKE KEYPORT	EMERGENCY MANAGER	GRAND PORTAGE	MIKE@GRANDPORTAGE.COM
15. MARA KET COATKINS	GRAND PORTAGE	WATER QUALITY	
16.			
17.			
18.			
19.			

* Trustlands
 Margaret, Tony → m.watkins@grandportage.com 20216
 Heather Fox-Gis → heatherfg@gp

**Grand Portage Reservation
Tribal Multi-Hazard Mitigation Plan Annex**



July 26, 2018
Planning Team Meeting #1

Agenda

1. Welcome and Introductions
2. MHMP Plan & Tribal Annex Overview
 - About the Plan
 - Planning Team
 - Plan Content & Prioritization of Natural Hazards
3. Review of Mitigation Strategies and Developing Mitigation Actions
4. Hazard Mitigation Assistance (HMA) Grants
5. Mitigation Action Working Session



**About your UMD
Project Team**



- The **Geospatial Analysis Center (GAC) at the University of Minnesota Duluth** was contracted by Minnesota HSEM to facilitate the development of this plan and to conduct spatial analysis, mapping and research for the plan.
- The GAC has worked on 30 MHMP's (2011-2018), working with both Minnesota counties and tribes.
- Working with the GAC is **Bonnie Hundrieser**, who specializes in Emergency Management planning.

About the Plan

The Multi-Hazard Mitigation Plan (MHMP) is a requirement of the Federal Disaster Mitigation Act of 2000 (DMA 2000). **The development of a local government plan is required in order to maintain eligibility for certain federal hazard mitigation grant funding programs.**

MHMP's must:

- Be updated every 5 years
- Identify hazards and conduct a risk assessment
- Include goals, strategies, and mitigation actions
- Address all jurisdictions
- Engage stakeholder and include public participation

The Grand Portage Tribal Annex

The Grand Portage Band is developing a **Tribal Annex** to the Cook County MHMP. The annex will identify:

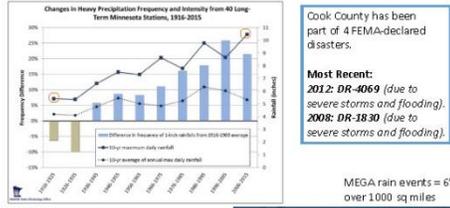
- **Hazards and vulnerabilities** that are specific to the Reservation.
- **Capability strengths & gaps** for mitigation that are specific to the Reservation.
- **Mitigation projects & activities** that are specific to the Reservation.
- **Other FEMA-specific requirements** for Tribes.

The Band's adoption of the Cook County MHMP and of the Grand Portage Tribal Annex will make the Grand Portage Band eligible to apply for FEMA hazard mitigation assistance grants either in partnership with Cook County to the State of Minnesota or directly to FEMA.

What is Hazard Mitigation?

- HM is **sustained action** to reduce or eliminate long-term risk to people and their property from hazards.
- HM Planning is the process local government use to **identify risks and vulnerabilities** associated with natural disasters, and develop **long-term strategies for protecting people and property from future hazard events.**
- HM planning allows communities to strategically plan for and **work together** to implement activities that are cost effective, technically feasible and environmentally sound **BEFORE** a disaster strikes.
- A dollar spent on mitigation grants leads to an average of \$6 in avoided post-disaster relief costs and increased federal tax revenues.

Hazard Assessment Example: Flooding FEMA-Declared Disasters in Minnesota and Observed Trends



For Minnesota (above):
 • 10-year maximum value has doubled from 5 to 10 inches



Hazard Vulnerability Example: Flooding Modeled 100-yr Flood



Examples of economic loss output from FEMA Hazus model for census block, parcels, and by occupancy class

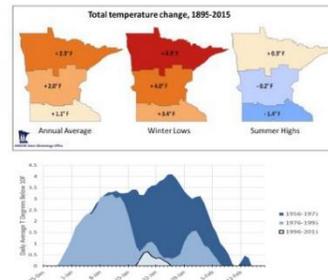
General Occupancy	Estimated Total Building	Total Damaged Buildings	Total Building Exposure	Total Economic Loss	Building Loss
Agricultural	535	0	\$106,955,000	\$1,445,000	\$971,000
Commercial	238	0	\$14,573,000	\$309,000	\$181,000
Education	8	0	\$1,962,000	\$21,000	\$1,000
Government	77	0	\$17,261,000	\$665,000	\$1,000
Industrial	25	0	\$4,970,000	\$7,000	\$1,000
Manufacturing	42	0	\$14,968,000	\$127,000	\$58,000
Residential	2,330	35	\$154,040,000	\$1,397,000	\$631,000
Total	3,266	35	\$314,729,000	\$3,769,000	\$1,663,000

(Examples from Lincoln and Lac Qui Parle Counties)

Hazard Vulnerability Example: Climate Projections

Hazard	Projections through century	Confidence in projected changes
Extreme cold	Continued loss of cold extremes and dramatic warming of coldest conditions	Highest
Extreme rainfall	Continued increase in frequency and magnitude; unprecedented flash-floods	
Heat waves	More hot days with increases in severity, coverage, and duration of heat waves	High
Drought	More days between precipitation events, leading to increased drought severity, coverage, and duration	Moderately High
Heavy snowfall	Large events less frequent as winter warms, but occasional very large snowfalls	Moderately low
Severe thunderstorms & tornadoes	More "super events" possible, even if frequency decreases	

Hazard Vulnerability Example: Warming Climate Projections



Winter warming 13x faster than summer

Number of days where daily average is below 10F is drastically declining

What Hazards are Addressed?

A Multi-Hazard Mitigation Plan looks primarily at natural disasters, including:

Flooding	Hail	Drought
Dam/Levee Failure	Lightning	Extreme Heat
Wildfire	Winter Storms	Extreme Cold
Windstorms	Landslides/Erosion	Earthquakes
Tornadoes	Land Subsidence (Sinkholes & Karst)	

Hazard Categories from the Minnesota State Plan

Manmade hazards are not required by the DMA 2000 to be addressed in the MHMP.

How are Hazards Identified & Ranked for a Community?

- Previous Hazard Events
- Historical Data (National Climatic Data Center)
- Calculated Priority Risk Index (CPRI)

CPRI Risk Factors
 PROBABILITY
 MAGNITUDE/SEVERITY
 WARNING TIME
 DURATION

Hazard Assessment for Hazard Risk Ranking

CPRI Assessment for Hazard Risk Ranking

Prioritization of Risks Faced by Grand Portage Reservation

Following are the natural hazards proposed for inclusion in the Cook County Multi-Hazard Mitigation Plan & Grand Portage Tribal Annex.

A discussion on the prioritization of these hazards by their risk severity will provide the Tribe direction in the development of mitigation actions for the next 5 years.

Prioritization of Hazards for Grand Portage Reservation	
Type	Risk Severity
Wildfire	High
Severe Summer Storms (Thunder storms, Lightning, Hailstorms, Windstorms, Tornadoes)	High
Severe Winter Storms (Blizzards, Heavy Snow, Ice Storms)	High
Flash Flood, Riverine Flood, & Coastal Flood	Moderate
Extreme Temperatures (Heat & Cold)	Moderate
Drought	Moderate
Erosion /Coastal Erosion and Land Subsidence	Low
Dam Failure	Low

Wildfire

- **Probability:** High
- **Possible Impacts:**
 - Danger to Life Safety (homes in wooded areas)
 - Loss of Forests and Natural Resources
 - Damage to Property
 - Cascading Effects such as air quality pollution, need for extended evacuation.



Proposed Risk Ranking: HIGH

Severe Summer Storms

- **Probability:** High
- **Possible Impacts:**
 - Danger to Life Safety
 - Damage to Natural Resources
 - Damage to Property
 - Cascading Effects such as flooding to roads, area lakes & streams, downed power lines & extended power outages to homes and critical facilities.



Proposed Risk Ranking: HIGH

Severe Winter Storms

- **Probability:** High
- **Possible Impacts:**
 - Danger to Life Safety (road passage, homes)
 - Interruption to Transportation and Community Services
 - Damage to Property
 - Cascading Effects such as downed power lines & extended power outages to homes and critical facilities.



