TRADITIONAL VILLAGE OF TOGIAK

TRIBAL HAZARD MITIGATION PLAN [2019 – 2024]

FINAL Revision 0
August 2019

Prepared for:

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ACRONYMS AND ABBREVIATIONS

%	percent
°F	degrees Fahrenheit
AVEC	Alaska Village Electric Cooperative
BBAHC	Bristol Bay Area Health Corporation
BBNA	Bristol Bay Native Association
BBNC	Bristol Bay Native Corporation
BIA	Bureau of Indian Affairs
Bristol	Bristol Engineering Services Company, LLC
CFR	Code of Federal Regulations
City	City of Togiak
Community	Togiak
Council	Traditional Council of Togiak
DCCED	State of Alaska Department of Commerce, Community, and Economic Development
DHS&EM	State of Alaska Division of Homeland Security and Emergency Management
DOTID	Department of Transportation and Infrastructure Development
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FMA	Flood Mitigation Assistance
HMGP	Hazard Mitigation Grant Program
HMP	Hazard Mitigation Plan
ID	Identification
IGAP	Indian General Assistance Program
km	kilometer
MM	Modified Mercalli Scale
mph	miles per hour
NFIP	National Flood Insurance Program
NOAA	National Oceanic and Atmospheric Administration
NWS	National Weather Service
PDM	Department of Homeland Security Pre-Disaster Mitigation

ACRONYMS AND ABBREVIATIONS (Continued)

THMP	Tribal Hazard Mitigation Plan
TNL	Togiak Native Limited
Tribe	Traditional Village of Togiak
USACE	US Army Corps of Engineers
USGS	US Geological Survey

EXECUTIVE SUMMARY

The Tribal Hazard Mitigation Plan (THMP) for Togiak, Alaska (Community) was developed in accordance with the requirements of the Stafford Act and Title 44 of the Code of Federal Regulations (CFR). Bristol Bay Native Association (BBNA) represents the Traditional Village of Togiak (Tribe) and provides support for the Federal Emergency Management Agency (FEMA) pre-disaster mitigation planning project. BBNA contracted Bristol Engineering Services Company, LLC (Bristol) for the development of the THMP. Planning Team members from the Community were identified by the Tribe to assist in the development of this plan.

Hazard mitigation reduces potential losses from future disasters. It is the goal of the Traditional Council of Togiak (Council) to develop a disaster – resistant community for the general public and Tribe members by identifying hazard mitigation actions. These actions will reduce the impact of natural hazards on the Community and encourage the restoration and protection of natural and cultural resources.

This plan contains current community information, documents the planning process for the THMP, identifies the natural hazards that have an impact on the Community, identifies community assets, analyzes how the assets are impacted by natural hazards, and identifies the Community's vulnerability to these hazards. Additionally, the THMP lists the Community's mitigation goals and prioritized mitigation actions.

The Planning Team identified natural hazards that could affect the Community. The following is a list of natural hazards that have had an impact on the Community.

- Earthquake – Earthquakes occur and can cause disruptions to the Community's ground water source.
- Erosion – The Community is located along Togiak Bay and Nasaurluq Creek. Flooding, heavy rains, high tides, and storm-driven wind and waves contribute to coastal erosion. Spring break up, flooding, and periodic fluctuations in creek water levels and flow contribute to riverine bank erosion. Homes and critical infrastructure are being threatened due to riverine and coastal erosion.
- Extreme Cold – Underground water and sewer utilities are susceptible to freezing. This could leave residents throughout the Community without water.
- Flood – Flooding in the Community occurs due heavy seasonal rainfall events, heavy spring snow melt, ice jams in the river, and high tides. The lower village of the Community is in a flood zone. This flooding can also compromise utilities and septic systems and can spread pollution.
- Severe Wind – High wind events can result in damage to structures, a loss of power and communications, a reduction of visibility in winter due to blowing

snow, decreased quality of air due to dust, and limits the accessibility of the Community via air transportation. High winds can damage the sea wall by blowing ice bergs into the wall and move supporting material away from the wall as they move back out to sea.

- Severe Winter Weather – Severe winter weather events and cold temperatures can result in power outages, and limits air transportation in and out of the Community. It can also present a hazard to residents traveling around the Community due to blowing snow and icy conditions.
- Subsidence – Utilities are being impacted by the gradual settling of the earth around the Community.
- Volcano – Ash from the number of active volcanos along the Alaska Peninsula and Cook Inlet has an impact on air transportation in and out of the Community. This also has an impact on equipment and community members.
- Wildfire –Wildfires destroy subsistence resources, structures, and is a sever risk to human life. The upper portion of the Community is lacking fire hydrants and it is difficult to get water up to those Communities should there be a fire.

Mitigation goals were selected by the Planning Team for the identified natural hazards. These goals are broad statements that represent the Community's vision for reducing or avoiding losses from the identified hazards. The following is a list of mitigation goals:

- Build the capacity of the Tribe and City of Togiak (City) to prepare, respond to, and recover from disasters.
- Reduce the possibility of damages due to earthquakes.
- Reduce the possibility of damages due to erosion.
- Reduce the possibility of damages due to extreme cold temperatures.
- Reduce the possibility of damages due to floods.
- Reduce the possibility of damages due to severe winds.
- Reduce the possibility of damages due to severe winter weather.
- Reduce the possibility of damages due to subsidence.
- Reduce the possibility of damages due to volcanos.
- Reduce the possibility of damages due to wildfires.

In addition to the identified hazards and the mitigation goals, the Planning Team identified mitigation actions to support the THMP mitigation goals. The following is a list of the high priority mitigation actions.

- Construct the emergency shelter access route.
- Provide public education on natural hazards that impact the Community.
- Conduct bulkhead rehabilitation.
- Reinforce and/or elevate roads and provide continued maintenance.
- Relocate new and existing public safety facilities to areas above the 100-year floodplain.
- Conduct drainage improvements throughout the Community.
- Identify and apply dust suppression on roads and runway.
- Install hydrants on the hill throughout Togiak Heights.

The THMP is a living document that will be reviewed on an annual basis, and updated every five years. The annual reviews will monitor the relevance and implementation of the mitigation action plan, and evaluate the effectiveness and progress of the THMP. The annual evaluation of the THMP will include a review of any changes to assets, impacts from hazards, or any additional changes to the plan.

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1.0 INTRODUCTION

Bristol Bay Native Association (BBNA) is an Alaska Native Regional Non-Profit Corporation and tribal consortium. Incorporated under state law, corporation bylaws are structured as a pure tribal consortium. The 31 federally recognized tribes in the Bristol Bay region make up the members of the non-profit corporation. The 31 tribes are represented on the BBNA Board of Directors by their elected tribal presidents, or the president's designee (who must be a tribal member). Therefore, BBNA is directly controlled by the tribal governments it represents.

BBNA is a federally recognized tribal consortium for contracting purposes and is a "Tribal Organization" as defined in the Indian Self-Determination and Education Assistance Act. BBNA operates dozens of grants and contracts under various types of eligibility. Understandably, eligibility of each grant is controlled by the regulations and authorizing legislation of each particular funding source. BBNA operates both Indian and non-Indian programs.

BBNA represents all tribes within the Bristol Bay Region, and as such provides support for the Federal Emergency Management Agency (FEMA) pre-disaster mitigation planning project. On behalf of the Traditional Council of Togiak (Council), BBNA contracted Bristol Engineering Services Company, LLC (Bristol) for the development of this Tribal Hazard Mitigation Plan (THMP) for Togiak, Alaska (Community). The THMP was prepared to meet the requirements of the Stafford Act and Title 44 of the Code of Federal Regulations (CFR). By meeting these requirements, it makes the Community eligible for funding through state and federal mitigation grant programs.

The purpose of hazard mitigation is to reduce potential losses from future disasters. The intent of mitigation planning is to maintain a process that leads to hazard mitigation actions. This THMP identifies the natural hazards that affect the Community, identifies actions to reduce losses from those hazards, develops long-term strategies to reduce the impacts of future events on people, property, and the environment, and establishes a coordinated process to implement the plan. The THMP establishes goals and objectives and associated actions to reduce and mitigate the threat of natural hazards to life, property, infrastructure, economic stability and emergency response capabilities in the Community while encouraging the protection and restoration of cultural and natural resources.

It is the goal of the Council to create a disaster-resistant community for the Traditional Village of Togiak (Tribe) members and the general public in the Community. The THMP includes information to assist government leaders and residents with current and future planning efforts to efficiently and effectively mitigate natural hazards in the Community.

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2.0 COMMUNITY DESCRIPTION

This section describes the location and geography, climate, history, demographics, and economy of the Community.

2.1 LOCATION AND GEOGRAPHY

The Community is located at the head of Togiak Bay, 67 miles west of Dillingham. It lies in Togiak National Wildlife Refuge and is the gateway to Walrus Island Game Sanctuary. The Community lies at approximately 59.0597° North Latitude and 160.3775° West Longitude (See Figures 1 and 2). The Community is located in Section 12, Township 13S, and Range 67W along the Seward Meridian. The Community is located in the Bristol Bay Recording District. The area encompasses 45.2 square miles of land and 183.3 square miles of water (State of Alaska Department of Commerce, Community, and Economic Development [DCCED], 2018).

2.2 CLIMATE

Climate can have a significant impact on the hazards that affect the Community. The Community's climate can also have an impact on the goals and mitigation strategies that are decided upon. The following is a climate summary of the Community:

The Community falls within the transitional climate zone, characterized by tundra interspersed with boreal forests, and weather patterns of long, cold winters and shorter, warm summers. Fog and high winds are prevalent during the winter. The bay is ice-free from June through mid-November (DCCED, 2018). Annual precipitation ranges from 20 to 26 inches. The average winter temperatures range from 4 to 30 degrees Fahrenheit (°F), and the average summer temperatures range from 37 to 66°F (NOAA, November 2013).

2.3 HISTORY

In 1880 "Old Togiak" or "Togiagamute" was located across the bay and had a population of 276. Heavy winter snowfalls made wood-gathering difficult at Old Togiak, so gradually people settled at a new site on the opposite shore, where the task was easier. Many residents of the Yukon-Kuskokwim region migrated south to the Togiak area after the devastating influenza epidemic in 1918-19. A school was established in an old church in 1950. A school building and a National Guard armory were constructed in 1959. The Community flooded in 1964, and many fish racks and stores of gas, fuel oil, and stove oil were destroyed. Three or four households left Togiak after the flood and developed the village of Twin Hills upriver. The city government was incorporated in 1969 (DCCED, 2018).

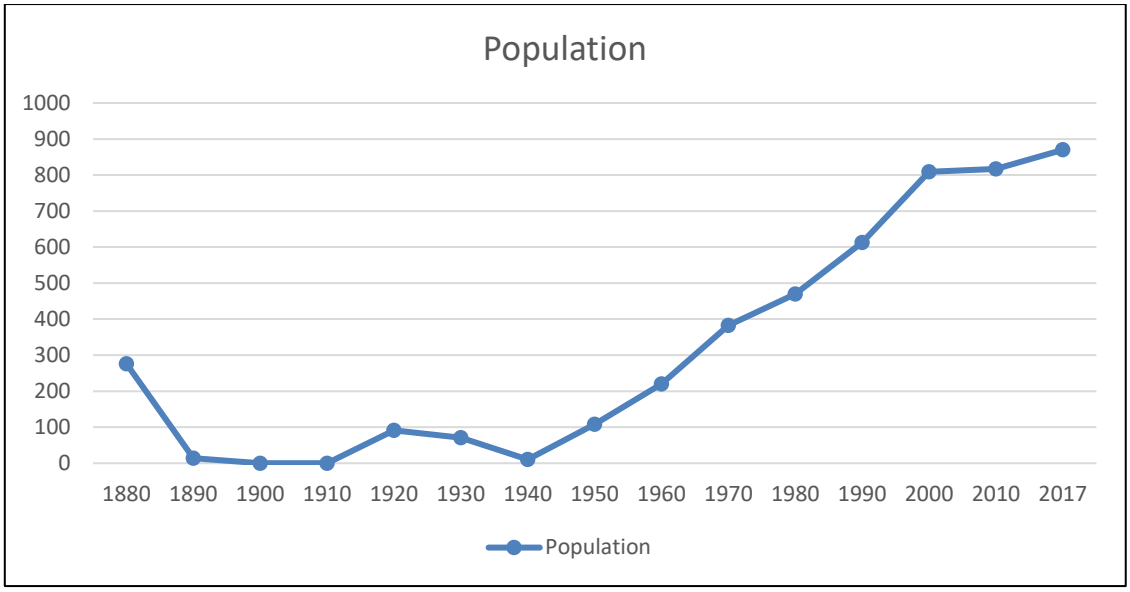
2.4 ECONOMY

The local government, trade, transportation and utilities, educational and health services, and manufacturing provides the main employment opportunities in the Community (ALARI, 2018). Other Community employment opportunities include financial activities, professional and business services, state government, leisure and hospitality, information, and natural resources and mining. According to the 2010 Census, the median household income in the Community was $47,083. The Community's primary source for food is derived from a subsistence lifestyle. This lifestyle includes activities such as hunting, fishing, berry picking, and other similar activities (DCCED, 2018).

2.5 DEMOGRAPHICS

The 2017 State of Alaska Department of Commerce, Community, and Economic Development (DCCED) certified population is 876 people (DCCED, 2018). Exhibit 2-1 depicts a historic representation of the population of the Community.

Exhibit 2-1: Population History



Source Note: Census Population History retrieved from DCCED
https://www.commerce.alaska.gov/dcra/dcraexternal/community/

The 2010 census recorded 817 residents with a median age of 25. The Community is principally an Alaska Native community with 78 percent (%) Alaska Native, 15.9% two or more races, and 5.5% White. In 2010, the male and female population was 425 and 392 respectively. The 2010 census also revealed that there were 231 households with an average household size of 4 people (DCCED, 2018).

3.0 PLANNING PROCESS

This section provides information about the planning process that took place during the development of the THMP. It provides an overview of the planning process, the planning team, the public involvement efforts and documentation, the review and incorporation of existing plans, reports and studies, and the plans to integrate the THMP into other planning processes. Documentation of the planning process and public involvement is located in Appendix A and Appendix B, respectively.

3.1 PLANNING PROCESS

The planning process was developed following the requirements of 44 CFR 201.7(c)(1). The Department of Homeland Security Pre-Disaster Mitigation (PDM) grant provided funding and project oversight to the BBNA Department of Transportation and Infrastructure Development (DOTID). Bristol, BBNA's contractor, guided the development of a project team to assist BBNA DOTID with the THMP development.

The planning process took place from November 26, 2018 to January 24, 2019. The following steps describe the planning process to develop the THMP. All planning documents created or used are included in Appendix A.

1. **Establish the Planning Team:** An initial meeting was held with the Council to establish a point of contact and identify other team members. The titles and organizations of the Planning Team members are identified in Table 3-1. During the initial meeting there was a brief discussion about hazards that affect the community as described in the Risk Assessment (Section 5.0).
2. **Education of the Planning Team:** The THMP planning process was described to the Planning Team on November 26, 2018 and participants were asked to help identify hazards that affect the Community, and critical infrastructure.
3. **Organize Resources:** Members of the Planning Team identified resources, including staff, agencies, and local community members who could provide technical expertise and historical information needed in the development of the THMP (see Sections 3.2 and 3.3.1).
4. **Assess Risks**: The Planning Team identified the hazards and assets within the Community. With the assistance of Bristol, the Planning Team developed a risk analysis for the community assets in relation to the identified hazards. The Planning Team identified the areas of greatest concern to the Community and developed vulnerability statements. Section 5.0 provides a detailed description of the Risk Assessment.

5. Assess Capabilities: The Planning Team reviewed current administrative and technical, legal and regulatory, and fiscal capabilities to determine whether existing provisions and requirements adequately address relevant hazards (see Section 3.4 and Section 6.1).
6. Develop a Mitigation Strategy: After reviewing the risk analysis and vulnerability statements, the Planning Team developed the mitigation goals. Once goals were established, the Planning Team identified a comprehensive range of potential mitigation actions. Subsequently, the Planning Team refined the prioritized mitigation actions, and evaluated and prioritized the actions for implementation. Section 6.0 provides a detailed description of the Mitigation Strategy.
7. Monitor, Evaluate, and Plan Updates: The Planning Team developed a process to monitor, evaluate, and update the THMP to ensure it will be used as intended (see Section 4.0). Plan maintenance forms can be found in Appendix C. The Planning Team also established a plan to track the progress of the identified mitigation actions (see Section 6.7). Mitigation tracking forms are located in Appendix E.

In addition to the steps above the Planning Team encouraged community input throughout the planning process. Section 3.3 details how the public was involved in the planning process.

3.2 PLANNING TEAM

The Planning Team is shown in Table 3-1, 44 CFR 201.7(c)(1).

Table 3-1 Hazard Mitigation Planning Team

Name	Title	Organization
Elizabeth Wassillie	President	Traditional Council of Togiak
Marie Paul	Vice President	Traditional Council of Togiak
Bertha Pavian-Lockuk	Secretary	Traditional Council of Togiak
Esther Fayer	Treasurer	Traditional Council of Togiak
Peter Lockuk Sr.	Council Member	Traditional Council of Togiak
Teo Pauk	Council Member / Transportation	Traditional Council of Togiak
Deanna Snyder	Tribal Clerk	Traditional Council of Togiak
Darryl Thompson	City Administrator	City of Togiak
Dan Breeden	Director	BBNA DOTID
Annie Fritze	Program Manager	BBNA DOTID
Isaac Pearson	Senior Engineer	Bristol (THMP Consultant)
Danielle Dance	Civil Engineer	Bristol (THMP Consultant)

3.3 PUBLIC INVOLVEMENT

Public involvement is important to the planning process of the THMP, 44 CFR 201.7(c)(1)(i). The Council defines "public" as living in the tribal service area or on tribal land, as well as any tribal member or citizen not living on the tribal lands that desires to provide comment on the THMP. It is important for the public to understand and be educated on the Community's priorities. The public also provides valuable insight into issues of concern, identifying community assets and areas that need improvement. The public can provide important information about the history of hazards that have affected the area. Additionally, they can provide ideas for continuing public involvement after the plan has been adopted.

A public meeting was held by BBNA DOTID and Bristol on January 25, 2019 in the Community to educate and receive feedback on the THMP. During the meeting, participants were given the opportunity to discuss how they have personally been impacted by the identified hazards in their community. They were also given the opportunity to discuss mitigation strategies that they felt would help prevent future losses due to the hazards. Additionally, the community was asked how they would like to be included in the remaining planning process and throughout the implementation of the mitigation strategies.

Newsletters were used to inform the public about the project. The first newsletter provided an overall description of the project, its purpose, the general process for plan development, and ways for the public to participate in the development of the plan. The second newsletter was sent to inform the public that a draft of the THMP was ready for review and provided the dates for a public review and comment period.

In addition to the public meeting and newsletters, residents or interested parties were encouraged to participate in, and had access to a public survey. This survey was available and located in the tribal office throughout the planning process and during the public meeting.

Twenty-nine surveys were completed and returned. The residents of the Community identified through the survey that they are most concerned about erosion (see Exhibit 3-1). Additionally, Exhibit 3-2 illustrates the opinions of the residents regarding the importance of community assets. A copy of the survey distributed to community members and a complete summary of responses can be found in Appendix B.

Exhibit 3-1: Natural Disaster Concern (Survey Question #2)

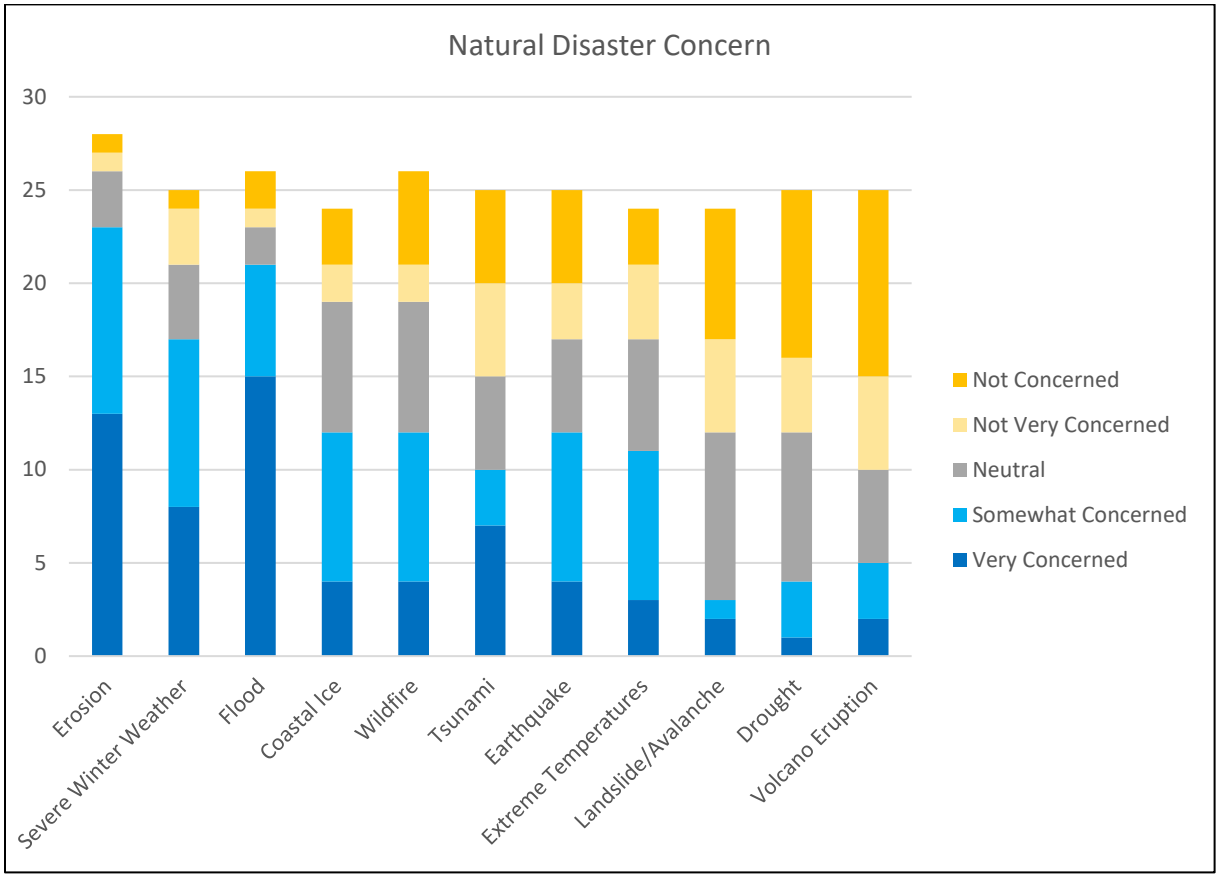
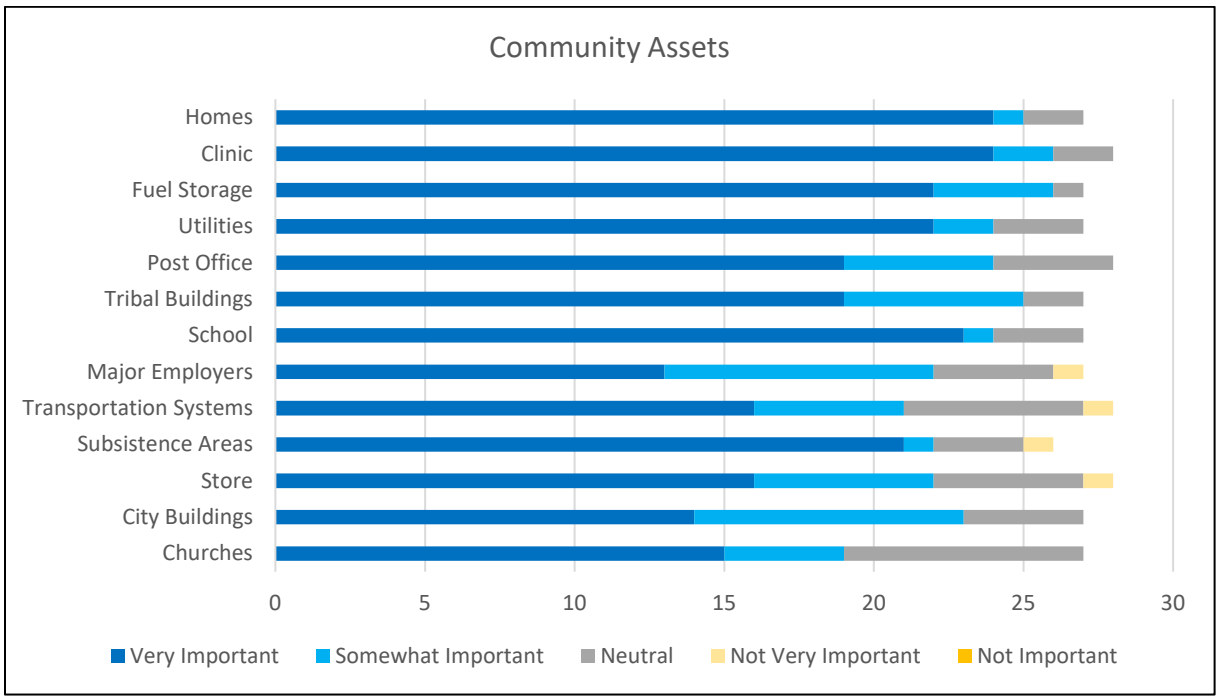


Exhibit 3-2: Community Assets (Survey Question #7)



All documentation and materials used to involve the public are located in Appendix B. This includes: public meeting advertisements, sign-in sheets, presentations, handouts, newsletters, surveys and a summary of responses, and any comments received via email, phone, or facsimile.

3.3.1 Other Communities, Tribal Agencies, and Regional Agencies Involved

The Planning Team worked to include all stakeholders in the planning process and development of the THMP, 44 CFR 201.7(c)(1)(ii). Table 3-2 provides the other stakeholders, communities, tribal agencies, and regional agencies that were involved in the planning process and development of the plan.

Table 3-2: Stakeholder Contacts

Stakeholder Type	Stakeholder	Contact Person (Title)	Contact Email
Village for Profit	Togiak Native Limited (TNL)	Jimmy Coopchiak (President)	tnl_2011@live.com
Regional for Profit	Bristol Bay Native Corporation (BBNC)	Jason Metrokin (President)	jmetrokin@bbnc.net
Regional Housing	Bristol Bay Housing Authority	Brenda Akelkok (Executive Director)	bakelkok@bbha.org
Regional Hospital	Bristol Bay Area Health Corporation (BBAHC)	Robert Clark (CEO)	rclark@bbahc.org
Regional Hospital	BBAHC	Rebecca Coopchiak (CHAP Supervisor)	rcoupchiak@bbahc.org
Sub Regional Clinic	BBAHC	Bernice Toyukak (Health Aid)	btoyukak@bbahc.org
Non-Profit Agency	BBNA	Gayla Hoseth (Natural Resources Director)	ghoseth@bbna.com
Non-Profit Agency	BBNA	Carla Akelkok (VPSO Program Manager)	cakelkok@bbna.com
Non-Profit Agency	BBNA – Togiak Village Council	Roger Wassillie (VPSO)	roger.wassillie@alaska.gov

Table 3-2 (Continued): Stakeholder Contacts

Stakeholder Type	Stakeholder	Contact Person (Title)	Contact Email
Economic Development	BBNA	Kristina Andrew (Program Manager)	krandrew@bbna.com
Community Development Quota Program	Bristol Bay Economic Development Corporation	Norman VanVactor (CEO)	norm@bbedc.com
School District	Southwest Region Schools	Steve Noonkesser (Superintendent)	snoonkesser@swrsd.org
School	Togiak Schools	Michael Lee (Principal)	mlee@swrsd.org
Municipal	City of Togiak	Teo Pauk (Mayor)	ctyoftog@unicom-alaska.com
Municipal	City of Togiak	Shawn Kamkahpak (City Clerk)	cityoftogiak@outlook.com
Municipal	City of Togiak	Darryl Thompson (Administrator)	togwater@hushmail.com
Electric Utility	Alaska Village Electric Corporation (AVEC)	Meera Kohler (CEO/General Manager)	mkohler@avec.org
Telephone	United Utilities, INC	--	customer@uui-alaska.com
Telephone	GCI	Lana Woods (Permitting & Compliance Manager	lwoods@gci.com
State Representative	State of Alaska	Bryce Edgmon (Representative)	representative.bryce.edgmon@akleg.gov
State Senator	State of Alaska	Lyman Hoffman (Senator)	senator.lyman.hoffman@akleg.gov

Applicable stakeholders were contacted by e-mail to invite their participation in the planning process. Applicable comments provided by these stakeholders are included in Appendix B.

3.4 INCORPORATION OF EXISTING PLANS/STUDIES/REPORTS

During the development of the THMP the Planning Team reviewed any applicable existing plans, studies, and reports, 44 CFR 201.7(c)(1)(iii). Table 3-3 lists those documents reviewed by the Planning Team and contains a summary of the incorporated content.

Table 3-3: Existing Plans, Studies, and Reports Reviewed

Plans/Studies/Reports Reviewed for this THMP	Summary of Incorporated Content
US Army Corps of Engineers (USACE) Alaska Baseline Erosion Assessment	This report identifies the Community as having erosion issues (USACE, 2009).
USACE Erosion Assessment	The Community is experiencing bank erosion along Nasaurluq Creek and coastal erosion along Togiak Bay (USACE, 2007).
BBNA Forest and Fire Management Plan	This report provides information about the areas vegetation, soils, wildlife, forest, and fire management. It also provides regional goals and objectives to preserve and protect the region and details the fire management plan (BBNA, 2014).
State of Alaska Hazard Mitigation Plan (HMP)	Identifies profiled hazards, provides resources, and provides goals and mitigation strategies identified by the State of Alaska. It also identifies that the Community participates in the National Flood Insurance Program (NFIP). This HMP also identifies some state disaster declarations regarding a few natural hazards that the Community experiences State of Alaska Division of Homeland Security and Emergency Management (DHS&EM) (DHS&EM, 2013).
Alaska Emergency Response Guide for Small Communities	This guide provides general procedures to assist local officials in preparing for, responding to, and recovering from emergency and disaster situations developed by the DHS&EM (DHS&EM, 2017).
City of Togiak, Alaska Hazard Mitigation Update Plan 2018	This report provides City mitigation actions and goals. (City of Togiak, 2018).
Togiak Comprehensive Plan	This report helps provide a vision for the community and important projects to support the community vision (Traditional Council of Togiak, 2015).
Traditional Village of Togiak Long Range Transportation Plan	This plan identifies transportation goals and actions for the Community (Traditional Council of Togiak, 2019).

NOTE: Complete reference information for the Plans/Studies/Reports in the table above is included in Section 8.0 of this plan.

3.5 INTEGRATION INTO OTHER TRIBAL PLANNING PROCESSES

The Planning Team worked to share and integrate the information collected during the planning process with other tribal planning processes, 44 CFR 201.7(c)(1)(iv). They accomplished this by attending tribal planning meetings when invited and providing regular updates to the Council. Through this process the Planning Team was also able to identify projects or actions for the mitigation plan.

The THMP was developed concurrently with the Togiak Tribal Transportation Safety Plan. As a result, safety throughout the community was addressed and discussed in various aspects regarding natural hazards, and safety on all modes of transportation in the Community.

There were no FEMA programs or initiatives occurring at the time of the planning process. Therefore, the planning process was not integrated into other FEMA programs or initiatives. However, prior to the development of this THMP the City developed an update to the City of Togiak HMP. Additionally, the City completed their Flood Insurance Rate Maps (FIRM) for the NFIP. The City also received a PDM of roughly $2.3 million to conduct repairs on their seawall. This construction for the repair was completed in 2017.

4.0 PLAN MAINTENANCE

This section provides a formal maintenance plan to monitor, evaluate, and update the THMP to ensure that it remains an applicable and active document, and that improvements and updates to the THMP happen in a coordinated and organized manner, 44 CFR 201.7(c)(4)(i). This section also describes how the Council plans to continue public involvement in the maintenance of the plan. Appendix C contains questionnaires and forms to track the maintenance process.

4.1 MONITORING

The Planning Team will continue to monitor the progress of the mitigation actions to track the relevance and implementation of the mitigation action plan (Section 6.6) and all of its elements. Once a year from the time that the plan is adopted, the Tribal Administrator, or designee, will track the status of implementation of the identified mitigation actions and provide a status report to the Council. A more thorough review, by the responsible agency, of the progress of each identified mitigation action will be addressed in Section 6.7. The THMP Maintenance Monitoring Form (THMP Form 4-1) is located in Appendix C.

4.2 EVALUATING

The Planning Team will evaluate the THMP, in its entirety, to assess its effectiveness at achieving its stated goals and purposes. The Planning Team will evaluate the progress towards the THMP goals on an annual basis from the time the plan was adopted. The THMP Plan Update Evaluation Form (THMP Form 4-2) is located in Appendix C. This evaluation will include a review of the following:

- Identification of agencies, stakeholders, residents that have participated in THMP implementation efforts;
- Identification of notable changes to the risk assessment;
- Identification of new hazards and their impacts;
- Identification of new reports or planning materials available to the Community; and
- Identification of new hazard mitigation projects.

The Tribal Administrator, or designee, will contact the Council and other applicable stakeholders identified in Sections 3.2 and 3.3.1 to determine if the THMP needs to be updated to address newly identified hazards, new reports, or new hazard mitigation projects. The Tribal Administrator, or designee, will e-mail all stakeholders summarizing this process and request a planning meeting, if an update is warranted.

4.3 UPDATING

The THMP will be updated at least once every five (5) years. The plan can be revised prior to this when significant changes need to be made, if any necessary changes are identified during the evaluation process (Section 4.2). The Tribal Administrator, or designee will contact the Council and Planning Team no later than the beginning of the fourth year following the THMP adoption to begin the process for updating the plan. The Planning Team will review and incorporate all applicable information collected or received to update the THMP. Comments received from the public and information collected from the THMP evaluation form (Form 4-2 located in Appendix C) and mitigation action plan review forms (Form 6-2 located in Appendix E) will aid the Planning Team in refocusing on any possible new hazards, or available resources.

In addition to reviewing the plan maintenance forms and mitigation action plan review forms the Planning Team will begin the following activities:

- Request grant assistance to update the THMP.
- Identify sections of the plan that need to be improved and begin brainstorming proposed changes.
- Update and analyze the risk assessment.
  - Review and update the hazard analysis.
  - Review and update the Community assets.
  - Complete a new risk analysis.
  - Re-evaluate the Community Vulnerability statements.
- Update the Community mitigation strategy.
  - Re-evaluate and update the Community mitigation goals.
  - Update and review mitigation actions.
- Update the THMP document.
- Submit updated THMP to FEMA for review and approval.

Table 4-1 identifies the plan maintenance timeline and the tasks that should be completed each year.

Table 4-1: Plan Maintenance Timeline

Year	Action(s)	Applicable Forms
2019	Plan Adoption	N/A
2020	• Monitor status of actions • Evaluate THMP	• THMP Form 4-1 • THMP Form 4-2
2021	• Monitor status of actions • Evaluate THMP	• THMP Form 4-1 • THMP Form 4-2
2022	• Monitor status of actions • Evaluate THMP	• THMP Form 4-1 • THMP Form 4-2
2023	Begin plan update activities (outlined in Section 4.3)	N/A
2024	Finalize THMP update	N/A
2025	THMP Update adopted	N/A

4.4 PUBLIC INVOLVEMENT IN THE PLAN MAINTENANCE PROCESS

The Council is committed to involving the public in the continual maintenance and updating of the THMP, 44 CFR 201.7(c)(4)(iv). A continued effort will be made to identify opportunities to raise community awareness about the hazards that affect the Community. This effort could include attendance and provision of materials at Tribe-sponsored events, outreach programs, and public mailings. Additionally, efforts will be made to include hazard mitigation into Community public meetings when possible.

A paper copy of the THMP and any proposed changes will be available at the Tribal office and at the BBNA DOTID office. An electronic copy of the THMP Plan will also be available from the Tribal office or the BBNA DOTID office. Comments or concerns can be directed to the Tribal Administrator, or designee. Any comments or concerns collected will be included in the annual monitoring effort and considered for inclusion in future THMP updates.

The Planning Team will ensure that the public will be involved in the THMP update. This involvement could be in the form of public meetings, newsletters, or other community correspondence techniques. The public will be given the time to review the draft plan prior to its adoption.

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5.0 RISK ASSESSMENT

This section provides an analysis of the hazards that affect the Community planning area, 44 CFR 201.7(c)(2)(i). This section also identifies the Community's assets, analyzes the risks of assets associated with each hazard type, and assesses the vulnerabilities of local people, property, and natural environment.

The Community planning area is shown in Exhibit 5-1. The planning area encompasses Sections 2, 3 and 9-15 of Township 13 South Range 67 West, and Sections 33 and 34 of Township 12 South, Range 66 West, of the Seward Meridian. Community trails and subsistence areas may extend beyond the sections shown.