Proposed Risk Ranking: HIGH

Flooding

Flash Flood, Riverine Flood, and Coastal Flooding

- **Probability:** Moderate to High
- **Possible Impacts:**
 - Danger to Life Safety (road passage, flooding of homes)
 - Interruption to Transportation and Community Services
 - Flooding of Wild Rice Lakes and lost harvest
 - Damage to Property
 - Cascading Effects such as pump station failure



Proposed Risk Ranking: MODERATE

Extreme Temperatures (Heat/Cold)

- **Probability:** Moderate
- **Possible Impacts:**
 - Possible Danger to Life Safety
 - Health Vulnerability of Adults or Children to Heat Stroke or Hypothermia
 - Cascading Effects such as need to provide temporary sheltering



Proposed Risk Ranking: MODERATE

Drought

- **Probability:** Low to Moderate
- **Possible Impacts:**
 - Impacts to local water resources and lakes
 - Impact to Wild Rice Lakes to Produce Sustainable Harvest
 - Cascading Effects such as increased danger for wildfire.



Proposed Risk Ranking: Moderate

Erosion, Coastal Erosion, Land Subsidence

- **Probability:** Low to Moderate
- **Possible Impacts:**
 - Erosion of coastal shore areas, streambanks, riverbanks, lake edges
 - Sediment load to lakes
 - Damage to Property
 - Cascading Effects such as increase in landslides on steep hills during high rain events.



Proposed Risk Ranking: LOW

Review of Mitigation Capabilities

Multi-Hazard Mitigation Plans require that each jurisdiction **must** document the existing authorities, policies, programs, and resources in place for mitigation.

- What **plans and programs** are in place to support mitigation against that hazard?
- What **program gaps or deficiencies** exist to support mitigation against that hazard?

Mitigation Strategy #1: Local Planning and Regulations

Government, administrative, or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses.

Examples include planning and zoning, building codes, capital improvement programs, open space preservation, and stormwater management regulations.

Local Planning & Regulations Examples



Mitigation Strategy #2: Structure and Infrastructure Projects

Actions that involve the construction of structures to reduce the impact of a hazard, such as dams, levees, floodwalls, seawalls, retaining walls, and safe rooms; and actions that involve the modification of existing buildings or structures to protect them from a hazard or remove them from the hazard area.

Examples include acquisition, elevation, structural retrofits, storm shutters, and shatter-resistant glass. Climate Resilient Mitigation Actions include flood diversion and storage and green infrastructure. This mitigation strategy includes road/bridge/culvert projects for local flood mitigation.

Acquisition of Flood Prone Properties and Conversion to Open Space



Community Safe Rooms Wadena-Deer Creek School, June 17 2010



August, 2012 – 1st school based tornado safe room (Wadena)



Green Infrastructure Projects



Power Line retrofit/burial



Mitigation Strategy #3: **Natural Systems Protection**

Actions that, in addition to minimizing hazard losses, preserve or restore the functions of natural systems.

These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, wetland restoration and preservation, aquifer storage and recovery and floodplain and stream restoration.

Natural Systems Protection examples



Mitigation Strategy #4:
Education and Awareness Programs

Actions to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them.

Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.

Education & Awareness Program Examples



Mitigation Strategy #5:
Mitigation Preparedness & Response Support

(HSEM added strategy for use in the state)

Actions that protect people and property prior to, during and immediately after a disaster or hazard event. Services include warning systems and emergency response services.

These activities are not typically considered mitigation, but support reduction of the effects of damaging events.

Mitigation Preparedness & Response Support examples



Mitigation Actions Update

So far, the following has been completed in the review of mitigation actions in the last MHMP:

1. What mitigation actions **have been completed** since the last plan was adopted.
2. What mitigation actions **should be deleted**.
3. What mitigation actions **have not been completed or may be an on-going action** to roll-over into the new plan.

Next Steps in Developing Actions

1. Identify specific mitigation strategies and actions at the jurisdictional level based on the community's risk and vulnerabilities.
2. Consider priority, timeframe, who's responsible, and what is in place to support implementation.
3. Consider potential funding and cost/benefit.
4. Engage key partners and stakeholders in providing local expertise and feedback.
5. Provide opportunities for public involvement and feedback in the planning process.

FEMA's Hazard Mitigation Assistance (HMA) Grant Program

The Federal Emergency Management Agency (FEMA) provides grant funding to help communities to implement eligible mitigation projects that will help to reduce or eliminate the impact of future hazard or disaster events.



Not all mitigation actions are eligible for federal HMA funding. Identification of eligible projects for potential HMA funding is a critical part of the MHMP planning process!

Mitigation Grant Eligibility

- Local Units of Government
- All jurisdictions in State
 - City, County, Tribal, private non-profit
- Cost Share - 75%/25%
- **Project must be identified in local HM plan**

Application Process

- Notice of Available Funds
- Application
- Benefit Cost Analysis
- Environmental Historic Preservation
- State and FEMA review
- Award ~ 3 year period of performance
- Closeout

Eligible project types

- **Acquisition/Elevation/Relocation**
 - Substantially or repetitively damaged (flood or erosion)
 - Threat of imminent danger (slope failure)
- **Tornado Safe Rooms** (severe storms/tornadoes)
- **Powerline retrofit/strengthening** (severe storms/ice)
- **Wildfire sprinklers/defensible space/resistant materials**
- **Slope stabilization**
- **Flood risk reduction activities**

New! Climate Resilient Mitigation Actions (CRMA)

FEMA encourages communities to incorporate **climate resilience** in all mitigation actions through use of **green infrastructure methods** and designing projects to increase **ecosystem service benefits**

1. Aquifer Storage and Recovery (ASR)
2. Floodwater Diversion, Storage, and Recovery
3. Floodplain and Stream Restoration

**Historical projects in Cook County
resulting from Hazard Mitigation funding**

Year	Project Description	Sub-Grantee	Federal Share
1997	Convert overhead electric power lines to underground (HMGF)	Arrowhead Electric Cooperative	\$306,915
2008	Wildfire Retrofit Project (PDM)	Cook County	\$1,913,480
2008	Arrowhead Fire Mitigation Project (PDM)	ARDC	\$448,375
2011	Wildfire Mitigation (PDM)	Cook County	\$494,864
Total HMGF/PDM Funding - Cook County			\$3,163,634

Mitigation Strategies

For every community, there are a range of mitigation actions that can be taken to work to reduce or eliminate the impacts of future natural hazard and disaster events. Following are the four types of mitigation strategies recommended by the Federal Emergency Management Agency (FEMA) for the organization of mitigation actions:

- 1) **Local Planning and Regulations:** Government, administrative, or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include planning and zoning, building codes, capital improvement programs, open space preservation, and stormwater management regulations.
- 2) **Structure and Infrastructure Projects:** Actions that involve the construction of structures to reduce the impact of a hazard, such as dams, levees, floodwalls, seawalls, retaining walls, and safe rooms; and actions that involve the modification of existing buildings or structures to protect them from a hazard or remove them from the hazard area. Examples include acquisition, elevation, structural retrofits, storm shutters, and shatter-resistant glass. CRMA include flood diversion and storage (FDS) and green infrastructure.
- 3) **Natural Systems Protection:** Actions that, in addition to minimizing hazard losses, preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation. Aquifer storage and recovery (ASR) and floodplain and stream restoration (FSR).
- 4) **Education and Awareness Programs:** Actions to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.

A fifth strategy was added by Minnesota HSEM for use in the state:

- 5) **Mitigation Preparedness and Response Support:** Actions that protect people and property prior to, during and immediately after a disaster or hazard event. Services include warning systems and emergency response services.. These activities are typically not considered mitigation, but support reduction of the effects of damaging events.



State of Minnesota
Department of Public Safety
Division of Homeland Security and Emergency Management
445 Minnesota Street, Suite 223
St. Paul, MN 55101-6223

HAZARD MITIGATION ASSISTANCE

Hazard Mitigation Assistance (HMA) grant programs provide funding with the aim to reduce or eliminate risk to property and loss of life from future natural disasters. HMA programs are typically a 75%/25% cost share program. The federal share is 75% of total eligible project reimbursement costs. The local applicant is responsible for 25% of the project costs. The amount of HMGP funds availability is based on a percent of Public Assistance provided by Federal Emergency Management Agency (FEMA).

- Hazard Mitigation Grant Program (HMGP) funds assists in implementing long-term hazard mitigation measures following a Presidential major disaster declaration
- Pre-Disaster Mitigation (PDM) provides funds for hazard mitigation planning and projects on an annual basis
- Flood Mitigation Assistance (FMA) provides funds for projects to reduce or eliminate risk of flood damage to buildings that are insured under the National Flood Insurance Program (NFIP) on an annual basis

Who is eligible for grant funding?

All applicants must have or be covered under an approved Hazard Mitigation Plan. Eligible applicants include: State and local governments; certain private non-profit organizations or institutions; and Tribal Communities

What types of projects can be funded?