Exhibit 5-1: Planning Area

5.1 HAZARD ANALYSIS

The first step in the risk assessment is to identify the natural hazards that could affect the planning area. Natural hazards result from uncontrollable or unexpected natural events. The Planning Team reviewed 13 possible hazards that could affect the planning area. Each

hazard was evaluated based on a range of factors. The tables below (Table 5-1 through Table 5-4) provide the classifications and definitions of each factor (FEMA, 2013). These factors included the location of affected area, the magnitude or extent of the event, and the probability of future events (see Table 5-1 through Table 5-3). Based on the rankings from Table 5-1 through Table 5-3 the possible hazards were then ranked again based on their overall impact on the Community (see Table 5-4). The hazard evaluation worksheet (Worksheet 1) is located in Appendix A.

Table 5-1 provides a classification and its definition related to the geographic area that the hazard may affect.

Table 5-1: Location

Color Code	Area Affected	Definition
BLUE	Negligible	• Isolated single-point occurrences • Less than 10% of planning area
GREEN	Limited	• Limited single-point occurrences • 10% to 25% of planning area
YELLOW	Significant	• Frequent single-point occurrences • 25% to 75% of planning area
RED	Extensive	• Consistenct single-point occurrences • 75% to 100% of planning area

Table 5-2 provides classifications and definitions used to determine the significance of each hazard based on maximum extent or magnitude seen in historic events or future probability.

Table 5-2: Maximum Extent or Magnitude

Color Code	Maximum Extent	Definition
BLUE	Weak	• Little to no damage done • Slow speed of onset or short duration of event • Limited classification on scientific scale (if applicable)
GREEN	Moderate	• Some damage and loss of services for days • Moderate speed of onset or moderate duration of event • Moderate classification on scientific scale (if applicable)
YELLOW	Severe	• Devastating damage and loss of services for weeks or months • Fast speed of onset or long duration of event • Severe classification on scientific scale (if applicable)
RED	Extreme	• Catastrophic damage and uninhabitable conditions • Immediate onset or extended duration of event • Extreme classification on scientific scale (if applicable)

Table 5-3 provides classifications with definitions related to the probability of future events happening in the planning area.

Table 5-3: Probability of Future Events

Color Code	Probability of Future Event	Definition
BLUE	Unlikely	• Less than 1% probability of occurrence in the next year • Recurrence interval of greater than every 100 years
GREEN	Occasional	• 1% to 10% probability of occurrence in the next year • Recurrence interval of 11 to 100 years
YELLOW	Likely	• 10% to 90% probability of occurrence in the next year • Recurrence interval of 1 to 10 years
RED	Highly Likely	• 90% to 100% probability of occurrence in the next year • Recurrence interval of less than 1 year

After the possible hazards were evaluated according to location, extent or magnitude, and probable future occurrence each hazard was then ranked according to its overall impact. A hazard's overall impact is the effect or consequence of the hazard on the Community and its assets. The Community's assets are identified and further discussed in Section 5.2. Table 5-4 provides the classifications with definitions to determine the overall impact of each hazard on the planning area.

Table 5-4: Overall Impact

Color Code	Impact	Definition
GREEN	Low	• Event has minimal impact on planning area • Two or more criteria fall in lower classifications
YELLOW	Medium	• Event's impacts on the planning area are noticeable but not devastating • Criteria fall mostly in the middle ranges of classifications
RED	High	• Event is likely/highly likely to occur with severe strength over a significant or extensive portion of the planning area • Criteria consistently fall in the high classifications

Table 5-5 shows a summary of the hazard analysis (also provided in Appendix A, Worksheet 1). This summary identifies each of the hazards evaluated, if the hazard presents a significant impact to the Community, and an explanation of why it was or was not determined to be significant to the Community and further analyzed by the Planning Team.

Table 5-5: Significant Hazards in the Planning Area

Hazard	Significant (Yes/No)	Explanation
Avalanche	No	Avalanches do not occur in the planning area due to the generally flat terrain.
Drought	No	The community has regular precipitation throughout the year. They are not currently concerned about the effects of drought.
Earthquake	Yes	Earthquakes have occurred in the Community, but have not caused serious damage.
Erosion	Yes	The Community is situated along Togiak Bay and the Nasaurluq Creek. The river and coast are experiencing consistent erosion which will begin to threaten homes and critical infrastructure over time.
Extreme Cold	Yes	Severe cold days require more fuel usage and presents an economic hardship on the residents and community. Extreme cold can also cause pipes to freeze leaving residents without water.
Extreme Heat	No	Extreme heat has not had an impact on the Community.
Flood	Yes	Flooding can occur due to heavy rainfall, ice jams in the river, heavy spring snow melt, or high tides. The entire lower village is in the flood zone. The flooding can also compromise utilities and septic systems, and can spread pollution from contaminated sites.
Severe Wind	Yes	Strong wind storms occur frequently in the Community. These storms can damage roofs, blow over power and communication lines which can potentially lead to loss of power and all communication services. Ice bergs can be blown in and cause damage to the sea wall. Also, wind can produce an unhealthy amount of dust and can limit air transportation into the Community.
Severe Winter Weather	Yes	Severe winter weather can affect plane access to the community for travel, food and supplies, and medical emergency evacuations. Severe winter weather also creates challenges with winter road maintenance. Snow storms can also cause power outages.
Subsidence	Yes	The whole planning area is affected by subsidence. Underground pipes have been damaged and light poles are tilting. Roads continue to settle over long periods of time.
Tsunami	No	The Community is located along Togiak Bay but does not experience tsunamis.

Table 5-5 (Continued): Significant Hazards in the Planning Area

Hazard	Significant (Yes/No)	Explanation
Volcano	Yes	There are a number of active volcanos along the Alaska Peninsula and Cook Inlet that could deposit ash in the Community or disrupt flights to the Community. The corrosive properties of volcanic ash are harmful to equipment and detrimental to human health.
Wildfire	Yes	There have been 9 fires within roughly 11 miles of the Community since 1982, totaling 12,663 acres. Wildfires can destroy structures and subsistence resources, and is a severe risk to human life.

The following sections examine each hazard identified by the Tribe that could impact the planning area. This examination includes a general description of each hazard, its anticipated location, anticipated extent, history of occurrences in the planning area, and the probability of future occurrences.

Some hazards, such as tornadoes, could occur in the planning area, but with such infrequency that they were not considered for this evaluation.

5.1.1 Earthquake

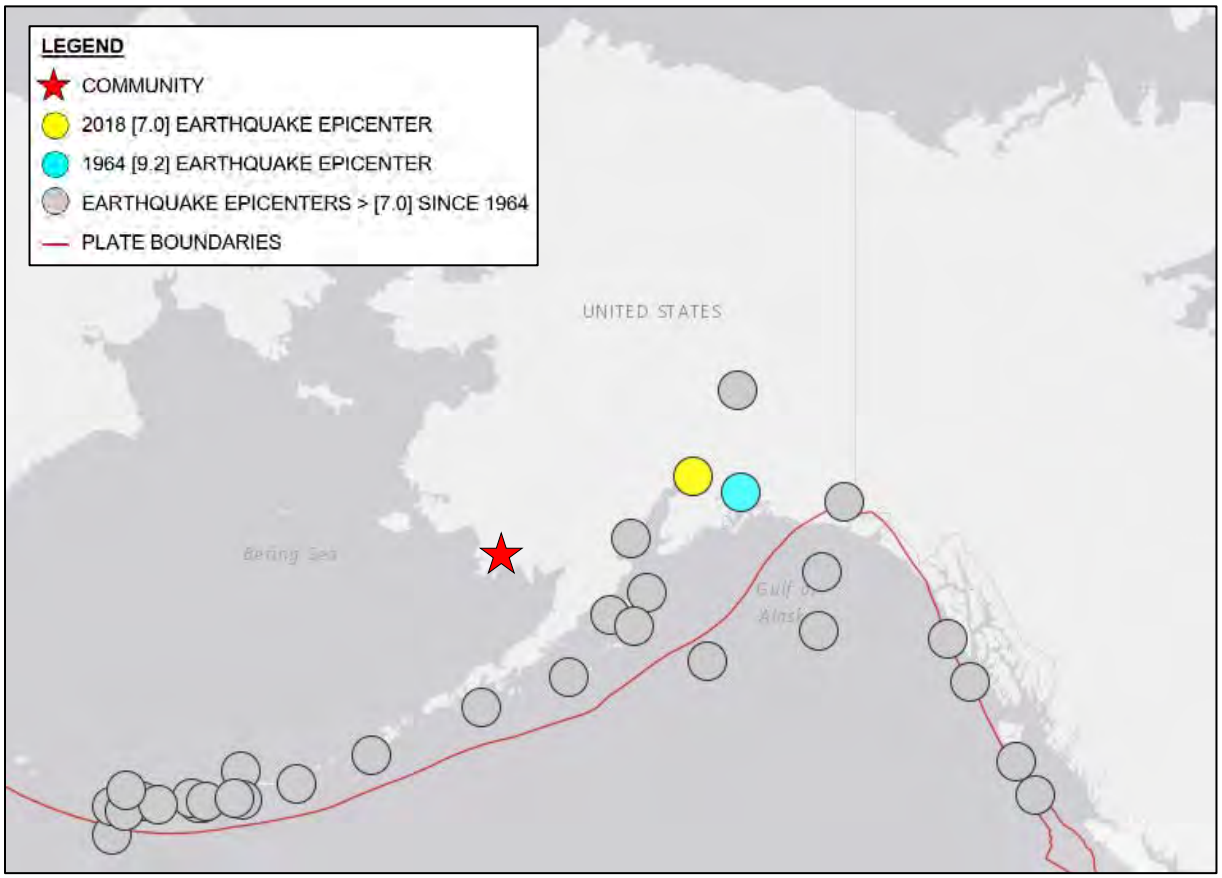
An earthquake is a sudden trembling or movement in the earth's crust due to a sudden release of energy along the edge of the earth's tectonic plates. Earthquakes typically occur without warning. The effects of an earthquake can be felt far beyond the site of its epicenter. The epicenter is the point on the earth's surface that is vertically above the point in the crust where the seismic movement begins. A seismometer detects the vibrations caused by an earthquake and plots them on a seismograph. The magnitude of an earthquake is measured using the Richter scale. Most earthquake-related deaths and property damage are caused by the collapse and failure of structures due to ground shaking. The amount of damage depends upon the duration and extent of the shaking.

Landslides, liquefaction, and tsunamis are some other damaging effects of an earthquake. Earthquake-induced landslides are the down-slope movement of rock, soil and other debris due to ground movement on a steep mountain or hillside slope. Liquefaction occurs when saturated, unconsolidated sand or soil is disturbed due to the shaking from an earthquake. This shaking causes ordinarily solid material or soils to behave like a liquid. A tsunami is a series of enormous ocean waves that can damage or destroy buildings and infrastructure and cause flooding.

5.1.1.1 Location

An earthquake above a 7.0 on the Richter scale is considered a major earthquake. The epicenters of all major earthquakes occurring in Alaska since 1964 are shown on Exhibit 5-2. This map was developed using the US Geological Survey (USGS) Earthquake Catalog Search feature (USGS, 2018). The Community is located approximately 457 miles southwest of the 1964 earthquake epicenter, the largest recorded earthquake in Alaska. The Community is not located on any mapped fault lines. The largest earthquake that has occurred within a 75 miles radius of the Community was a magnitude 4.4 on the Richter scale, located 63.4 miles away in Southern Alaska in February 1994. The closest earthquake to occur near the Community above a magnitude 2.5 was a magnitude 4.2 earthquake that occurred 6.3 miles away in May 1992 (USGS, 2018). More historic earthquake information surrounding the Community is provided in Section 5.1.2.3.

Exhibit 5-2: Major Earthquakes in Alaska



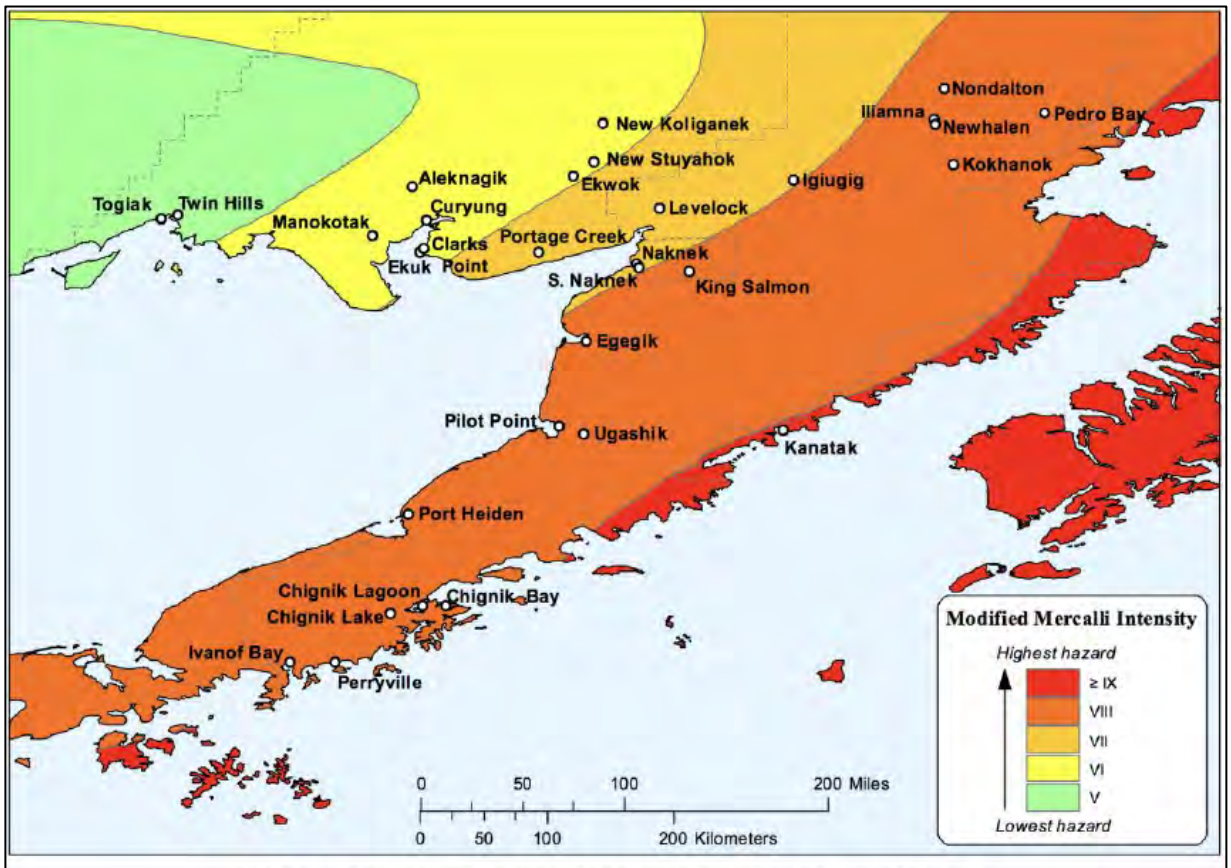
5.1.1.2 Extent

Earthquakes are felt in the Community. Community members have reportedly felt slight tremors from major earthquakes in Alaska, but these earthquakes have not caused any

known damage in the Community. The most severe earthquake felt in the Community was the Great Alaska Earthquake of 1964. Residents described the event saying river ice was visibly shaking. This earthquake had a recorded magnitude of 9.2 on the Richter scale, making it the second largest recorded earthquake in the world. Its effects were felt as far away as South Africa (Alaska Earthquake Center, 2018).

The Geological Hazards Team of the USGS National Earthquake Information Center in Golden, Colorado created a time-independent probabilistic seismic hazard map for the Bristol Bay Region of Alaska. The map (Exhibit 5-3) depicts the intensity of potential earthquake ground shaking that has a 2% chance of occurring in 50 years, presented in terms of the Modified Mercalli Scale (MM) and based on peak ground acceleration. The Community is located in a Zone V MM Intensity, indicating the earthquake risk is relatively low (Natalia Ruppert, Presentation, November 22, 2016). Exhibit 5-4 provides a description of damages that can occur at each magnitude of the MM. This exhibit also provides an approximate Richter Scale equivalent for each MM intensity (USGS, 2019 and SMS Tsunami Warning, 2018).

Exhibit 5-3: Bristol Bay Earthquake Hazard Map



USGS map showing the intensity of potential earthquake ground shaking that has a 2% chance of occurring in 50 years, site class B
(based on peak ground acceleration)

Exhibit 5-4: Modified Mercalli Intensity Scale with Approximate Richter Scale Equivalent

MM Intensity	Richter Scale (approximate)	People's Reaction	Furnishings	Built Environment	Natural Environment
I	1-2	Not felt			Changes in level and clarity of well water are occastionally associated with great earthquakes at distances beyond which the earhtquakes felt by people
II	3	Felt by a few	Delicately suspended objects may swing.		
III	3.5	Felt by several; vibration like passing truck.	Hanging objects may swing appreciably.		
IV	4	Felt by many; sensation like heavy body striking building.	Dishes rattle	Walls creak; windows rattle	
V	4.6	Felt by nearly all; frightens a few.	Picutres swing out of place; small objects move; a few objects fall from shelves within the community.	A few instances of craked plaster and cracked windows with the community.	Trees and bushes shaken noticeably.
VI	5	Frightens many; people move unsteadily.	Many objects fall from shelves.	A few instances of fallen plaster, broken windows, and damaged chimneys within the community.	Some fall of tree limbs and tops, isolated rockfalls and landslides, and isolated liquefaction.
VII	5.5	Frightens most; some lose balance.	Heavy furniture overturned.	Damage negligible in buildings of good design and construction, but considerable in some poorly built or badly designed structures; weak chimneys broken at roof line, fall of unbraced parapets.	Tree damage, rockfalls, landslides, and liquefaction are more severe and widespread with increasing intensity.
VIII	6	Many find it difficult to stand	Very heavy furniture moves conspicuously.	Damage slight in buidlings designed to be earthquake resistant, but severe in some poorly built structures. Widespread fall of chimneys and monuments.	
IX	6.5	Some forcibly thrown to the ground.		Damage considerable in some buildings designed to be earthquake resistant; buildings shift off foundations if not bolted to them.	
X	7			Most ordinary masonry structures collapse; damage moderate to severe in many buildings designed to be earthquake resistant.	

NOTE: Information in this scale was taken from the USGS Modified Mercalli Scale, and the SMS Tsunami Warning Scale (reference information located in Section 8.0).

The largest local concern regarding earthquakes in the Community is disruptions in groundwater. Groundwater wells are relied on for drinking water and household use. A large earthquake nearby the Community could potentially alter the mineralogy or quality of groundwater.

5.1.1.3 History of Occurrences

The USGS Search Earthquake Catalog was consulted for a history of recorded earthquakes with epicenters within 75 miles of the Community and magnitude of 2.5 or greater since 1964. Table 5-6 shows the top ten data results by distance from the community, Table 5-7 by magnitude, and

Table 5-8 by date (USGS, 2018).

Table 5-6: Top 10 Historic Earthquake Epicenters Closest to Community

Date	Magnitude	Distance from the Community (miles)	Location
May-1992	4.2	6.3	Bristol Bay
Feb-1994	4.0	53.4	Southern Alaska
Mar-1997	3.3	57.2	Bristol Bay
Feb-1994	3.5	58.4	Southern Alaska
May-2004	3.1	60.3	Bristol Bay
Jun-2007	2.6	60.9	Southern Alaska
Apr-2011	2.5	61.9	Bristol Bay
Feb-1994	4.4	63.4	Southern Alaska
Sep-2018	3.0	68.2	31 kilometers (km) S* of Dillingham, Alaska
May-2009	2.5	68.8	Bristol Bay

* South (S)

Table 5-7: Top 10 Greatest Magnitude Historic Earthquakes near Community

Date	Magnitude	Distance from the Community (miles)	Location
Feb-1994	4.4	63.4	Southern Alaska
May-1992	4.2	6.3	Bristol Bay
Feb-1994	4.0	53.4	Southern Alaska
Feb-1994	3.5	58.4	Southern Alaska
Mar-1997	3.3	57.2	Bristol Bay
Feb-1994	3.3	71.4	Southern Alaska
May-2004	3.1	60.3	Bristol Bay
Sep-2018	3.0	68.2	31 km S* of Dillingham, Alaska
Apr-2009	2.8	72.8	Southern Alaska
Feb-2015	2.7	71.1	115 km SE* of Bethel, Alaska

* South (S), Southeast (SE)

Table 5-8: Top 10 Most Recent Historic Earthquakes near Community

Date	Magnitude	Distance from the Community (miles)	Location
Sep-2018	3.0	68.2	31 km S* of Dillingham, Alaska
May-2017	2.6	71.9	135 km NNW* of Dillingham, Alaska
Feb-2015	2.7	71.1	11 5km SE* of Bethel, Alaska
Apr-2011	2.5	61.9	Bristol Bay
May-2009	2.5	68.8	Bristol Bay
Apr-2009	2.8	72.8	Southern Alaska
Jun-2007	2.6	60.9	Southern Alaska
May-2004	3.1	60.3	Bristol Bay
Mar-1997	3.3	57.2	Bristol Bay
Feb-1994	3.3	71.4	Southern Alaska

* South (S), North Northwest (NNW), Southeast (SE)

5.1.1.4 Probability of Future Events

It is likely for earthquakes to occur in or near the Community in the future.

5.1.2 Erosion

Erosion is the wearing away, movement, or transportation of land. This can occur along riverbanks, shorelines, dune materials, and beaches. Repetitive flooding events, sea level rise, wave action, subsidence, sediment loss, and climate change can result in long-term erosion. Though most erosion happens gradually over a long period, it can also happen quickly due to periodic natural events such as windstorms, flooding, hurricanes, and storm surges. This can also be intensified by human activities or influences such as the construction of embankment protection structures or water table depletion. Erosion is measured as the rate of change in the displacement or position of the shoreline or riverbank over a given period of time. Erosion does not typically cause death or injury to people; however, it can destroy community infrastructure, buildings, and transportation systems.

5.1.2.1 Location

The Community experiences extensive coastal erosion along the banks of Togiak Bay and riverine bank erosion along the Nasaurluq Creek, which is on the north side of the Community. Erosion can also be found throughout the Community along roads. Significant erosion areas are identified on Figures 1 and 2.

5.1.2.2 Extent

The Community THMP team has classed the area affected by erosion as "extensive." The erosion of highest concern is the river and coast eroding the banks to the point where homes and the community's infrastructure (utilities, roads etc.) are undermined.

Storm-driven wind and waves, high tides, heavy rains, and flooding contribute to coastal erosion. The Community is expanding south along Togiak Bay. In 1984 the City build a mile-long seawall and an additional bulkhead, built in 1987, to protect the northern part of the Community. The unprotected coastal areas along the expanding community south of the sea wall, and north of the bulkhead are eroding. It was estimated by Tetra Tech in 1983 that erosion was happening at a rate of about 1 foot per year. Tetra Tech also estimated that this rate could increase to 7 to 8 feet per year if major storms were regular. The City now estimates that erosion is happening at a rate of about 4 feet per year (USACE, 2009). Since the construction of the seawall in 1984, roughly 700 feet of the wall was lost. The Community was awarded a FEMA grant to repair the wall. Repairs were completed in 2017.

Periodic fluctuations in creek flow and water levels, flooding, and spring break up are contributing to riverine bank erosion along the Nasaurluq Creek. The City estimates that erosion is happening at a rate of 4 to 6 feet per year along the Creek (USACE, 2009).

The City's fuel tanks are at risk of erosion because they are between the Togiak Bay and Nasaurluq Creek. Outbuildings, residences, sheds, sewer lines, water lines, and a church are threatened by erosion along Nasaurluq Creek. Some of these structures are less than 100 feet from the eroding bank (USACE, 2009).

5.1.2.3 History of Occurrences

Erosion along the shoreline have been persistent problems for the Community. There have been major erosion events in 1964, 1979, 1980, and 1982 (USACE, 2009).

Erosion is an on-going process. However, particular events can result in notable occurrences of erosion, such as floods. Major flood-erosion events occurred in 1964, 1979, 1980, and 1982.

5.1.2.4 Probability of Future Events

Significant erosion is visible along the riverbanks every year, particularly after spring breakup. It is highly likely for erosion to continue to occur in the Community due to ice dams, storms, wind, coastal erosion and the continuous flow of the creek.

5.1.3 Extreme Cold

Extreme temperatures constitute different conditions in different parts of the country. In colder climate regions such as Alaska, extreme cold events involve temperatures -10°F and below. Extreme cold temperatures can occur after a winter storm or during long durations of storm inactivity. Fatalities and injuries can occur from extreme cold by causing hyperthermia or frostbite.

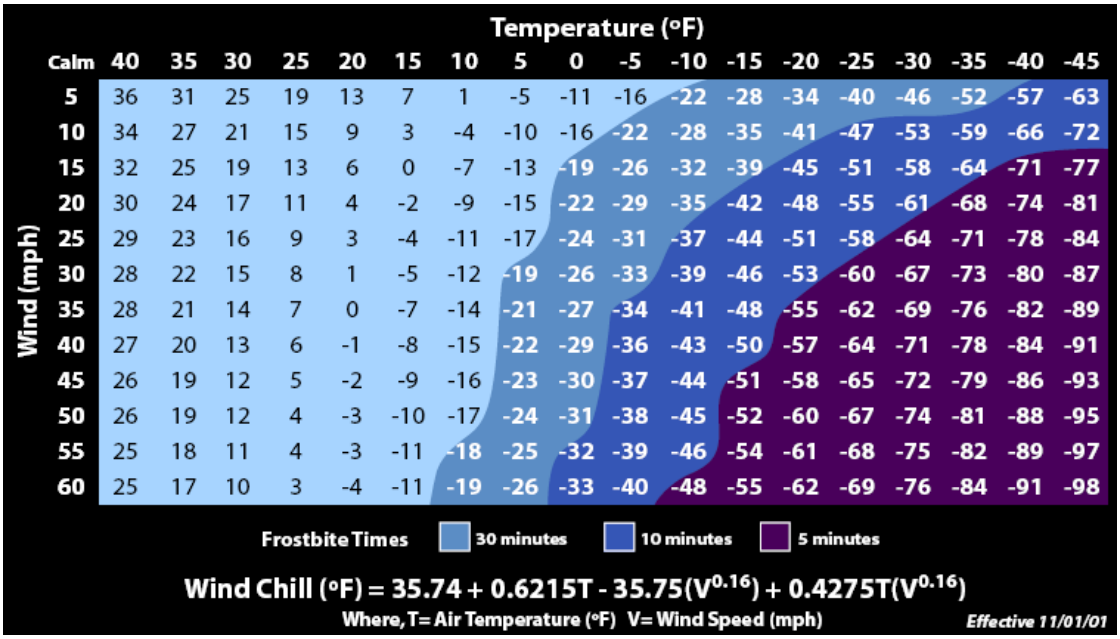
5.1.3.1 Location

Extreme cold affects the entire tribal planning area (see Exhibit 5-1).

5.1.3.2 Extent

Extreme cold varies from region to region. For the purpose of this report, extreme cold is being classified as the temperature at which frostbite occurs in 30 minutes, or less. This determination was based on the National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS) wind chill chart in Exhibit 5-5 (NOAA NWS, 2018).

Exhibit 5-5: Wind Chill Chart



The Community has experienced temperatures as low as -32°F in 2012 (Weather Underground, 2018). There are no known fatalities, injuries, or illnesses caused by extreme cold events in the Community. However, residents are impacted by these events in various ways.

Most residents are aware of the dangers of extreme cold and know how to prepare for winter weather. The Community is most at risk of extreme cold during a power outage or during winter hunting expeditions. Pipes freeze in government and private structures during extreme cold events. Additionally, underground water and sewer pipes are old and susceptible to freezing. This can cause damage to homes and other structures and can also cause residents to go without water for a time while repairs are made. This becomes a bigger hazard when the power is out. These cold events also make it difficult to get vehicles to run and creates challenges for pumping oil. Extreme cold in the late spring early summer has the potential to impact plant growth and disrupt subsistence activities. Heating fuel is very expensive which impacts the residents economically.

5.1.3.3 History of Occurrences

Community members provided accounts of past extreme cold events. According to residents, extreme cold is occurring less often than in the past. Extreme cold events occur at least once every winter and can last up to several weeks at a time. Residents also recalled a cold event in March of 2017 where a pile driver drove through a water line. This caused the line to freeze, leaving several homes without water. Repairs were made in six days.

Data is not readily available for the Community; however, temperatures have been recorded in the nearby community of Dillingham, which is roughly 68 miles away. These communities area assumed to experience similar temperatures. Therefore, Table 5-9 identifies historical extreme cold temperatures recorded in Dillingham (Weather Underground, 2018).

Table 5-9: Historical Extreme Temperature Events

Year	Minimum Temperature (°F)	# of Days Below -10°F
2018	-7	0
2017	-20	5
2016	-8	0
2015	-7	0
2014	-16	2
2013	-16	1
2012	-32	36
2011	-31	9
2010	-14	5
2009	-27	12
2008	-27	19

On February 8, 1991 the Community experienced an electrical failure that lasted four days. This was combined with extreme cold temperatures which caused damage to the Municipal water system and the plumbing and heating systems of public buildings. Disaster assistance was provided to the Community under Disaster Declaration AK-91-127 (DHS&EM, October 2013).

5.1.3.4 Probability of Future Events

It is highly likely that the Community will continue to experience the effects of extreme temperatures.

5.1.4 Flood

Flooding is the accumulation of water where normally none exists. There are various types of flooding, such as, coastal flooding, riverine flooding, and shallow flooding. Additionally, flooding can occur due to rapid snowmelt, ice jams, heavy rainfall, severe thunderstorms, tropical storms, and other high precipitation events. Flooding can damage buildings, personal property, and infrastructure. It can cause road or bridge closures. It can cause a disruption of services, such as, transportation, or utility services. It can also cause injuries or death.

Flooding events are the most significant threats to ecosystems along river and coastal areas of Alaska. As the water runs over and through the watershed, it picks up and carries contaminants and soil. Everything from leaked motor oil on parking areas, plastic grocery bags, pesticides, fertilizers, detergents, and sediments; known as non-point source pollutants. Point source discharges are; discharge points, bulk fuel storage and sewage treatment plants, and other regulated known sources or points of pollutant discharges. If untreated, these pollutants wash directly into waterways carried by runoff from rain and snowmelt. These contaminants can infiltrate groundwater and concentrate in streams and rivers and can be carried down the watershed and into the ocean. Non-point source pollution is linked to the creation of large dead-zones (areas with minimal oxygen) in the ocean and threatens the health of the ecosystem.

5.1.4.1 Location

Areas in the Community at risk of flooding are depicted on Figures 1 and 2. FEMA flood maps are available for the Community (FIRM Map Numbers 0200900034A, 0200900041A, 0200900042A, 0200900053A, and 0200900061A). The base flood elevations on the FIRM's are given in feet, which are referenced to the North American Vertical Datum of 1988 (FEMA, February 3, 2010). The 2010 Togiak Community Profile flood map indicates areas subjected to flooding. The low-lying areas adjacent to Togiak Bay have the highest risk. This includes the entire lower portion of the village. Additionally, many roads and properties in

the Community have poor drainage. During long periods of heavy rainfall, these areas can flood and maintain standing water for several days.

5.1.4.2 Extent

Although the seawall has been effective against erosion, floods still overtop the wall and flood the northern part of the village. The roads in the lower village are still impacted by flood waters. To reduce this impact, the Community built up the roads by raising them about 1.5 feet. Some of the roads have standing water issues due to poor drainage.

The Community experiences coastal flooding due to high tides and winds, and heavy rains. High-water levels can inundate large portions of the Community. Flooding can also occur due to ice jams, and heavy spring runoff in the Nasaurluq Creek. Snow melt and heavy rains can cause flooding throughout the Community. This flooding leaves roads impassable and hampers movement between residences and critical facilities.

Flooding in the coastal portions of the Community could cut off access to critical services and facilities. Most of the Community's private and public buildings are near the coastline. Utilities, septic systems, homes, and roads are also be at risk.

5.1.4.3 History of Occurrences

Flooding along the coastline has been a continuous problem for the Community. There have been major flood events in 1964, 1979, 1980, and 1982. During the 1964 flood event, ninety percent of the village was covered with about 3 to 4 feet of water (USACE, 2009). A flood gauge has been installed on the front of the City office. The gauge has a High-Water Elevation sign with a water symbol at the 1964 flood level of 18.8 feet (City of Togiak, 2018).

On August 23, 2005 the Community experienced a strong storm with high winds and high tides. Water levels were 2 to 3 feet above the high tide levels. This caused widespread coastal flooding. Personal property, public infrastructure, and commercial property damages were reported. Disaster assistance was provided to the Community under Disaster Declaration AK-06-214 (DHS&EM, October 2013).

5.1.4.4 Probability of Future Events

It is highly likely flooding will continue to happen in the Community due to the continuing effects of rain, ice jams, and high tides and winds. According to the FIRM, there is a 1% chance every year that most of the Community could get flooded.

5.1.5 Severe Wind

Severe wind can accompany other natural hazards or occur alone. Wind events pose a threat to vital utilities, lives, and property. Severe winds have been classified using the Beaufort

wind scale. Strong gale winds of 47 miles per hour (mph) and greater are considered severe and likely to produce damage.

5.1.5.1 Location

Severe wind affects the entire tribal planning area (see Exhibit 5-1).

5.1.5.2 Extent

The Beaufort Wind Scale gives a force scale of 1 – 12 based on sustained wind speed. Exhibit 5-6 identifies the scale and the consequences that are possible at the different levels as well as, the impacts to ocean water movement (NOAA NWS, 2013). Any wind event, Force 9 and higher is considered severe and can cause damage within the Community.

Exhibit 5-6: Beaufort Wind Scale

The Beaufort Wind Scale

Force	Name	Wind Speed knots	mph	Consequence
0	Calm	0	0	Smoke rises vertically
Wave height: 0 m - **Sea:** Like a mirror				
1	Light air	1-3	1-3	Smoke drifts with air
Wave height: 0.1 m (.25 ft) - **Sea:** Ripples - No foam crests				
2	Light breeze	4-6	4-7	Weather vanes become active
Wave height: 0.2-0.3 m (0.5-1 ft) - **Sea:** Small wavelets - Not breaking				
3	Gentle breeze	7-10	8-12	Leaves and small twigs move
Wave height: 0.6-1 m (2-3 ft) - **Sea:** Small wavelets - Crests begin to break				
4	Moderate breeze	11-16	13-18	Small branches sway
Wave height: 1-1.5 m - **Sea:** Small waves becoming longer, numerous whitecaps.				
5	Fresh breeze	17-21	19-24	Small trees sway - Waves break
Wave height: 2-2.5 m (6-8 ft) - **Sea:** Moderate waves - Many whitecaps				
6	Strong breeze	22-27	25-31	Large branches sway
Wave height: 3-4 m (9.5-13 ft) - **Sea:** Larger waves forming - Whitecaps everywhere				
7	Near gale	28-33	32-38	Whole trees sway - difficult to walk
Wave height: 4-5.5 m (13.5-19 ft) - **Sea:** Sea heaps up - White foam blown around				
8	Gale	34-40	39-46	Twigs break off trees
Wave height: 5.5-7.5 m (18-25 ft) - **Sea:** Edges of crests break into spindrifts				
9	Strong gale	41-47	47-54	Shingles blow off roofs
Wave height: 7-10 m (23-32 ft) - **Sea:** High waves - Sea rolls - Reduced visibility				
10	Storm	48-55	55-63	Trees uprooted - Damage to buildings
Wave height: 9-12.5 m (29-41 ft) - **Sea:** Very high waves with overhanging crests				
11	Violent Storm	56-63	64-73	Widespread damage
Wave height: 11.5-16 m (37-52 ft) - **Sea:** Exceptionally high waves				
12	Hurricane	Over 63	Over 73	Violent destruction
Wave height: 16+ m (52+ ft) - **Sea:** Sea completely white - Excessive foam				

Severe wind can be present all year, but these events are most common during the spring and fall months. These conditions can cause loose debris to blow around the Community and detach roofing or siding from homes and other structures.

The power poles in the Community are 30 years old. Severely windy conditions can cause power poles to blow over and cause power outages. When power outages happen during cold temperatures it produces a hazard to residents and can cause water and sewer lines to freeze. Communications can also be interrupted due to high wind events.

Ice bergs are blown in during the winter months. This can cause damage to the sea wall. As the ice moves in and out it can move material away from the sea wall leaving it susceptible to further damage. However, the wind can also create a natural barrier with the ice bergs to protect the Community against flooding.

In the summer and fall months, severe wind conditions produce an unhealthy amount of dust. The airport runway and all of the roads in the Community are gravel. This produces large amounts of airborne dust, impacting subsistence harvests and producing a breathing risk to everyone, but especially young children and those with respiratory issues.

Severely windy conditions impact air transportation in and out of the Community. This increases risks to residents if there is a lack of needed supplies, medications, and mail. This also decreases the ability to evacuate for medical emergencies.

5.1.5.3 History of Occurrences

According to locals, severe windstorms occur more than once per year, usually in the fall. Residents were not able to provide exact dates, but past wind storms have caused major damage to roofs and buildings and caused power outages. Residents recalled a time when the power was out for a week due to a broken power line from wind. During this time residents had to haul water to their homes and use their back up heaters. Additionally, the Community has gone 2-3 days without planes being able to land.

The residents noted that the upper and lower portions of the village experienced “dust devils” during the summer of 2018. They stated that these are happening more frequently. Residents also stated that the wind and tide created a natural sea wall out of ice bergs during the winter of 2017. This natural sea wall created a barrier and protected the Community from storm surges.

Wind data is not readily available for the Community, however, wind speeds have been recorded in the nearby community of Dillingham, which is roughly 68 miles away. These communities area assumed to experience similar wind events. Therefore, Table 5-10 identifies historical severe wind events recorded in Dillingham (Weather Underground, 2018).

Table 5-10: Historical Severe Wind Events

Year	Max Wind Speed (mph)	# of Days Above 47 mph
2018	50	1
2017	43	0
2016	48	1
2015	47	1
2014	46	0
2013	44	0
2012	53	2
2011	55	1
2010	43	0
2009	60	5
2008	38	0

On August 23, 2005 the Community experienced a strong storm with high winds which caused flooding in the Community. Disaster assistance was provided to the Community through Disaster Declaration AK-06-214 (DHS&EM, October 2013). See Section 1.1.4 for more information regarding this event.

5.1.5.4 Probability of Future Events

Severe wind events are highly likely to continue to occur in the Community.

5.1.6 Severe Winter Weather

Severe winter storms can include snow, freezing rain, sleet, or a mix of the previous forms of precipitation. Heavy snowfall occurs when large quantities of snow is produced in a short period of time. Drifting snow creates an uneven distribution of snow caused by strong winds. This weather can cause harm to individuals, cause power outages, cause property damage, and damage utilities.

5.1.6.1 Location

Severe winter weather affects the entire tribal planning area (see Exhibit 5-1).

5.1.6.2 Extent

Air transportation is essential to the Community. Severe winter storm conditions create a hazard for planes to land in the Community. These storms hinder the ability to evacuate for medical emergencies, and receive needed supplies, medications, and mail due to ice or snow

on the runway. There have been times in the past when planes have not been able to land in the Community for several days at a time.

Traveling in severe winter conditions is dangerous for residents because of the blowing snow and reduced visibility. Blowing snow is a hazard to residents. Many residents travel on all-terrain vehicles. Low visibility makes it difficult for road operators to keep the roads plowed. Reduced visibility is exacerbated by colder temperatures because of their effect on the snow ratio. Due to the average temperatures in Alaska being lower than the rest of the United States during winter months, a snow ratio of 1:20 was assumed. This means that for every 1 inch of precipitation, 20 inches of snow falls. With extreme cold, the snow ratio can increase up to 1:50. This 'fluffy' snow is hard to manage because it becomes airborne easily.

Icy conditions throughout the Community can present a hazard for all residents. Vehicles are at risk of sliding off the roads if the roads are not cleared of snow and ice. Walking residents are at risk of falling and injuring themselves. Walking residents share the road with vehicles and large equipment. This causes a risk to pedestrians walking in the Community.

Power outages can be caused by severe winter storms. If power is not quickly restored, the clinic is at risk of losing essential medications and vaccines that require refrigeration. Young children and community elders are at greater risk of injury during power outages.

5.1.6.3 History of Occurrences

Precipitation data is not readily available for the Community. However, precipitation has been recorded in the nearby community of Dillingham, which is roughly 62 miles away. These communities are assumed to experience similar amounts of precipitation. Table 5-11 identifies historical severe winter weather events recorded in Dillingham between the months of November and March. Precipitation data was not available between 2008 and 2012 (Weather Underground, 2018).

Table 5-11: Historical Severe Winter Weather Events

Year	Maximum One Day Precipitation (inches)	# of Days Above 1.0 inch
2018	0.9	0
2017	0.29	0
2016	5.6	33
2015	1.13	1
2014	1.19	1
2013	0.49	0
2012	0.11	0

Additionally, residents in the Community provided the following accounts of severe winter weather:

- The school district wanted to keep the school open every day. In order to do this a bus had to be pulled behind a loader to get it to the school. One night the kids had to spend the night in the school because they were unable to get them home safely. Residents were unable to remember the year of this event.
- Not all homes are weatherized which allows pipes to freeze.
- The Community went for a winter with no medivac flights due to severe winter conditions. Residents were not able to recall the year of this event.
- The shelves were empty at the two Community stores for about two weeks during the winter of 2017. These stores are also used by the nearby community of Twin Hills.

5.1.6.4 Probability of Future Events

Severe winter weather will likely continue to occur and impact the Community. However, the Community is noticing that they are not getting the amount of snow that they used to get in the past. This is due to the warmer winter temperatures that they are experiencing.

5.1.7 Subsidence

Subsidence is the settling of surface soils either gradually over time or a sudden sinking. This is often experienced in swampy areas with soft or wet soils. Many things including thawing permafrost, declining groundwater levels, compactions, mining, and drainage can cause subsidence. The collapse of surface areas can damage infrastructure and buildings.

5.1.7.1 Location

Impacts of subsidence are beginning to be noticed throughout the planning area. Specific location are not able to be identified at this time, therefore see Exhibit 5-1 for the planning area.

5.1.7.2 Extent

The Community is experiencing a gradual settling throughout the Community which is exposing different underground infrastructure. As the infrastructure settles it can cause damage such as breaking of pipes, leaks in water lines and/or sewer lines, and possible leaks in fuel lines. The roads around the Community are also beginning to settle and sink. Some are sinking to the level of the tundra which is causing drainage issues throughout the Community. The road that connects the upper village and school to the lower village is experiencing permafrost thaw. This is causing road problems and creates hazardous driving conditions for kids to get to school. Settling roads impacts ground transportation and are expensive to maintain and fix.

Structures around the Community are beginning to tilt. This is causing damage to the structure. Many light poles are tilting which could be an indicator of ground movement and subsidence.

5.1.7.3 History of Occurrences

There is no data available to indicate when subsidence is happening in the Community. Therefore, anecdotal evidence from community residents was relied upon. Residents are noticing that the permafrost is thawing more than normal. Residents stated that they are noticing that the Clinic and light poles are tilting. Residents also stated that underground fuel lines have ruptured causing fuel leaks which require monitoring and clean up response. The cause is not fully understood, but it is thought to have been caused by the settling of the pipes underground.

5.1.7.4 Probability of Future Events

Subsidence will continue to impact the community as permafrost continues to thaw.

5.1.8 Volcano

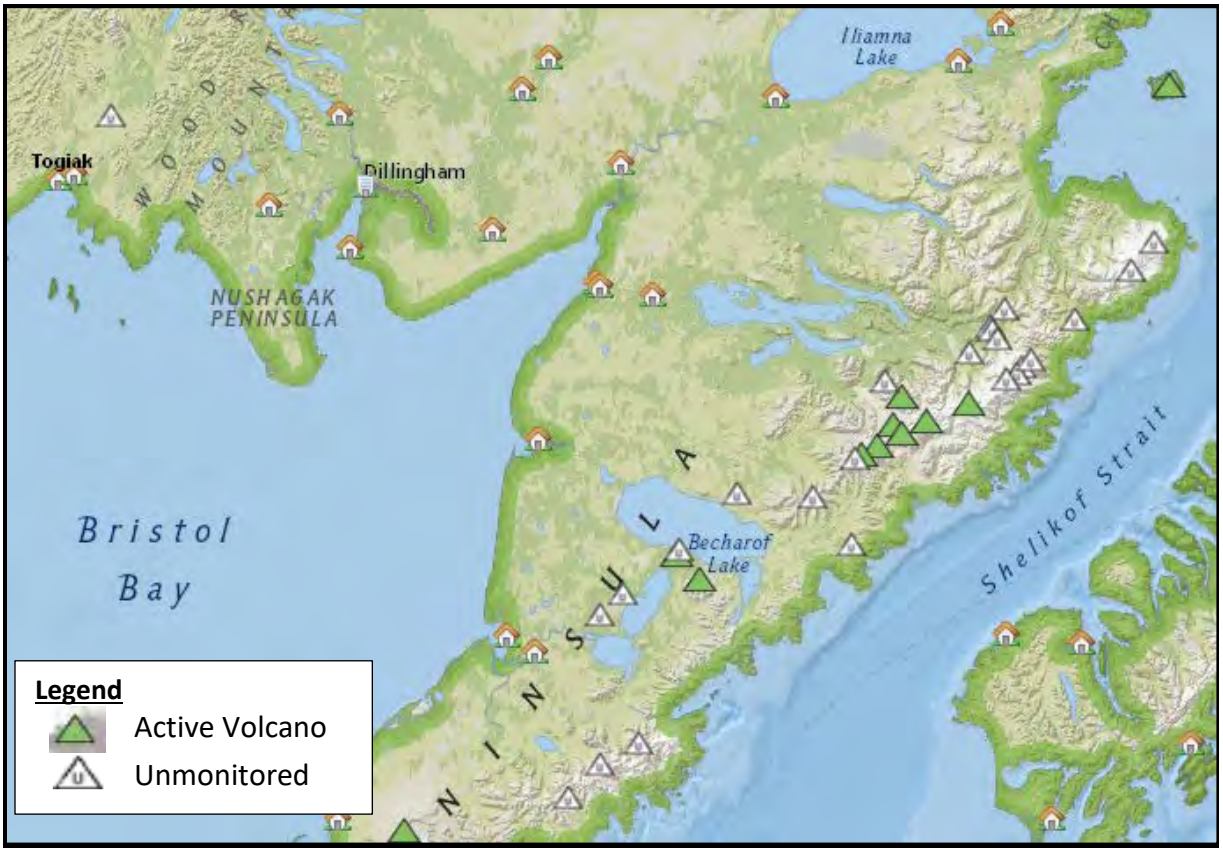
A volcano is a typically conical shaped mountain or hill that has a crater or vent. Lava, rock fragments, gases, and hot vapors erupt from the earth's core through the crater or vent. Volcanos are generally found where tectonic plates are diverging or converging. Erupting volcanos can pose hazards to those in the immediate area of the eruption or outside of the area for many miles. A volcano produces volcanic ash when it erupts. This can impact

aircraft and vehicle transportation. It can also cause injury to people as it impacts air quality. Breathing volcanic ash can damage the lungs and cause breathing issues.

5.1.8.1 Location

There are no volcanos within 100 miles of the Community. There is one inactive volcano near the Community. Exhibit 5-7 identifies some of the volcanos that can impact the Community with ash fall (Alaska Volcano Observatory, 2016). The entire planning community is at risk when ash fall enters the area (see Exhibit 5-1).

Exhibit 5-7: Volcanos Near the Community



5.1.8.2 Extent

Volcanic ash is the primary concern for the Community for various reasons. Ash fall produces poor air quality and is a health risk to people with respiratory issues. Ash fall also creates a hazard to equipment, generators, vehicles, or anything with a motor. Volcanic ash is corrosive and can damage machinery. In rural Alaska, it can be challenging to replace equipment due to limited local resources, and delivery access to the Community. The Community relies upon air transportation for supplies, mail, and medical emergencies.

Volcanic ash may or may not fall on the Community depending on the wind direction from the source. However, it can still have an impact if it is in the flight path of the aircraft.

5.1.8.3 History of Occurrences

There is no specific data for ash fall in the Community. However, the residents recalled a small amount of ash fall that entered the Community when Mount Redoubt erupted in 2009. This eruption caused interrupted air transportation throughout the state and Bristol Bay region. It also turned the snow grey. Residents expressed their concern over the impacts that ash might have on their subsistence resources such as wildlife and vegetation.

5.1.8.4 Probability of Future Events

Volcanos are anticipated to occasionally affect the Community. Volcanic eruptions are challenging to predict, and ash fall impacts are dependent on wind patterns.

5.1.9 Wildfire

A wildfire spreads through the consumption of vegetation. It typically occurs in areas with abundant vegetation. It often begins unnoticed and spreads quickly. It produces dense smoke that can be seen for many miles. Wildfires can result in damage to property, subsistence areas, and loss of life. The smoke produced from wildfires can prohibit air transportation in and out of a community, and reduces air quality.

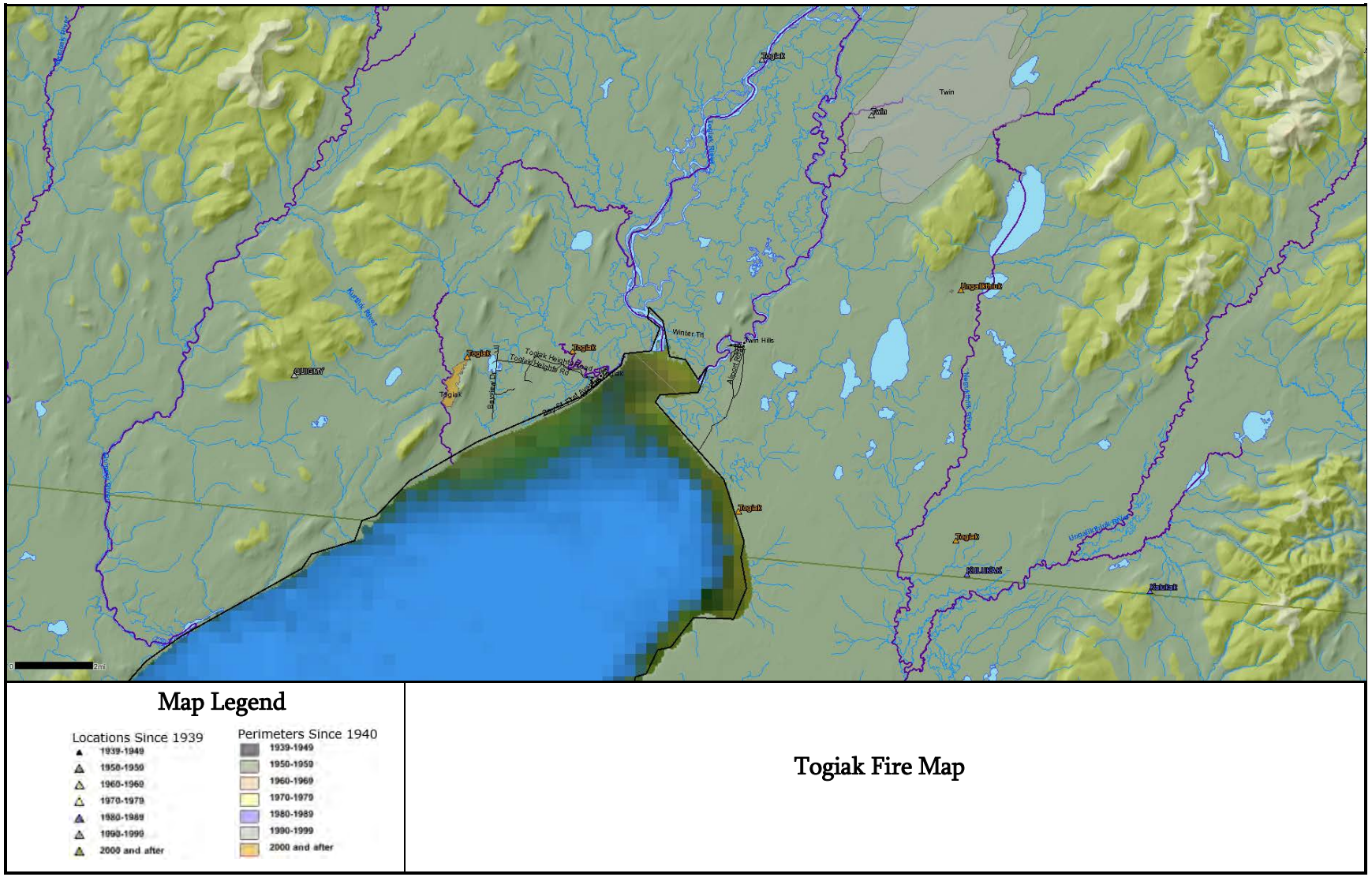
Fuel, weather, and topography contribute to the behavior of the wildfire (Idaho Firewise, 2018):

- Wildfire fuel includes structures and vegetation. Dense, large areas burn for a longer duration and creates large amounts of heat. Less dense and dry areas burn quickly with less heat.
- Weather that can affect a wildfire includes wind, moisture, temperature, cloudiness, and air pressure. Wind moves the wildfire across the landscape and provides oxygen which can make the fire grow quickly. It can also cause embers to blow to new areas potentially causing new fire locations. Low humidity and high temperatures can cause the vegetation to become dry. High humidity and rain can extinguish or slow the fire down.
- Topography, or physical features, including aspect and slope of an area, can contribute to the behavior of a wildfire. Wildfires burn more rapidly moving up a slope because it preheats the fuels which makes them more combustible. Also, south and west facing slopes have drier fuels due to more exposure to the sun.

5.1.9.1 Location

A map of wildfires located in and around the Community since 1939 is provided in Exhibit 5-8. However, wildfires have an impact on the entire tribal planning area (see Exhibit 5-1) due to the impacts of smoke and subsistence resources.

Exhibit 5-8: Togiak Fire Map



Source: (Alaska Interagency Coordination Center, 2018)

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5.1.9.2 Extent

Subsistence areas around the Community provide needed food sources for residents. Wildfires can damage these areas and the resources they provide, such as berries, greens, and wildlife.

Smoke from wildfires produce poor air quality. It is hazardous to residents and pets, especially the elders, young children, and those with respiratory issues. Smoke from wildfires can also have a negative impact on subsistence harvests, specifically fish in smoke houses and in drying racks. This is an issue because residents throughout the Community rely upon these harvests to sustain themselves through the winter months.

The Community has a firetruck and fire department but no portable water pumps. There are fire hydrants in the lower portion of the village but these have not been installed in the upper portion of the village so water has to be transported to a fire.

5.1.9.3 History of Occurrences

Table 5-12 below provides a list of wildfires and their impacts (in acreage) in or around the Community (Alaska Interagency Coordination Center, 2018).

Table 5-12: History of Wildfires

Fire Name	Year	Estimated Impact (Acres)	Distance from the Community (Miles)
Togiak	2018	0.1	1.0
Togiak	2015	190	3.3
Togiak	2008	1.0	5.0
Quigmy	1997	0.2	7.7
Togiak	1991	20	9.4
Ungalikthiuk	2015	2.0	9.8
Twin	1991	12400	10.0
Togiak	2012	0.1	10.2
Kulukak	1982	50	10.9

Additionally, residents recalled the fire in 2015 that was upriver about 15-20 miles north of the Community. This fire was caused by lightning. The smoke was thick which caused a vehicle accident. It was very hot weather during that time with little wind which made it harder for residents to breath. The smoke lasted about a week, and during that time there was not plane service. This fire was put out naturally by rain but residents had to monitor.

5.1.9.4 Probability of Future Events

Wildfires are highly likely to continue to affect the Community. The Community is noticing drier and hotter seasons with more lightning. These conditions cause the vegetation to become drier, and more susceptible to fires. These same conditions are becoming more common throughout Alaska which also increases the risk of smoke from distant wildfires being blown into the Community.

5.2 COMMUNITY ASSETS

The Planning Team determined the potential impacts of natural hazards to the Community assets. Assets are broadly defined as anything that is important to the Community such as the people, the economy, and the natural and built environments of the Community. Some assets are more vulnerable to these hazards because of their socioeconomic uses and physical characteristics.

5.2.1 People

The most important asset to the Community is the people. The 2017 DCCED certified population was 870. Residents are not always in their homes. The following list provides the main places that people are in large numbers during the day when not in their place of residence.

- Coupchiak Building
- Seveth Day Adventist Church
- New School
- City of Togiak Quarters
- Togiak Trading Store
- Moravian Churhc
- Dental Clinic
- Togiak Head Start
- City of Togiak Police and Fire Station
- UAF BB & Youth Center
- Blue's Steambath House
- Old School Housing
- New School Residence
- Senior Center/Togiak Clinic
- Nanguciulnguk Center
- Assembly of God Churhc
- U.S. Post Office
- Tribal Office
- Family Service Worker Building

5.2.2 Economy

The local economy is important to understand when planning to reduce the impacts of hazards. Economic resiliency influences recovery after a natural disaster. The following is a list of economic resources that could be affected and pose a severe impact on the Community should a hazard impact the Community.

- City of Togiak Quarters
- Togiak Trading Store
- AC Store
- Airport

5.2.3 Built Environment

Existing infrastructure and structures are another important asset to the Community. The following is a list important infrastructure, existing structures, and critical facilities in the community.

- Critical Facilities/Existing Structures
  - Coupchiak Building
  - Seventh Day Adventist Church
  - Old School
  - School Shop
  - City of Togiak Quarters
  - UAF BB & Youth Center
  - City of Togiak Office
  - Beacon Tower
  - Senior Center/Togiak Clinic
  - Dental Clinic
  - U.S. Post Office
  - AC Store
  - TNL Office
  - Assembly of God Church
  - City of Togiak Maintenance Building
  - Blue's Steambath House
  - Old School Housing
  - New School
  - New School Residence
  - UUI Station
  - Family Service Worker Building
  - City of Togiak Garage
  - Tribal Office
  - Togiak Trading Store
  - Togiak Head Start
  - Nanguciulnguk Center
  - TNL Garage
  - Moravian Church
  - GCI Station
  - City of Togiak Police and Fire Station

- Infrastructure
  - Airport
  - AVEC Tank Farm
  - Old Water Tower
  - Tribally Owned Equipment
  - Trails
  - Overhead/Underground Utility Lines
  - Togiak Water Tank
  - AVEC Electric Plant
  - Drying Racks
  - Landfill
  - Roads
  - Tank Farm

5.2.4 Natural Environment

Natural resources and environmental assets are also important to the Community. These resources are important to the Community's quality of life and identity.

- Subsistence areas (hunting and berry picking areas)
- Nasaurluq Creek
- Togiak Bay
- Drinking water aquifer

5.3 RISK ANALYSIS

The risk analysis assesses the potential effects of the identified hazards on the vulnerable assets that have been identified. Table 5-13 provides a list of the identified assets with the Community. It provides a monetary value, if applicable, to the asset as well as the number of occupants that could be affected should a natural hazard impact the asset. Each asset was evaluated for each identified hazard. If the hazard posed a significant risk to the asset an "X" was placed in the corresponding "Hazard Impact" column in Table 5-13. This information helped the Planning Team determine where the Community is most vulnerable and further helped in the identification of mitigation goals and actions.

The Planning Team used a combination of historical, exposure, and scenario analysis to determine the impact each hazard could have on the Community assets. They used historical analysis by reviewing the frequency and impact on the Community of the hazard in the past. Exposure analysis was used by evaluating the existing assets in the area where the hazard is likely to occur or has occurred in the past. Additionally, they used Community plans to identify future assets that may be affected by the hazard. The Planning Team used scenario analysis by asking "what if" questions about the hazard and made predictions of how the hazard would impact the Community assets should a hazard occur.

Table 5-13: Risks to Vulnerable Assets

Facility Type	Facility Number (See Fig. 1 & 2)	Facility Name	Number of Occupants	Location (Latitude, Longitude)	Estimated Value	Hazard Impacts								
						Earthquake	Erosion	Extreme Cold	Flood	Severe Wind	Severe Winter Weather	Subsidence	Volcano	Wildfire
Government	10	City of Togiak Quarters	3	59° 3'43.35"N, 160°22'33.74"W	Unknown	X		X	X	X	X	X		X
	14	City of Togiak Office	4	59° 3'37.45"N, 160°22'43.96"W	$564K	X		X		X	X	X		X
	16	City of Togiak Garage	2	59° 3'36.27"N, 160°22'43.58"W	$236K	X		X	X	X	X	X		X
	17	City of Togiak Maintenance Building	2	59° 3'35.49"N, 160°22'44.92"W	Unknown	X		X	X	X	X	X		X
	18	City of Togiak Police and Fire Station	2	59° 3'34.61"N, 160°22'46.46"W	$836K	X		X	X	X	X	X		X
	26	U.S. Post Office	1	59° 3'29.92"N, 160°22'52.55"W	Unknown	X		X	X	X	X	X		X

Table 5-13 (Continued): Risks to Vulnerable Assets

Facility Type	Facility Number (See Fig. 1 & 2)	Facility Name	Number of Occupants	Location (Latitude, Longitude)	Estimated Value	Hazard Impacts								
						Earthquake	Erosion	Extreme Cold	Flood	Severe Wind	Severe Winter Weather	Subsidence	Volcano	Wildfire
Transportation	36	Airport	N/A	59° 3'26.76"N, 160°23'24.53"W	$30M	X						X		X
	37	Tribally Owned Equipment	N/A	Community Wide	Unknown	X		X			X	X	X	X
	42	Official NTTFI Roads	N/A	29.8 Miles	$59.6M							X		
	43	Trails	N/A	Community Wide	--							X		
Educational	4	Old School Housing	4	59° 3'37.10"N, 160°22'36.48"W		X	X	X	X	X	X	X		X
	5	Old School	N/A	59° 3'35.50"N, 160°22'38.51"W	$10M	X	X	X	X	X	X	X		X

Table 5-13 (Continued): Risks to Vulnerable Assets

Facility Type	Facility Number (See Fig. 1 & 2)	Facility Name	Number of Occupants	Location (Latitude, Longitude)	Estimated Value	Hazard Impacts								
						Earthquake	Erosion	Extreme Cold	Flood	Severe Wind	Severe Winter Weather	Subsidence	Volcano	Wildfire
Educational (Continued)	6	New School	200	59° 3'21.33"N, 160°25'31.04"W	$27M*	X		X		X	X	X		X
	7	New School Tank Farm	1	59° 3'23.13"N, 160°25'28.28"W	*$27M (Part of New School Cost)	X		X	X		X	X		X
	8	School Shop	N/A	59° 3'36.69"N, 160°22'39.87"W	*$27M (Part of New School Cost)	X		X	X	X	X	X		X
	9	New School Residence	20	59° 3'18.88"N, 160°25'34.33"W	*$27M (Part of New School Cost)	X		X		X	X	X		X
	46	Teacher Apartments	20	59° 3'17.55"N, 160°26'2.32"W	*$27M (Part of New School Cost)	X		X		X	X	X		X
	47	Principal / Vice Principal Apartment Building	4	59° 3'26.16"N, 160°26'5.23"W	*$27M (Part of New School Cost)	X		X		X	X	X		X
	48	Teacher/ Trooper Housing	4	59° 3'36.45"N, 160°22'34.56"W	Unknown	X		X		X	X	X		X

Table 5-13 (Continued): Risks to Vulnerable Assets

Facility Type	Facility Number (See Fig. 1 & 2)	Facility Name	Number of Occupants	Location (Latitude, Longitude)	Estimated Value	Hazard Impacts								
						Earthquake	Erosion	Extreme Cold	Flood	Severe Wind	Severe Winter Weather	Subsidence	Volcano	Wildfire
Medical	19	Senior Center/ Togiak Clinic	15	59° 3'32.85"N, 160°22'48.84"W	$2M	X		X	X	X	X	X		X
	24	Dental Clinic	4	59° 3'31.95"N, 160°22'49.98"W	Unknown	X		X	X	X	X	X		X
Community	1	Coupchiak Building	1	59° 3'19.76"N, 160°23'5.73"W	Unknown	X	X	X	X	X	X	X		X
	2	Blue's Steambath House	1	59° 3'20.74"N, 160°23'2.49"W	Unknown	X	X	X	X	X	X	X	X	X
	3	Seventh Day Adventist Church	2	59° 3'23.21"N, 160°22'59.41"W	Unknown	X	X	X	X	X	X	X		X
	12	UAF BB & Youth Center	N/A	59° 3'37.88"N, 160°22'41.89"W	Unknown	X		X		X	X	X		X

Table 5-13 (Continued): Risks to Vulnerable Assets

Facility Type	Facility Number (See Fig. 1 & 2)	Facility Name	Number of Occupants	Location (Latitude, Longitude)	Estimated Value	Hazard Impacts								
						Earthquake	Erosion	Extreme Cold	Flood	Severe Wind	Severe Winter Weather	Subsidence	Volcano	Wildfire
Community (Continued)	13	Family Service Worker Building	10	59° 3'38.35"N, 160°22'43.72"W	$1.4M	X		X		X	X	X		X
	23	Togiak Trading Store	1	59° 3'33.97"N, 160°22'50.39"W	Unknown	X		X	X	X	X	X		X
	25	Togiak Head Start	4	59° 3'31.26"N, 160°22'51.89"W	Unknown	X		X	X	X	X	X		X
	27	Nanguciulnguk Center	2	59° 3'30.62"N, 160°22'54.90"W	Unknown	X		X		X	X	X		X
	28	AC Store	8	59° 3'27.66"N, 160°22'56.37"W	Unknown	X		X	X	X	X	X		X
	29	TNL Garage	1	59° 3'26.94"N, 160°22'58.58"W	Unknown	X		X	X	X	X	X		X

Table 5-13 (Continued): Risks to Vulnerable Assets

Facility Type	Facility Number (See Fig. 1 & 2)	Facility Name	Number of Occupants	Location (Latitude, Longitude)	Estimated Value	Hazard Impacts								
						Earthquake	Erosion	Extreme Cold	Flood	Severe Wind	Severe Winter Weather	Subsidence	Volcano	Wildfire
Community (Continued)	30	TNL Office	3	59° 3'26.62"N, 160°22'59.20"W	Unknown	X		X	X	X	X	X		X
	31	Moravian Church	2	59° 3'33.43"N, 160°22'59.33"W	$1.5M	X		X		X	X	X		X
	32	Assembly of God Church	2	59° 3'36.50"N, 160°22'54.26"W	Unknown	X	X	X		X	X	X		X
	34	Drying Racks	N/A	Community Wide	--	X				X		X	X	X
	38	Tribal Office	9	59° 3'32.85"N, 160°22'48.84"W	Unknown	X		X		X	X	X		X
	40	Cemetery	N/A	59° 3'35.32"N, 160°22'54.34"W	--									x
Utilities	11	UUI Station	1	59° 3'42.79"N, 160°22'34.63"W	Unknown	X		X	X		X	X	X	X
	15	Togiak Water Tank	N/A	59° 3'36.64"N, 160°22'44.83"W	$1.2M	X		X			X	X	X	X

Table 5-13 (Continued): Risks to Vulnerable Assets

Facility Type	Facility Number (See Fig. 1 & 2)	Facility Name	Number of Occupants	Location (Latitude, Longitude)	Estimated Value	Hazard Impacts								
						Earthquake	Erosion	Extreme Cold	Flood	Severe Wind	Severe Winter Weather	Subsidence	Volcano	Wildfire
Utilities (Continued)	20	AVEC Tank Farm	N/A	59° 3'35.65"N, 160°22'48.08"W	Unknown	X		X			X	X		X
	21	AVEC Electric Plant	2	59° 3'34.76"N, 160°22'48.71"W	$7M	X		X			X	X	X	X
	22	Old Water Tower	N/A	59° 3'37.04"N, 160°22'48.50"W	Unknown	X		X			X	X	X	X
	33	GCI Station	N/A	59° 3'46.11"N, 160°22'42.49"W	Unknown	X		X		X	X	X	X	X
	35	Beacon Tower	N/A	59° 3'49.93"N, 160°22'32.68"W	Unknown	X		X			X	X		X
	39	Landfill	1	59° 3'18.79"N, 160°23'21.36"W	Unknown							X		
	41	Overhead Utility Lines	N/A	Community Wide	Unknown	X		X		X	X	X		X

Table 5-13 (Continued): Risks to Vulnerable Assets

Facility Type	Facility Number (See Fig. 1 & 2)	Facility Name	Number of Occupants	Location (Latitude, Longitude)	Estimated Value	Hazard Impacts								
						Earthquake	Erosion	Extreme Cold	Flood	Severe Wind	Severe Winter Weather	Subsidence	Volcano	Wildfire
Utilities (Continued)	44	City of Togiak Water & Sewer	N/A	Community Wide	$45.1M	X		X			X	X	X	
	45	Tank Farm	2	59° 3'33.77"N, 160°22'41.85"W	$11M	X	X	X	X		X			X

5.4 VULNERABILITY

The following lists the Community's overall vulnerability to the hazards that affect the planning area, 44 CFR 201.7(c)(2)(ii).

- Earthquakes – Groundwater is relied on for drinking water and household uses. The quality of water in the aquifer could be altered during an earthquake.
- Erosion – The seawall is impacted by continual erosion along the coast and requires constant supervision and maintenance. The area between the old school and the new dock is experiencing a higher rate of erosion. Every storm takes material from section of the seawall and deposits it to another. Nasaurluq Creek is also eroding and beginning to impact roads and other critical structures and infrastructure.
- Extreme Cold – Underground sewer and water lines are susceptible to freezing and breaking which has caused residents to go without water until repairs can be made. Also, the price of heating fuel is very expensive and more heating fuel is required during extreme cold events which causes a hardship on community residents. At times residents are required to choose between heating their homes or feeding their families.
- Flood – The lower village is in a flood zone. The seawall protects the lower village from the waves, but if the waves are large enough the water will still extend over the top of the seawall and flood the lower village. The fuel tanks and other critical infrastructure are in the flood zone and at risk of coastal and riverine flooding. Several roads in the Community are susceptible to flooding, including the road leading to the new school.
- Severe Wind – Roofing has blown off structures due to severe wind events. These wind events also cause power outages due to the power poles being blown down. Severe wind events can also cause ice bergs to be blown into the sea wall which can cause damage. Wind causes unhealthy dust emissions around the Community. Severe wind events also impact air service in and out of the Community.
- Severe Winter Weather – During severe winter weather events there is zero visibility which makes it difficult to plow and keep the roads and airport open. This creates a problem when trying to get the kids to school safely during these events. The Community relies on air traffic to bring in supplies, mail and medicines as well as medivac flights in the event of medical emergencies. There have been times when the store shelves have been empty. Additionally, during warmer winter months the roads become very icy and slick. This presents a hazard to drivers, and walking residents. Pedestrians have to share the roads with heavy equipment and other vehicles.

- Subsidence – The roads in the Community are sinking to the level of the tundra. Light poles and other structures throughout the Community are beginning to tilt and sink. Underground utility lines are rupturing and causing leaks.
- Volcano – Volcanic ash that enters the Community impacts air services and receiving supplies. This also presents a breathing hazard to those residents that have breathing issues. Residents are concerned about the impacts of ash on subsistence resources like wildlife and berries.
- Wildfire – Smoke from wildfires present a breathing hazard to those residents in the Community with breathing difficulties. The smoke can also impact air services in and out of the Community. These also impact and destroy local subsistence resources.

6.0 MITIGATION STRATEGY

The following section describes the Community's mitigation strategy. This mitigation strategy will serve as a long-term plan for reducing the potential losses identified in the risk assessment. The THMP discusses the Community's current pre- and post- disaster hazard management plan, and existing and potential funding sources. It also provides the Community's mitigation goals, and actions. Along with these goals and actions this section provides an action plan, a tracking process for the mitigation actions, and a plan to implement these goals and actions into existing planning mechanisms.

6.1 PRE-/POST-DISASTER HAZARD MANAGEMENT

Pre- and post-disaster hazard management programs, policies, and mitigation capabilities of the Community were reviewed, 44 CFR 201.7(c)(3) and 201.7(c)(3)(iv). The Planning Team used this review to identify existing opportunities and challenges of existing capabilities of the Community. This information aided in the determination of mitigation actions for the identified hazards.

The Community is small with limited planning and land management tools. The resources available in the Community are listed below in Table 6-1 and Table 6-2. This THMP provides an opportunity to identify challenges and needs for additional programs and/or policies. It also provides an opportunity to work with other local agencies in the development of appropriate programs and policies.

The Community's planning and regulatory tools are listed in Table 6-1 below. These tools aid in the prevention and reduction of impacts from hazards in the Community.

Table 6-1: Planning and Regulatory Tools

Regulatory Tools (ordinances, codes, plans)	(Yes / No)	Comments
Comprehensive Plan	Yes	2015, developed by the Council
Land Use Plan	No	--
Wildland Fire Protection Plan	No	--
Emergency Response Plan	No	--
Long Range Transportation Plan	Yes	2019, developed by the Council
Tribal Transportation Safety Plan	Yes	2019, developed by the Council
Other Special Plans (e.g., climate change adaptation, coastal zone management)	Yes	2018,City of Togiak Hazard Mitigation Plan Update

Table 6-1 (Continued): Planning and Regulatory Tools

Regulatory Tools (ordinances, codes, plans)	(Yes / No)	Comments
Building Code[1]	No	With the exception of NFIP requirements.
Zoning Ordinances	No	--
Subdivision Ordinances or Regulations	No	--
Special Purpose Ordinances (floodplain management, hillside or steep slope ordinances, stormwater management, hazard setback requirements, wildfire ordinances)	Yes	NFIP related ordinances.