All projects must be eligible, technically feasible, and cost-effective. All projects are subject to environmental and cultural resource review. Examples of projects include:

- ***NEW! Climate Resilient Mitigation Activities*** are eligible under the Hazard Mitigation Assistance programs to support communities in reducing the risks associated with climate change. These activities are: ***Aquifer Storage and Recovery, Floodplain and Stream Restoration, Flood Diversion and Storage, and Green Infrastructure Methods.*** These activities can mitigate any natural hazard; however, the activities are focused on mitigating the impacts of flood and drought conditions.
- **Property Acquisition and Structure Demolition or Relocation** – The voluntary acquisition of an existing at-risk structure and the underlying land, and conversion of the land to open space through the demolition or relocation of the structure. The property must be deed-restricted in perpetuity to open space uses to restore and/or conserve the natural floodplain functions.
- **Safe Room Construction** - Safe room construction projects are designed to provide immediate life-safety protection for people in public and private structures from tornado and severe wind events. Includes retrofits of existing facilities or new safe room construction projects, and applies to both single and dual-use facilities
- **Minor Localized Flood Reduction Projects** - Projects to lessen the frequency or severity of flooding and decrease predicted flood damages, such as the installation or modification of culverts, and stormwater management activities, such as creating retention and detention basins. These projects must not duplicate the flood prevention activities of other Federal agencies and may not constitute a section of a larger flood control system.

- **Infrastructure Retrofit** - Measures to reduce risk to existing utility systems, roads, and bridges.
- **Soil Stabilization** - Projects to reduce risk to structures or infrastructure from erosion and landslides, including installing geotextiles, stabilizing sod, installing vegetative buffer strips, preserving mature vegetation, decreasing slope angles, and stabilizing with rip rap and other means of slope anchoring. These projects must not duplicate the activities of other Federal agencies.
- **Wildfire Mitigation** - Projects to mitigate at-risk structures and associated loss of life from the threat of future wildfire through: Defensible Space for Wildfire, Application of Ignition-resistant Construction and Hazardous Fuels Reduction
- **Post-Disaster Code Enforcement** – Projects designed to support the post-disaster rebuilding effort by ensuring that sufficient expertise is on hand to ensure appropriate codes and standards, including NFIP local ordinance requirements, are used and enforced.
- **Generators** – Emergency equipment to provide a secondary source of power. Generators and related equipment (e.g., hook-ups) are eligible provided that they are cost-effective, contribute to a long-term solution to the problem they are intended to address, and meet other program eligibility criteria.
- **5 Percent Initiative Projects** – These projects, which are only available pursuant to an HMGP disaster, provide an opportunity to fund mitigation actions that are consistent with the goals and objectives of the State or Indian Tribal (Standard or Enhanced) and local mitigation plans and meet all HMGP program requirements, but for which it may be difficult to conduct a standard Benefit-Cost Analysis (BCA) to prove cost-effectiveness.
- **All-Hazard Mitigation Plans**
Update or enhance sections of the current FEMA-approved mitigation plan, such as:
 - Risk and vulnerability assessment based on new information, including supporting studies, such as economic analyses;
 - Mitigation strategy, specifically strengthening the linkage to mitigation action implementation, with emphasis on available HMA project grant funding; or
 - Incorporate climate adaptation, green building, or smart growth principles into the risk assessment and/or mitigation strategy.

How do I apply?

Start by submitting a Notice of Interest, available on HSEMs website at:

<https://dps.mn.gov/divisions/hsem>

Where can I obtain further information?

For additional information about the HMA grant program, you can refer to the FEMA website:

<http://www.fema.gov/hazard-mitigation-assistance>

For additional information contact:

- Jennifer Nelson, State Hazard Mitigation Officer at (651) 201-7427 or Jennifer.E.Nelson@state.mn.us
- Jim McClosky, Hazard Mitigation Planner at (651) 201-7455 or James.McClosky@state.mn.us

MITIGATION ACTIONS WORKSHEET

HAZARD: _____ / JURISDICTION: _____

Mitigation Strategy:

- | | |
|--|---|
| <input type="checkbox"/> Local Planning & Regulations | <input type="checkbox"/> Education and Awareness |
| <input type="checkbox"/> Structure and Infrastructure Projects | <input type="checkbox"/> Mitigation Preparedness and Response Support |
| <input type="checkbox"/> Natural Systems Protection | |

Mitigation Action:

HAZARD: _____ / JURISDICTION: _____

Mitigation Strategy:

- | | |
|--|---|
| <input type="checkbox"/> Local Planning & Regulations | <input type="checkbox"/> Education and Awareness |
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Mitigation Action:

HAZARD: _____ / JURISDICTION: _____

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- | | |
|--|---|
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Mitigation Action:

HAZARD: _____ / JURISDICTION: _____

Mitigation Strategy:

- | | |
|--|---|
| <input type="checkbox"/> Local Planning & Regulations | <input type="checkbox"/> Education and Awareness |
| <input type="checkbox"/> Structure and Infrastructure Projects | <input type="checkbox"/> Mitigation Preparedness and Response Support |
| <input type="checkbox"/> Natural Systems Protection | |

Mitigation Action:

HAZARD: _____ / JURISDICTION: _____

Mitigation Strategy:

- | | |
|--|---|
| <input type="checkbox"/> Local Planning & Regulations | <input type="checkbox"/> Education and Awareness |
| <input type="checkbox"/> Structure and Infrastructure Projects | <input type="checkbox"/> Mitigation Preparedness and Response Support |
| <input type="checkbox"/> Natural Systems Protection | |

Mitigation Action:

HAZARD: _____ / JURISDICTION: _____

Mitigation Strategy:

- | | |
|--|---|
| <input type="checkbox"/> Local Planning & Regulations | <input type="checkbox"/> Education and Awareness |
| <input type="checkbox"/> Structure and Infrastructure Projects | <input type="checkbox"/> Mitigation Preparedness and Response Support |
| <input type="checkbox"/> Natural Systems Protection | |

Mitigation Action:

Grand Portage Reservation
July 26, 2018 MHMP Planning Meeting
Mitigation Ideas Worksheet Notes

Following are notes from the Grand Portage Reservation 7-26-18 MHMP Planning Team Meeting “Mitigation Action Working Session” part of the meeting. Participants worked individually or in groups and used Mitigation Action Worksheets to brainstorm new mitigation ideas for the Reservation. Participants used the worksheets to develop mitigation action ideas, identifying:

- Hazard – what natural hazard does the action focus on?
- Jurisdiction/Area – what jurisdiction (*area*) is for? (All of Reservation or Specific Areas)
- Strategy – which mitigation strategy does this action relate to?
- Action – what is a description of the mitigation action?

The mitigation actions identified during this session will be used to support development of mitigation actions to include in the 2018 Grand Portage Reservation Tribal Annex to the Cook County MHMP.

Margaret Watkins, Grand Portage Water Quality Specialist

Hazard: Flooding
Strategy: Planning / Structure & Infrastructure Projects
Action: Need an alternate route for evacuation; there is one road in/out of Grand Portage. Inland road upgrades are needed and new connections to other roads. Install bigger culverts geared to handle a 500-year flood instead of the “old” 100-year flood standard for culverts.

Hazard: Flooding
Strategy: Structure & Infrastructure Projects
Action: Improve stormwater management for our sewer ponds. To prevent untreated sewage from overflowing the ponds after an extreme storm event, it would be helpful to have a pumping system and location in place where the wastewater could safely and efficiently be moved to.

Hazard: Flooding
Strategy: Natural Systems Protection
Action: Erosion control along Lake Superior shoreline and Hollow Rock Creek.

Matt Tyler, Grand Portage Forester

Hazard: Wildfire
Strategy: Natural Systems Protection / Structure & Infrastructure Projects
Action: Conduct wildfire hazardous fuels inventory on the Reservation.
Implement Firewise landscaping where needed for defensible space.
Investigate PDM grant application for metal roofs.
Develop community firebreaks/trails.
Increase wildfire-fighting capacity (equipment)

Hazard: Ice Storms
Strategy: Structure & Infrastructure Projects
Action: Ice storms are expected to increase with climate change. Increased ice storms can take down powerlines and close trails and roads. Investigate ways to 1) Bury powerlines where they aren't already buried (and where is feasible); 2) Strategically brush or landscape trails/roads; and 3) Increase brushing capacity to reduce trees/branches that may threaten to fall due to the weight of ice.

Hazard: Drought
Strategy: Natural Systems Protection
Action: Assess the relative drought resistance of various sugar bush and paper birch sites and prioritize them for restoration treatments.

Brian Sherburne, Grand Portage Enterprise Administrator

Hazard: Wildfire
Strategy: Structure & Infrastructure Projects
Action: Access to water pumping from lake during defensible space efforts.

Hazard: Chemical Spill (Hwy. 61)
Strategy: Local Planning & Regulations
Action: Learn what is hauled on Hwy. 61. Understand how to respond to a spill.

William "Bill" Myers, Reservation Tribal Council - Councilman

Hazard: Loss of Power (Long-term)
Strategy: Structure & Infrastructure Projects
Action: Put more power lines underground from sub-station west of Reservation. Put in wind power for Reservation Enterprise.

Tony Swaber, Grand Portage Trustlands Administrator

Hazard: Wildfire
Strategy: Planning & Regulations / Natural Systems Protection
Action: GP Fire/Forestry has fuels reduction program forest management plan. (Continue planning & implementation). Address air quality on the Reservation from fires outside that may threaten public health.

Hazard: Electric Power
Strategy: Structure & Infrastructure Projects
Action: Winter storm or straight line winds can result in power loss that lasts 2-3 days at a time. (Encourage local residents to have generators).

Hazard: Coastal Erosion
Strategy: Natural Systems Protection
Action: Lake Superior shore line erodes with large storms and wind build up. (Find ways to mitigate against shoreline erosion).

Carmen Keyport, Grand Portage Oshki Ogimaag Charter School Director

Hazard: Severe Wind
Strategy: Structure & Infrastructure Projects
Action: Community safe room. Most people do not have basements, and a community safe room to protect against severe wind events would be important. For example, an addition to our Community Center.

Hazard: All-Hazards
Strategy: Education & Awareness Programs
Action: Remind people how to sign up for Code Red. People change phone numbers often and may forget to sign up for the CodeRed notification system.

Hazard: All-Hazards
Strategy: Education & Awareness Programs
Action: Increase education and awareness on personal safety planning for emergencies. Some people do not have a plan on how to react in an emergency situation. How can we better help people think about emergency preparedness?

Hazard: Wildfire
Strategy: Structure & Infrastructure Projects
Action: Install external wildfire sprinkler systems for residents in high-risk wildfire areas where possible.

Jack Freeman, Grand Portage Lodge and Casino – Chief of Security

Hazard: Wildfire
Strategy: Planning & Regulations / Structure & Infrastructure Projects
Action: Implement Firewise elements for existing properties. Implement sprinkler systems to protect housing.

Hazard: Extreme Cold Weather
Strategy: Mitigation Preparedness & Response Support
Action: 1) Define community safe space for use in extreme cold weather (Community Center, Casino/Lodge; 2) Provide education programs defining resource options.

April McCormick, Reservation Tribal Council - Secretary/Treasurer

Hazard: Wildfire
Strategy: Local Planning & Regulations/Natural Systems Protection
Action: Use Land use and Forestry to strengthen areas at risk for wildfire prior to development of residential areas. (*Ask Erik Carlson, Forestry for more info).

Hazard: High Volume Water (Rain/Flood Stormwater)
Strategy: Structure & Infrastructure Projects / Natural Systems Protection
Action: (see list)

- Upsize culverts where needed to handle 500-year flood event, not 100-year. Identify risk areas of concern, say for example Red Rock Creek, MN Hwy. 61.
- Work on Reservation Restoration Projects. Address failing gabion baskets. Redesign river contours to natural. Partners: Grand Portage, MnDOT, Cook County SWCD, Keith Anderson
- Address high-risk areas for flooding (Lodge/Casino, Bay Homesites/Lakeside, transportation routes (Hwy. 61/old Hwy.)
- Mitigate wastewater treatment exposure to high volumes of water (supportive of notes from Margaret Watkins).

Hazard: Power Failure/Severe Storms
 Strategy: Structure & Infrastructure Projects/Education & Awareness Programs /Mitigation Preparedness & Response Support

- Action: (see list)
- Enhance facilities that provide safety in case of natural hazard event (i.e., extreme summer or winter storms that cause extended power outage).
 - Construct “Safe Rooms” for high winds at our Community Center and the Lodge/Casino.
 - Educate residents on having generators and salt water rechargeable batteries.
 - Investigate working with power company to strengthen/retrofit/or bury powerlines underground.
 - Improve the Colleville Substation to handle power better

Krishna Woerheide, Grand Portage Trustlands, Environmental Specialist

Hazard: Severe Summer Storms / Drought
 Strategy: Local Planning & Regulations / Structure & Infrastructure Projects
 Action: Food Sustainability Initiative. Protection of Tribal Community Gardens, orchards, and sugarbush.

Hazard: Stormwater/Flood Management/Erosion
 Strategy: Structure & Infrastructure Projects
 Action: (see list)

- Mitigate against stream and Lake Superior shore erosion during extreme rain events
- Mitigate against contamination of drinking water systems post-flood
- Mitigate against the release of beaver dams near roads and subsequent flooding

Hazard: Wetlands/Habitat Protection
 Strategy: Natural Systems Protection
 Action: Work on protection of wetlands to protect habitat for subsistence species (moose, bear, deer) in the event of drought/flood/excessive heat, etc. Subsistence species are an important part of this area. Also included should be hatchery operations and fish habitat.

Grand Portage Reservation Multi-Hazard Mitigation Plan Update

October 16, 2018 MHMP Planning Team Meeting #2
Grand Portage Log Community Building – Grand Portage, MN
10:00 a.m. – 12:00 p.m.

Meeting Summary:

On Tuesday, October 16, 2018 members of the Grand Portage Reservation Multi-Hazard Mitigation (MHMP) Planning Team convened to conduct a review and discussion of the draft mitigation action charts developed for Grand Portage Tribal Annex to the Cook County MHMP. The meeting was facilitated by Bonnie Hundrieser, a member of the University of Minnesota – Duluth Geospatial Analysis Center (GAC) planning team that is leading the update of the Cook County/Grand Portage MHMP. A total of 11 people attended the meeting, representing Grand Portage tribal government, department personnel, residents, and other agency stakeholders from outside of the Reservation.

The opening Power Point presentation covered a re-cap of key points regarding the MHMP plan & Tribal Annex (*purpose of the plan, who the plan covers, who needs to participate, what hazards are addressed and how they are ranked, mitigation strategies to be used, and what projects may be eligible for FEMA HMA funding*). The presentation also provided a discussion of climate change adaptation and resilience in relationship to hazard mitigation. A detailed breakdown of the Mitigation Action Chart was provided to explain the relevance of each column to be addressed in the chart.

Following the presentation, the planning team participated in a facilitated discussion of the Tribe's draft master Mitigation Action Chart. New mitigation actions included in the chart were identified through the Tribe's review of current and new mitigation actions during the first planning team meeting and capabilities assessment process. The planning team discussed each of the mitigation actions, adding comments, corrections, and notes on where potential funding sources or project partners would be applicable.

Following the Mitigation Action Chart review, the group discussed the upcoming process of public outreach, holding a public meeting, and posting the final draft of the plan for the public to review and comment on, followed by submission of the draft plan to HSEM and FEMA for final review and approval.

Attached to this meeting summary are the following documentation items:

- Grand Portage HMP Mtg. #2 Email Invite
- 10-16-18 Meeting Agenda
- 10-16-18 Meeting Sign-in Sheets
- 10-16-18 Power Point Presentation Slides

*Meeting Summary Prepared By:
Bonnie Hundrieser, UMD Project Team, (Hundrieser Consulting LLC)*

**GRAND PORTAGE EMERGENCY MANAGEMENT / SAFETY
OFFICE**

105 STORE ROAD GRAND PORTAGE MN 55605 PHONE 475-2129

September 25, 2018

SUBJECT: Grand Portage Tribal Multi-Hazard Mitigation Plan

Greetings,

Your presence is requested at the **2nd Planning Team Meeting** for the update of the **Grand Portage Tribal Multi-Hazard Mitigation Plan** on:

Date: Tuesday, October 16, 2018

Time: 10:00 a.m. - 12:00 p.m.

Location: Grand Portage Log Community Building (73 Upper Road)

During this meeting we will be reviewing the draft Grand Portage **5-year Mitigation Action Chart** to be included in the plan. Your feedback will be needed to identify & discuss the mitigation actions that will be listed for implementation on the Reservation. This is a Federal requirement we must cover for the plan to be approved. The meeting will be facilitated by Bonnie Hundrieser, a member of the UMD Team who is working closely with us on this project.

Please RSVP your attendance to me. If you cannot attend, please seek to send someone else in your stead as your representation. It is really important that we have input from key Tribal government and departments; Trustlands, Forestry, School, Enterprise, and Public Works. Non-Tribal key partners will also be invited; Arrowhead Electric, NPS, and MN DOT.