[1] New public facilities are designed by licensed professionals using applicable state and federal codes and regulations present at the time of design.

The Community's administrative and technical capabilities are listed in Table 6-2 below. These staff and their skills and tools can be used for mitigation planning and to implement specific mitigation actions.

Table 6-2: Administrative and Technical Capability

Staff / Personnel Resources	(Yes / No)	Department / Agency and Position
Administrator	Yes	Tribe
Environmental Program	Yes	Tribe
Fire Department	Yes	Department of Public Safety
Librarian	Yes	School
Village Public Safety Officer	Yes	Police Chief
Health Aide	Yes	BBAHC
Planner or engineer with knowledge of land development and land management practices	No	The Tribe hires consultants with this knowledge
Engineer or professional trained in construction practices related to buildings and / or infrastructure	No	The Tribe hires consultants with this knowledge
Planner or engineer with an understanding of natural and / or human-caused hazards	No	The Tribe hires consultants with this knowledge
Surveyors	No	The Tribe hires consultants with this knowledge
Floodplain Manager	No	The Tribe works with the City and utilizes the State Floodplain Manager.
Staff with education or expertise to assess the jurisdiction's vulnerability to hazards	No	The Tribe hires consultants with this knowledge

Table 6-2 (Continued): Administrative and Technical Capability

Staff / Personnel Resources	(Yes / No)	Department / Agency and Position
Personnel skilled in Geospatial Information System and / or HAZUS	No	The Tribe hires consultants with this knowledge
Finance (Grant Writers)	Yes	Tribe, City, BBNA[1] (Situation Dependent)

[1] BBNA provides post-disaster grant management staff who can assist the Tribe with grant applications for disaster recovery and long-term recovery plans.

6.2 FUNDING

The following identifies existing and potential funding sources to implement proposed mitigation activities and actions, 44 CFR 201.7(c)(3)(iv) and 201.7(c)(3)(v).

6.2.1 Existing Funding Sources

At the time of the development of the THMP the Tribe has not received or allocated any non-FEMA funds for hazard mitigation actions or projects. However, the Tribe received PDM grant funding for the development of the THMP.

6.2.2 Potential Funding Sources

There are federal, tribal, and private funding sources available to the Tribe for proposed mitigation activities and projects. Sections 6.2.2.1 thru 6.2.2.3 provides a brief list and description of a selection of potential funding sources. In addition to the funding sources listed below other funding sources can be found from the following resources:

- Grants.gov – www.grants.gov is a public website where all federal agency discretionary funding opportunities are posted for grantees to find and apply. Some grant postings close quickly, so it is important to frequently check for potential opportunities.
- Catalog of Federal Resilience Programs for Alaskan Communities – The Denali Commission published a catalog detailing programs that are available to Alaskan communities. A copy of the catalog is located in Appendix D. See Section 8.0 for a web link to the catalog to check for updates (Arctic Executive Steering Committee, 2015).

6.2.2.1 Federal Funds

FEMA provides funding for eligible mitigation planning and projects that protect life and property from future disaster damages and reduces disaster losses. This funding is administered through three programs, the PDM, the Hazard Mitigation Grant Program

(HMGP), and the Flood Mitigation Assistance (FMA) Program. Below is a brief description of each of these funding sources.

Pre-Disaster Mitigation (PDM) Program

The PDM Program is authorized by Section 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. The goal of this programs is to reduce the overall risk to structures and population from future hazard events. Funds from the program provides opportunities to raise public awareness and reduce future losses before disasters occur. PDM provides funds on an annual basis for hazard mitigation planning and projects. This funding is dependent on the amount congress appropriates each year (FEMA, 2018).

Hazard Mitigation Grant Program (HMGP)

HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. Following a Presidential Major Disaster Declaration HMGP supports post-disaster cost-effective projects. The purpose of the HMGP is to provide funding for long-term hazard mitigation planning and projects that will reduce the risk of loss of property and life from future disaster. HMGP provides funding up to 75% of mitigation projects. The remaining 25% of the mitigation project funding needs will come from other available funding sources (FEMA, 2018).

Flood Mitigation Assistance (FMA) Program

The FMA Program is authorized by Section 1366 of the National Flood Insurance Act of 1968. The goal of this program is to reduce or eliminate claims made under the NFIP. FMA provides funding on an annual basis for planning and projects that reduce or eliminate the risk of flood damage to buildings that are insured under the NFIP. Funding for this program is dependent on the amount congress appropriates each year for this program (FEMA, 2018).

6.2.2.2 Tribal Funds

Tribal funds are available to the Community. One of the Tribal funds available is the Indian General Assistance Program (IGAP). The IGAP provides funding sources to help manage and maintain an environmental office. This office conducts environmental assessments for the Community and helps to prioritize environmental concerns, and educate the public.

6.2.2.3 Private Funds

In general, private funds are not readily available to the Tribe. However, the Tribe could potentially have access to funds through local non-profit organizations and regional corporations.

6.3 MITIGATION GOALS

The findings from the risk assessment were used to develop mitigation goals and actions. The mitigation goals in this THMP are general guidelines that describe Community goals, 44 CFR 201.7(c)(3)(i). These goals are broad, long-term statements that represent the Community's vision for avoiding and reducing losses from the identified hazards. The Planning Team has identified the mitigation goals in Table 6-3.

Table 6-3: Mitigation Goals

Goal Number	Goal Description
1	Build the capacity of the Tribe and City to prepare, respond to, and recover from disasters.
2	Reduce the possibility of damages due to **earthquakes**.
3	Reduce the possibility of damages due to **erosion**.
4	Reduce the possibility of damages due to **extreme cold temperatures**.
5	Reduce the possibility of damages due to **floods**.
6	Reduce the possibility of damages due to **severe winds**.
7	Reduce the possibility of damages due to **severe winter weather**.
8	Reduce the possibility of damages due to **subsidence**.
9	Reduce the possibility of damages due to **volcanos**.
10	Reduce the possibility of damages due to **wildfires**.

6.4 POTENTIAL MITIGATION ACTIONS

Mitigation actions are specific activities, projects, actions, and processes that aid in achieving the mitigation goals. These actions are used to eliminate or reduce long-term risk to property and people from hazards and their impacts, 44 CFR 201.7(c)(3)(ii). There are four (4) types of mitigation actions that will help reduce long-term vulnerabilities. Mitigation actions fall under the following categories, local plans and regulations, infrastructure and structure projects, natural systems protections, and education and awareness programs. The Planning Team brainstormed and developed a comprehensive list of potential mitigation actions. The full list (Potential Mitigation Actions) is located in Appendix A.

Not all of the identified actions can be implemented in the final action plan. This could be due to a lack of political acceptance, technical feasibility, lack of funding, and other constraints. The Planning Team refined the list of potential mitigation actions (see Appendix A) using the criterion listed below (FEMA, March 2013). These criterion were used to facilitate discussions and to aid in the determination of mitigation actions to be

implemented into the prioritized mitigation action plan (Section 6.5). The underlined and bold action identification (IDs) in the potential mitigation actions list (see Appendix A) were selected by the Planning Team to be implemented in to the action plan. Each of these actions were more thoroughly analyzed using the Mitigation Action Evaluation Worksheet located in Appendix A (FEMA, March 2013).

- Life Safety – Analyzes how effective the action is at preventing injuries and protecting lives.
- Property Protection – Analyzes the significance of the action at eliminating or reducing damage to infrastructure and structures.
- Technical – Analyzes if the action is technically feasible and if it is a long-term solution.
- Political – Analyzes public and political support of the action.
- Legal – Analyzes if the Community has authority to implement the action.
- Environmental – Analyzes the actions impacts on the environment and if it complies with environmental regulations.
- Social – Analyzes the action based on its effect on one or more segments of the population.
- Administrative – Analyzes the Community's personnel and administrative capabilities to implement and maintain action.
- Local Champion – Analyzes the action to determine if there is a strong advocate that will support the action's implementation.
- Other Community Objectives – Analyzes if the action advances other community objectives or plans.

These identified and selected activities represent a comprehensive range that will lessen the need for preparedness or response resources when a natural hazard impacts the Community in the future.

6.5 MITIGATION ACTION PLAN

The actions to be implemented into the mitigation action plan, identified by the Planning Team, were prioritized based on the importance of each item relative to the plan's goals, risks, and capabilities of the Community, 44 CFR 201.7(c)(3)(iii). Table 6-4 provides a prioritized list of mitigation actions, the position, office, department or agency responsible for the implementation of the action, potential funding options, and the timeframe for the action to be implemented. The Mitigation Action Implementation Worksheet (THMP Form 6-1) is included in Appendix E.

Table 6-4: Prioritized Mitigation Actions

[1]Action ID	Description	Priority (High, Medium, Low)	Coordinating Department	Implementation Department/Role	Potential Funding Source	Timeframe
1.A	Construct the emergency shelter access route.	High	Tribe	City/Tribe	Bureau of Indian Affairs (BIA)/FEMA	2 Years
1.B	Develop a suit of emergency plans and training/drills: Community Evacuation, and Emergency Operations	Medium	Tribe	City/Tribe/TNL	N/A	2 Years
1.C	Provide public education on natural hazards that impact the Community.	High	Tribe	Tribe	N/A	2 Years
2.A	Conduct non-structural mitigation projects (such as bookshelf tie-downs, computer servers being made earthquake resistant, etc.)	Medium	Tribe	Tribe	N/A	2 Years
3.A	Conduct bulkhead rehabilitation.	High	Tribe	City	Tribe/City	2 Years
4.C	Educate residents on the importance of having a personal backup water supply	Medium	Tribe	Tribe	BBNC	2 Years
5.A	Reinforce and/or elevate roads and provide continued maintenance.	High	Tribe	City	BIA	2-3 Years
5.B	Relocate new and existing public safety facilities to areas above the 100-year floodplain.	High	Tribe	City/Tribe/TNL	N/A	5-6 Years
5.C	Conduct drainage improvements throughout the Community.	High	Tribe	City	BIA	2 Years

Table 6-4 (Continued): Prioritized Mitigation Actions

[1]Action ID	Description	Priority (High, Medium, Low)	Coordinating Department	Implementation Department/Role	Potential Funding Source	Timeframe
6.B	Identify and apply dust suppression on roads and runway.	High	Tribe	City	BIA	2 Years
7.A	Research and consider instituting the Storm Ready program through the National Weather Service.	Medium	City	City	State	2 Years
7.B	Conduct a Winter Weather Awareness Week.	Medium	Tribe	Tribe	N/A	1 Year
7.C	Increase public awareness about NOAA Weather Radio for warning tone alert capabilities and continuous weather broadcasts.	Medium	Tribe	City	N/A	2 Years
7.D	Ecourage weather-resistant building practices and materials.	Medium	Tribe	City/TNL	N/A	2 Years
8.A	Educate residents about why settling is happening and how to monitor the settling.	Medium	Tribe	Tribe/City/TNL	N/A	2 Years
9.A	Provide public preparedness and education about volcanic hazards in the region.	Low	Tribe	City	N/A	2 Years
10.B	Install hydrants on the hill throughout Togiak Heights.	High	City	City	State	2 Years

[1] Action IDs are not in sequential order. For a full listing of potential mitigation action items see Appendix A.

6.6 IMPLEMENTING ACTION PLAN INTO OTHER PLANNING MECHANISMS

After the adoption of the THMP by the Council, the Planning Team will work to incorporate the goals and actions of the THMP into other existing Community planning mechanisms, 44 CFR 201.7(c)(4)(iii). The Planning Team will accomplish this by performing the following activities:

- Review community-specific regulatory tools to establish where to incorporate the mitigation philosophy into other plans.
- Work with the community to increase awareness for implementing THMP philosophies and initiatives into other planning mechanisms. Provide assistance with incorporating the mitigation strategy (and Mitigation Action Plan) into relevant planning mechanisms (i.e., Utility Master Plans, Transportation Plans, Comprehensive Plan, Capital Improvement Project List, etc.)
- Update or amend other applicable planning mechanisms as necessary to include the THMP Action Plan.

6.7 REVIEWING PROGRESS GOALS

Tracking the progress of the mitigation actions and goals is important to the THMP, 44 CFR 201.7(c)(4)(ii) and 201.7(c)(4)(v). The Prioritized Mitigation Actions (Table 6-4) provides information pertaining to the tracking process for each mitigation action. It provides the following tracking process information:

- The estimated time to implement each action;
- The department, office, or agency responsible for coordinating and monitoring the implementation of each action; and
- The department, office, or agency and their respective roles in implementing each action.

The Mitigation Action Plan in Section 6.5 provides a description of the planned implementation timeframe for each Mitigation Action. A Mitigation Action Progress Report will be completed annually to monitor the progress of the Mitigation Actions, and any Mitigation Actions that require project closeout. The Mitigation Action Progress Report will address the current status of the mitigation project, any changes made to the project, implementation problems, and appropriate strategies to overcome them. The Mitigation Action Progress Report (THMP Form 6-2) is located in Appendix E.

When FEMA supported projects are completed, the project closeout documents will be prepared by the Tribe. Project closeout may include final invoicing, site inspections, and summary memorandums of the Mitigation Actions.

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7.0 PLAN ASSURANCES AND ADOPTION

This section complies with the requirements of 44 CFR 201.7(c)(5) and 44 CFR 201.7(c)(6). The Tribe assures that it will comply with all applicable regulation and federal statutes in effect with respect to the periods for which it receives grant funding in compliance with 44 CFR Parts 200 and 3002. The Tribe will amend its plan whenever necessary to reflect changes in Federal or tribal laws and statutes.

The Council will formally adopt the THMP after receiving a letter from FEMA stating that the plan is approved pending adoption. The THMP adoption resolution will be signed by the Council and will be placed in Appendix F. This document will show the Tribe's commitment to implementing the mitigation strategies identified in the THMP and authorizes the responsible agencies to execute their actions.

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FIGURES

Community Map
TOGIAK

59° 3' 23" N 160° 23' 32" W (NAD 83)
Approximate Elevation: 9'
Township 13 South, Range 67 West, S.M., AK
U.S.G.S. Quadrangle "GOODNEWS BAY A-4" Alaska
BRISTOL BAY RECORDING DISTRICT

LEGEND

FLOODING
EROSION

0 100 200 300
SCALE IN FEET

FIGURE 1 of 2

ASSET KEY:

1. COUPICHIAK BUILDING
2. BLUE'S STEAMBATH HOUSE
3. SEVENTH DAY ADVENTIST CHURCH
4. SCHOOL BUILDING/ RESIDENCE
5. OLD SCHOOL
8. SCHOOL SHOP
9. NEW SCHOOL RESIDENCE
10. CITY OF TOGIAK QUARTERS
11. UUI STATION
12. UAF BB & YOUTH CENTER
13. FAMILY SERVICE WORKER BUILDING
14. CITY OF TOGIAK OFFICE
15. TOGIAK WATER TANK
16. CITY OF TOGIAK GARAGE
17. CITY OF TOGIAK MAINTENANCE BUILDING
18. CITY OF TOGIAK POLICE AND FIRE STATION
19. SENIOR CENTER / TOGIAK CLINIC
20. AVEC TANK FARM
21. AVEC ELECTRIC PLANT
22. OLD WATER TOWER
23. TOGIAK TRADING STORE
24. DENTAL CLINIC
25. TOGIAK HEAD START
26. U.S. POST OFFICE
27. NANGUCIULNGUK CENTER
28. AC STORE
29. TNL GARAGE
30. TNL OFFICE
31. MORAVIAN CHURCH
32. ASSEMBLY OF GOD CHURCH
33. GCI STATION
34. DRYING RACKS*
35. BEACON TOWER
36. AIRPORT
37. TRIBALLY OWNED EQUIPMENT*
38. TRIBAL OFFICE
39. LANDFILL
40. CEMETERY
41. UTILITIES LINES *
42. ROADS *
43. TRAILS *
44. CITY OF TOGIAK WATER AND SEWER*
45. TANK FARM
48. TEACHER/ TROOPER HOUSING

* NOT SHOWN FOR CLARITY

AREA MAP INSET

SEC. 9, SEC. 10, SEC. 11, SEC. 12, SEC. 13, SEC. 14, SEC. 15, SEC. 16, SEC. 22, SEC. 23
FIGURE 1, FIGURE 2
0 2000 4000

15.6° E Magnetic North
True North

160°23'25" W
59°03'23" N
160°22'39" W
59°03'46" N

MAP NOTES

This map was prepared by the Bristol Bay Native Association (BBNA) in cooperation with the Alaska Department of Community and Economic Development (DCED) using funding from the Bristol Bay Housing Authority, U.S. Bureau of Indian Affairs, Alaska Coastal Management Program, and funding from the Initiative for Accelerated Infrastructure Development (IAID). The IAID is supported by grants from the Alaska Native Tribal Health Consortium, Denali Commission, USDA Rural Development, Alaska Department of Transportation and Public Facilities and DCED. The Bristol Bay Native Association contracted with Bristol Environmental & Engineering Services in June of 2003 to prepare the map. McClintock Land Associates Inc. was subcontracted by Bristol Environmental and Engineering Corporation to perform aerial photography and control surveying.

This map is based upon a digital orthophoto prepared to National Map Accuracy Standards from July 8, 2003 photography (nominal scale 1" = 800'). An orthophoto is an aerial photo which has been corrected, by rectification to ground control stations, to remove aircraft distortions and warpage. The distortions are generally caused by topography and the aircrafts tilt and trim.

Property and utility information has been generated from readily available sources with limited accuracy checks. Property information is not intended to represent a comprehensive title search of Recorders Office records. Utility locations are approximate and show only the main lines. Generally, the information is current as of July, 2003.

This map should not be construed as a survey. On-site surveys should be conducted prior to engineering and or construction.

COORDINATE SYSTEMS

Horizontal Datum-NAD 83 Alaska State Plane Zone 7 (USS FEET)
based on TSI STATION "Dillingham As Mk"
Vertical Datum-NAVD 88, based on CORS tie to "Kenai" & "Cold Bay" & "Kodiak"

Magnetic Declination computed by U.S.G.S. Geomag program using IGRF2000 model as of January, 2004.

TOPOGRAPHIC & PLANIMETRIC DATA

All topographic and planimetric data was collected utilizing stereo photography correlated with the photography used for the orthophoto production. Topographic data was prepared to National Map Accuracy Standards for a 2 foot contour interval. Topographic data located in densely vegetated areas should be considered less accurate and may not meet those standards aforereferenced.

TOGIAK COMMUNITY MAP SHEET 1 1"=100' (2003 PHOTOGRAPHY)

TOGIAK

59° 3' 23" N 160° 23' 32" W (NAD 83)
Approximate Elevation: 9'
Township 13 South, Range 67 West, S.M., AK
U.S.G.S. Quadrangle "GOODNEWS BAY A-4" Alaska
BRISTOL BAY RECORDING DISTRICT

LEGEND

0 200 400 600
SCALE IN FEET

FIGURE 2 of 2

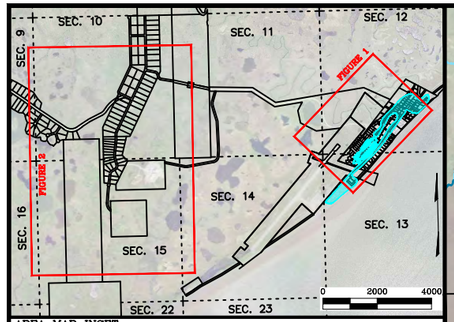
ASSET KEY:

** NEED

6. NEW SCHOOL
7. NEW SCHOOL TANK FARM
9. SCHOOL RESIDENCE
37. TRIBALLY OWNED EQUIPMENT *
41. UTILITIES LINES *
42. ROADS*
43. TRAILS *
44. CITY OF TOGIAK WATER AND SEWER*
46. TEACHER APARTMENT BUILDNGS
47. PRINCIPLE/ VICE PRINCIPLE APARTMENT BUILDINGS

* NOT SHOWN FOR CLARITY

AREA MAP INSET



160°25'55" W
59°02'49" N

160°23'54" W
59°04'00" N

47
46
9
6
7

MAP NOTES

This map was prepared by the Bristol Bay Native Association (BBNA) in cooperation with the Alaska Department of Community and Economic Development (DCED) using funding from the Bristol Bay Housing Authority, U.S. Bureau of Indian Affairs, Alaska Coastal Management Program, and funding from the Initiative for Accelerated Infrastructure Development (IAID). The IAID is supported by grants from the Alaska Native Tribal Health Consortium, Denali Commission, USDA Rural Development, Alaska Department of Transportation and Public Facilities and DCED. The Bristol Bay Native Association contracted with Bristol Environmental & Engineering Services in June of 2002 to prepare the map. McClintock Land Associates Inc. was subcontracted by Bristol Environmental and Engineering Corporation to perform aerial photography and control surveying.

TOGIAK COMMUNITY MAP SHEET 2 1"=200' (2003 PHOTOGRAPHY)

APPENDIX A

Planning Process

- Meeting Minutes (November 26, 2018)
- Sign-In Sheet
- Meeting Agenda
- Hazard Identification Worksheet
- Risk Analysis Worksheet
- Mitigation Action Types & Examples
- Potential Mitigation Actions
- Mitigation Action Evaluation Worksheet

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Anchorage, AK 99501-5169
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TRIP REPORT & MEETING MINUTES

Project: **BBNA THMP & TTSP Project**
Bristol Project No: 32190013
Reference: Togiak Planning Team Meetings & Public Meetings
Date of Meeting: November 26, 2018, 9:30 AM – 12:30 PM
Location of Meeting: Bristol Conference Room
Participants:
Bristol: Danielle Dance, Jackie Wander
Planning Team: See attached sign in sheet

Summary

Jackie and Danielle hosted a Togiak planning team meeting in the Bristol Large Conference Room to discuss the Tribal Hazard Mitigation Plan. Notes taken during the meeting are summarized below. Worksheets, maps, and other documents used during the meeting are attached to these minutes.

THMP Planning Team Meeting Notes

Worksheet #1 – Hazard Identification

- Earthquake
  - Feel earthquakes but have not ever had any extreme damage
  - There was an earthquake recently that the main village felt but the hillside did not feel, a couple of summers ago, was the biggest earthquake she felt her entire life
  - Storage cubes hanging in closet were swaying
  - No structural damage
  - Why do the different elevations feel earthquakes differently?
  - Seem to be happening more often than before
  - USGS map shows a volcano fault through Togiak, would like to set up monitors
  - They have geothermal energy within the community, could possibly harness for energy in the future, but needs to be researched
- Erosion
  - Coastal and river erosion
  - During the 2005 declared disaster, they put a double row of gabions filled with rock to stabilize base, this mitigation strategy is working
  - They built a seawall in 1984-1985, lost 700 feet of the wall due to the storm, they got about $1.6 FEMA grant funds to repair the wall, which was finished last year, the material was very difficult to get so they asked for an additional $660,000
  - Erosion is occurring farther down the river out of the town
  - The area between the old school and new dock is a high priority, seem to be losing more gravel

  - Every time there is a storm, it brings more gravel and buries the seawall, and other areas it takes away the gravel, they have to move the excess gravel to maintain
  - Right before the cross strip, the gravel is really low, but on the other end the seawall is high, there is a big difference
  - No longer have winter, the river will freeze with 1-2 feet of ice (freezes faster than the ocean), then in January it got up to mid-50s causing the river to flood, high tide/waves and high winds, destroyed over $2M worth of repairs on the seawall, ice chunks crash into the seawall
  - Northern part of the village, church, school, and 15 homes are at risk to damage
  - PROFILE
- Flooding
  - Entire lower village of Togiak is a flood zone
  - Now eligible for insurance now with the flood mapping, which is complete
  - The seawall protects against waves, but floods still overtop the seawall and flood the entire northern part of the village (see map markups)
  - When the tide is high enough, the road gets covered with water (near the river), to address this problem, they just built up the road 1.5 feet with new gravel
  - Had an ice jam about 6-7 years ago in the river up north and flooded the northern area of the village
  - Destroyed the backhoe bucket trying to move icebergs, it is very costly
  - Several roads in the lower village have standing water, poor drainage, mostly happens in the spring or during the winter if there is wet weather
  - Elders predicted the seawall would cause flooding
  - House flooded up to the top step, may have flooded the insulation below floor
  - Floods drain when the tide goes out within 6 hours
  - Free drains through the seawall
  - Happens every year
  - Gravel on roadways is being washed away down the hill due to rain, continue to sink even though they were built up
  - PROFILE
- Extreme Cold
  - Last March it was negative 20 or 30, a pile driver drove through a water line and froze up several dozen homes, had it fixed within 6 days
  - Had to fix about 30 leaks to get water to the fish plant, village had to go without water overnight to get water to the fish plant
  - Hillside housing has individual wells, the water is good but is there a way to monitor or test the water to make sure it is still clean and safe? Not just homes, also the school and other buildings
  - Concerned about contamination seeping into drinking water
  - Last year had late winter, and the summer was cold
  - Hypothermia doesn't happen very often but it has happened
  - The cost of heating fuel is very expensive, $6/gallon from the native store, sometimes people have to decide to pay for food over heating oil, which causes their house to freeze up and the boiler to break, electricity is expensive, costly

repairs when a house freezes, it costs $1,000/month to keep the house running in the winter
    - Concerns about septic systems, underground water and sewer lines freezing up, the wells have a 10-15 year lifespan, are planning a new sewer lagoon and lift station (designed by Bristol), septic systems are failing and have no money to fix
    - Not all homes are weatherized
    - Happens every year
    - When AVEC stops working for a week, 50 homes freeze up, that is being taken care of, but in the cold weather need to make sure they have power, had 2-inches of ice on power/transmission line to well, went 2 weeks without furnished water to the village, would like to have a generator to plug into the well for backup to prevent entire 5-mile transmission line from freezing
    - Power goes out often
    - 30 year old poles, pole broke, did not have power for a week, due to wind, people have to use their backup heaters and haul water to homes
    - PROFILE
- Severe Winter Weather
    - Southwest school district wanted to keep the school open every day, had to tow a school bus packed (standing room only) behind a loader to get kids to the school, one time they had to overnight at the school
    - Have zero visibility during the storm which makes it difficult to plow
    - Try to tell people to stay in and not travel, but people still get stuck
    - Ice on the roads impact
    - People walk on the roads, have to share the road with heavy equipment and vehicles
    - The airport needs to be plowed constantly
    - Went one winter without any medevacs, you have to be really creative
    - Last winter, both of the stores were empty for a couple of weeks
    - PROFILE
- Volcano
    - Volcanic ash affects air service for 3-4 days or up to a week for the entire region
    - There has been ash blown into the community from Redoubt and one volcano on the chain 2-3 years ago
    - There are volcanoes nearby Togiak, but they are inactive
    - The snow turns grey
    - The health clinic has masks for the people with breathing problems, how bad is it for healthy members
    - Concerned about the vegetation and subsistence animals, how long do they need to wait to collect berries, etc. after an ash fall event? Need to educate the community
    - PROFILE
- Storm Surge
    - When the wind comes from south-southeast, there is always a possibility for a big flood
    - There was a huge flood after the 1964 earthquake, had to use a skiff to get to the old school, it killed dogs

  - Occurs yearly, more and more frequent
  - Fall has the most unpredictable weather, could happen in the spring too, depends on wind direction and tide size
  - Last year there was a naturally occurring ice seawall which protected against the storm surge
  - PROFILE
- Severe Wind
  - Since 2005 have had a lot of wind storms that have done a lot of damage
  - Wind blows the ice bergs and causes power outages
  - Some roofing flies off the homes, and continues to worsen
  - 2-3 days without flights
  - One day this summer, it was nice and sunny, then in the afternoon the wind started to pick up and caused dust devils in the upper and lower village areas, those are occurring more and more
  - PROFILE
- Subsidence
  - The whole community is sinking
  - See the worst damage at the clinic
  - Underground pipe that transfers petroleum fuel/stove oil ruptured, need to monitor the contamination and see if it is spreading and determine size of the plume, does the leak effect the migrating smelt and salmon? This leak happened near the old school site, cleaned up the old school tank farm several years ago, but there was a pipe that had been leaking, not sure what caused the leak but could be from pipes shifting or cold ground
  - Roads sink down to the level of the tundra
  - See more permafrost thawing on the roads that causes damage going down the hill
  - Light poles are starting to tilt, which may be a sign of subsidence
  - The homes on the hill have no water when the power goes out, a lot of backup stoves aren't working anymore now because they are damaged due to rainwater draining into the stoves, leaking houses
  - PROFILE
- Wildfire
  - Smoke is a big concern, without wind the smoke stays for several days, no planes
  - There was a fire upriver, caused by lightning, 3 years ago in 2015, went out naturally from rain, people had to monitor, 15-20 miles upriver to the north, could see the smoke from the village, there was a vehicle accident because the smoke was so thick, it was very hot weather which made it worse, smoke lasted about a week with no plane service
  - When the wind is coming from up north from McGrath or other fires in the interior, the smoke affects them
  - Concerns about old/closed landfills (2 old dump sites) causing contamination, need to monitor, some of them are not far from erosion areas
  - There is a fire department and fire truck, but don't have a portable water pump, would like each village to have one so they can help other villages if needed
  - Don't have hydrants up the hill yet
  - Every year have small fires started near the apartments

    - Caused by natural lightning, lightning storms every summer
    - Kids start fires in the village, right next to housing often
    - PROFILE
- Drought
    - Very rarely, but when there is little rain the roads and airport get very dusty
    - Precipitation changes every year, sometimes have a dry summer and winter, then the next will be very wet
    - Affects the fish
    - Do not want to profile, but want to keep an eye on it in case it gets worse
    - Some rivers dry up
    - The vegetation and edible plants (greens, berries) don't produce very well
    - DO NOT PROFILE
- Severe Heat
    - Causes permafrost melting
    - The heat is very stifling and uncomfortable when it is hot
    - DO NOT PROFILE
- Avalanche
    - Not very often, only when there is a lot of snow
    - DO NOT PROFILE
- Tsunami
    - They only get warnings, but it could happen
    - Late 1990s, the river flooded from the tide while they were fishing
    - One time they noticed rolling waves while set netting, not high enough waves to cause damage but are visible
    - DO NOT PROFILE

Worksheet #3 – Risk Analysis

- Do not have time to discuss today, so Brice will look over the existing asset list and map to see what needs to be updated, coordinate via email
- The new tank farm is near the old school, the school building is still there but the tank farm took up the empty adjacent lot

Worksheets #4-#5 – Vulnerability Statements and Mitigation Goals

- Draft vulnerability statements will be drafted by Danielle based on today's discussion, which will be available for review in the Draft Plan.
- Emergency evacuation plan includes the school on the hill as a muster point, but there is only one route to the school, they need another route to higher ground in case the road is blocked or flooded
- It is difficult to access the clinic because the gravel pad is very steep, especially a hazard when it is icy, need better emergency access, health and safety is the main priority, so need to prioritize the clinic, airport, police, fire department, and emergency response
- Only have one generator for the whole village (it is new), need a backup for the school, health department, and the airport lights
- Use example goals provided from Worksheet #5

Worksheet #6 – Mitigation Action Plan

- Had to rehabilitate a 6-foot culvert, and elevated the road up the hill (emergency access route), roads are still too narrow, need to maintain this
- Some property owners block the right-of-way to prevent maintenance or snow plowing on the road in front of their houses
- Need to find other funding for these large projects
- Billy Blue Road, designed (see map)
- When there was a tsunami warning, they announced on the VHF, the two people that evacuated got hurt and everyone stayed home, 4-inch flooding on the Aleutians
- There are existing plans, but they need to be updated
- Need community education, community meeting, VHF, and Facebook
- All of the first responders are in the Council, so when they are all out of town for conferences, who responds to an emergency? They need more trained community members
- Need door prizes for the community meetings or else people will not go, can be a gift card to the AC store or utility bills
- Send out newsletters every so often to inform the community
- City wide resolution to accept the flood plain maps and insurance, paid for by the City
- VPSOs and City personnel get out to warn people, tell people to get boats to safety
- VHF and local radio are the most common modes of communication
- There a lot of old homes, a worker looked up in bed and saw the stars, roofs are rotting and blow off easily, the whole village needs an update to current codes
- The clinic and village office (combined building) have poor insulation, but other public facilities including school, senior center, etc. had new insulation put in with door checks, but the windows are still single pane
- Need to have cleanup response in the event of a spill from an earthquake, have acquired some kits but need to be trained on how to use them, there is a designated site for hazardous material, have a Class III landfill, Oasis Environmental brownfield site study
- Want to have the public meeting after January 16, would like to avoid a Saturday public meeting because people go hunting, are okay with a Friday evening public meeting
- The City is in the process of updating their FEMA plan, five year life, worried about funding interference with the two plans going on at the same time
- Billy Blue Road, Yellow Building, and Outfall are the current projects

Attachments:

1. Planning Team Meeting Sign-in Sheet
2. Planning Team Meeting Agenda
3. Worksheet #1: Hazard Identification
4. Worksheet #5: Mitigation Goals
5. Worksheet #6: Mitigation Strategies (Incomplete)
6. Maps (Marked Up)

End Meeting Minutes

CC: File

Planning Team Meeting

Togiak Tribal Hazard Mitigation Plan (2019 - 2024) & Tribal Transportation Safety Plan
Date / Location: November 26, 2018, Bristol Conference Room

Sign In Sheet

Name	Phone	Email
Tee Pauk	907 493-5003	
Peter Lockuk SR.	907 493-5003	lockukp@gmail.com
City Admin Darryl Thompson	907-493-2087	togwater JO hushmail.com
Marie Paul, VP	907. 493.5045	marie49991079@yahoo.com
Tribal President Elizabeth Wassillie	907-493-2150	elizabethwassillie@yahoo.com
~~Esther~~ Fayer Tribal Council	907-493-2096	ecfayer@yahoo.com
Deanna Snyder	907.493.5003 Tribal clerk	togiakclerk@bbna.com
Bertha Pavian-Lockuk Tribal secretary	907-493-5830/2049	#(blockuk@swrsd.org)

TOGIAK
November 26, 2018

HAZARD MITIGATION PLAN & TRANSPORTATION SAFETY PLAN

WORKSHOP AGENDA

Hazard Mitigation Plan

9:30 AM	Introductions Project Background & Schedule
9:45 AM	Worksheet 1 – Hazard Identification • Review / Update identified hazards in City of Togiak October 2009 plan
10:30 AM	Worksheet 3 – Risk Analysis Review / Update assets, and map
11:15 AM	**BREAK**
11:30 AM	Worksheet 4 – Vulnerability Statements Worksheet 5 – Mitigation Goals (Review)
11:45 AM	Worksheet 6 – Mitigation Action Plan (Review)
12:15 PM	City of Togiak October 2009 Plan (Selected Section(s) Review)
12:30 PM	Closing Statements & Action Items

Remaining Items to be Accomplished During Site Visit:

- Transportation Safety Plan
  - Determine Emphasis Areas
  - Implementation Plan
- Public Meeting for both Plans

WORKSHEET #1: HAZARD IDENTIFICATION

Use this worksheet to identify which hazards are most significant to your community planning area. Follow the instructions provided on pages 9 and 10.

Write "Blue" "Green" "Yellow" or "Red" in Columns A-D based on definitions in Tables 1-4 on Pages 9-10.

Write "Yes" or "No" in Column E depending on the outcome of Column D.

Hazard	Column A Location (Geographic Area Affected) *(Table 1)*	Column B Maximum Probable Extent (Magnitude / Strength) *(Table 2)*	Column C Probability of Future Events *(Table 3)*	Column D Overall Significance *(Table 4)*	Column E Profile (Yes/No)
*Avalanche					No
Drought					No
Earthquake	Red	Blue	Green	Green	YES
Erosion	Yellow	Yellow	Red	Red	YES
*Extreme Cold	Red	Yellow	Red	Yellow	YES
*Extreme Heat					No
Flood	Red	Yellow	Red	Red	YES
*Landslide					No
Severe Wind	Red	Yellow	Red	Red	YES
*Severe Winter Weather	Red	Yellow	Red	Yellow	YES
*Subsidence	Red	Yellow	Yellow	Yellow	YES
Tsunami					No
Volcano	Red	Green	Green	Green	YES
Wildfire	Red	Yellow	Green	Yellow	YES
Storm Surge	Yellow	Yellow	Red	Yellow	YES

***** Definitions for selected hazards are located on the back for clarification. Hazards from City of Togiak Multi-Hazard Mitigation Plan (Oct. 2009)

SELECT HAZARD DEFINITIONS

Extreme Temperatures *(i.e. Extreme Cold, Extreme Heat)*: Extreme temperatures constitute different conditions in different parts of the country. In regions that are accustomed to winter weather, extreme cold temperatures involve temperatures between 20° F to -50° F. These temperatures can occur after a winter storm or during long durations of storm inactivity. Similarly, extreme heat is usually recognized as the condition where temperatures consistently stay ten or more degrees above the average high temperature for extended periods of time. Fatalities can occur from extreme temperatures by causing hyperthermia or frostbite in cold regions and hypothermia in warmer regions.