If you have questions, please do not hesitate to contact me.

Thank You,

*Mike Keyport, Emergency Management/Safety Director
Grand Portage Band of Lake Superior Chippewa
Po Box 428
Grand Portage MN 55605
Ph 218-475-2129
Cell 218-387-4718
mikek@grandportage.com*



Grand Portage Reservation Tribal Multi-Hazard Mitigation Plan

Planning Team Meeting #2

Tuesday, October 16, 2018, 10:00 a.m. – 12:00 p.m.
Grand Portage Log Community Building – Grand Portage, MN

Presenting:

Bonnie Hundrieser, UMD MHMP Project Team Member

Agenda:

1. **Welcome & Introductions**
2. **MHMP Presentation**
 - Recap of Key Points (Plan purpose, process and content)
 - Overview of MDH Region 2 Climate Profile / Climate Resilient strategies
 - Mitigation Action Chart Overview - Explanation of all columns of the MAC
3. **MAC Working Session: Group Review & Feedback**
 - Group review and feedback of Grand Portage MAC (corrections, revisions, new items)
4. **Discussion of Next Steps**
 - Finalize Mitigation Action Chart
 - Public Outreach & Engagement (News Release, Online plan review & comment period)

Contact:

For more information on the Grand Portage MHMP, please contact:

- Mike Keyport, Grand Portage Emergency Management Director
218-475-2129 / mikek@grandportage.com
- Bonnie Hundrieser, UMD Project Team Member
218-343-3468 / hundrieserconsulting@gmail.com

Grand Portage 10/16/18 Planning Team Meeting #2
 Participant Sign-in List (11 attendees)

Grand Portage Tribal MHMP Annex Tuesday, October 16, 2018 Planning Team Meeting #2 - 10:00 a.m. to 12:00 p.m. Participant Sign-in List			
Name	Grand Portage Dept./ Agency/Organization	Title	Email
Marie Spry	GP Reservation Tribal Council	Vice Chair	mariespry@grandportage.com
Brandon Seitz	National Park Service	Resource Assistant	brandon.seitz@nps.gov
Valita Bockovich	GP Grants/Accounting	Accounting Clerk	valitaab@grandportage.com
Ann Hendricks	Community Member	GP Resident	hendricks_ann@yahoo.com
Matt Tyler	Trustlands	Forester	mtyler@grandportage.com
John Twiest	Arrowhead Electric Cooperative	Operations Manager	jtwiest@arrowhead.coop
Brian Sherburne	Grand Portage Lodge & Casino	Enterprise Administrator	bsherburne@grandportage.com
Clinton Little	MN DNR Coastal Program	Coastal Program Specialist	clinton.little@state.mn.us
Jack Freeman	Grand Portage Lodge & Casino	Chief of Security	jfreeman@grandportage.com
Paula Schaeffbaur	GP Health/EMS	Director	paulas@grandportage.com
Mike Keyport	Emergency Management	Emergency Manager	mikek@grandportage.com

Grand Portage Reservation – Tribal Multi Hazard Mitigation Plan
 Planning Team Meeting #2 – Tuesday, October 16, 2018 – 10:00 a.m. to 12:00 p.m.

PARTICIPANT SIGN IN SHEET

Name	Grand Portage Dept. or Agency/Organization	Title	Email
1. <i>Maia Spry</i>	<i>GP Tribal Council</i>	<i>Vice Chair</i>	<i>maia@grandportage.com</i>
2. <i>Brandon Seitz</i>	<i>NPS</i>	<i>Resource Asst.</i>	<i>brandon.seitz@nps.gov</i>
3. <i>Valita Bockovich</i>	<i>Grants Acting</i>	<i>Acting Clerk</i>	<i>valitab@grandportage.com</i>
4. <i>Ann Hendricks</i>	<i>Grants Mgr</i>		<i>hendricks.ann@epaweb.com</i>
5. <i>Matt Tyler</i>	<i>Natural Resources/Forestry</i>	<i>Forester</i>	<i>matyler@grandportage.com</i>
6. <i>Tyler Twiest</i>	<i>Arrowhead Elec.</i>	<i>OTIS MGR</i>	<i>twiest@arrowhead.com</i>
7. <i>Brian Sherburne</i>	<i>GP</i>	<i>Enterprise Administrator</i>	<i>bsherburne@grandportage.com</i>
8. <i>Clinton Little</i>	<i>MN DNR</i>	<i>Assistant Program Specialist</i>	<i>clinton.little@state.mn.us</i>
9. <i>JACK FREEMAN</i>	<i>GP's Security</i>	<i>CHIEF of SEC.</i>	<i>tfreeman@gp.com</i>
10. <i>Karla Schaeffauer</i>	<i>GP Health/EHS</i>	<i>Director</i>	<i>karla.s@grandportage.com</i>
11. <i>Mike Keyport</i>	<i>GP Emergency Mgmt</i>	<i>Director</i>	<i>mikek@grandportage.com</i>
12.			
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Grand Portage Reservation Tribal Multi-Hazard Mitigation Plan Annex



October 16, 2018
Planning Team Meeting #2
MITIGATION ACTION CHART REVIEW

Agenda Hazard Mitigation Planning Meeting #2

1. Welcome and Introductions
2. MHMP Presentation
3. Mitigation Action Chart (MAC) Review & Discussion
4. Overview of Next Steps



MHMP Recap

Overview of the Purpose, Process, and Content of the Multi-Hazard Mitigation Plan & Tribal Annex

Overview

- The Grand Portage Reservation is developing a **Tribal Annex** to the Cook County **Multi-Hazard Mitigation Plan (MHMP)**. The plan must be updated every 5 years.
- The purpose of the plan is to identify & assess natural hazards that pose risk to the County and Reservation and **develop long-term strategies and mitigation actions** that will help to reduce or eliminate the impact of future hazard or disaster events.

Grand Portage Tribal Annex

The Grand Portage **Tribal Annex** will identify:

- **Hazard impacts and vulnerabilities** that are specific to the Reservation.
- **Capability strengths & gaps** for mitigation that are specific to the Grand Portage Band.
- **Mitigation activities for implementation** that are specific to the Reservation.
- Other **FEMA-specific requirements** for Tribes.

The Band's adoption of the Cook County MHMP and of the Grand Portage Tribal Annex will make the Band eligible to apply for FEMA hazard mitigation assistance grants either in partnership with Cook County to the State of Minnesota or directly to FEMA.

FEMA Participation Requirements



Content of the MHMP

- Physical and social profile
- Asset Inventory
- Hazard Assessment and Vulnerability Analysis
- Capability Assessment
- Mitigation Actions



Hazard Risk Rankings

Prioritization of Hazards for Cook County & Grand Portage Reservation	
Type	Risk Severity
Wildfire	High
Severe Summer Storms (Thunderstorms, Lightning, Hailstorms, Windstorms, Tornadoes)	High
Severe Winter Storms (Blizzards, Heavy Snow, Ice Storms)	High
Flash Flood, Riverine Flood, & Coastal Flood	Moderate
Extreme Temperatures (Heat & Cold)	Moderate
Drought	Moderate
Erosion / Coastal Erosion and Land Subsidence	Moderate
Dam Failure	Low

Minnesota Climate Change Projections

Hazard	Projections through century	Confidence in projected changes
Extreme cold	Continued loss of cold extremes and dramatic warming of coldest conditions	Highest
Extreme rainfall	Continued increase in frequency and magnitude; unprecedented flash-floods	
Heat waves	More hot days with increases in severity, coverage, and duration of heat waves	High
Drought	More days between precipitation events, leading to increased drought severity, coverage, and duration	Moderately High
Heavy snowfall	Large events less frequent as winter warms, but occasional very large snowfalls	Moderately low
Severe thunderstorms & tornadoes	More "super events" possible, even if frequency decreases	

Planning for Climate Change & Community Resilience

Planning for Climate & Health Impacts in Northeast Minnesota

Emergency Management Collaborators for NEMM Region 2

Climate Change Vulnerability Assessment and Adaptation Plan

1854 Ceded Territory including the Bois Forte, Fond du Lac, and Grand Portage Reservations

Climate Adaptation and Resilience & Hazard Mitigation

Climate Adaptation and Resilience - Building capacity to prepare for and respond to the impacts of climate change on the community, the environment, and the local economy.

Hazard Mitigation - can help local government and Emergency Management identify strategies and actions to help plan for & mitigate against:

- More frequent & larger rain events
- Warmer temperatures (winter/summer)
- Impacts to vulnerable populations, critical infrastructure, and natural resources

Review of Mitigation Strategies

These strategies support long-term risk-reduction activities that help to protect people & property from future hazard events.