Landslide / Avalanche: A landslide is the movement of a mass of debris, rock, or earth by force of gravity down a slope. An avalanche is the movement of snow and debris down a slope by force of gravity. Landslides and avalanches occur when the stability of the slope changes from stable to unstable. This can be caused by storms, earthquakes, volcanic eruptions, fire, erosion, rapid temperature changes in the case of avalanches, and other human-induced activities. Steep slopes and long slopes have a higher probability to slide. High soil water content and/or slopes with low vegetative coverage are also likely to slide. Landslides and avalanches cause infrastructure and property damage, environmental disturbance, and possible injuries and fatalities.

Severe Winter Weather: Severe winter storms can include snow, freezing rain, sleet, or a mix of the previous forms of precipitation. Heavy snowfall occurs when large quantities of snow is produced in a short period of time. Drifting snow creates an uneven distribution of snow caused by strong winds. This weather can cause power outages, downed trees, and property damage. It can also cause deaths and injuries.

Subsidence: Subsidence is the settling over time or sudden sinking of surface soils due to subsurface movements. Some causes of subsidence are thawing permafrost, declining ground water levels, compactions, mining, and drainage of organic soils. Subsidence can destroy or damage infrastructure or buildings near areas affected by a sudden or gradual collapse of surface area.

NOTE: If you have any questions about the hazard definitions, or about Worksheet #1 in general, contact Danielle with Bristol at (907) 743-9394.

INSTRUCTIONS FOR WORKSHEET #1

Worksheet #1 is a tool to determine which hazards to include in the Tribal Hazard Mitigation Plan (THMP). Use these classifications / definitions to help identify the most significant hazards that affect your community. Give each hazard on Worksheet #1 a color code based on the definitions provided in Tables 1 – 4.

1. **Location (Geographic Area Affected)** – *[Column A]*

   This classification describes where the hazard occurs, how often it occurs, and how much of the community was impacted.

Table 1: Location (Geographic Area Affected)

Color Code	Area Affected	Definition
BLUE	Negligible	• Only one small area or none • Less than 10% of planning area • Isolated single-point occurrences
GREEN	Limited	• Only some of the community • 10% to 25% of planning area • Limited single-point occurrences
YELLOW	Significant	• Most of the community • 25% to 75% of planning area • Frequent single-point occurrences
RED	Extensive	• Almost all or All of the community • 75% to 100% of planning area • Consistent single-point occurrences

2. **Maximum Probable Extent (Magnitude / Strength)** – *[Column B]*

   This classification describes how much damage was done, how fast and for how long the hazard impacted the community, and the strength or magnitude of the hazard on a scientific scale, if applicable.

Table 2: Maximum Probable Extent (Magnitude/Strength)

Color Code	Maximum Extent	Definition
BLUE	Weak	• Little to no damage done • Slow speed of onset or short duration of event • Limited classification on scientific scale (if applicable)
GREEN	Moderate	• Some damage and loss of services for days • Moderate speed of onset or moderate duration of event • Moderate classification on scientific scale (if applicable)
YELLOW	Severe	• Devastating damage and loss of services for weeks or months • Fast speed of onset or long duration of event • Severe classification on scientific scale (if applicable)
RED	Extreme	• Catastrophic damage and uninhabitable conditions • Immediate onset or extended duration of event • Extreme classification on scientific scale (if applicable)

3. Probability of Future Events – *[Column C]*

This classification describes the possibility of the hazard occurring in the next year, and how often the hazard will occur.

Table 3: Probability of Future Events

COLOR CODE	Probability of Future Event	Definition
BLUE	Unlikely	• Less than 1% probability of occurrence in the next year • Recurrence interval of greater than every 100 years
GREEN	Occasional	• 1% to 10% probability of occurrence in the next year • Recurrence interval of 11 to 100 years
YELLOW	Likely	• 10% to 90% probability of occurrence in the next year • Recurrence interval of 1 to 10 years
RED	Highly Likely	• 90% to 100% probability of occurrence in the next year • Recurrence interval of less than 1 year

4. Overall Significance – *[Column D]*

This classification provides a way to determine how much impact the hazard has on the community. This classification is based on the classifications from Tables 1 – 3 (Columns A – C).

Table 4: Overall Significance

COLOR CODE	Impact	Definition
GREEN	Low	• Event has minimal impact on planning area • Two or more criteria fall in lower classifications (2 or more BLUE) • Profile – Likely doesn't need to be profiled but can
YELLOW	Medium	• Event's impacts on the planning area are noticeable but not devastating • Criteria fall mostly in the middle ranges of classifications (2 or more GREEN or YELLOW) • Profile – Choice of the Planning Team
RED	High	• Event is likely/highly likely to occur with severe strength over a significant or extensive portion of the planning area • Criteria consistently fall in the high classifications (2 or more RED) • Profile – Definitely profile

5. Profile (Yes OR No) – *[Column E]*

For the purposes of the THMP, "profile" means to include the hazard in the plan and analyze in more detail. Not all hazards need to be profiled for your community. Only hazards with a moderate to high overall significance should be included in the plan, but the Planning Team can choose to profile any hazard as they see fit. Use Table 4 (Column D) to determine if the hazard should be profiled.

WORKSHEET #5: MITIGATION GOALS

Mitigation goals are general guidelines that explain what the community wants to achieve with the Tribal Hazard Mitigation Plan. They are broad policy-type statements that are long-term, and represent the vision for reducing or avoiding losses from the identified hazards.

The following are a few examples of mitigation goals.

- Promote development that is disaster-resistant.
- Build capacity of the Tribe to prepare, respond to, and recover from disasters.
- Reduce possibility of damages from [disaster].
- Promote recognition and mitigation of all natural hazards that affect the Community.
- Prevent damage to structures and infrastructure.
- Promote cross-referencing of mitigation goals and actions with other Tribal planning mechanisms and projects.

Using the previously created vulnerability statements as a guide, and the provided examples, create the Community Tribal Hazard Mitigation Plan (THMP) Mitigation Goals.

Mitigation Goals:

**Note: You many have more or less than 15 statements.*

1.) Build the capacity of the Tribe to prepare, respond to, and recover from disasters.

2.) Reduce the possibility of damages from earthquakes.

3.) Reduce the possibility of damages from erosion.

4.) Reduce the possibility of damages from extreme cold temperatures.

5.) Reduce the possibility of damages from floods.

6.) Reduce the possibility of damages from severe wind.

7.) Reduce the possibility of damages from severe winter weather.

8.) Reduce the possibility of damages from subsidence.

9.) Reduce the possibility of damages from volcanos.

10.) Reduce the possibility of damages from wildfires.

11.) Reduce the possibility of damages from storm surges.

12.)

13.)

14.)

15.)

Worksheet #6 Mitigation Actions

Hazard	ACTIONS
Column A2	Column B2
Hazard	**Description**
Flood	*Oct 2009 Plan (Completed Projects)* FLD-8: Togiak Flood Plain Maps FLD-9: Flood Insurance *Oct 2009 Plan (Add to current plan)* FLD-2: Elevation and/or reinforcement of roads (ongoing w/continued maintenance) FLD-3: Relocate existing and new public safety facilities to areas above the 100-year floodplain FLD-5: Improve drainage in Togiak *Additional New Ideas*
Erosion	*Oct 2009 Plan (Completed Projects)* FLD-1: Bulkhead rehabilitation *Additional New Ideas*
Prepare Tribe to prepare, respond to, and recover from disasters	*Oct 2009 Plan (Add to current plan)* FLD-4: Emergency shelter access route FLD-6: Suite of emergency plans (update existing plans) *Additional New Ideas* Identify location for emergency shelter (not school) Educate community members about the updated emergency plan Identify key personnel to organize emergency efforts when needed and have alternates identified Maintain and update public facility structures (weatherization)
Earthquake	*Oct 2009 Plan (Add to current plan)* E-1: Identify critical facilities E-2: Assess the structural integrity of critical facilities and infrastructure E-3: Nonstructural mitigation projects (e.g. secure bookshelves to wall) *Additional New Ideas* Properly secure fuel tanks Maintain clean up response kits Train users on clean up response kits
Severe Winter Weather	*Oct 2009 (Add to current plan)* SW-1: Storm Ready SW-3: NOAA Weather Radio SW-4: Encourage weather resistant building construction materials and practices *Additional New Ideas*
Volcano	
Extreme Cold	
Severe Wind	
Subsidence	
Wildfires	
Storm Surges	

Area Use Map
TOGIAK

59° 3' 23" N 156° 23' 31" W (NAD 83)
Approximate Elevation: 9'
Township 12 & 13 South, Range 66 & 67 West, S.M., AK
U.S.G.S. Quadrangle "GOODNEWS BAY A-4" Alaska
BRISTOL BAY RECORDING DISTRICT

SEE SHEETS 1 & 2 FOR DETAILED COMMUNITY MAP

0 1000 2000 3000

Scale 1"=1000'
Date of Photography: July 13, 2003
Magnetic Declination computed by U.S.G.S. Geomag Program using IGRF2000 model as of January, 2004.

SHEET 4 of 4

MAP NOTES

This map was prepared by the Bristol Bay Native Association (BBNA) in cooperation with the Alaska Department of Community and Economic Development (DCED) using funding from the Bristol Bay Housing Authority, U.S. Bureau of Indian Affairs, Alaska Coastal Management Program and funding from the Initiative for Accelerated Infrastructure Development (IAID). The IAID is supported by grants from the Alaska Native Tribal Health Consortium, Denali Commission, USDA Rural Development, Alaska Department of Transportation and Public Facilities and DCED. The Bristol Bay Native Association contracted with Bristol Environmental & Engineering Services in June of 2003 to prepare the map. McClintock Land Associates Inc. was subcontracted by Bristol Environmental and Engineering Corporation to perform aerial photography and control surveying.

TOGIAK AREA USE MAP SHEET 4 1"=1000' (2003 PHOTOGRAPHY)

U.S. SURVEY
NO. 7093
NA Cert
50-90-0176

Approx. location
EIN 15 D1, C5
"An easement for an existing access trail 25' in width from the Village of Togiak westerly to Public Lands and Goodnews Bay"

SEC. 11
ANCSA 12(a)
I.C. 179/180

Approx. location
EIN 15 D1, C5
"An easement for an existing access trail 25' in width from the Village of Togiak westerly to Public Lands and Goodnews Bay"

SEC. 12
ANCSA 12(a)
I.C. 179/180

SEC. 14
ANCSA 12(a)
I.C. 179/180

Preliminary
ANCSA 14 (c)
Tract 1

160°24'08" W
59°03'11" N

160°23'53" W
59°03'56" N

Togiak Airport
Tract D

Togiak Airport
Tract I
Preliminary
ANCSA 14 (c)
Tract M

Togiak Airport
Tract E

Preliminary
ANCSA 14 (c)
Tract 12

Tract E-2

Plat #86-12

Togiak Airport
Tract F

Plat #85-12

Preliminary
ANCSA 14 (c)
Tract 15

SEC. 13
ANCSA 12(a)
I.C. 179/180

SEE SHEET 1 FOR DETAILED MAP OF THIS AREA

50' Sea Wall Easement

find legal small dying

Community Map
TOGIAK

59° 3' 23" N 160° 23' 32" W (NAD 83)
Approximate Elevation: 9'
Township 13 South, Range 67 West, S.M., AK
U.S.G.S. Quadrangle "GOODNEWS BAY A-4" Alaska
BRISTOL BAY RECORDING DISTRICT

LEGEND

- Residential Building
- Commercial Building
- Public Building

0 200 400 600
SCALE IN FEET 1"=200'

SHEET
3 of 4

MAP NOTES

This map was prepared by the Bristol Bay Native Association (BBNA) in cooperation with the Alaska Department of Community and Economic Development (DCED) using funding from the Bristol Bay Housing Authority, U.S. Bureau of Indian Affairs, Alaska Coastal Management Program, and funding from the Initiative for Accelerated Infrastructure Development (IAID). The IAID is supported by grants from the Alaska Native Tribal Health Consortium, Denali Commission, USDA Rural Development, Alaska Department of Transportation and Public Facilities and DCED. The Bristol Bay Native Association contracted with Bristol Environmental & Engineering Services in June of 2003 to prepare the map. McClintock Land Associates Inc. was subcontracted by Bristol Environmental and Engineering Corporation to perform aerial photography and control surveying.

TOGIAK COMMUNITY MAP SHEET 3 1"=200' (2003 PHOTOGRAPHY)

- ~~Flood~~ Erosion - Flood

MAP NOTES

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This map is based upon a digital orthophoto prepared to National Map Accuracy Standards from July 8, 2003 photography (nominal scale 1" = 800'). An orthophoto is an aerial photo which has been corrected, by rectification to ground control stations, to remove aircraft distortions and warpage. The distortions are generally caused by topography and the aircrafts tilt and trim.

Property and utility information has been generated from readily available sources with limited accuracy checks. Property information is not intended to represent a comprehensive title search of Recorders Office records. Utility locations are approximate and show only the main lines. Generally, the information is current as of July, 2003.

This map should not be construed as a survey. On-site surveys should be conducted prior to engineering and or construction.

COORDINATE SYSTEMS

Horizontal Datum-NAD 83 Alaska State Plane Zone 7 (USS FEET)
based on TRI STATION "Dillingham Az Mk"
Vertical Datum-NAVD 88, based on CORS tie to "Kenai" & "Cold Bay" & "Kodiak"

Magnetic Declination computed by U.S.G.S. Geomag program using IGRF2000 model as of January, 2004.

TOPOGRAPHIC & PLANIMETRIC DATA

All topographic and planimetric data was collected utilizing stereo photography correlated with the photography used for the orthophoto production. Topographic data was prepared to National Map Accuracy Standards for a 2 foot contour interval. Topographic data located in densely vegetated areas should be considered less accurate and may not meet those standards aforereferenced.

Community Map
TOGIAK
59° 3' 23" N 160° 23' 32" W (NAD 83)
Approximate Elevation: 9'
Township 13 South, Range 67 West, S.M., AK
U.S.G.S. Quadrangle "GOODNEWS BAY A-4" Alaska
BRISTOL BAY RECORDING DISTRICT

LEGEND

🟨	Residential Building	-W-	Water Line w/Hydrant
🟥	Commercial Building	-S-	Sewer Line w/Manhole
▨	Public Building	-T-	Telephone Line
•	Pole w/Guy Anchor	-P-	Electric Line w/Pole
◆	Utility Pole	-FM-	Sewer Force Main
	Earth Station	— —	Easements
	Antenna Tower	—···—	Survey Meanders
	Fire Hydrant		Survey Control

0 100 200 300
SCALE IN FEET 1"=100'

SHEET
1 of 4

Bristol Bay Native Association

TOPO AND PLANIMETRIC LEGEND

Culvert
Swamp
Trail
Flowing Water
Edge of Water
Edge of Road/Area
Fence
Boardwalk
Bridge

BUILDING KEY

1. Coupchiak Building
2. Coupchiak Building
3. Blue's Steambath House
4. Seventh Day Adventist Church
5. School Building/Residence
6. School Building/Residence
7. School Building/Residence
8. School Building/Residence
9. School Classroom
10. School
11. School Classroom
12. Tank Farm
13. School Shop
14. School Residence
15. School Residence
16. School Residence
17. School Residence
18. School Residence
19. School Residence
20. City of Togiak Quarters
21. UUI Station
22. UAF BB & Youth Center
23. Family Service Worker Building
24. City of Togiak Office
25. Togiak Water Tank
26. City of Togiak Garage
27. City of Togiak Maintenance Building
28. City of Togiak Police & Fire Station
29. Senior Center/Togiak Clinic
30. AVEC Tank Farm
31. AVEC Electric Plant
32. City of Togiak Water & Sewer
33. Old Water Tower
34. Togiak Trading Store
35. Dental Clinic
36. Togiak Head Start
37. U.S. Post Office
38. Nanguciulnguk Center
39. AC Store
40. TNL Garage
41. TNL Office
42. Moravian Church
43. Assembly of God Church
44. GCI Station
45. Drying Racks
46. Yellow Building
47. Non Direction Beacon Tower

TOGIAK COMMUNITY MAP SHEET 1 1"=100' (2003 PHOTOGRAPHY)

— Subsidence

TOGIAK

59° 3' 23" N 160° 23' 32" W (NAD 83)
Approximate Elevation: 9'
Township 13 South, Range 67 West, S.M., AK
U.S.G.S. Quadrangle "GOODNEWS BAY A-4" Alaska
BRISTOL BAY RECORDING DISTRICT

LEGEND

- Residential Building
- Commercial Building
- Public Building
- Pole w/Guy Anchor
- Utility Pole
- Light Pole
- Earth Station Antenna Tower
- Water Line w/Hydrant
- Sewer Line w/Manhole
- Telephone Line
- Electric Line w/Pole
- Sewer Force Main
- Easements
- Survey Meanders

0 200 400 600
SCALE IN FEET 1"=200'

SHEET 2 of 4

AREA MAP INSET 1"=2000'

BUILDING KEY

1. New Togiak School

TOPO AND PLANIMETRIC LEGEND

- Culvert
- Swamp
- Trail
- Flowing Water
- Edge of Water
- Edge of Road/Area
- Fence
- Boardwalk
- Bridge

MAP NOTES

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TOGIAK COMMUNITY MAP SHEET 2 1"=200' (2003 PHOTOGRAPHY)

Risk Analysis Worksheet *(Profiled Hazards Only)*

Facility Number	Column A Facility Name	Column B Number of Occupants	Column C Location	Column D Estimated Value	Column E: Hazard Impacts *(Fill in Hazards in Blank Columns Below)*									
					Earthquake	Erosion	Extreme Cold	Flood	Severe Wind	Severe Winter Weather	Storm Surge	Subsidence	Volcano	Wildfire
	Coupchiak Building													
	Blue's Steambath House													
	Seventh Day Adventist Church													
	School Building / Residence													
	School													
	New School													
	Tank Farm													
	School Shop													
	School Residence													
	City of Togiak Quarters													
	UUI Station													
	UAF BB & Youth Center													
	Family Service Worker Building													
	City of Togiak Office													
	Togiak Water Tank													
	City of Togiak Garage													
	City of Togiak Maintenance Building													

Risk Analysis Worksheet *(Profiled Hazards Only)*

Facility Number	Column A Facility Name	Column B Number of Occupants	Column C Location	Column D Estimated Value	Column E: Hazard Impacts *(Fill in Hazards in Blank Columns Below)*									
					Earthquake	Erosion	Extreme Cold	Flood	Severe Wind	Severe Winter Weather	Storm Surge	Subsidence	Volcano	Wildfire
	City of Togiak Police and Fire Station													
	Senior Center / Togiak Clinic													
	AVEC Tank Farm													
	AVEC Electric Plant													
	City of Togiak Water & Sewer													
	Old Water Tower													
	Togiak Trading Store													
	Dental Clinic													
	Togiak Head Start													
	U.S. Post Office													
	Nanguciulnguk Center													
	AC Store													
	TNL Garage													
	TNL Office													
	Moravian Church													
	Assembly of God Church													
	GCI Station													
	Drying Racks													
	Beacon Tower													
	Roads													
	Trails													
	Airport													

Risk Analysis Worksheet *(Profiled Hazards Only)*

Facility Number	Column A Facility Name	Column B Number of Occupants	Column C Location	Column D Estimated Value	Column E: Hazard Impacts *(Fill in Hazards in Blank Columns Below)*									
					Earthquake	Erosion	Extreme Cold	Flood	Severe Wind	Severe Winter Weather	Storm Surge	Subsidence	Volcano	Wildfire
	Tribally Owned Equipment													
	Tribal Office													
	Overhead Power Lines													
	Overhead Telephone Lines													
	Landfill													

MITIGATION ACTION TYPES AND EXAMPLES

Mitigation Type	Description	Examples
Local Plans and Regulations	These actions include government authorities, policies, or codes that influence the way land and buildings are developed and built	• Comprehensive plans • Land use ordinances • Subdivision regulations • Development review • Building codes and enforcement • NFIP Community Rating System • Capital improvement programs • Open space preservation • Stormwater management regulations and master plans
Structure and Infrastructure Projects	These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards. Many of these types of action are projects eligible for funding through the FEMA Hazard Mitigation Assistance program.	• Acquisitions and elevations of structures in flood prone areas • Utility undergrounding • Structural retrofits • Floodwalls and retaining walls • Detention and retention structures • Culverts • Safe rooms
Natural Systems Protections	These are actions that minimize damage and losses and also reserve or restore the functions of natural systems.	• Sediment and erosion control • Stream corridor restoration • Forest management • Conservation easements • Wetland restoration and preservation
Education and Awareness Programs	These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady or Firewise Communities. Although this type of mitigation reduces risk less directly than structural projects or regulation, it is an important foundation. A greater understanding and awareness of hazards and risk among local officials, stakeholders, and the public is more likely to lead to direct actions.	• Radio or television spots • Websites with maps and information • Real estate disclosure • Presentations to school groups or neighborhood organizations • Mailings to residents in hazard-prone areas • StormReady • Firewise Communities
Emergency Response Actions	These are actions to identify emergency response or operational preparedness.	• Create mutual aid agreements with neighboring communities to meet emergency response needs • Purchase radio communications equipment • Develop procedures for notifying citizens of available shelter locations during an event

Potential Mitigation Actions

GOALS		ACTIONS	
No.	**Goal**	**ID**	**Description**
1	Build the capacity of the Tribe and City to prepare, respond to, and recover from disasters.	**1.A**	Construct the emergency shelter access route.
		1.B	Develop a suit of emergency plans and training/drills: Community Evacuation, and Emergency Operations
		1.C	Provide public education on natural hazards that impact the Community.
		1.D	Identify a location of an emergency shelter, different than the school.
		1.E	Educate community members about the updated emergency plan
		1.F	Identify key personnel to organize emergency efforts when needed and have alternates identified
		1.G	Maintain and update public facility structures for proper weatherization.
		1.H	Improve/update access to Clinic.
2	Reduce the possibility of damages due to earthquakes.	**2.A**	Conduct non-structural mitigation projects (such as bookshelf tie-downs, computer servers being made earthquake resistant, etc.)
		2.B	Properly secure fuel tanks.
		2.C	Maintain clean up response kits.
		2.D	Train users on clean up response kits.
3	Reduce the possibility of damages due to erosion.	**3.A**	Conduct bulkhead rehabilitation.
4	Reduce the possibility of damages due to extreme cold temperatures.	4.A	Provide information for residents to weatherize homes.
		4.B	Educate residents on the symptoms and remedies for hypothermia.
		4.C	Educate residents on the importance of having a personal back up water supply.
		4.D	Educate residents on the importance of having personal back up generator.

Potential Mitigation Actions

GOALS		ACTIONS	
No.	**Goal**	**ID**	**Description**
5	Reduce the possibility of damages due to floods.	**5.A**	Reinforce and/or elevate roads and provide continued maintenance.
		5.B	Relocate new and existing public safety facilities to areas above the 100-year floodplain.
		5.C	Conduct drainage improvements throughout the Community.
6	Reduce the possibility of damages due to severe winds.	6.A	Secure and/or replace leaning power poles.
		6.B	Identify and apply dust suppression on roads and runway .
		6.C	Acquire a back up generator for the Clinic.
7	Reduce the possibility of damage due to severe winter weather.	**7.A**	Research and consider instituting the Storm Ready program through the National Weather Service.
		7.B	Conduct a Winter Weather Awareness Week.
		7.C	Increase public awareness about NOAA Weather Radio for warning tone alert capabilities and continuous weather broadcasts.
		7.D	Ecourage weather-resistant building practices and materials.
8	Reduce the possibility of damages due to subsidence.	**8.A**	Educate residents about why settling is happening and how to monitor the settling.
9	Reduce the possibility of damages due to volcanos.	**9.A**	Provide public preparedness and education about volcanic hazards in the region.
		9.B	Provide information to residents about the impacts of ash to subsistence resources and care of harvested resources.
10	Reduce the possibility of damages due to wildfires.	10.A	Acquire a portable water pump (an additional resource to the fire truck).
		10.B	Install hydrants on the hill throughout Togiak Heights.
		10.C	Update Code Red Connex.

INSTRUCTIONS - MITIGATION ACTION EVALUATION WORKSHEET

Use this worksheet to help evaluate and prioritize each mitigation action that is going to be implemented in the Mitigation Action Plan. For each action, evaluate the potential benefits and / or likelihood of successful implementation for the criteria defined below.

Rank each of the criteria with a -1, 0 or 1 using the following scale:

- 1 = Highly effective or feasible
- 0 = Neutral
- -1 = Ineffective or not feasible

EVALUATION CRITERIA

Life safety – How effective will the action be at protecting lives and preventing injuries?

Property Protection – How significant will the action be at eliminating or reducing damage to structures and infrastructure?

Technical – Is the mitigation action technically feasible? Is it a long-term solution? Eliminate actions that, from a technical standpoint, will not meet the goals.

Political – Is there overall public support for the mitigation action? Is there the political will to support it?

Legal – Does the community have the authority to implement the action?

Environmental – What are the potential environmental impacts of the action? Will it comply with environmental regulations?

Social – Will the proposed action adversely affect one segment of the population? Will the action disrupt established neighborhoods, break up voting districts, or cause the relocation of lower income people?

Administrative – Does the community have the personnel and administrative capabilities to implement the action and maintain it or will outside help be necessary?

Local Champion – Is there a strong advocate for the action or project among local departments and agencies that will support the action's implementation?

Other Community Objectives – Does the action advance other community objectives, such as capital improvements, economic development, environmental quality, or open space preservation? Does it support the policies of the comprehensive plan?

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Mitigation Action Evaluation Worksheet

Mitigation Action ID	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
1.A	1	0	1	1	1	0	1	1	1	1	8
1.B	1	1	1	0	1	0	0	1	0	0	5
1.C	1	1	1	1	1	0	0	1	0	0	6
2.A	1	1	1	0	1	0	0	1	0	0	5
3.A	1	1	1	1	1	1	0	1	1	1	9
4.C	1	0	1	0	1	0	0	1	0	0	4
5.A	1	1	1	1	1	0	0	1	0	0	6
5.B	1	1	-1	1	1	0	0	0	1	1	5
5.C	1	1	1	0	1	1	0	1	1	0	7
6.B	1	0	1	1	1	1	0	1	1	0	7
7.A	1	1	1	0	1	0	0	1	1	0	6
7.B	1	0	1	1	1	0	0	1	1	0	6
7.C	1	0	1	0	1	0	0	1	0	0	4
7.D	0	1	0	0	1	0	0	1	0	0	3
8.A	0	1	1	0	1	0	0	1	0	0	4
9.A	1	0	1	0	1	0	0	1	0	0	4
10.B	1	1	1	1	1	0	1	1	1	1	9

*Source: Local Mitigation Planning Handbook, FEMA, March 2013, Worksheet 6.1

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APPENDIX B

Public Involvement

- Public Meeting Comments
- Public Meeting Sign-In Sheet
- Public Meeting Flyer
- Public Meeting Handout
- Public Meeting Presentation
- Community Survey
- Community Survey Response Summary
- Newsletter #1 and Fax Transmittal
- Stakeholder Email
- Newsletter #2
- Letter to State Representative
- Letter to Senator

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TRIP REPORT & MEETING MINUTES

Project: **BBNA THMP & TTSP Project**
Bristol Project No: 32190013
Reference: Togiak Planning Team Meetings & Public Meetings
Date of Meeting: January 24-25, 2019
Location of Meeting: Senior Center / Tribal Building
Participants:
Bristol: Danielle Dance, Jackie Wander
Planning Team: See attached sign in sheet
Public Meeting: See attached sign in sheet

Summary

Jackie and Danielle arrived in Togiak around 4:30 PM on January 24, 2019. They originally planned to host a public meeting in the Senior Center at 6:00 PM, but there were basketball games going on at the school that evening, so very few people were expected to attend. The Council decided to reschedule the meeting for the next day at noon to have a lunch potluck meeting. The change was announced over the VHF radio.

The next day, Jackie and Danielle met with the Safety Planning Team from 9:00 to 11:30 AM in the Senior Center / Tribal Building. The Planning Team consisted of Council members, local police, and one of the Togiak State Troopers (see attached sign in sheet). They determined emphasis areas and discussed potential safety strategies for the plan. Then the public meeting was held from 12:00 to 1:30 PM. The Council provided sandwiches and snacks. Bristol discussed both the Tribal Transportation Safety Plan (TTSP) and the Tribal Hazard Mitigation Plan (THMP) at the meeting, collected public comments, and distributed public surveys. Jackie and Danielle departed Togiak around 2:00 PM via Alaska Island Air.

Notes taken during the meetings are summarized below. Items marked with (*) need more research, or assistance.

TTSP Planning Team Meeting Notes

- Airport is past its useful life, over 30 years old, needs to be upgraded; funding is always limited, during the summer they have a processor that uses T130 planes to fly their product out but can only fill ¾ full because the airport cannot handle it; it creates a lot of dust; Council is trying to work with representatives for solutions
- Roads have a lot of problems with dust, lots of residents have respiratory problems; call the clinic at 493-5511 for cases of dust irritation
- Have a lot of loose dogs
- Approximately 3-4 years ago, three young guys went camping during March for caribou hunting; they didn't see the creek because of whiteout conditions; one guy drove into the basin and flew off his vehicle; the snowmachine was damaged

- At least 4-5 times in the past, they have had to search for missing hunters and/or travelers in the winter
    - People running out of fuel, etc.
    - Two recent incidences this winter include a 4-wheeler broke through the ice up river, and a snowmachine ran out of fuel coming up the trail on the east side
    - Most of the time, the extended family will reach out and assist, sometimes send out two or three teams;
    - Troopers would have the records of search and rescue missions, they have air support, etc.
- There is a trail that they need to work on; it connects the ends of Bayview Drive and Hillside Drive; the current route is too steep about 4:1 slope which gets dangerous when icy; residents cannot get fuel, etc.
- The Council conducted a project to mark the trails several years ago; many markers have fallen over, and they are spaced too far apart
- A lot of speeding complaints, especially after hours when police are not on duty
- Account of a high school student that died, no street lights, probably a DUI, snowmachine hit a pole
- Numerous pedestrian incidents, one up at Togiak Heights subdivision, especially in areas with limited lighting
- Another pedestrian incident occurred at the AC store, someone backing up and hit a person; medevac was required
- General ATV safety: too many people riding on one ATV, speeding, age of drivers, etc.
- Used to have the VPSO and troopers do safety presentations at the school through BBNA, and at the same time gave out helmets
- An existing ordinance specifies ATV age limit of 12-years-old, the ordinance is 20 years old and needs to be updated
- Helmets are required, but the wording on the ordinance is unclear
- Dangerous going around the S-turn going up to the school; trying to build Billy Blue Road across the tundra; the original plan will not work because of the tundra (flood zone, soils, etc.); need to talk with Togiak Natives Limited (TNL) (land owner) to get an alternate route and combine project with new subdivision
- If there is ever a tsunami, there is only one road, so if the whole village evacuates at once, it would cause traffic issues; need an alternate route (need two roads)
- Going to be resurfacing the airport this summer through DOT; a lot of issues in the winter, the snow blowing will collect on the airport; lighting issues because the lights used to go off often restricting medevac access, so they would have to wait until daylight or manually put lights out, etc.; a lot of rain water on the airport; animal control at the airport and too many loose dogs are other issues
- Include animal control as separate emphasis area
- There is a creek with smelt run in the fall that attracts thousands of seagulls and birds which is a problem with the airplanes
- When there are house fires, they need more water; had a fire some years ago up the hill and the 500 gallon tank/firetruck was not enough water; they tried to use other equipment to pump up from the pond

- In the spring time they get a lot of ship traffic including million gallon fuel tanks; concerns that they do not have proper fuel response equipment/resources; there were two swamped tenders/fuel spills out of Dillingham last summer
- Someone working on their vehicle was underneath, did not have proper blocking and vehicle fell on him 4 years ago; there are two community shops but one is never open and the other is limited; the shop tools are limited so people have to bring their own tools; students learn mechanical services through the school shop by working on school vehicles and ATVs, they might accept public vehicles too, but ultimately the Council would like to run their own shop with plenty of storage and parts
- If there was a fire at houses up the hill, there is only one access road (Blueberry Street) which has one spot where the road is steep; the fire engines cannot access; need an extension off the end or a reroute to avoid this area; that subdivision also has bad cell service
- Have a code red connex that needs to be updated
- Togiak Heights needs better drainage; the roads need to be higher and wider; the road gets submerged in water with high tides and high winds; it is the heaviest used road; the road is also sinking, and there are no guardrails
- New subdivisions up the hill need streetlights; the streetlights were approved by AVEC, but do not know the status of that project; need to replace old burnt out lights with LEDs to save money it costs $2500 per existing pole and another $1000 for new pole; need more energy efficient lighting, old ones use too much power; need sensors
- Need for signs (need one by post office-see desired locations on attached map); there is a sign vandalism issue, people were bending them down with 4-wheelers causing a safety issue because people could hit the bent stop signs; need more education about sign vandalism and teaching people how to drive respectfully, or more robust sign posts; need parents to be parents; Togiak is growing so need more traffic control
- Togiak has two State Troopers (switch every two weeks), one BBNA VPSO, one City VPO (enforces city speeding, etc.), one TPO, and a compliance officer that assists
- Need upgraded culverts; over time they get crushed and need to be replaced; and need a proper drainage system
- Need wind abatement such as snow fencing or some sort of environmental protection for the roads and the airport
- Access control is needed at the airport
- Have road maintenance equipment but no storage, nowhere that is free of vandalism; a brand new rock truck had a broken window within a month; all city equipment has broken windows; there is no land for a large storage /storage building, including school buses, etc.
- Need new equipment; have one grader and when it is down, there is no road maintenance in the winter; snow removal is hard to do with the loader; hard to get funding through the state, most of funding is from private funding
- BBNA had a project to do winter trail markers, the tripods are already fallen over; need maintenance to fix; already have GPS information; the Manokotak trail markers have fallen down; very important for people who are not familiar with trails, also for search and rescue

- Have some funding with TCD (Togiak Conservation District, similar to Wildlife refuge land management agency) to redo the trails/subsistence roads with either boardwalks, mats, or gravel (need to decide method); do not have equipment to haul gravel; the ATVs are destroying the land (Togiak Wildlife Refuge land and C orporation land)
- Most of trails (all winter trails) are in the inventory
- There are 8-10 miles of road within Togiak; the Council gets most funding through extra miles from trails; concern about BIA removing the trails from inventory
- Enforcement through TCD, will be like Fish and Wildlife management in the future, have big plans for the TCD, but nothing yet
- Council is currently working with a place names coordinator out of Houston through a BBNC Education Foundation grant; they want to name places up the river, geared towards losing culture and importance of place names; install placards to identify local places of cultural significance; places could be identified on trail maps too
- More education for the young people on trail safety and winter travel, even summer boating travel, especially if they are going to make a trail system; could schedule hands-on field trips; this summer they just received a trails subscription trying to get funding to make trails safer; have been working with the Parks Service RTCA (River, Trails, and Conservation Assistance) program; a lot of them are over used; trails provide access to blackberries, salmon berries, and cranberries; have a meeting with RTCA in March to create a better plan/project to get the trails repaired
- Need more winter survival training as well, bring a tarp and a VHF, other tips
- There were plans to get a deep/high water port because the only way to get to Togiak is via water or air; a lot of fishermen get stuck during low water
- Cannot access the refuge if there is minimal snow coverage, need to stay on trail
- Speed limit signs are desired; need education for speeding; need traffic enforcement for speeding; the Troopers cannot do traffic stops; there is a State program that requires driver's licenses that would allow Troopers to make traffic stops; there is a City ordinance about speeding; experience says monetary penalties are not effective and community service would be more effective; concerns about the City/Tribe confiscating vehicles because they would be liable and need insurance; Trooper explained they do not have to lock up vehicles, can seize in place instead; need to evaluate options
- Used to apply oil/chemical (calcium chloride?) on roads for dust prevention but rain washed it away; need to research some other options that are more weather resistant*; tried the water truck but did not work
- Dust masks are needed; one time had a huge brush fire and the clinic ran out of masks within an hour; need to have some available up the hill so people don't have to come down through the dust to get to the clinic (two separate village areas)
- Consider chip-seal or pavement?* Depends on vehicle percentages; pavement would be safer if most vehicles were trucks; concerned there would be a lot of deaths with too many ATVs mixed with larger vehicles
- Dust clouds from big planes, even with small planes coming in every day
- Need education about dust getting onto tundra depending on wind direction; dust settles on berries; is this unhealthy? School buses create dust; HUD homes on the hill get all that dust from the buses; need school education for teens on ATVs especially on curve going

down the hill; kids speed on purpose to make dust; the dust creates fog which reportedly caused an accident once due to low visibility

- Research other options for speeding and dust; need something that is safe for the environment; need help with this*
- Like the idea of widening roads for pedestrians, adding streetlights, and getting reflectors; roads get narrower in the winter and have standing water on the sides, especially on the turns; HUD homes on the hill are so close to the road so children play in the road; child/pedestrian safety is taught through the Headstart program, but need to expand this education to the community in other ways; some kids sled on the roads in the winter; could have more kids at play signs especially in residential areas and on Airport Road
- Interested in a walking path from lower village to school separate from road; the bus does not pick up kids from the upper area to the school; even small kids have to walk to school from this subdivision; concern about low lighting
- ATV drivers need to be 16 years old; a few years ago they posted the age limit, need to repost an enforce; encourage general public and parents to make a community effort to enforce good driving behavior, for example stop kids when they are a driving with too many people on one ATV; educate community on how to assist with these problems
- Need helmets; could give out helmets to people who partake in an ATV safety class; need to reschedule this class and give new helmets every 5 years with the Safety Plan updates
- Parents need to take away access to the ATV
- Right now churches, vans for airlines, and VPO/TPO give rides, but there needs to be another ride share system; what kind of grants are available?*
- Kids load up their 4-wheelers to get to the school for gym night and basketball games
- Kids hot-wire and steal other peoples' ATVs and take them at night
- Need lights at the "transit facility dock" for when freight comes in; need safer tie down billiards; need to pursue funding through the state (currently using heavy equipment to anchor the barges); had a fatality on the beach, a kid hit the lines for these anchors
- Life jackets are now being enforced on the rivers by state troopers; used to have life vests available with Kids Don't Float but they were not being returned; want to participate in again and label vests and put a sign to return vests; education for kids to wear their PFDs; summertime commercial fishermen do not wear them either; the coast guard does not to enforce / inspect / fine near Togiak; typically Fish and Wildlife do this but there is no one stationed in Togiak to do it (would need a grant to pay for this position and the equipment); people have life jackets but just don't use them; some people may not be able to afford them; could do something similar to helmet: have a boating safety class and then life vests to participants
- The set netters get inspected; boats should have at least one person capable of giving safety drills, operating gear, etc. but doesn't happen in Togiak, only in Dillingham
- Need better communication with Coast Guard; just need to ask, they are always looking for missions; would like them to come to Togiak for 4-days to patrol in the summer (during commercial fishing) and during fall time when people are going up river for fishing and hunting
- Parents need to be models for the children

- Need more health aides and first responders in the community; there are currently 5 health aides; there are no City safety response personnel, need more ETT/EMT training and recruitment
- Might need to relocate the airport if they want to extend or get a paved runway because there may not be enough room (near the coast); prefer to relocate to a non-flood zone area; interested in doing a feasibility study for the airport; Togiak is growing and air traffic demand is increasing; Togiak will continue to expand on the hill, which may be an ideal location for a new airport
- Need fencing for access control around the airport like in Dillingham, with placards to say authorized personnel only; may not need fencing around the whole property, just at access points
- Could also use fencing around boat haul/storage area to prevent vandalism, people steal gas and other items from the boats
- There is a City ordinance to keep your dogs tied up; the most effective thing is to put a bounty on the dogs, and hire a person to animal patrol; are there grant options?* Need a full time position and would need to supply a vehicle and a facility,
- During summer the fish smell at the cannery attracts bears; people cannot see bears when it is dark; one time someone was running from a bear and could not escape because it was right next to their skiff at the boat landing area; also need animal control
- Interested in hiring someone to shoot crows at the dump but is this legal or a protected species concern?*
- The City used to set aside money for dog catchers
- Story of a big dog chasing an elderly lady on her ATV, she was yelling, took a jump off the curb to get away; dogs are even a pedestrian issue; there used to be packs of dogs that would surround you walking; they are stray dogs, not pets, hungry and wild
- Vet comes in once every spring and offers free rabies shots through the Tribe
- Some wolves are an issue, during school (typically September); bears need to be shot
- Need a good Village operated shop and trained mechanics with equipment/tools providing full time service; need security to keep tools from getting stolen; large facility with enough storage, even exterior storage that is locked in; there are a lot of broken down vehicles in Togiak; many damaged vehicles should not be on the roads – broken windshields, no wipers, lights out, tires, etc.

TTSP Public Meeting Notes

- Road Conditions, need road markers with red reflectors along the roads; need to identify where those can be purchased
- 4-wheeler drivers are going faster than the trucks; Not just individuals but families; Some have flipped (3 or 4), one of which the driver's side window opened during rollover and ejected man from truck
- The 25 mph speed limit is too fast on icy roads
- Story of a teacher and wife in white water canoe, flooding 3 feet over bank, two fatalities, found wife because she had life jacket on, but husband was sitting on his
- Young driver in a tender boat took off on his own in 15 foot waves, despite being told not to go, ended in a fatality
- People not listening when community members suggest a safer alternative

- City loader and dozer are barely running; grader needs new blades; is there funding for equipment? It is an emergency response issue
- Desire a feasibility study for expanding the current airport; unclear if there is or is not enough space to extend current runway, disagreement on this
- Law enforcement should give out citations for kids that drive under 16 because there was a major accident, otherwise maybe the roads could be paved
- Concern about dust on the roads and the airport; they have put dust chemical on the roads but it only lasts a couple of months, and it is too pricey to maintain

THMP Public Meeting Notes

- Several years ago, a government declared natural disaster in southwest Alaska off the coast damaged approximately 700-feet of the seawall in Togiak; they received $2.2 million for repair; concerns about several dozen homes and a few major buildings located near the coast
- Togiak has a new power plant that they are still learning how to operate, which has power outages sometimes; when there is a loss of power, most homes are heated by stoves or boiler or furnace (all by electricity), causing homes to freeze, water to freeze, and a lot of damage; need an alternative heat source or backup power; they have a new generator at the water plant
- The seawall was designed to rebound the waves, but when the water gets above the wall, the water passes the village into the wetlands from behind, surrounding the village with flooding
- There are some villages up north that have erosion issues in their communities. In Togiak, there is no more land for younger generations, unless you go up the hill. With limited jobs in town, people have to share homes with multiple families. They need to relocate and expand to higher elevations. This will be a problem in the future with rising populations. There needs to be a study for housing development – how many people are homeless and need a home? TNL is the landowner. The lower village is in a flood zone so people need to move up to the hill. There is a lack of funding. Coordinate this effort with the comprehensive plan and the possible relocation of the airport.
- What will happen if there is a storm? What is the deadline for these projects? Concerns about national security from foreign countries. There is not shelter in Togiak or up the hill. When it flooded in 1964 during the earthquake, there was no warning system. The village flooded. No place to sleep over night. The community is not prepared for these things. Do not have masks or rubber gloves. These items are a priority because they are needed ASAP before an emergency can occur. The two separate village areas experience different hazards. There is no public van to help out if there is a storm or earthquake (see response from City personnel in next bullet). Need a few people from the City, Village, TNL, to pursue funding and get together a few times per week including elders and the public. People do not know when there is a new law.
- The city has disaster plans and hazard mitigation plans. If the City gets tsunami warnings, State personnel are in contact with the City. The City has four 50-passenger school buses. The City will contact drivers to evacuate in an emergency. These plans need to be communicated to the public.

Attachments:

1. Planning Team Meeting Sign-in Sheet
2. Planning Team Meeting Agenda
3. Safety Plan Candidate Emphasis Areas
4. Safety Implementation Plan Tables
5. Public Meeting Sign-in Sheet
6. Public Meeting Flyer
7. Public Meeting Handouts
8. Public Meeting Presentation Slides
9. Map Markups

End Meeting Minutes

CC: File

Planning Team Meeting

Togiak Tribal Transportation Safety Plan & Tribal Hazard Mitigation Plan (2019 - 2024)

Date / Location: January 24, 2019

Sign In Sheet

Name	Phone	Email
Marie Paul	907.310.0993	marie4099678@yahoo.com
Elizabeth Wassillie	493-2150	TogiakPresident@gmail.com
Esther Tayer	493-2096	estayer@yahoo.com
Deanna Snyder	493 5003	togiakclerk@bbna.com
Peter Lockuk Sr	493-5131	lockukp@gmail.com
Jimmy Coggahut c	493 2290	
Roger C. Wassillie	907-493-2825	rwassillie@bbna.com
Leroy N Lockuk	907-493-2402	nanalock92@gmail.com
Dan Nanalook Sr	907.493.2004	dnanalookjr@yahoo.com
Teo Paul		
DAN STANLOOKE	(907) 493-2084	dansank@alaska.gov

TOGIAK
January 25, 2019

HAZARD MITIGATION PLAN & TRANSPORTATION SAFETY PLAN

MEETING AGENDA

Transportation Safety Plan

9:00 AM Introductions
Project Overview

9:15 AM Transportation Safety Plan

- Emphasis Areas
- Strategies
- Implementation Plan

10:45 AM BREAK

Hazard Mitigation Plan

11:00 AM Hazard Mitigation Plan

- Mitigation Actions
- Prioritizing Worksheet
- Remaining Items

11:45 AM Closing Statements & Action Items

Levelock Tribal Transportation Safety Plan

Candidate Emphasis Areas

Emphasis Area	Strategic Linkage	Potential Strategies
Road Maintenance	• Standing water / drainage issues • Lack of local gravel • Lack of funding	• Find a gravel source • Seek funding • Construct storage / maintenance building
ATV Helmet Use	• Parental concerns	• Helmet program • Helmet ordinance / enforcement
Dust	• Community dust concerns • Sandy road surface	• Water roads • Slower speeds
Drunk Driving	• 3 ATV accidents involving intoxicated driving, bumping into power poles or guy wires	• Education • Power pole adjustments
Trail Safety	• Many unmarked subsistence trails provide access to nearby communities	• Install trail markers • Search and rescue ATVs • New GCI tower
Elder Transit	• Community desire	• Provide transit service to store, post office, etc.
Boating Safety	• Lack of boat launch facilities • Lack of search and rescue services	• All tide dock & boat ramp • Purchase village search and rescue boat • Continue Kids Don't Float
Airport Safety	• Limited plane service in windy weather • Existing lights are out	• Cross strip runway • Replace burnt out lights

Legend:

Village Council Wish List

IMPLEMENTATION PLAN

EMPHASIS AREA #1	STRATEGIC LINKAGE
Road Conditions	
OBJECTIVES	
SUCCESS INDICATORS	

4Es	ACTIONS	TARGET OUTPUT	RESPONISBLE PARTIES	DATE OF COMPLETION	PERFORMANCE MEASURES	MONITORING & EVALUATION
EDUCATION	Education about respecting signs starting at the school					
ENFORCEMENT	installing Street signs (yeild and stop), prevent vandalism (more robust poles)					
ENGINEERING	Blueberry Street Redesign or relocate, resurface / widen / built up / drainage / guardrails (Togiak Heights), more lights on the heights, upgrade lights to be more energy efficient, upgraded culverts / drainage system, snow fencing (some other form of wind ebatements for roads and aiport) possibly a study needs to be done to identify best solution, maintenance storage facility/shop with controlled access this could include storage for buses, new equipment for winter road maintenance					
EMERGENCY SERVICES	Improve cell access					

IMPLEMENTATION PLAN

EMPHASIS AREA #2	STRATEGIC LINKAGE
Trail Safety	
OBJECTIVES	
SUCCESS INDICATORS	

4Es	ACTIONS	TARGET OUTPUT	RESPONISBLE PARTIES	DATE OF COMPLETION	PERFORMANCE MEASURES	MONITORING & EVALUATION
EDUCATION	Trail maps, Upik names for cultural preservation, Placard to show map, educate young people for trail safety (hands on trips / need more winter survival)					
ENFORCEMENT	Develop enforcement system through TCD.					
ENGINEERING	Trail development and research for trail creation (possibly mats)					
EMERGENCY SERVICES	Trail markers (especially between togiak and Manokotak)					

IMPLEMENTATION PLAN

EMPHASIS AREA #3	STRATEGIC LINKAGE
Speeding / Dust	
OBJECTIVES	
SUCCESS INDICATORS	

4Es	ACTIONS	TARGET OUTPUT	RESPONISBLE PARTIES	DATE OF COMPLETION	PERFORMANCE MEASURES	MONITORING & EVALUATION
EDUCATION	Speeding issues included with drivers education at school, education fof dust impacts for residents and subsistence activities					
ENFORCEMENT	Speed limit signs, evaluate options (review city ordinances and post to become aware of existing ordinances)					
ENGINEERING	Research options for dust supression and apply, consider chip seal					
EMERGENCY SERVICES	dust masks at clinic with extra supplies (possibly multiple locations for supplies)					

IMPLEMENTATION PLAN

EMPHASIS AREA #4	STRATEGIC LINKAGE
Pedestrian Safety	
OBJECTIVES	
SUCCESS INDICATORS	

4Es	ACTIONS	TARGET OUTPUT	RESPONISBLE PARTIES	DATE OF COMPLETION	PERFORMANCE MEASURES	MONITORING & EVALUATION
EDUCATION	Reflective tape, road safety taught in head start, sledding safety education at school,					
ENFORCEMENT	Kids at play signs (heights, airport road) Reduced speed signs					
ENGINEERING	widening roads, additional lights					
EMERGENCY SERVICES	walking path for Togiak Heights,					

IMPLEMENTATION PLAN

EMPHASIS AREA #5	STRATEGIC LINKAGE
ATV Safety	
OBJECTIVES	
SUCCESS INDICATORS	

4Es	ACTIONS	TARGET OUTPUT	RESPONISBLE PARTIES	DATE OF COMPLETION	PERFORMANCE MEASURES	MONITORING & EVALUATION
EDUCATION	drivers education, education of all community residents of how we can maintain safety in community, attend education class then get helmet,					
ENFORCEMENT	Repost age limit, newsletter					
ENGINEERING						
EMERGENCY SERVICES	Community transit					

IMPLEMENTATION PLAN

EMPHASIS AREA #5	STRATEGIC LINKAGE
Boating Safety	
OBJECTIVES	
SUCCESS INDICATORS	

4Es	ACTIONS	TARGET OUTPUT	RESPONISBLE PARTIES	DATE OF COMPLETION	PERFORMANCE MEASURES	MONITORING & EVALUATION
EDUCATION	education for young people for boating safety (hands on trips), attend class provide lifevest					
ENFORCEMENT	work with coast guard to do a mission during fishing season, work with fish and game to monitor during fish season and fall time, fence around boat haul out area to help prevent vandalism					
ENGINEERING	tie downs and billiards,					
EMERGENCY SERVICES	lights at transit facility dock, tie downs and billiards, life jackets (kids don't float), enough health aids, first response workers					

IMPLEMENTATION PLAN

EMPHASIS AREA #5	STRATEGIC LINKAGE
Evacuation / School Access Route	
OBJECTIVES	
SUCCESS INDICATORS	

4Es	ACTIONS	TARGET OUTPUT	RESPONISBLE PARTIES	DATE OF COMPLETION	PERFORMANCE MEASURES	MONITORING & EVALUATION
EDUCATION						
ENFORCEMENT						
ENGINEERING						
EMERGENCY SERVICES						

IMPLEMENTATION PLAN

EMPHASIS AREA #5	STRATEGIC LINKAGE
Airport Safety	
OBJECTIVES	
SUCCESS INDICATORS	

4Es	ACTIONS	TARGET OUTPUT	RESPONISBLE PARTIES	DATE OF COMPLETION	PERFORMANCE MEASURES	MONITORING & EVALUATION
EDUCATION						
ENFORCEMENT	fencing for access control, signs "authorized personnel only"					
ENGINEERING	extension, lights, resurface, relocation, feasibility study (away from village)					
EMERGENCY SERVICES						

IMPLEMENTATION PLAN

EMPHASIS AREA #5	STRATEGIC LINKAGE
Animal Control	
OBJECTIVES	
SUCCESS INDICATORS	

4Es	ACTIONS	TARGET OUTPUT	RESPONISBLE PARTIES	DATE OF COMPLETION	PERFORMANCE MEASURES	MONITORING & EVALUATION
EDUCATION	educational awareness of wild animal safety					
ENFORCEMENT	bounty and hire someone to go after dog (acquire paid position and vehicle and facility for animal control and monitor bear)					
ENGINEERING						
EMERGENCY SERVICES	spring vet service for shots for pets					

IMPLEMENTATION PLAN

EMPHASIS AREA #5	STRATEGIC LINKAGE
Vehicle Maintenance	
OBJECTIVES	
SUCCESS INDICATORS	

4Es	ACTIONS	TARGET OUTPUT	RESPONISBLE PARTIES	DATE OF COMPLETION	PERFORMANCE MEASURES	MONITORING & EVALUATION
EDUCATION	trained mechanics (village operated)					
ENFORCEMENT						
ENGINEERING	maintenance shop (storage shed and fenced in area)					
EMERGENCY SERVICES						

Community Meeting

Togiak Tribal Transportation Safety Plan & Tribal Hazard Mitigation Plan (2019 - 2024)

Date / Location: January 24, 2019 at 6 PM / Senior Center

Sign In Sheet

Name	Name	Name

TOGIAK
TRANSPORTATION SAFETY PLAN & HAZARD MITIGATION PLAN

COMMUNITY MEETING

Come learn about two new projects in the works! The first is a Tribal Transportation Safety Plan, which proposes strategies to improve safety of local roads, trails, boating facilities, and airport. The second project is a Tribal Hazard Mitigation Plan, which proposes strategies to protect the community against natural disasters such as wildfires, floods, earthquakes, & more.

We want to hear from you!

Attendees can provide input about safety and hazard priorities for the community. The project planners will be available for any questions or feedback from the public.

Posting date 1/10/2019

Thursday
January 24, 2019
6:00 PM

Senior Center

Door Prizes!

Potluck!

Please bring a dish to share

For more information or to submit comments contact:

Jackie Wander
(907) 563-0013
jwander@bristol-companies.com

Bristol
ENGINEERING SERVICES COMPANY, LLC

Bristol
ENGINEERING SERVICES COMPANY, LLC

111 W. 16th Avenue, Third Floor
Anchorage, AK 99501-5169
phone (907) 563-0013
fax (907) 563-6713
www.bristol-companies.com

Community Meeting Handout
Togiak Tribal Transportation Safety Plan
January 24, 2019

Dear Participant;

Thank you for attending the public meeting for the Togiak Tribal Transportation Safety Plan project. Your participation is crucial to the planning process. We appreciate any feedback you may have on this meeting or the project in general.

Bristol Engineering has been contracted by Bristol Bay Native Association (BBNA) on behalf of the Traditional Village of Togiak to develop a Tribal Transportation Safety Plan (TTSP) for your community. A TTSP is a collaborative and comprehensive document that identifies transportation safety issues and strategies to address them. The overarching goal is to reduce risk of car crashes, fatalities, and injuries on the local transportation system. The TTSP is also essential for obtaining funding for safety projects. The TTSP project is currently at the Draft report level. After this public meeting, Bristol will incorporate public comments into a Final Draft TTSP, which will be submitted to the Council for review.

The purpose of this public meeting is to present the Draft TTSP to the community, as well as better understand the community's transportation safety priorities. Priorities can be any project or program aimed at improving safety for any mode of travel including roads, trails, pedestrian features, boating and aviation facilities, and more. Your comments will help determine emphasis areas for the plan.

Public comment is key to a successful project. Please feel free to contact me directly with any comments or concerns. I can be reached by email at jwander@bristol-companies.com or by phone (907) 743-9314.

Sincerely,

Jaclyn Wander

Jaclyn (Jackie) Wander
Civil Engineer II

Bristol
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Community Meeting for Togiak Tribal Hazard Mitigation Plan

January 24, 2019

Dear Participant;

Thank you for attending the public meeting for the Togiak FEMA Tribal Hazard Mitigation Plan (THMP). Your comments and participation are very important to the planning process. We appreciate any feedback you may have on this meeting or the project in general.

Bristol Bay Native Association (BBNA) Department of Transportation and Infrastructure Development (DOTID) has contracted Bristol Engineering Services Company, LLC (Bristol) to assist with the preparation of the FEMA THMP. The THMP is a planning document used to identify hazards that your community is exposed to and ways to reduce potential losses of important assets from these hazards. A FEMA approved and community adopted THMP enables the Local government to apply for grants through disaster related assistance programs like the Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM), and others.

The purpose of this public meeting is to inform the community about the THMP, collect community feedback about the identified hazards and mitigation actions / projects. We are looking for personal experiences with the identified hazards, and assistance with identifying problem areas and issues of concern. We would also like input on the identified mitigation strategies and ways that the Planning Team can keep the public informed and involved in the process. This information will be used in the THMP. A draft copy will be available for review when completed.

Public comment is key to a successful project. Please feel free to contact me directly with any comments or concerns. My email is ddance@bristol-companies.com.

Sincerely,

Danielle Dance
Civil Engineer I

Attachments:
- Newsletter
- List of Preparedness Resources
- 12 Ways to Prepare Postcard

Bristol Bay Native Association
Transportation and Infrastructure Development

August 2018 Newsletter 1

This newsletter describes the Bristol Bay Native Association Transportation and Infrastructure Department's Tribal Hazard Mitigation Planning project development processes to all interested agencies, stakeholders, and the public and to solicit comments. It can also be viewed on the BBNA's website at www.bbna.com

Bristol Bay Native Association (BBNA) Transportation and Infrastructure Department (DOTID) was awarded a Pre-Disaster Mitigation Program grant from the Federal Emergency Management Agency (FEMA) to prepare your 2019 Tribal Hazard Mitigation Plan (THMP). Bristol Engineering Services Company, LLC (BESC) was contracted to assist the BBNA DOTID with preparing a 2019 FEMA approvable THMP plan.

The TMP will identify all natural hazards, such as earthquake, flood, erosion, severe weather, and wildland/tundra fire hazards, etc. The plan will also identify the people and facilities potentially at risk and ways to mitigate damage from future hazard impacts. We will document the public participation and planning process as part of this project.

What is Hazard Mitigation?
Hazard mitigation projects eliminate the risk or reduce the hazard impact severity to people and property. Projects may include short- or long-term activities to reduce exposure to or the effects of known hazards. Hazard mitigation activities could include relocating or elevating buildings, replacing insufficiently sized culverts, using alternative construction techniques, developing, implementing, or enforcing building codes,or developing, and implementing education programs.

Why Do We Need A Hazard Mitigation Plan?
Communities must have a State, FEMA approved, and community adopted mitigation plan to receive a project grant from FEMA's pre- and post- disaster grants identified in their Hazard Mitigation Assistance and other agency's mitigation grant programs. BBNA DOTID plans to apply for mitigation funds after our plan is complete.

A FEMA approved and community adopted THMP enables the Local government to apply for the Hazard Mitigation Grant Program (HMGP), a disaster related assistance program; the Pre-Disaster Mitigation (PDM), and the National Flood Insurance Program (NFIP) Flood Mitigation Assistance (FMA) grant programs.

The Planning Process
There are very specific federal requirements that must be met when preparing a FEMA approvable THMP. These requirements are commonly referred to as the planning process requirements of 44 CFR 201.7 (c)

The following steps describe the planning process in order to develop the THMP.

1. **Establish the Planning Team**
2. **Education of the Planning Team**
3. **Assess Risks**
4. **Assess Capabilities**
5. **Develop a Mitigation Strategy**
6. **Monitor, Evaluate, and Plan Updates**

We are currently in the very beginning stages of preparing the plan development. We will be conducting a Planning Team Meeting to introduce the project and planning team, to gather comments from community residents, identify hazards, and collect data to refine the vulnerability assessment.

We Need Your Help

BESC has prepared survey packets to begin collecting information for your THMP. Survey packets will be mailed to your village council and sent by email to your village administrator.

Establishing a Planning Team is a very important step. We will need a point of contact (POC)/team leader from your community. This group will consist of 2-5 people that have good knowledge about land use, the transportation system, public facilities, and safety resources within the community. BBNA DOTID will be in contact with your tribe to determine a POC and your planning team.

Once the Planning Team has been developed, they will begin to work on the following items:

- Identifying the hazards that impact your community;
- Determining information about the hazards such as, location, history, extent, and the probability of future events;
- Completing a risk analysis, and;
- Developing problem statements and goals.

BBNA DOTID will be in contact with your tribe to set up an initial teleconference meeting with the Planning Team, BBNA DOTID, and BESC to continue to work on the THMP development.

The BBNA DOTID team will be led by Annie Fritze, DOTID Program Manager or Dan Breeden, Department Director with assistance from Bristol Engineering Service Company, LLC (contracted by BBNA). BESC will be developing materials and lead the planning process with guidance from BBNA DOTID staff.

BBNA Tribal Hazard Planning Team

Team Member	Title	Involvment
Annie Fritze	Program Manager	THMP Team Leader, data gathering and plan review
Dan Breeden	Department Director	THMP Team Leader, data gathering and plan review
Isaac Pearson, P.E.	Senior Engineer	THMP Consultant
Danielle Dance	Civil Engineer	THMP Consultant

Public Participation

The purpose of this newsletter is to keep you informed, and to allow you every opportunity to voice your opinion regarding these important projects. We want to encourage public involvement as a continuous effort throughout the project.

We encourage you to take an active part in the development effort, and preparation of the Tribal Hazard Mitigation Plan.

The goal is to receive comments, identify key issues or concerns, and improve mitigation ideas, and to guide the community.

Please contact BBNA DOTID program staff or BESC if you have any questions, comments, or requests for more information:

Bristol Bay Native Association DOTID	**Bristol Engineering Services Company, LLC**
Annie Fritze OR **Dan Breeden** **PO Box 310** **Dillingham, Alaska 99576** **(907) 842-6219**	**Danielle Dance, Consultant** **111 W. 16th Avenue, Third Floor** **Anchorage, Alaska 99501** **(907)563-0013**

Useful web links

Volcano Information

- Visit the AVO website: www.avo.alaska.edu
- Sign up for the VNS: https://volcanoes.usgs.gov/vns2/
- Ash Impacts website: https://volcanoes.usgs.gov/volcanic_ash
- Ashfall advisories come from the NWS: www.weather.gov/afc/
- AVO would *love* your volcano observations and ash samples
    - *Find us at www.avo.alaska.edu/contact.php/*
    - *Is Ash Falling: www.avo.alaska.edu/ashfall/ashreport.php*
    - *Collection instructions: https://avo.alaska.edu/ashfall.php*
    - *Facebook: http://facebook.com/alaska.avo*
    - *Twitter: http://twitter.com/alaska_avo*
- Air Quality Advisories, DEC: http://dec.alaska.gov/air
- Airborne ash hazards to aircraft, NOAA: http://aawu.arh.noaa.gov
- Local Notice to Mariners, USCG: www.navcen.uscg.gov

Weather Information

- Watches and Warnings: https://alerts.weather.gov/cap/ak.php?x=1
- Any forecast: http://www.weather.gov/afc
- Mobile information (low bandwidth): http://www.weather.gov/source/afc/mobile/
- River Information: http://www.weather.gov/aprfc
- Rainfall: http://www.weather.gov/aprfc
- Breakup Info: http://www.weather.gov/aprfc/breakupESRIMap
- River Conditions: http://www.weather.gov/aprfc/riverConditions
- Alaska Weather T.V. Maps: http://www.weather.gov/afc/tv
- Sea Ice forecasts: http://www.weather.gov/afc/ice
- Outlook (temperatures and precipitation): http://www.cpc.noaa.gov
- Send us a storm report: http://www.srh.noaa.gov/StormReport_new/SubmitReport.php?site=AFC

WEBSITES

- Alaska DHS&EM: http://ready.alaska.gov
- Ready, Department of Homeland Security: https://www.ready.gov/
- Department of Commerce, Community and Economic Development (DCCED), State of Alaska Floodplain Management: http://www.commerce.state.ak.us/dca/nfip/nfip.htm
- Flood information for Alaskans: http://www.flood.alaska.gov
- Association of State Floodplain Managers: http://www.floods.org/
- Alaska-Pacific River Forecast Center (APRFC): http://aprfc.arh.noaa.gov
- Natural Resources Conservation Service (NRCS), Alaska Snow, Water and Climate Services: http://ambcs.org
- National Weather Service (NWS), Alaska Region Headquarters: http://www.arh.noaa.gov/
- Federal Aviation Administration (FAA), Alaskan Region's Weather Cameras: http://avcams.faa.gov/
- U.S. Department of the Interior—Bureau of Land Management (BLM), Alaska Fire Service: http://fire.ak.blm.gov/
- Alaska Energy Authority (AEA): http://www.akenergyauthority.org/
- Department of Commerce, Community and Economic Development (DCCED), Community Profiles: http://www.commerce.state.ak.us/dca
- Alaska Department of Public Safety, Rural Fire Training Office: http://www.dps.state.ak.us/fire/TEB/ruralfireprotection.aspx
- Department of Environmental Conservation (DEC): http://www.state.ak.us/dec/
- National Weather Service, Forecast Office Alaska Ice Desk: http://pafc.arh.noaa.gov/ice.php
- Federal Emergency Management Agency (FEMA): http://www.fema.gov/
- American Red Cross of Alaska: http://www.alaska.redcross.org
- Small Business Administration: http://www.sba.gov/localresources/disasteroffices/focwest/index.html

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January 24, 2019

Traditional Village of Togiak Tribal Transportation Safety Plan

Bristol Engineering Services Company, LLC
Jackie Wander, Civil Engineer II

Bristol

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Safety Minute

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Presentation Overview

- What is a Safety Plan?
- Importance of Safety Plans
- The Four E's of Safety
- Steps to Develop a Safety Plan
- Data Collection & Surveys
- Emphasis Areas
- Implementation Plan
- Next Steps
- Questions / Comments
- Hazard Mitigation Plan Presentation
- Door Prizes!

3

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Tribal Transportation Safety Plan

"A Transportation Safety Plan is a collaborative and comprehensive document that identifies transportation safety issues and strategies to address them. Effective Transportation Safety Plans lead to projects that make the transportation system safer."

~ U.S. Department of Transportation Federal Highway Administration
Developing a Transportation Safety Plan

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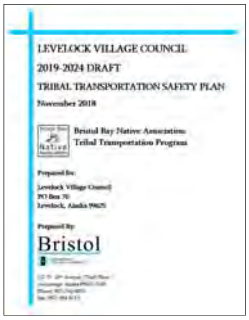
Tribal Transportation Safety Plan

- Uses Data to Guide Transportation Investment Decisions
- Mechanism to Coordinate Safety Efforts
  - Engage leadership/stakeholders
  - Collect/analyze data
  - Determine emphasis areas
  - Identify strategies
- Evaluates Existing Efforts


LEVELOCK VILLAGE COUNCIL
2019-2024 DRAFT
TRIBAL TRANSPORTATION SAFETY PLAN
November 2018
Bristol Bay Native Association
Tribal Transportation Program
Bristol

5

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Importance of Safety Plans

- Proactive Approach to Planning
  - Prevents crashes
  - Improves unsafe transportation conditions
- Addresses Most Critical Safety Needs
- Develops Partnerships
- Fosters Multidisciplinary Cooperation
- Increases Access to Safety Funding

"Planning with safety in mind saves lives"

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Four E's of Safety

- EDUCATION
  - Gives drivers information about making good choices
  - Informs about rules of the road
- ENFORCEMENT
  - Enforces traffic laws
  - Provides visible police presence
- ENGINEERING
  - Addresses roadway infrastructure
- EMERGENCY SERVICES
  - Provides rapid response
  - Quality of care when responding to collisions causing injury

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Safety Plan Development

- Step 1 – Establish Safety Leadership Framework
- Step 2 – Collect & Analyze Safety Data
- Step 3 – Determine Emphasis Areas
- Step 4 – Identify Strategies
- Step 5 – Prioritize/Incorporate Strategies
- Step 6 – Draft a Plan
- Step 7 – Evaluate/Update the Transportation Safety Plan

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Safety Partners

- Traditional Village of Togiak
- City of Togiak
- Togiak Natives Limited
- VPSO / VPO
- Togiak State Troopers
- Togiak Sub Regional Health Clinic / BBAHC
- BBNA
- Bristol Engineering / BBNC
- Alaska DOT&PF
- FHWA
- BIA TTP
- DNR / Coast Guard

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Existing Safety Efforts

- Road Maintenance
  - Road grading
  - Snow plowing
  - Brush cutting
  - Culvert cleaning
- Law Enforcement
  - VPSO
  - State Trooper
- Billy Blue Road
  - Safe Routes to School Grant
- Driver's Education
  - Talks at school
- Road Rehabilitation
  - Built up roads
  - Installed new culverts
- Trail improvements
  - Trail redesign in progress

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Data Collection

- Crash Data from Alaska Department of Transportation
- US Coast Guard Boating Accidents
- Citations / Data from Togiak Police*
- Public Surveys*

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Crash Data – Overview

- 3 Crashes from DOT&PF
  1. 24-year old female with one occupant, Sunday night, alcohol use, functional damage to 3 vehicles
  2. 21-year old female, Friday evening, ran a stop sign, suspected alcohol use, minor damage to 2 vehicles
  3. 60-year old male with one other occupant, Friday night, negligent driving, hit and seriously injured a pedestrian

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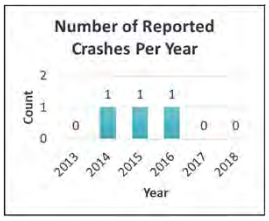
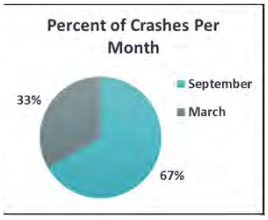
Crash Data – Time / Date





- All of the accidents occurred in the evening after 4 PM and before 12 AM

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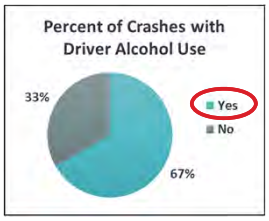
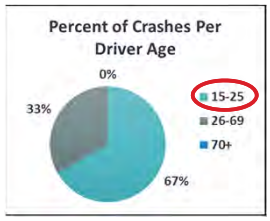
Crash Data – Driver Stats





- None of the drivers were wearing seatbelts

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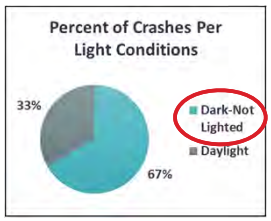
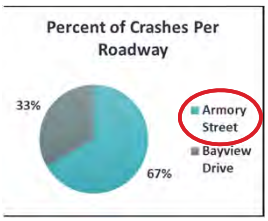
Crash Data – Road Conditions





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Boating Accidents – Map

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Boating Accidents – Details

- 5 Total Fatalities since 2009

Year	2016	2011	2009
Month	January	August	July
Time of Day	10:40 PM	7:00 AM	12:00 PM
Body of Water	Togiak River	Togiak Bay	Togiak Bay
No. of Accidents	1	1	1
No. of Vessels	1	1	1
No. of Injuries	0	0	0
No. of Deaths	3	1	1
Accident Type	Capsizing	Flooding/Swamping	Flooding/Swamping
Accident Cause	Hazardous Waters	Alcohol Use	Unknown
Vessel Type	Open Motorboat	Open Motorboat	Open Motorboat

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Public Surveys

- Need surveys

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Public Surveys

- Question 1 – Rank safety priorities
- Question 2 – How old are you?
- Question 3 – How do you get around within the community?
- Question 4 – Crash data
- Question 5 – What do you think could be done to improve transportation safety within the community?

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Candidate Emphasis Areas

- Road Conditions
  - Rehabilitate Bayview Drive
  - Guardrails on Togiak Heights
  - Drainage improvements
- Trail Safety
  - Construct new trails
  - Install trail markers
  - Develop trail maps
  - Trail bridges
- Speeding / Dust
  - Speed limit signs
  - Dust suppression
  - Stricter enforcement
- Pedestrians
  - More streetlights
  - Wider roads
  - Reflectors

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Candidate Emphasis Areas

- ATV Safety
  - Helmet program
  - Stricter enforcement
  - Driver's education
- Boating Safety
  - More life vest use
  - Lights at barge dock
  - Kids Don't Float program
- School
  - Billy Blue Road
  - School zone signs
  - Ice removal on school routes

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Emphasis Areas

- Airport Safety
- Animal Control
- Vehicle Maintenance
- Others? Comments?