Local Planning & Regulations

Government, administrative, or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses.

Mitigation Examples

- Planning & Zoning
- NFIP
- Building Codes
- CIP's
- Open Space Preservation
- GIS Mapping
- Community Assessments



Structure and Infrastructure Projects

Actions that involve construction or modification of existing buildings or structures to reduce the impact of a hazard or remove them from the hazard area.

Mitigation Examples

- Property Acquisition
- Flood Diversion & Storage
- Road, Bridge, & Culvert Improvements
- Community Safe Rooms
- Green Infrastructure



Municipal/Rural Electric Power Line retrofit/burial projects



Natural Systems Protection

Actions that, in addition to minimizing hazard losses, preserve or restore the functions of natural systems.

Mitigation Examples

- Sediment & erosion control (Coastal, Streambank, Slope Stabilization)
- Forest and vegetation management
- Wetland restoration
- Floodplain and stream restoration.



Education and Awareness Programs

Actions to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate against them to protect life safety and property.

Mitigation Examples

- Public Outreach via media/social media
- Preparedness Training
- NWS Severe Weather Awareness Weeks



Mitigation Preparedness and Response Support

Actions that protect people and property prior to, during and immediately after a disaster or hazard event. Services include warning systems and emergency response services.

Mitigation Examples

- Emergency warning notification systems
- Generators for Critical Facilities
- Training & Education for Local Elected Officials
- Shelter/Evacuation Plans
- Emergency Mgmt. Training & Exercises



Climate Adaptation and Community Resilience

Actions that help communities to plan for and mitigate against natural hazards influenced by climate change and the potential impacts to public health, vulnerable populations, community infrastructure, and the local economy.



Mitigation Action Chart (MAC) Overview

The MAC identifies the specific mitigation measures that the jurisdiction(s) will seek to implement over the next 5 years to reduce or eliminate the impacts of natural hazard events.

"Hazard" column

Hazard	Mitigation Strategy	Mitigation Action	Local Planning	Local System	Infrastructure	Preparedness	Emergency Response Activity Implementation	Public Funding
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Each mitigation action **must** address a particular natural hazard.

"All-Hazard" mitigation actions relate to more than one type of natural hazard or may relate to other categories of technological and man-made threats/hazards.

"Mitigation Strategy" column

Hazard	Mitigation Strategy	Mitigation Action	Local Planning	Local System	Infrastructure	Preparedness	Emergency Response Activity Implementation	Public Funding
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Each mitigation action **must** identify which type(s) of mitigation strategies relate to the mitigation measure:

1. Local Planning & Regulations
2. Structure and Infrastructure Projects
3. Natural Systems Protection
4. Education and Awareness Programs
5. Mitigation Preparedness and Response Support

"Mitigation Action" column

Hazard	Mitigation Strategy	Mitigation Action	Local Planning	Local System	Infrastructure	Preparedness	Emergency Response Activity Implementation	Public Funding
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Each mitigation action **must** include a description of what effort is to be implemented. Mitigation actions should be written to be clear, concise, and action-oriented (start with a verb). The action should seek help to reduce or eliminate long-term risk to life safety and property damage from future natural hazard events.

"Status" column

Hazard	Mitigation Strategy	Mitigation Action	Local Planning	Local System	Infrastructure	Preparedness	Emergency Response Activity Implementation	Public Funding
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Each mitigation action **must** include an indication of current status. They are:

- "In-Progress" – a defined mitigation project or effort that is currently underway.
- "On-going" – a mitigation project or effort that continues without end.
- "New" – a new mitigation project or effort identified to include in the new plan.

“Priority Ranking” column



#	Mitigation Strategy	Mitigation Action	Start	Priority Ranking	Time Frame	Responsible Agency	Priority Ranking	Comments on Planning Mechanisms for Implementation	Possible Funding
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Each mitigation action **must** be ranked as being of **High, Moderate, or Low priority** to help provide guidance in implementation. Priority rankings should be based on key considerations, such as:

- Known effectiveness of the mitigation measure.
- Local capability to implement the mitigation measure.
- Cost effectiveness of the mitigation measure. (Benefit vs. Cost)
- Longevity of the mitigation measure.
- Community support for the mitigation measure.
- Eligibility for federal grants (FEMA HMA Grant Program).

“Timeline” column



#	Mitigation Strategy	Mitigation Action	Start	Priority Ranking	Time Frame	Responsible Agency	Priority Ranking	Comments on Planning Mechanisms for Implementation	Possible Funding
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Each mitigation action **must** indicate a timeframe for implementation.

- For mitigation actions that are “In-Progress” or “New” a known timeframe may be identified (i.e., 2017-2018).
- Some mitigation actions may be identified to be implemented within the 5 year period of the MHMP (2017-2021).

“Jurisdictions” column



#	Mitigation Strategy	Mitigation Action	Start	Priority Ranking	Time Frame	Responsible Agency	Priority Ranking	Comments on Planning Mechanisms for Implementation	Possible Funding
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Each mitigation action **must** identify what jurisdictions will seek to implement that action.

- Some mitigation actions will be specific to only the County for implementation.
- Other mitigation actions are those that all cities (or only some cities) would agree are important to include in their own jurisdictions.
- Schools and townships may be identified as well.

“Responsibility” column



#	Mitigation Strategy	Mitigation Action	Start	Priority Ranking	Time Frame	Responsible Agency	Priority Ranking	Comments on Planning Mechanisms for Implementation	Possible Funding
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Each mitigation action **must** include a brief identification of what agency or department or specific personnel has lead responsibility to implement that project or effort, such as:

- “County/City Emergency Management”
- “Planning and Zoning Department”
- “County Highway Department”
- “SWCD in collaboration with MN DNR”
- “Public Works Department”

“Comments on Planning Mechanisms for Implementation” column



#	Mitigation Strategy	Mitigation Action	Start	Priority Ranking	Time Frame	Responsible Agency	Priority Ranking	Comments on Planning Mechanisms for Implementation	Possible Funding
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Each mitigation action **must** include a description of how the mitigation measure will be incorporated into existing or future planning or project efforts by the jurisdiction provided. For example:

- Reference related plans or programs that relate to the mitigation measure (such as comprehensive land use plans, Capital Improvement Programs, public outreach and education programs)
- Reference existing partnerships that relate to the mitigation measure (such as “This is a standing effort of the County/City emergency management program in partnership with Public Health.”)

“Possible Funding” column



#	Mitigation Strategy	Mitigation Action	Start	Priority Ranking	Time Frame	Responsible Agency	Priority Ranking	Comments on Planning Mechanisms for Implementation	Possible Funding
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Each mitigation action **must** include identification of what possible funding will be used to implement the mitigation action:

- In most cases, “County/City” budget generally implies staff time to work on the mitigation measure or internal funding to purchase equipment, etc.
- When applicable, other funding such as outside grants, state or federal funding that may support the mitigation measure should be identified.
- It is particularly important to identify mitigation measures that may be eligible for FEMA HMA grant funding.

MAC Working Session

1. We will go through the Mitigation Action Chart together.
2. We will discuss any changes or additions of new mitigation actions to add to the chart.
3. You will have an opportunity to review this again with the entire draft plan before the plan is sent to HSEM and FEMA for review.

Overview of Next Steps

1. Final draft MAC will be submitted to UMD. The draft MHMP & Grand Portage Tribal Annex will be completed by UMD.
2. The draft plans will be submitted to the EM for preliminary review and revisions.
3. The full draft plan will be posted online for public review & comment. Public outreach will be conducted for the open review period. A public meeting is optional.
4. Any resulting revisions will be made, and the plan will be submitted to HSEM and FEMA for review and approval.

Appendix D
Public Outreach & Engagement
Documentation

DRAFT



GRAND PORTAGE BAND NEWS RELEASE
July 11, 2017

Grand Portage Band Begins Development of Tribal Hazard Mitigation Plan

The Grand Portage Band of Lake Superior Chippewa has steadily been building its emergency management program to ensure we have the capabilities in place to deal with emergencies or disasters before, during, and after they occur. As part of the Band's emergency management program, we are in the process of developing a *Grand Portage Reservation Hazard Mitigation Plan*. This plan will serve as a Tribal Annex to the Cook County Multi-Hazard Mitigation Plan that is undergoing an update. The Band is currently working with the Cook County Office of Emergency Management and a team from the University of Minnesota-Duluth Geospatial Analysis Center to update to the county plan and develop the new tribal annex.