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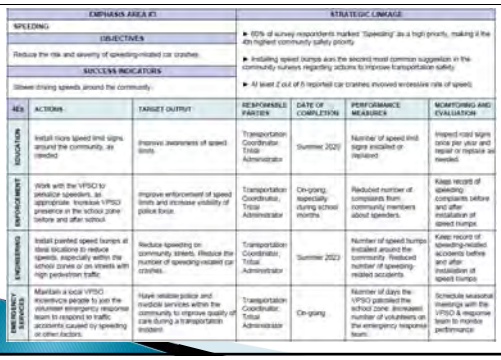
Implementation Plan



EMPHASIS AREA #3			STRATEGIC LINKAGE			
SPEEDING			▸ 65% of survey respondents marked 'Speeding' as a high priority, making it the 4th highest community safety priority.			
OBJECTIVES			▸ Installing speed bumps was the second most common suggestion in the community surveys regarding actions to improve transportation safety.			
Reduce the risk and severity of speeding-related car crashes.			▸ At least 2 out of 5 reported car crashes involved excessive rate of speed.			
SUCCESS INDICATORS						
Slower driving speeds around the community.						
#	ACTIONS	TARGET OUTPUT	RESPONSIBLE PARTIES	DATE OF COMPLETION	PERFORMANCE MEASURES	MONITORING AND EVALUATION
EDUCATION	Install more speed limit signs around the community, as needed	Improve awareness of speed limits	Transportation Coordinator, Tribal Administrator	Summer 2020	Number of speed limit signs installed or replaced	Inspect road signs once per year and repair or replace as needed
ENFORCEMENT	Work with the VPSO to penalize speeders, as appropriate. Increase VPSO presence in the school zone before and after school.	Improve enforcement of speed limits and increase visibility of police force.	Transportation Coordinator, Tribal Administrator	On-going, especially during school months	Reduced number of complaints from community members about speeders.	Keep record of speeding complaints before and after installation of speed bumps.
ENGINEERING	Install painted speed bumps at desk locations to reduce speeds, especially within the school zones or on streets with high pedestrian traffic.	Reduce speeding on community streets. Reduce the number of speeding-related car crashes.	Transportation Coordinator, Tribal Administrator	Summer 2020	Number of speed bumps installed around the community. Reduced number of speeding-related accidents.	Keep record of speeding-related accidents before and after installation of speed bumps.
EMERGENCY RESPONSE	Maintain a local VPSO incentivize people to join the volunteer emergency response team to respond to traffic accidents caused by speeding or other factors.	Have reliable police and medicals services within the community to improve quality of care during a transportation incident.	Transportation Coordinator, Tribal Administrator	On-going	Number of days the VPSO patrolled the school zone. Increased number of volunteers on the emergency response team.	Schedule seasonal meetings with the VPSO & response team to monitor performance.

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Next Steps

- Public Surveys!!
- Draft Safety Plan
  - March 2019
  - Collect public comment
- Final Draft Safety Plan
  - April 2019
  - Council review
- Final Safety Plan
  - May 2019
  - Resolution
- Implementation

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Togiak FEMA Tribal Hazard Mitigation Plan

Bristol Engineering Services Company, LLC
Danielle Dance

Presentation Overview

- Project Background
- FEMA Tribal Hazard Mitigation Plan (THMP)
- Funding
- Identified Hazards
- Assets
- Mitigation Goals
- Mitigation Action Plan

Project Background

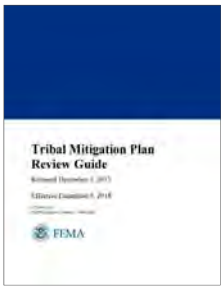
- BBNA DOTID awarded Pre-Disaster Mitigation Program grant from FEMA
  - Develop the Tribal Hazard Mitigation Plan
  - Contracted BESC
- Hazard Mitigation
  - eliminates risk to or reduces hazard impact severity to community assets
  - Projects can be long or short term
- Purpose of Plan
  - Identify ways to make community safer and more prepared
  - Provides opportunity for funding options through FEMA

Bristol Bay Native Association

Bristol ENGINEERING SERVICES COMPANY, LLC

FEMA Tribal Hazard Mitigation Plan (THMP)

- Follows Code of Federal Regulations (CFR)
  - 44 CFR Part 201
- Identifies
  - Planning Process / Planning Team
  - Plan to keep the THMP current
  - Natural hazards in your community
  - Community assets
  - Mitigation strategy / action plan
  - Funding Opportunities



Funding

- Eligibility Requirement for FEMA Pre- and Post- Disaster Grants
  - FEMA approved and community adopted Hazard Mitigation Plan
    - Plan identifies mitigation projects for the community
- Grants
  - Hazard Mitigation Grant Program (HMGP)
  - Pre-Disaster Mitigation (PDM)
  - National Flood Insurance Program (NFIP)
  - Flood Mitigation Assistance (FMA)
- Other Grant Opportunities
  - State
  - Tribal

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Identified Hazards

- Hazards Identified Based on
  - Location
  - Extent
  - Probability of Future Event
  - Overall Significance
- Hazards Detailed in Plan
  - Location
  - Extent
  - History
  - Probability of Future Events
- Hazards
  - Earthquake
  - Erosion
  - Extreme Cold
  - Flood
  - Severe Wind
  - Severe Winter Weather
  - Subsidence
  - Volcano
  - Wildfire
  - Storm Surge
- What experiences have you had?

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Community Assets

- Asset
  - People
  - Economy
  - Built Environment
  - Natural Environment

- Major Community Assets
  - School
  - Churches
  - Cemetery
  - Utilities
  - Clinic
  - Tribal Office
  - Post Office / Store
  - Roads / Trails
  - Bulkhead / Airport
  - Others

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Mitigation Goals

- Goals Based on Vulnerability Statements
  - Erosion continues to be an ongoing problem. The area between the old school and the new dock continues to loose gravel.
  - The seawall protects against the waves but water still overtops the seawall to flood the lower village.

FEMA Local Mitigation Planning Handbook
March 2013

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Mitigation Goals

- Community Goals
  - Reduce possibility of damages due to the profiled hazards.
    - Earthquakes
    - Erosion
    - Extreme Cold Temperatures
    - Floods
    - Severe Wind
    - Severe Winter Weather
    - Subsidence
    - Volcanos
    - Wildfires
    - Storm Surges
  - Build the capacity of the Tribe to prepare, respond to, and recover from disasters.

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Mitigation Actions

- Mitigation Actions Reduce Long-Term Vulnerability
- Types
  - Local plans and regulations
  - Structure and infrastructure projects
  - Natural systems protection
  - Education and awareness programs
  - Additional – Preparedness and Response Actions
- Actions Will be Used to Create a Mitigation Action Plan

FEMA Local Mitigation Planning Handbook
March 2013

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Mitigation Actions (Continued)

- Mitigation Actions
  - Need trained first responders and alternates
  - Housing assistance to update and improve homes.
  - Need cleanup response kits and trained personnel in case of spill after earthquakes or other spills.
  - Communication device for traveling in cold weather and for other emergencies.
  - Emergency shelter
  - Drainage improvements
  - Produce or update emergency plans
  - Elevation and/or reinforcement of roads
  - Relocate existing and new Public Safety Facilities to areas above the 100-year floodplain
  - Participate in Storm Ready
  - Encourage weather resistant building construction materials and practices
  - Identify critical facilities and assess structural integrity
- What other suggestions do you have?

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Continued Public Involvement

- Public Involvement is Important
  - Next Steps
- How can the Planning Team keep you informed and involved in this process?

Contact	
BBNA DOTID	Bristol Engineering (BESC)
Annie Fritze (907) 842-6143 afritze@bbna.com	Danielle Dance (907) 563-0013 ddance@bristol-companies.com

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Questions or Comments

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QUYANA!

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Community Map
TOGIAK

59° 3' 23" N 160° 23' 32" W (NAD 83)
Approximate Elevation: 9'
Township 13 South, Range 67 West, S.M., AK
USGS Quadrangle "GOODNEWS BAY A-4" Alaska
BRISTOL BAY RECORDING DISTRICT

AREA MAP INSET 1"=2000'

Pink dots showing where street signs are needed

MAP NOTES

This map was prepared by the Bristol Bay Native Association (BBNA) in cooperation with the Alaska Department of Community and Economic Development (DCED) using funding from the Bristol Bay Housing Authority, U.S. Bureau of Indian Affairs Alaska Coastal Management Program, and funding from the Initiative for Accelerated Infrastructure Development (IAID). The IAID is supported by grants from the Alaska Native Tribal Health Consortium, Denali Commission, USDA Rural Development, Alaska Department of Transportation and Public Facilities and HUD. The Bristol Bay Native Association contracted with Bristol Environmental & Engineering Services in June of 2003 to prepare the map. McClintock Land Associates Inc was subcontracted by Bristol Environmental and Engineering Corporation to perform aerial photography and control surveying.

This map is based upon a digital orthophoto prepared to National Map accuracy Standards from July 9, 2003 photography (nominal scale 1" = 800'). An orthophoto is an aerial photo which has been corrected, by rectification to ground control stations, to remove aircraft distortions and warpage. The distortions are generally caused by topography and the aircrafts tilt and lean.

Property and utility information has been generated from readily available sources with limited accuracy checks. Property information is not intended to represent a comprehensive title search of Recorders Office records. Utility locations are approximate and show only the main lines. Generally the information is current as of July, 2003

This map should not be construed as a survey. On-site surveys should be conducted prior to engineering and or construction

COORDINATE SYSTEMS

Horizontal Datum-NAD 83 Alaska State Plane Zone 7 [US FEET]
based on TM STATION Tolinghorn AZ AK
Vertical Datum-NAVD 88, based on CORS tie to "Kenai" & "Cold Bay" & "Kodiak"

Magnetic Declination computed by USGS Geomag program using IGRF2000 model as of January, 2004.

TOPOGRAPHIC & PLANIMETRIC DATA

All topographic and planimetric data was collected utilizing stereo photography correlated with the photography used for the orthophoto production. Topographic data was prepared to National Map Accuracy Standards for a 2 foot contour interval. Topographic data located in densely vegetated areas should be considered less accurate and may not meet these standards aforementioned.

LEGEND

- Residential Buildi
- Commercial Build
- Public Building
- Pole w/Guy Anchor
- Utility Pole
- Earth Station
- Antenna Tower
- Fire Hydrant
- Water Line w/Hydrant
- Sewer Line w/Manhole
- Telephone Line
- Electric Line w/Pole
- Sewer Force Main
- Easements
- Survey Meanders
- Survey Control

0 100 200 300
SCALE IN FEET 1"=100'

SHEET 1 of 4

TOPO AND PLANIMETRIC LEGEND

- Culvert
- Swamp
- Trail
- Flowing Water
- Edge of Water
- Edge of Road/Area
- Fence
- Boardwalk
- Bridge

BUILDING KEY

1. Coupchiak Building
2. Coupchiak Building
3. Ilnu's Steambath House
4. Seventh Day Adventist Church
5. School Building/Residence
6. School Building/Residence
7. School Building/Residence
8. School Building/Residence
9. School Classroom
10. School
11. School Classroom
12. Tank Farm
13. School Shop
14. School Residence
15. School Residence
16. School Residence
17. School Residence
18. School Residence
19. School Residence
20. City of Togiak Quarters
21. UAI Station
22. UAP BB & Youth Center
23. Family Service Worker Building
24. City of Togiak Office
25. Togiak Water Tank
26. City of Togiak Garage
27. City of Togiak Maintenance Building
28. City of Togiak Police & Fire Station
29. Senior Center/Togiak Clinic
30. AVEC Tank Farm
31. AVEC Electric Plant
32. City of Togiak Water & Sewer
33. Old Water Tower
34. Togiak Trading Store
35. Dental Clinic
36. Togiak Head Start
37. U.S Post Office
38. Nanguciulnguk Center
39. AC Store
40. TNL Garage
41. TNL Office
42. Moravian Church
43. Assembly of God Church
44. GCI Station
45. Drying Racks
46. Yellow Building
47. Non Direction Beacon Tower

TOGIAK COMMUNITY MAP SHEET 1 1"=100' (2003 PHOTOGRAPHY)

• location of Street Signs - Some missing

Issues with Subdivision
Roads on the hill (black pen)

No road
Steep
No access

Area Use Map
TOGIAK

59° 3' 23" N 156° 23' 31" W (NAD 83)
Approximate Elevation: 9'
Township 12 & 13 South, Range 66 & 67 West, S.M., AK
U.S.G.S. Quadrangle "GOODNEWS BAY A-4" Alaska
BRISTOL BAY RECORDING DISTRICT

SEE SHEETS 1 & 2 FOR DETAILED COMMUNITY MAP

0 1000 2000 3000

Scale 1"=1000'
Date of Photography: July 13, 2003
Magnetic Declination computed by U.S.G.S. Geomag Program using IGRF2000 model as of January, 2004.

SHEET 4 of 4

MAP NOTES

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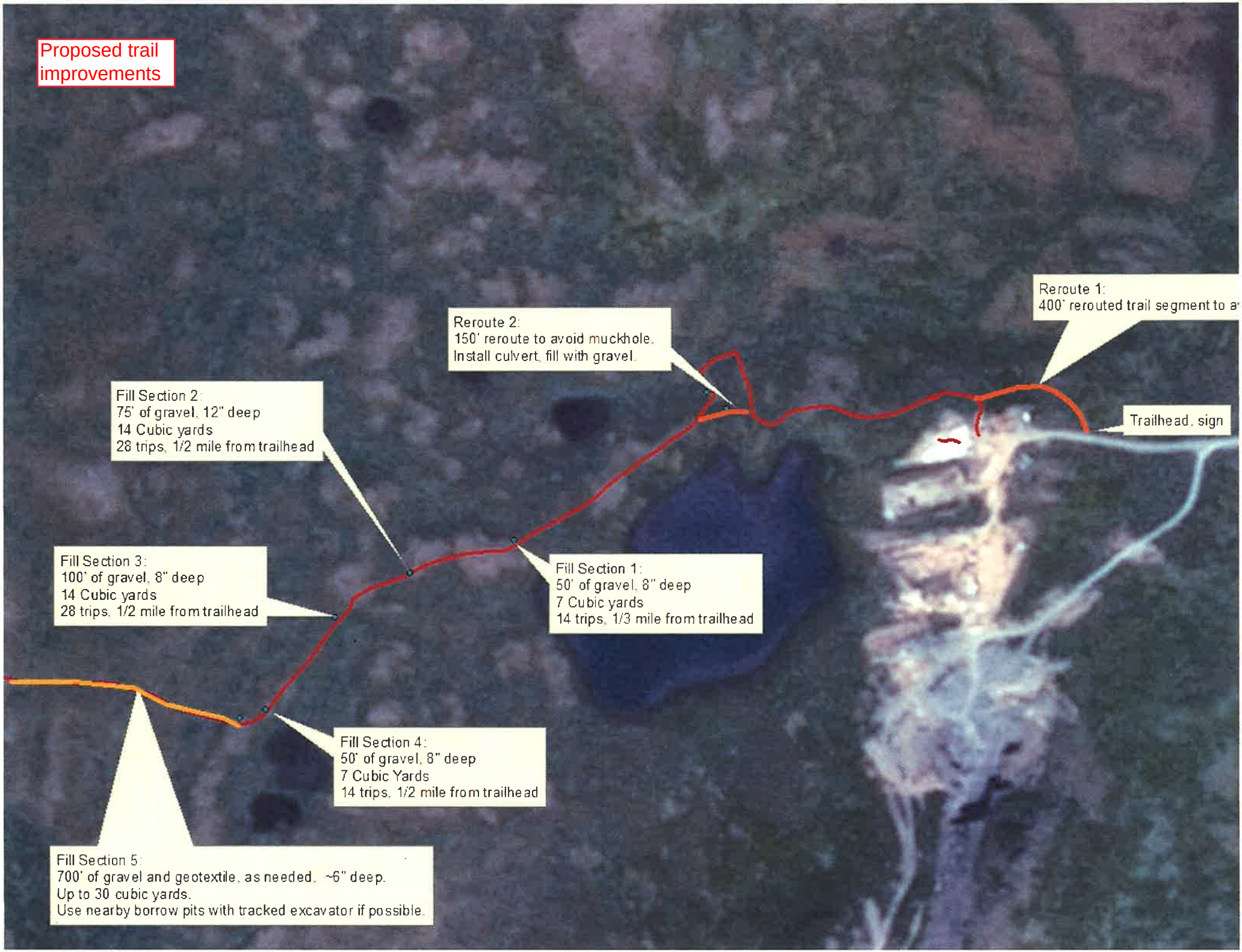
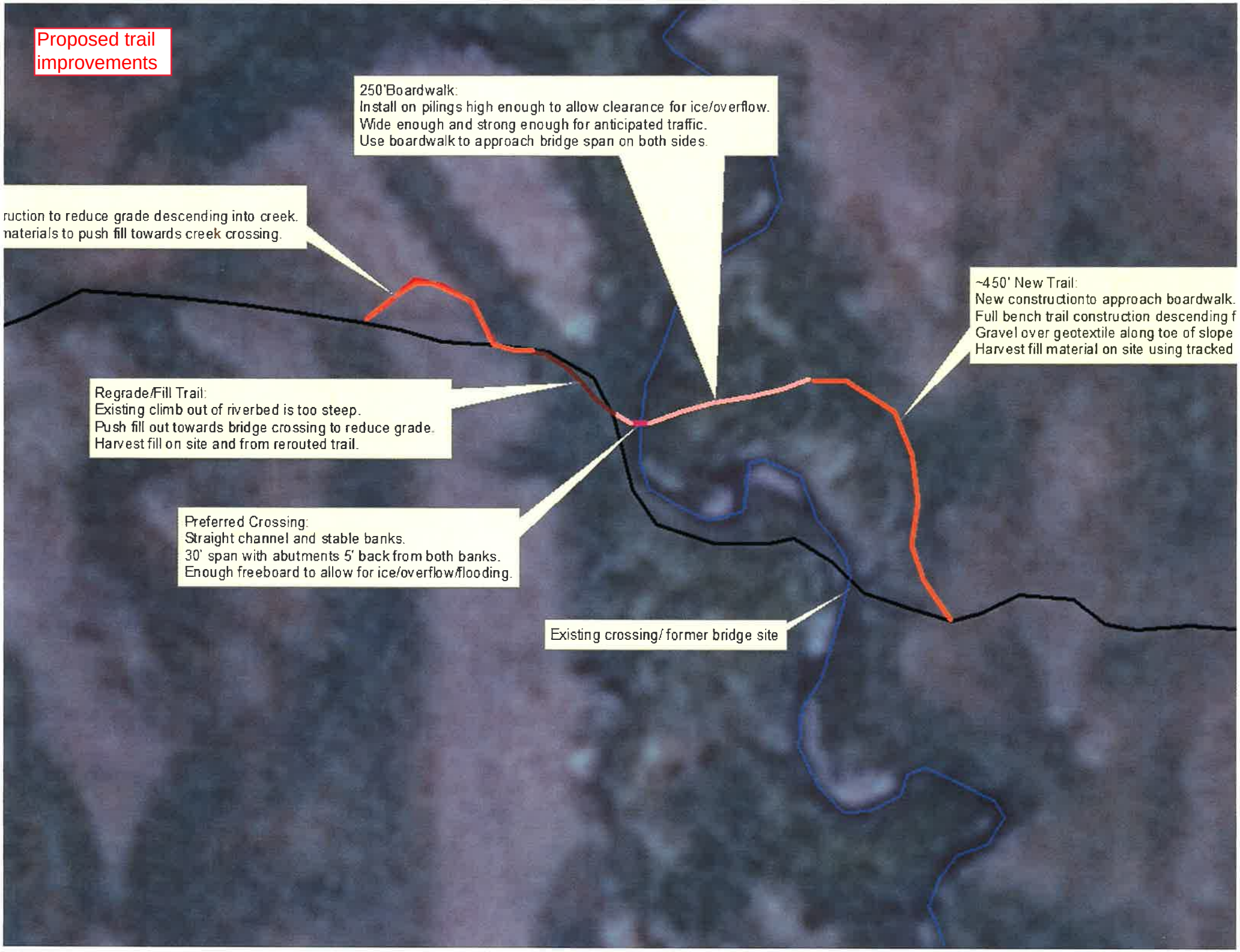
TOGIAK AREA USE MAP SHEET 4 1"=1000' (2003 PHOTOGRAPHY)


Proposed trail improvements
Reroute 1:
400' rerouted trail segment to a
Reroute 2:
150' reroute to avoid muckhole.
Install culvert, fill with gravel.
Trailhead, sign
Fill Section 2:
75' of gravel, 12" deep
14 Cubic yards
28 trips, 1/2 mile from trailhead
Fill Section 3:
100' of gravel, 8" deep
14 Cubic yards
28 trips, 1/2 mile from trailhead
Fill Section 1:
50' of gravel, 8" deep
7 Cubic yards
14 trips, 1/3 mile from trailhead
Fill Section 4:
50' of gravel, 8" deep
7 Cubic Yards
14 trips, 1/2 mile from trailhead
Fill Section 5:
700' of gravel and geotextile, as needed, ~6" deep.
Up to 30 cubic yards.
Use nearby borrow pits with tracked excavator if possible.


Proposed trail improvements
250'Boardwalk:
Install on pilings high enough to allow clearance for ice/overflow.
Wide enough and strong enough for anticipated traffic.
Use boardwalk to approach bridge span on both sides.
ruction to reduce grade descending into creek.
naterials to push fill towards creek crossing.
~450' New Trail:
New constructionto approach boardwalk.
Full bench trail construction descending f
Gravel over geotextile along toe of slope
Harvest fill material on site using tracked
Regrade/Fill Trail:
Existing climb out of riverbed is too steep.
Push fill out towards bridge crossing to reduce grade.
Harvest fill on site and from rerouted trail.
Preferred Crossing:
Straight channel and stable banks.
30' span with abutments 5' back from both banks.
Enough freeboard to allow for ice/overflow/flooding.
Existing crossing/ former bridge site

COMMUNITY SURVEY

This is a public opinion survey regarding natural hazards in your community. The results from this survey will help the Tribal Hazard Mitigation Plan Planning Team improve public/private coordination, mitigation, and risk reduction efforts in your community. Additionally we would like information regarding the methods and techniques you prefer for reducing the risks and losses associated with these hazards.

NATURAL HAZARD INFORMATION

We would like to know about your experience involving natural hazards and your exposure to preparedness information.

1. In the last five (5) years, have you or someone in your household directly experienced any of the natural disasters listed below?
(Please check all that apply)

- ☐ Coastal Ice
- ☐ Drought
- ☐ Earthquake
- ☐ Erosion
- ☐ Extreme Temperatures
- ☐ Flood
- ☐ Landslide/Avalanche
- ☐ Severe Winter Weather
- ☐ Tsunami
- ☐ Volcano Eruption
- ☐ Wildfire
- ☐ Other (specify): _____

2. How concerned are you about the following natural disasters affecting your community?
(Check the corresponding box for each hazard)

Natural Disaster	Very Concerned	Somewhat Concerned	Neutral	Not Very Concerned	Not Concerned
Coastal Ice	☐	☐	☐	☐	☐
Drought	☐	☐	☐	☐	☐
Earthquake	☐	☐	☐	☐	☐
Erosion	☐	☐	☐	☐	☐
Extreme Temperatures	☐	☐	☐	☐	☐
Flood	☐	☐	☐	☐	☐
Landslide/Avalanche	☐	☐	☐	☐	☐
Severe Winter Weather	☐	☐	☐	☐	☐
Tsunami	☐	☐	☐	☐	☐
Volcano Eruption	☐	☐	☐	☐	☐
Wildfire	☐	☐	☐	☐	☐
Other _____	☐	☐	☐	☐	☐

3. Have you received information about how to make members of your household and home safer from natural disasters?

- ☐ Yes
- ☐ No **(IF *NO* Skip to Question 5)**

If "YES", how recently?

- ☐ Within the last 6 months
- ☐ Between 6 and 12 months
- ☐ Between 1 and 2 years
- ☐ Between 2 and 5 years
- ☐ 5 years or more

4. Who provided the last received information about how to make members of your household and home safer from natural disasters?
(Please check only ONE)

- ☐ News Media
- ☐ Government Agency
- ☐ Utility Company
- ☐ University or Research Institution
- ☐ Tribe
- ☐ Neighbor / Friend / Family Member
- ☐ Non-Profit Organization
- ☐ Not Sure
- ☐ Other (specify): _____

5. What is the most effective way for you to receive information about how to make your household and home safer from natural disasters?
(Please check UP TO THREE)

- ☐ Newspapers
- ☐ Radio
- ☐ Schools
- ☐ Internet (News Outlets/Email Newsletters)
- ☐ Books
- ☐ Mail
- ☐ Fact Sheet / Brochure / Newsletters
- ☐ Public Workshops / Meetings
- ☐ Other (specify): _____

COMMUNITY VULNERABILITIES AND HAZARD MITIGATION STRATEGIES

We need to understand which community assets may be vulnerable to natural hazards in order to assess community risk. Vulnerable assets are those community features, characteristics, or resources that may be impacted by natural hazards (e.g. populations with functional needs, environmental resources, economic components, and others). The next set of questions will focus on the vulnerable assets in your community and your preferred strategies to mitigate risk to those assets.

6. Community assets are characteristics, features, or resources that either allow the community to function or make a community unique. In your opinion, which of the following categories are most vulnerable to the impacts caused by natural hazards in your community?
(Rank the community assets in order [from 1 to 6] of vulnerability, 1 being most vulnerable and 6 being least vulnerable)

Community Assets	Potential Natural Hazard Impact	Order of Vulnerability
Human	Loss of life and/or injuries	_____
Economic	Business closures and/or job losses	_____
Infrastructure	Damage or loss of bridges, utilities, schools, etc.	_____
Cultural / Historic	Damage or loss of fish dry racks, cemeteries, etc.	_____
Environmental	Damage or loss of forests, rangeland, waterways, subsistence areas, etc.	_____
Governance	Ability to maintain order and/or provide public amenities and services	_____

7. We would like to know what specific types of community assets are most important to you. **(Check the corresponding box for each hazard)**

Community Assets	Very Important	Somewhat Important	Neutral	Not Very Important	Not Important
School	☐	☐	☐	☐	☐
Clinic	☐	☐	☐	☐	☐
Churches	☐	☐	☐	☐	☐
City Buildings	☐	☐	☐	☐	☐
Tribal Buildings	☐	☐	☐	☐	☐
Store	☐	☐	☐	☐	☐
Post Office	☐	☐	☐	☐	☐
Transportation Systems	☐	☐	☐	☐	☐
Major Employers	☐	☐	☐	☐	☐
Fuel Storage	☐	☐	☐	☐	☐
Utilities	☐	☐	☐	☐	☐
Homes	☐	☐	☐	☐	☐
Subsistence Areas	☐	☐	☐	☐	☐
Other _____	☐	☐	☐	☐	☐
Other:_____	☐	☐	☐	☐	☐
Other:_____	☐	☐	☐	☐	☐
Other:_____	☐	☐	☐	☐	☐

8. A number of activities can reduce your community's risk from natural hazards. These activities can be both regulatory and non-regulatory.
(Check the corresponding box that best represents your opinion on how to best reduce the risk and loss associated with natural disasters.)

Strategies	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Not Sure
I support a planning and regulatory approach to reducing risk	☐	☐	☐	☐	☐	☐
I support a non-regulatory approach to reducing risk	☐	☐	☐	☐	☐	☐
I support a mix of both regulatory and non-regulatory approaches to reducing risk	☐	☐	☐	☐	☐	☐
I support structure and infrastructure projects to reduce risk	☐	☐	☐	☐	☐	☐
I support natural systems protection projects to reduce risk	☐	☐	☐	☐	☐	☐
I support education and awareness programs to reduce risk	☐	☐	☐	☐	☐	☐
I support protecting historical and cultural structures	☐	☐	☐	☐	☐	☐
I would be willing to make my home more disaster-resistant	☐	☐	☐	☐	☐	☐
I support steps to safeguard the local economy following a natural disaster	☐	☐	☐	☐	☐	☐
I support improving the disaster preparedness of local schools	☐	☐	☐	☐	☐	☐

9. Natural hazards can have a significant impact on a community. However, planning for these events can help reduce the impacts. The following statements will help determine community priorities regarding planning for natural hazards in your community.
(Check the corresponding box to show us how important each one is to you.)

Statements	Very Important	Somewhat Important	Neutral	Not Very Important	Not Important
Protecting private property	☐	☐	☐	☐	☐
Protecting critical facilities (e.g. roads, bridges, clinic, schools, store, etc.)	☐	☐	☐	☐	☐
Enhancing function of natural features (e.g. streams, wetlands)	☐	☐	☐	☐	☐
Protecting historical and cultural resources and landmarks	☐	☐	☐	☐	☐
Protecting and reducing damage to utilities	☐	☐	☐	☐	☐
Strengthening emergency services	☐	☐	☐	☐	☐

MITIGATION AND PREPAREDNESS ACTIVITIES IN YOUR HOUSEHOLD

Households can prepare and mitigate for natural hazards in order to prevent property damage, injuries, and loss of life. Any precautions taken or training received can make a big difference in your ability to recover from an emergency or natural disaster. Emergency care or access to basic services (e.g. electricity, gas, water, communications) may be temporarily cutoff. Or you may be asked to quickly evacuate. The following questions focus on your household's preparedness for natural hazards or emergencies.

10. Please check the activities that you have done in your household, plan to do in the near future, have not done, or are unable to do.
(Check one answer for each preparedness activity.)

Have you or someone in your household:	Have Done	Plan To Do	Not Done	Unable To Do
Attended a meeting or received written information on natural disasters or emergency preparedness?	☐	☐	☐	☐
Talked with members in your household about what to do in case of an emergency or natural disaster?	☐	☐	☐	☐
Developed a "Household/Family Emergency Plan" in order to decide what everyone would do in the event of an emergency or disaster?	☐	☐	☐	☐
Prepared a "Disaster Supply Kit" (stored extra food, water, batteries, or other emergency supplies)?	☐	☐	☐	☐

GENERAL HOUSEHOLD INFORMATION

We appreciate any information you are willing to share with us about you and/or your household.

11. Please indicate your age: _____

12. Gender **(Circle one)**: **Male** **Female**

13. How long have you lived in the community?

- ☐ Less than one (1) year
- ☐ 1 – 5 years
- ☐ 5 – 9 years
- ☐ 10 – 19 years
- ☐ 20 years or more

GENERAL COMMENTS

Please provide any additional comments about natural hazards in your community including historical disasters, existing efforts to prepare for or protect against a disaster, or comments about the Hazard Mitigation Plan Project in general.

Thank you for taking the time to complete this survey.

If you have any questions or comments, please contact **Danielle Dance** at **(907) 743-9394** or **ddance@bristol-companies.com**

SUMMARY - COMMUNITY SURVEY

A survey was distributed to the community members of Togiak, Alaska. This was done in an effort to collect public opinion regarding natural hazards that impact the community and preferred methods of reducing risk and losses associated with these hazards. Below is a summary of the data collected from the survey.

General Respondent Information

Twenty-nine questionnaires were completed and returned. Question 12 asked about the gender of the respondents. Twelve respondents were male, fifteen were female, and two did not respond, (See Figure 1). Question 13 asked about the length of time in the community. Eighty-eight percent (23 replies) of the questionnaires came from longtime residents that have lived in the community for 20 or more years (See Figure 2).

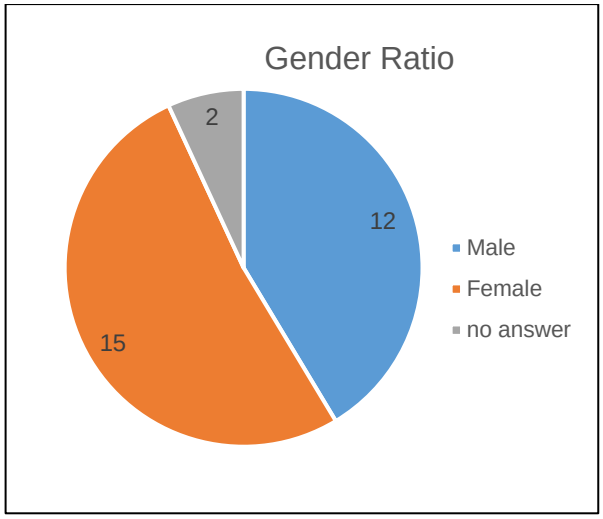


Figure 1: Gender Ratio (Question #12)

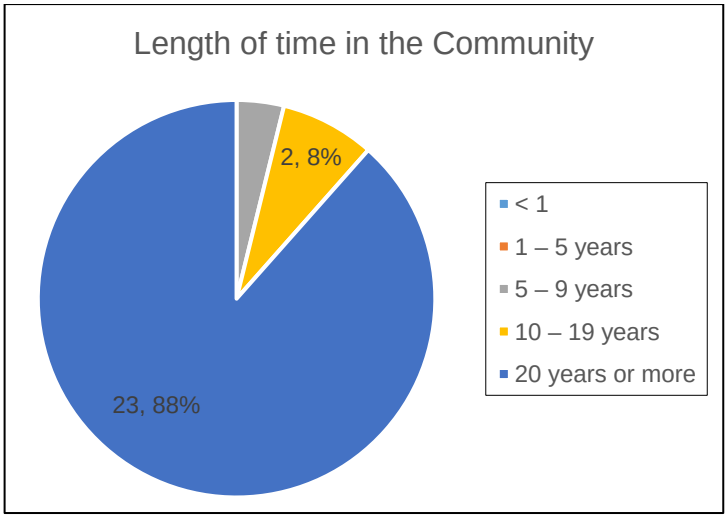


Figure 2: Length of Time in the Community (Question #13)

The residents that responded, ranged in age (Question 11) from 23 to 63 (Figure 3).

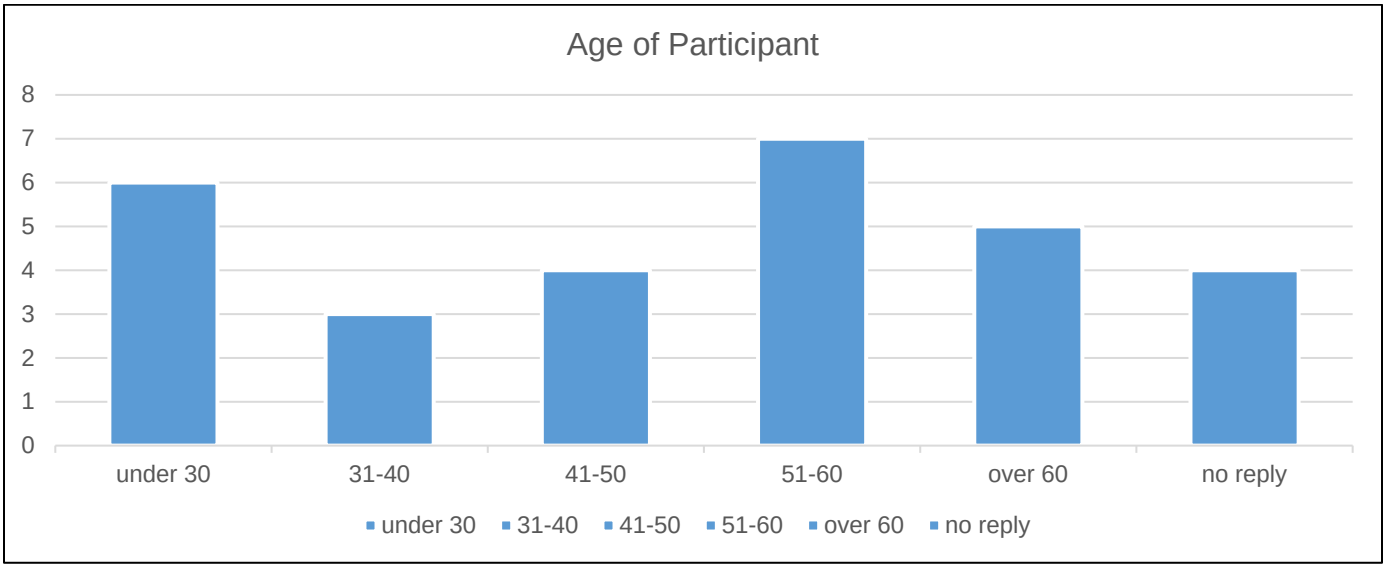


Figure 3: Age of Participant (Question #11)

NATURAL HAZARD INFORMATION

Information regarding experiences and concerns about natural hazards in the community was gathered (Question 1) from the survey. The survey respondents identified hazards that they have personally experienced (See Figure 4).