Hazard mitigation may be defined as *"any action taken to eliminate or reduce the long-term risk to human life and property from natural and technological hazards"*. For example, following the heavy rains and flooding of June, 2012 that severely impacted the Reservation, the Band worked to repair damaged roads and culverts vulnerable to future flooding and made improvements that would provide better drainage than before. The development of our CodeRED emergency alert system in cooperation with Cook County is another mitigation measure to help save lives by alerting our community when time is of the essence to take safety precautions.

About the Plan

The Grand Portage Reservation Tribal Hazard Mitigation Plan Annex will identify the natural hazards that pose risk to the Reservation, such as severe winter storms (blizzards and ice storms); severe summer storms (thunderstorms, lightening, hailstorms, windstorms and tornadoes); extreme temperatures (heat and cold); flooding, wildfire, and drought. The plan will identify and discuss the vulnerabilities and potential impacts that are specific to the Grand Portage Reservation, and will provide a range of mitigation actions that can be implemented to address those hazards and make our community more resilient.

Development of the hazard mitigation plan for the Reservation is under the direction of Mike Keyport, Grand Portage Emergency Management Director, and will include a planning team of representatives from Grand Portage tribal government, divisions, community members, and other key stakeholders such

as utility providers. The participation and feedback of key stakeholders such as Cook County or the MN DNR will also be part of the planning process. The Grand Portage planning team will work with the UMD Project Team to conduct a risk assessment, identify vulnerabilities specific to the Reservation, and identify strategic, cost-effective mitigation activities that may reduce future losses. Some mitigation activities may be eligible for future FEMA Hazard Mitigation Assistance (HMA) grant funding, such as: localized flood reduction measures, property acquisition and relocation/conversion to open space, infrastructure retrofits, wildfire mitigation, and safe room construction or retrofits to provide immediate life-safety protection for people vulnerable to tornado and severe wind events.

The planning process was initiated in April, 2018 and will be completed by June, 2019. A final draft of the plan will be reviewed by the State of Minnesota and the Federal Emergency Management Agency (FEMA) for meeting all requirements of a tribal hazard mitigation plan. Approval of the plan by FEMA will allow the Grand Portage Band to apply for federal Hazard Mitigation Assistance grant funding for eligible mitigation projects.

Public Feedback and Participation is Encouraged

As part of the planning process, gathering input from the public is an important and required step. The Grand Portage Band seeks to gather feedback from our community members to incorporate into the plan:

- What are the natural hazards you feel pose the greatest risk to the Reservation?
- What concerns do you have, and what sorts of mitigation actions or projects do you feel would help to reduce the damages of potential future events for our community?

The Grand Portage community and associated stakeholders will have a continued opportunity to participate in the plan development process in the coming months. A draft of the plan will be available for public review prior to submission of the plan to the State of Minnesota and FEMA. Future news releases will be shared to notify the public of these opportunities.

Contact

Comments or questions on the development of the Grand Portage Reservation Tribal Hazard Mitigation Plan Annex can be directed to:

Mike Keyport
Grand Portage Emergency Management Director
Phone: 218-475-2129
Email: mikek@grandportage.com



GRAND PORTAGE COMMUNITY INFORMATION FLYER

Grand Portage Band Begins Development of Tribal Hazard Mitigation Plan

The Grand Portage Band is currently in the process of developing a *Grand Portage Reservation Tribal Hazard Mitigation Plan*. This plan will serve as a Tribal Annex to the Cook County Multi-Hazard Mitigation Plan that is undergoing an update. Development of the plan will help the Grand Portage Band to continue to advance its emergency preparedness program and implement measures to reduce the risk to the community from future severe natural hazard events.

What is Hazard Mitigation?

Hazard mitigation may be defined as “any action taken to eliminate or reduce the long-term risk to human life and property from natural and technological hazards”. For example, following the heavy rains and flooding of June, 2012 that severely impacted the Reservation, the Band worked to repair damaged roads and culverts vulnerable to future flooding and made improvements that would provide better drainage than before. The development of our CodeRED emergency alert system in cooperation with Cook County is another mitigation measure to help save lives by alerting our community when time is of the essence to take safety precautions.

About the Plan

The Grand Portage Reservation Tribal Hazard Mitigation Plan Annex will identify the natural hazards that pose risk to the Reservation, such as severe winter storms (blizzards and ice storms); severe summer storms (thunderstorms, lightening, hailstorms, windstorms and tornadoes); extreme temperatures (heat and cold); flooding, wildfire, and drought. The plan will identify and discuss the vulnerabilities and potential impacts that are specific to the Grand Portage Reservation, and will provide a range of mitigation actions that can be implemented to address those hazards and make our community more resilient. Development of the hazard mitigation plan for the Reservation is under the direction of Mike Keyport, Grand Portage Emergency Management Director, and will include a planning team of representatives from Grand Portage tribal government, divisions, community members, and other key stakeholders.

Public Feedback and Participation is Encouraged

As part of the planning process, gathering input from the public is an important and required step. The Grand Portage Band seeks to gather feedback from our community members to incorporate into the plan:

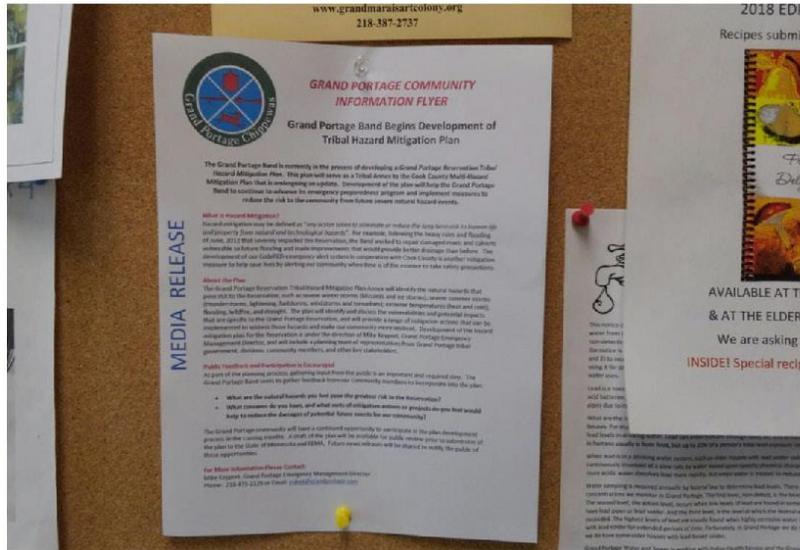
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The Grand Portage community will have a continued opportunity to participate in the plan development process in the coming months. A draft of the plan will be available for public review prior to submission of the plan to the State of Minnesota and FEMA. Future news releases will be shared to notify the public of these opportunities.

For More Information Please Contact:

Mike Keyport, Grand Portage Emergency Management Director
Phone: 218-475-2129 or Email: mikek@grandportage.com

**Grand Portage posting of Community Flyers
MHMP News Release #1, July 13, 2018**



**Grand Portage MHMP Community Information Flyer
Posted in the "Moccasin Telegraph"
August/September/October 2018 Issue**



Posted on page 5 of newsletter



GRAND PORTAGE COMMUNITY INFORMATION FLYER

**Grand Portage Band Begins Development of
Tribal Hazard Mitigation Plan**

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The Grand Portage community will have a continued opportunity to participate in the plan development process in the coming months. A draft of the plan will be available for public review prior to submission of the plan to the State of Minnesota and FEMA. Future news releases will be shared to notify the public of these opportunities.

For More Information Please Contact:

Mike Keyport, Grand Portage Emergency Management Director
Phone: 218-475-2129 or Email: mikek@grandportage.com

Appendix E

Grand Portage Plans & Programs in Place

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Planning & Regulatory

Plans/Programs	Yes/No
Comprehensive/Master Plan	No
Capital Improvements Plan	?
Economic Development Plan	?
Emergency Operations Plan	Yes
Continuity of Operations Plan	No
Transportation Plan	Yes
Stormwater Management Plan	No
Community Wildfire Protection Plan	No
FireWise Program	No
Water Conservation/Emergency Preparedness Plan	No
Wellhead Protection Plan	Yes
Database of dry hydrants/well access	Yes
Burning permits/restrictions	Yes
Water Management Plan	No
Zoning ordinance	Yes
Subdivision ordinance	Yes
Floodplain ordinance	Yes
Natural hazard specific ordinance (stormwater, steep slope, wildfire)	Yes
Flood insurance rate maps	No
Acquisition of land for open space and public recreation uses	No
School closing policy/communications plan in event of inclement weather/temperatures	Yes
Storm shelters (list all locations)	No
Warning sirens (list all locations)	No
SKYWARN Program	No
CodeRED Mass Notification System	Yes
Severe Weather Awareness Week	Yes
Winter Weather Awareness Week	Yes
NOAA Weather Radios	Yes
THIRA	Yes

Administrative & Technical

Administration	Yes/No
Planning Commission	No
Mitigation Planning Committee	No
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	No
Mutual aid agreements	Yes
Staff	Yes/No
Chief Building Official	No
Floodplain Administrator	No
Emergency Manager	Yes
Community Planner	Yes
Civil Engineer	No
GIS Coordinator	No

<i>Technical</i>	<i>Yes/No</i>
Warning systems/services (Reverse 911, outdoor warning signals)	Yes
Hazard data and information	No
Hazus analysis	No

Education & Outreach

<i>Program/Organization</i>	<i>Yes/No</i>
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes
Natural disaster or safety related school programs	Yes
StormReady certification	No
Firewise Communities certification	No
Public-private partnership initiatives addressing disaster-related issues	No

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Appendix F
Local Mitigation Capabilities Assessment

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As part of the Grand Portage Reservation Tribal Annex to the 2018 Cook County MHMP, tribal government and departments were invited to respond to a “Local Mitigation Capabilities Assessment” (LMCA) questionnaire to provide information about the current capabilities they have in place to support hazard mitigation, as well as any identified gaps or deficiencies. Information from the LMCAs was used to assist in developing new mitigation actions for the 2018 plan update. Following are the responses from those Grand Portage personnel or departments that participated.

Grand Portage Forestry

Submitted By: Matt Tyler, Field Forester and Erik Carlson, Lead Wildfire Tech

Q1. What plans, authorities, or policies are in place to help accomplish mitigation in your community?

- Grand Portage Fire Management Plan 1999
- Grand Portage Forest Management Plan

Q2. What staff (organizational capacity) are in place to help accomplish mitigation in your community?

- 16 red carded wildland firefighter (for prescribed burning)
- 1 full time and experienced lead fire tech
- 4 seasonal fire techs
- 2 Type 6 Wildfire Engines (with trained operator)
- 1 Type 4 Dozer (with trained operator)
- 1 J7 Muskeg (with trained operator)
- 1 large mobile woodchipper (with trained operator) for woody debris management
- 1 Full-time field forester and 1 full-time forestry tech, both with GIS capability.

Q3. What programs are in place to help accomplish mitigation in your community?

- Active prescribed burn program
- Participate in Cook County Firewise Program
- Active Forest Management / Timber Sale program

Q4. What funding or other resources are available to help accomplish mitigation in your community?

- The Grand Portage Fire Management program mitigation activities are funded by the Reservation Tribal Council, Cooperative agreement with the Bureau of Indian Affairs and more

recently with supplemental funding from the Natural Resources Conservation Service's EQIP program. Projects completed with these funding sources include:

- Fuels Reduction – Mechanical and prescribed fire treatments in the Wildland Urban Interface (WUI) and in the Non WUI.
- Prevention Activities – Including open burning permits, fire weather monitoring and providing public awareness (fire danger signs and public announcements).
- Firewise and other public education activities.

Q5. What program gaps or deficiencies do you feel exist that are a barrier to accomplishing mitigation in your community?

- Limited capacity for larger prescribed burns
 - Lack of adequate medical plan for large, remote prescribed burns.
 - Fractionated ownership that makes planning large prescribed burns difficult.
 - Limited access to aerial resources for large prescribed burns.
- Aging Wildfire and Forestry facilities.

Grand Portage Lodge & Casino

Submitted By: Jack Freeman, Chief of Security

Q1. What plans, authorities, or policies are in place to help accomplish mitigation in your community?

- These areas are not ones that I have specific responsibility for although I could be called to assist in a mitigation plan development.

Q2. What staff (organizational capacity) are in place to help accomplish mitigation in your community?

- Casino Security has developed a fire evacuation plan for the Lodge/Casino/Trading Post that will get people out of harm's way and to a safe place. This plan is something that all departments of these three facilities have a part in.

Q3. What programs are in place to help accomplish mitigation in your community?

- The road repairs that Tribe either contracts for or does themselves has ensured the viability of our road systems. There have been drainage improvements made when the Lodge/Casino facilities were remodeled. The Tribe keeps the main Reservation roadsides trimmed back to

improve visibility and drivability.

Q4. What funding or other resources are available to help accomplish mitigation in your community?

- This is an area with which I have no knowledge.

Q5. What program gaps or deficiencies do you feel exist that are a barrier to accomplishing mitigation in your community?

- The contingency plan for our enterprise non-natural hazard mitigation will need some further development. The things I think of as natural hazard mitigation concerning the enterprise facilities have been addressed, for the most part, with the remodel we just finished last year.

GP Trustlands Department – Water Quality

Submitted By: Margaret Watkins, Water Quality Specialist

Q1. What plans, authorities, or policies are in place to help accomplish mitigation in your community?

- We have a climate change adaptation plan and a Land Use Committee.

Q2. What staff (organizational capacity) are in place to help accomplish mitigation in your community?

- We have a GIS specialist, Emergency Management Plan, and a Roads and Realty Specialist.

Q3. What programs are in place to help accomplish mitigation in your community?

- We have an active and trained fire department, wildland fire crew, emergency medical service, and receive notices from the Clinic regarding weather alerts and air quality. We also have an environmental and biology department that includes a solid waste specialist, wetlands specialist, water quality specialist, and air quality specialist.

Q4. What funding or other resources are available to help accomplish mitigation in your community?

- Forestry works on reducing fuels to prevent wildfires, water quality is measured regularly, and we have worked with County, State and Federal Agencies on mitigation projects.

Q5. What program gaps or deficiencies do you feel exist that are a barrier to accomplishing mitigation in your community?

- Sources of funding are very limited.

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Appendix G

Jurisdictional Questionnaires

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As part of the Grand Portage Reservation Tribal Annex to the 2018 Cook County MHMP, tribal government and departments were invited to respond to a “**Jurisdictional Questionnaire**” to provide information on impacts of recent hazard events, the increase or decrease of community vulnerabilities, and ideas for local-level mitigation actions. Following are the responses from those Grand Portage personnel or departments that participated.

Grand Portage Forestry

Submitted By: Matt Tyler, Field Forester and Erik Carlson, Lead Wildfire Tech

1. **In the last 5 years has your community experienced any severe weather or disaster events that resulted in loss of life, caused property damage, or incurred costs for recovery? Please describe.** Not that we are aware of. It has been relatively quiet these last 5 years.
2. **In the last 5 years has your community taken any particular actions to reduce the vulnerability of your community against future severe weather or disaster events?**
 - Prescribed burning ditches in the village every year to reduce fuels and prevent spring grass fires.
 - Hazardous wildfire fuels reduction for homeowners upon request.
 - Timber Sales and pile burning to reduce hazardous wildfire fuels.
 - Understory wildfire reduction projects on Band lands.
3. **In the past 5 years, has anything changed that you feel has increased your community’s vulnerability to future severe weather or disaster events?** Diminishing numbers of volunteer firefighters and EMS responders.
4. **What concerns do you have / what mitigation actions you think would help your community to reduce or eliminate risk against future severe weather or disaster events?**
 - Continue wildfire fuel reduction and prescribed burning programs
 - Need to expand capacity for larger prescribed burns to better control hazardous fuels.

Grand Portage Lodge & Casino

Submitted By: Jack Freeman, Chief of Security

1. **In the last 5 years has your community experienced any severe weather or disaster events that resulted in loss of life, caused property damage, or incurred costs for recovery? Please describe.** I am unaware of any natural weather issues in the last five years. We did do an

extensive remodel of or Lodge and Casino where some flooding occurred but it was due to failure of construction temporary sheltering cover.

2. **In the last 5 years has your community taken any particular actions to reduce the vulnerability of your community against future severe weather or disaster events?** We have repaved a section of our roadway (HWY 61) and have trimmed back the brush along the roadway to increase the visibility to spot deer, bear, etc. All this is a help to prevent accident injuries. As part of the construction of our new facility we took specific action to move our fuel depot further away from the Lodge/Casino. We have worked with Arrowhead Electric to provide the Reservation with better electrical power and it seems that it has made some improvement in the number of power outages we have but there is more to do in that area.
3. **In the past 5 years, has anything changed that you feel has increased your community's vulnerability to future severe weather or disaster events?** I am unaware of any changes on the Reservation that would have increased our vulnerability to future weather.
4. **What concerns do you have / what mitigation actions you think would help your community to reduce or eliminate risk against future severe weather or disaster events?** From my perspective the construction of our new facility has really done a lot to improve drainage and cut back on slip/fall accident potential.

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