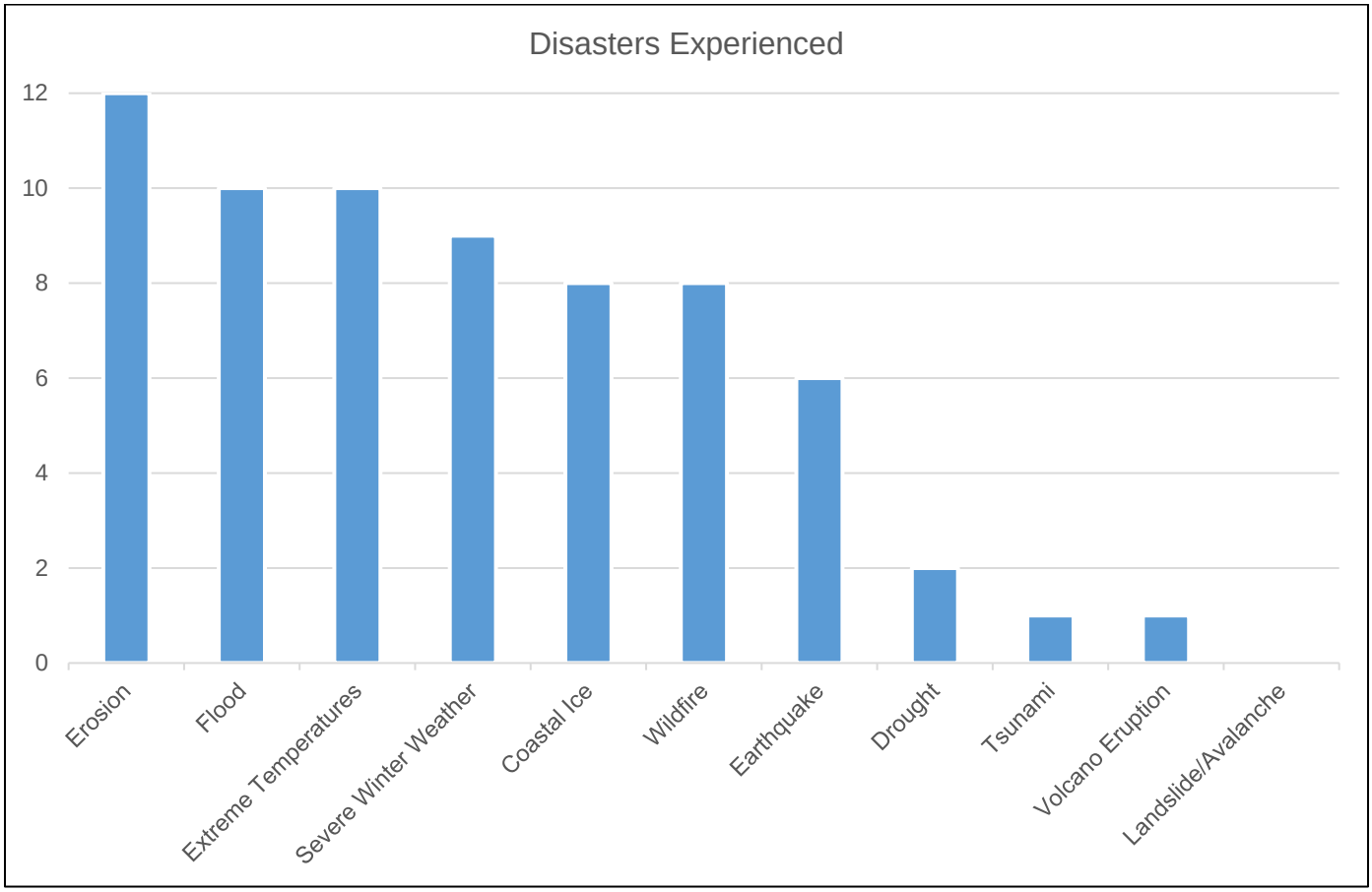


Figure 4: Disasters Experienced (Question #1)

Question 2 identified specific hazards that concerned the community members. The Community is most concerned about Erosion. Other disasters of concern were flooding and severe winter weather. Figure 5 identifies the concerns for the Community.

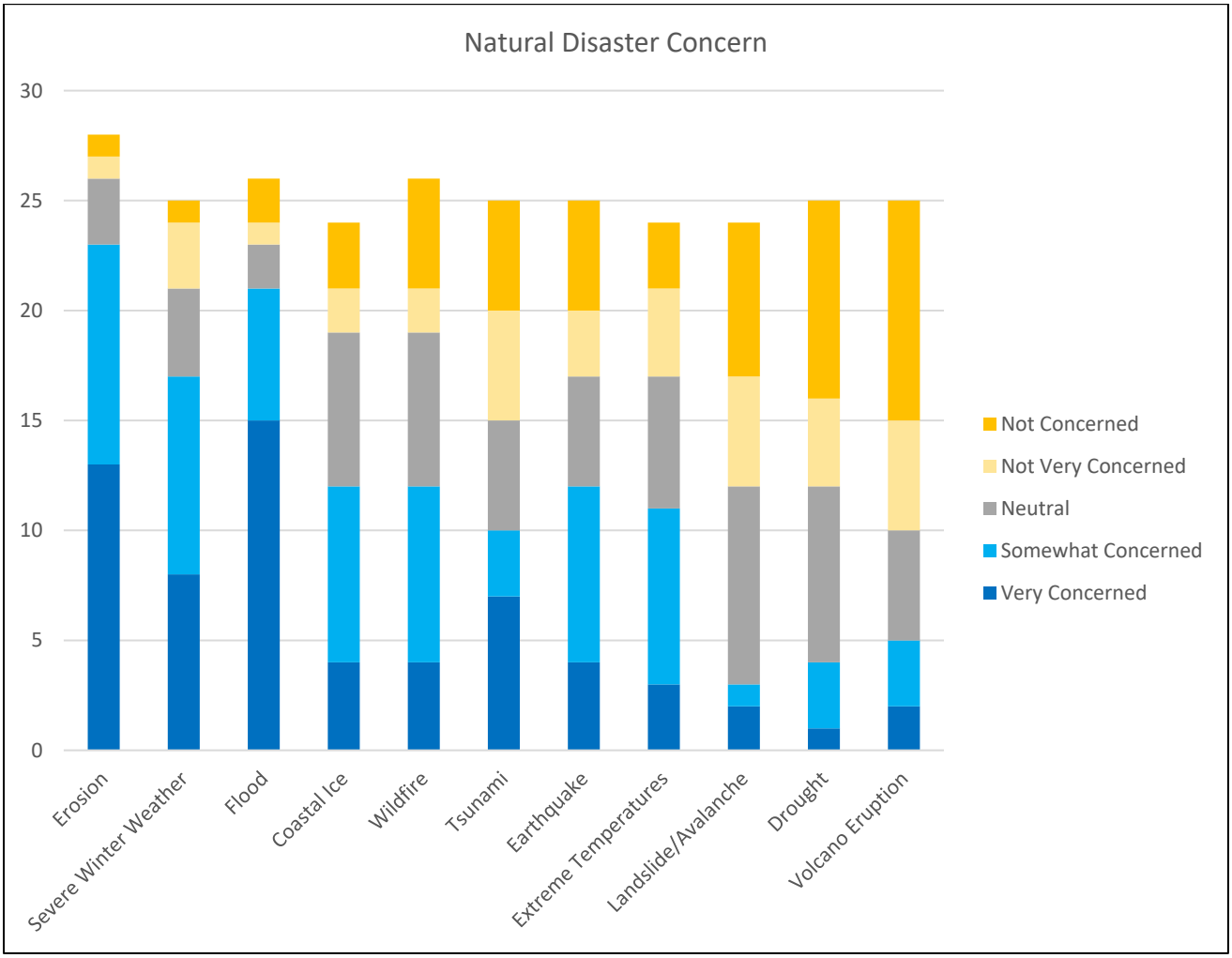


Figure 5: Natural Disaster Concern (Question #2)

The residents were asked if they received any information on how to make their homes and members of their household safe from a natural disaster and where they received that information (Question 3 and 4). Six respondents indicated they had received this information: Figure 6 indicates the source of the information obtained by the residents that said they received this information. Under “Other” was listed personal experience, stories and past instances, and personal study on the topic.

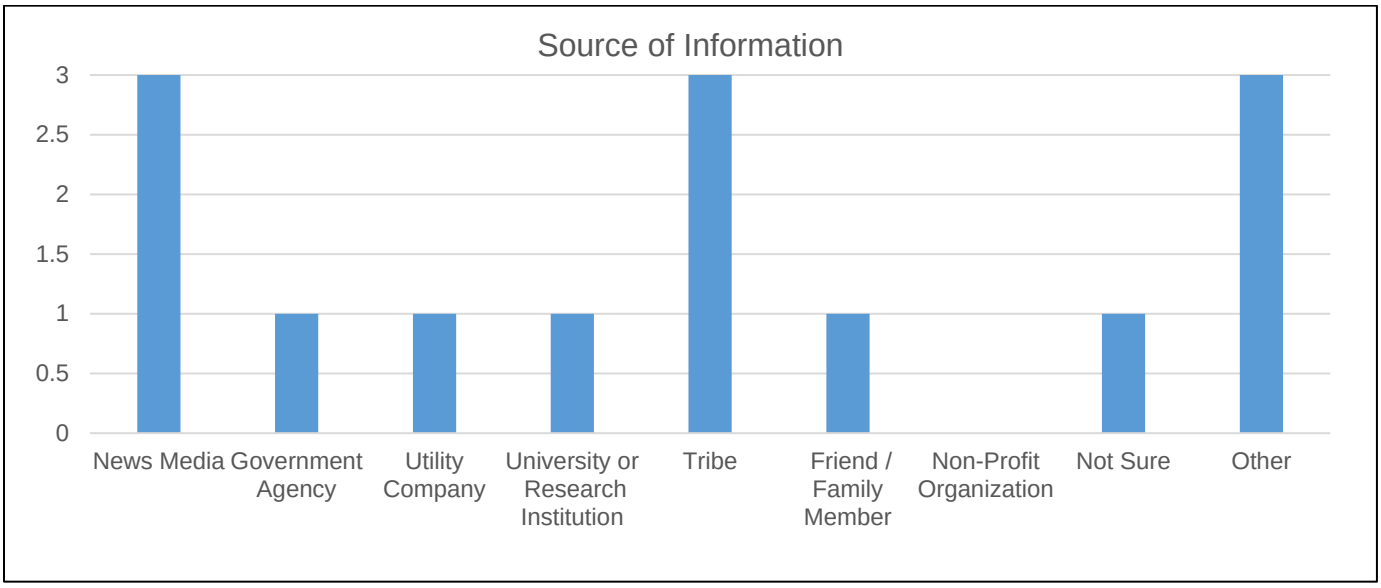


Figure 6: Source of Information (Question #4)

The residents were asked about the most effective way for them to receive information to protect their household and homes (Question 5). Internet, fact sheets/brochures/newsletters, and public workshops/meetings were considered the three most effective ways of receiving this information. Figure 7 provides the respondents preferred method of receiving information about how to protect their homes and households.

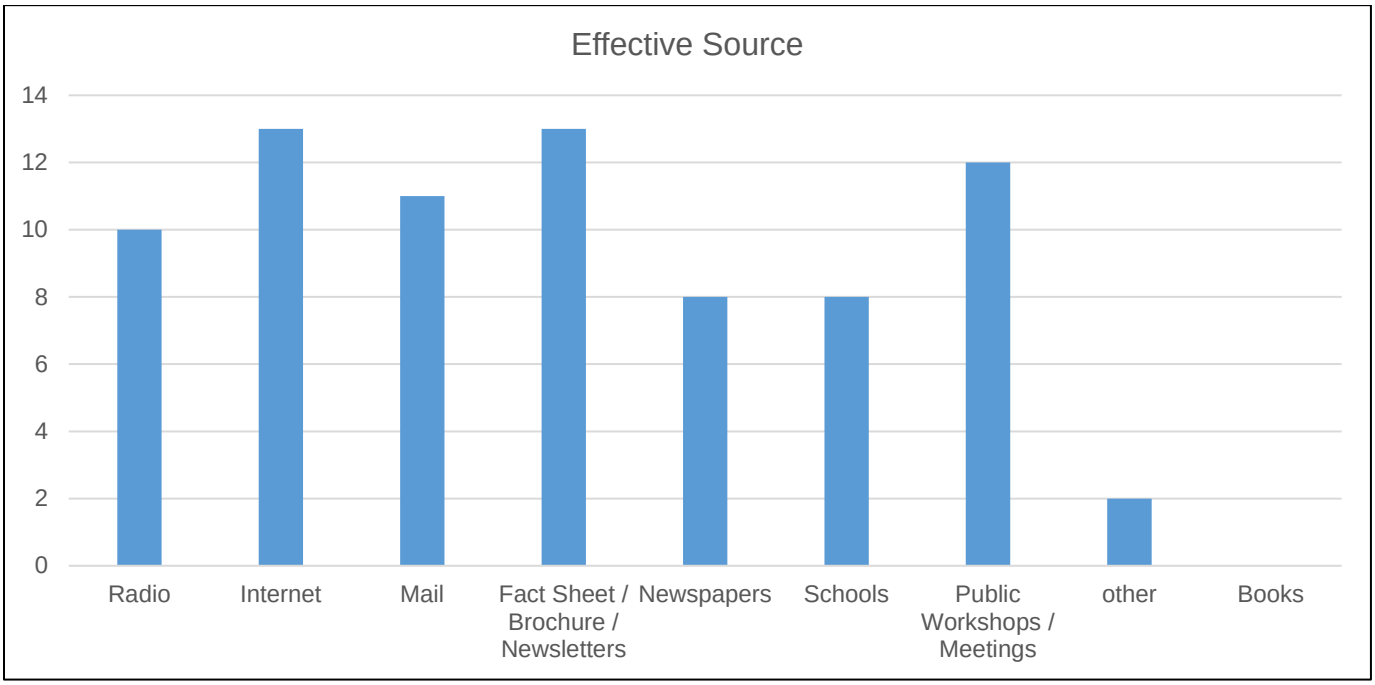


Figure 7: Effective Source (Question #5)

COMMUNITY VULNERABILITIES AND HAZARD MITIGATION STRATEGIES

The residents were asked to identify the categories of community assets that were most vulnerable to natural hazards (Question 6). Figure 8 portrays the opinions of those that responded to the survey.

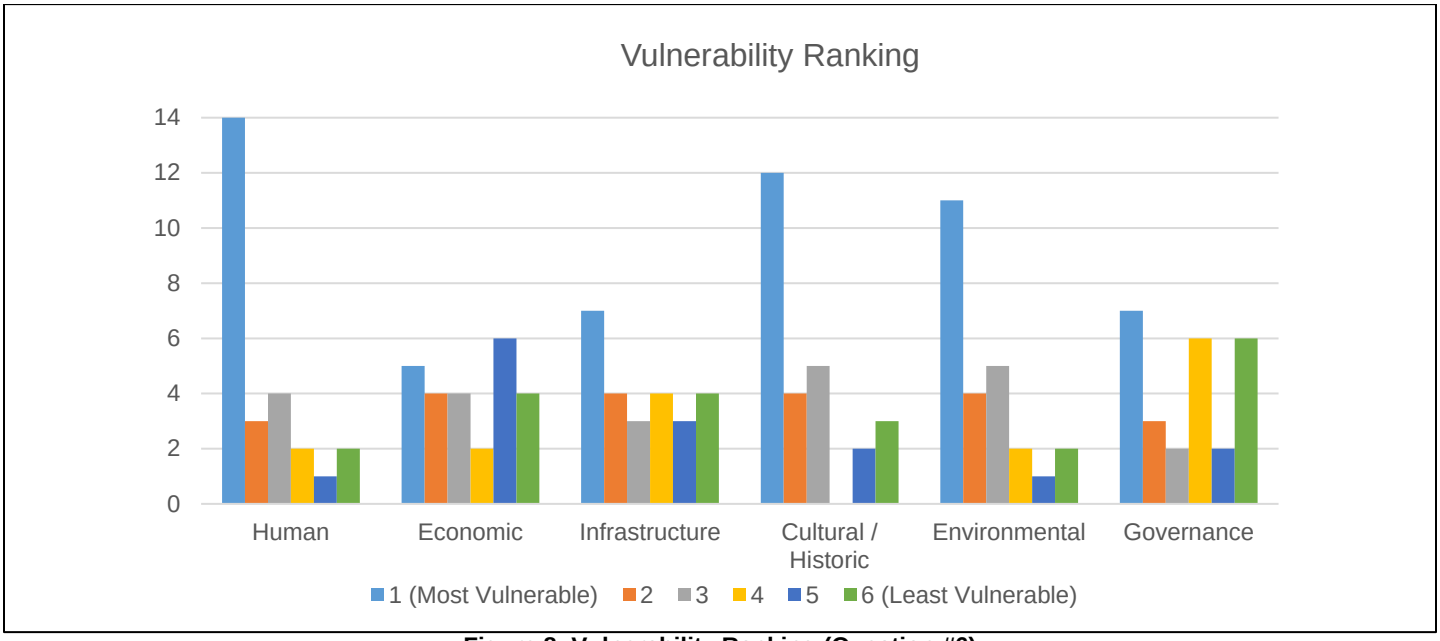


Figure 8: Vulnerability Ranking (Question #6)

Figure 9 shows to respondents' opinion of the importance of specific community assets (Question 7).

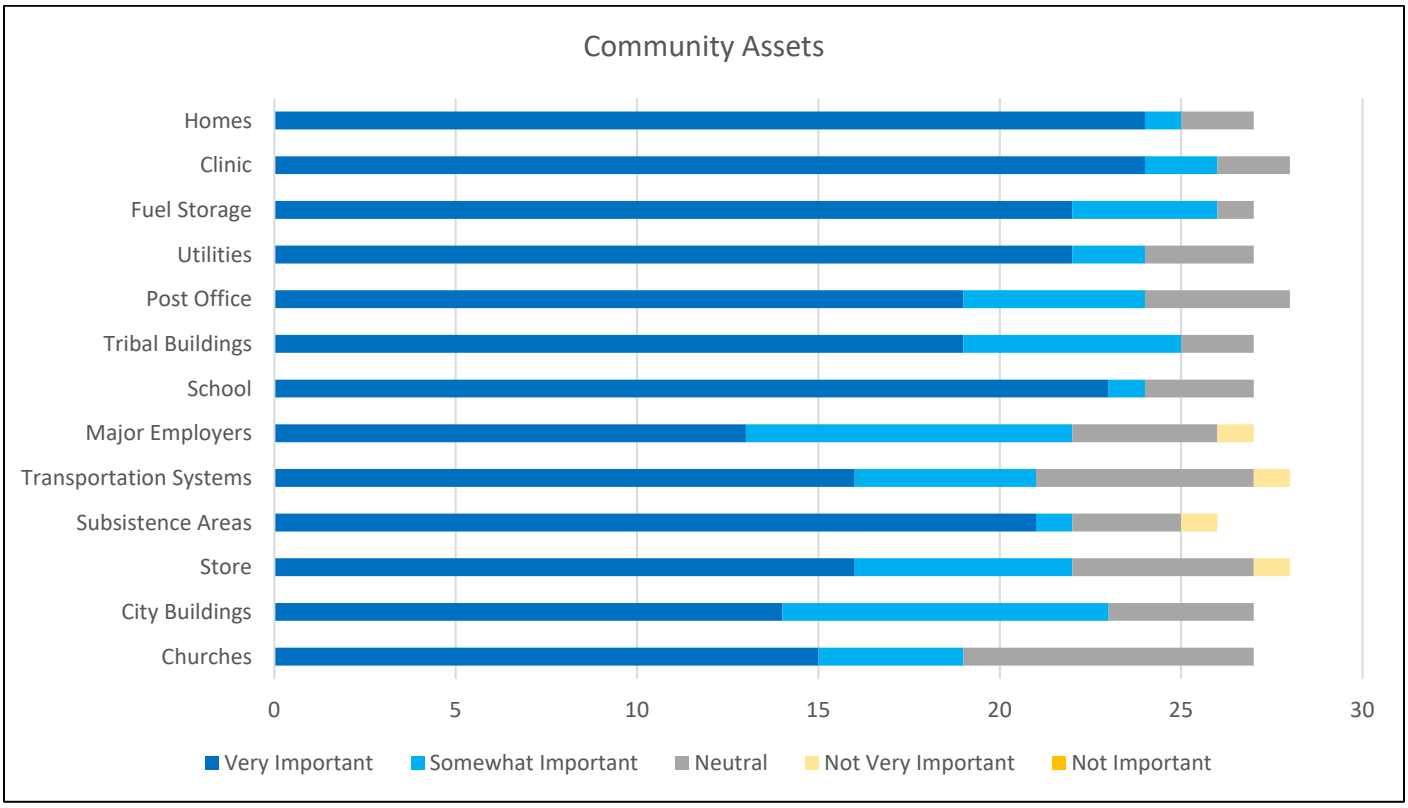


Figure 9: Community Assets (Question #7)

The survey respondents were asked to indicate agreement / disagreement with different mitigation strategies (Question 8). Figure 10 depicts the survey answers.

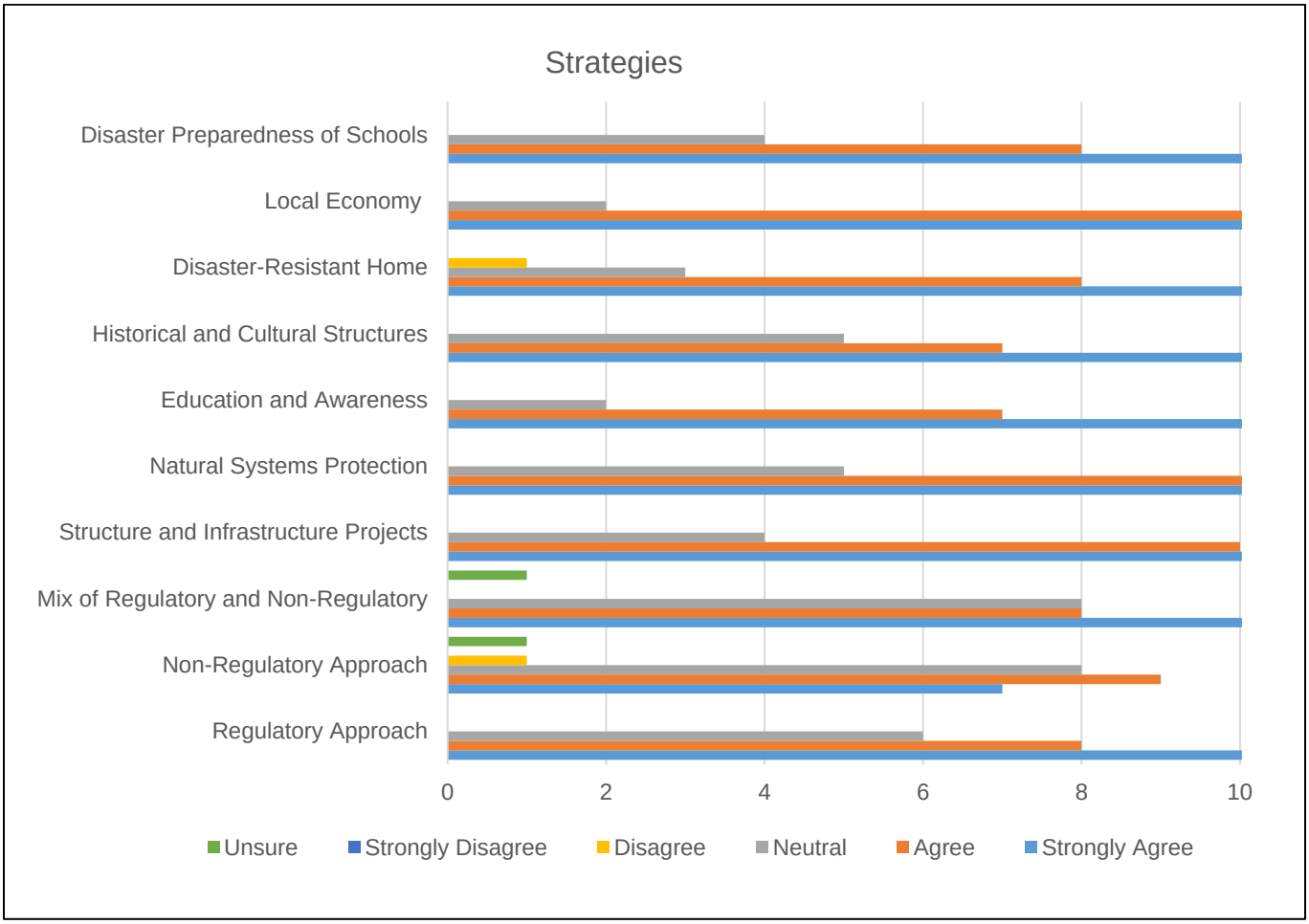


Figure 10: Mitigation Strategies (Question #8)

Question 9 asked community residents to identify community priorities regarding planning for natural hazards in their community (See Figure 11).

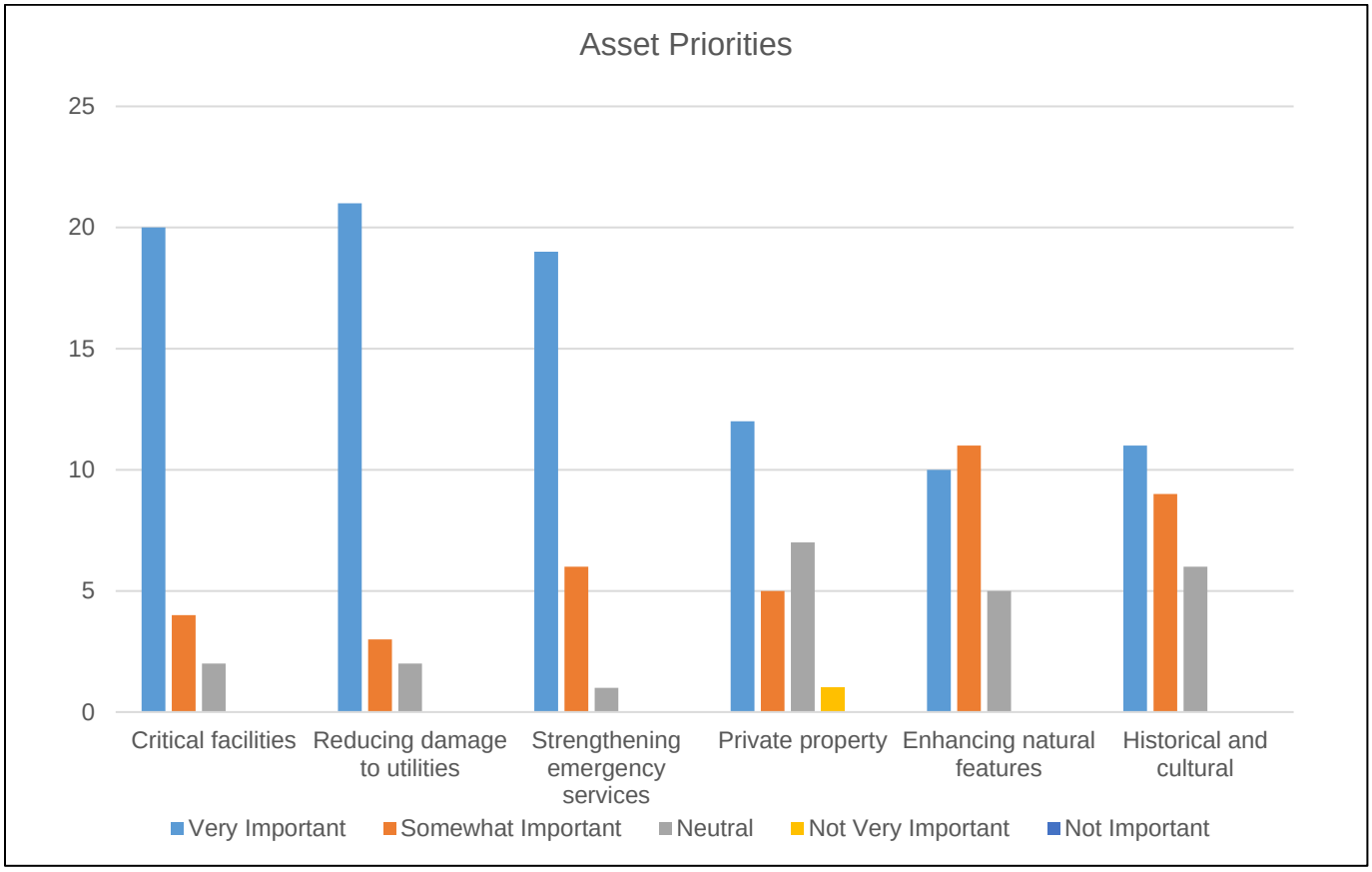


Figure 11: Asset Priorities (Question #9)

MITIGATION AND PREPAREDNESS ACTIVITIES IN THE HOUSEHOLD

Residents can protect themselves, their household members, and their own private property. Question 10 asked residents to identify preparedness activities they have personally done (See Figure 12)

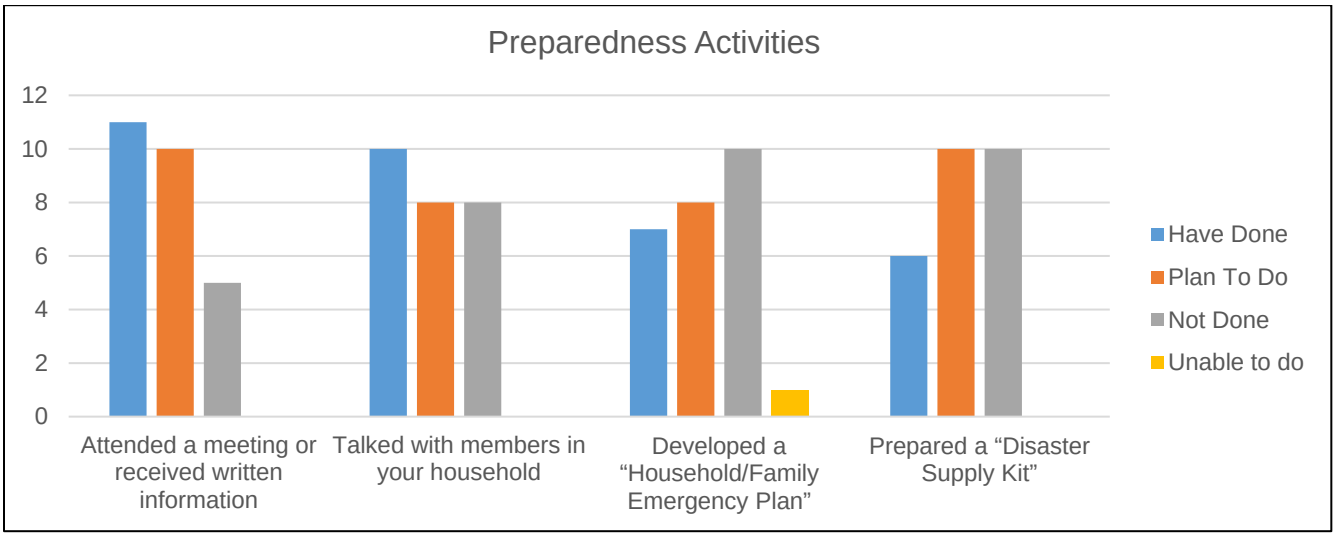


Figure 12: Preparedness Activities (Question #10)

GENERAL COMMENTS

The following is a list of comments made by some of the respondents.

- This is a much needed plan. Flooding, wildfires, and fierce storms are a concern. We are not prepared for any type of disaster.
- 1964 tidal wave/earthquake - limited communication/message was available then. At this time new technology is available but do not wish to be unprepared for any natural disasters. The dependable VHF radio has been here long time.
- During fall & winter months there is high winds that make the bay very dangerous along with large waves that flows over the seawall. Winter months the ice on the roads are a concern also the tundra fires.
- My concern in my community is major flooding in my area of Togiak. We are in a flood area. When we have high winds from sourthease/south, and from southwest that is my concern because it sure can happen so fast when we have high winds.
- Need an evacuation plan, a place for emergency shelter up the hill with enough water and food to last up to 10-14 days. Togiak is accessible only by land or air. Also need medical emergency plan including an stand-by generator.
- I think it would be great to have a mitigation plan if there is aever a natural disaster, especially one for tsunami's / floods.
- We have anew plant for utilities in Togiak. We had about 2 hours of no lights or heat due to electrical shutdown made me worry about our elders and infant kids. The temps were -15 the time of no lights.
- Thank you for coming to Togiak greatly to see you as you can see.
- Very close incidents - unusually high tide/wind direction.
- With the coast erosion I believe these higher tides could make flooding pretty bad. Also the Togaik Tua volcano is it active or dead. There are some places by it that don't freeze.
- There should be protective fencing to an from downhill and up the hill to prevent residents/kids getting mauled by nears/wolves, cause when they don’t have ride they walk. The roads seriously needs to be paved to STOP, and PREVENT FUTURE accidents/deaths, esp under-aged drivers. Plus its a serious health hazard in the summer cause most people drive over the limit to Togiak Heights that cuases dust that's unhealthy for kids and elders. And there should be accident fencing esp near the river on the road up the hill. And a walkway for people who walk/bike is important cause in the past someone got killed when walking on the road to jump trash.

This newsletter describes the Bristol Bay Native Association Transportation and Infrastructure Department's Tribal Hazard Mitigation Planning project development processes to all interested agencies, stakeholders, and the public and to solicit comments. It can also be viewed on the BBNA's website at www.bbna.com

Bristol Bay Native Association (BBNA) Transportation and Infrastructure Department (DOTID) was awarded a Pre-Disaster Mitigation Program grant from the Federal Emergency Management Agency (FEMA) to prepare your 2019 Tribal Hazard Mitigation Plan (THMP). Bristol Engineering Services Company, LLC (BESC) was contracted to assist the BBNA DOTID with preparing a 2019 FEMA approvable THMP plan.

The TMP will identify all natural hazards, such as earthquake, flood, erosion, severe weather, and wildland/tundra fire hazards, etc. The plan will also identify the people and facilities potentially at risk and ways to mitigate damage from future hazard impacts. We will document the public participation and planning process as part of this project.

What is Hazard Mitigation?
Hazard mitigation projects eliminate the risk or reduce the hazard impact severity to people and property. Projects may include short- or long-term activities to reduce exposure to or the effects of known hazards. Hazard mitigation activities could include relocating or elevating buildings, replacing insufficiently sized culverts, using alternative construction techniques, developing, implementing, or enforcing building codes,or developing, and implementing education programs.

Why Do We Need A Hazard Mitigation Plan?
Communities must have a State, FEMA approved, and community adopted mitigation plan to receive a project grant from FEMA's pre- and post- disaster grants identified in their Hazard Mitigation Assistance and other agency's mitigation grant programs. BBNA DOTID plans to apply for mitigation funds after our plan is complete.

A FEMA approved and community adopted THMP enables the Local government to apply for the Hazard Mitigation Grant Program (HMGP), a disaster related assistance program; the Pre-Disaster Mitigation (PDM), and the National Flood Insurance Program (NFIP) Flood Mitigation Assistance (FMA) grant programs.

The Planning Process
There are very specific federal requirements that must be met when preparing a FEMA approvable THMP. These requirements are commonly referred to as the planning process requirements of 44 CFR 201.7 (c)

The following steps describe the planning process in order to develop the THMP.

1. **Establish the Planning Team**
2. **Education of the Planning Team**
3. **Assess Risks**
4. **Assess Capabilities**
5. **Develop a Mitigation Strategy**
6. **Monitor, Evaluate, and Plan Updates**

We are currently in the very beginning stages of preparing the plan development. We will be conducting a Planning Team Meeting to introduce the project and planning team, to gather comments from community residents, identify hazards, and collect data to refine the vulnerability assessment.

We Need Your Help

BESC has prepared survey packets to begin collecting information for your THMP. Survey packets will be mailed to your village council and sent by email to your village administrator.

Establishing a Planning Team is a very important step. We will need a point of contact (POC)/team leader from your community. This group will consist of 2-5 people that have good knowledge about land use, the transportation system, public facilities, and safety resources within the community. BBNA DOTID will be in contact with your tribe to determine a POC and your planning team.

Once the Planning Team has been developed, they will begin to work on the following items:

- Identifying the hazards that impact your community;
- Determining information about the hazards such as, location, history, extent, and the probability of future events;
- Completing a risk analysis, and;
- Developing problem statements and goals.

BBNA DOTID will be in contact with your tribe to set up an initial teleconference meeting with the Planning Team, BBNA DOTID, and BESC to continue to work on the THMP development.

The BBNA DOTID team will be led by Annie Fritze, DOTID Program Manager or Dan Breeden, Department Director with assistance from Bristol Engineering Service Company, LLC (contracted by BBNA). BESC will be developing materials and lead the planning process with guidance from BBNA DOTID staff.

BBNA Tribal Hazard Planning Team

Team Member	Title	Involvment
Annie Fritze	Program Manager	THMP Team Leader, data gathering and plan review
Dan Breeden	Department Director	THMP Team Leader, data gathering and plan review
Isaac Pearson, P.E.	Senior Engineer	THMP Consultant
Danielle Dance	Civil Engineer	THMP Consultant

Public Participation

The purpose of this newsletter is to keep you informed, and to allow you every opportunity to voice your opinion regarding these important projects. We want to encourage public involvement as a continuous effort throughout the project.

We encourage you to take an active part in the development effort, and preparation of the Tribal Hazard Mitigation Plan.

The goal is to receive comments, identify key issues or concerns, and improve mitigation ideas, and to guide the community.

Please contact BBNA DOTID program staff or BESC if you have any questions, comments, or requests for more information:

Bristol Bay Native Association DOTID **Annie Fritze OR** **Dan Breeden** **PO Box 310** **Dillingham, Alaska 99576** **(907) 842-6219**	**Bristol Engineering Services Company, LLC** **Danielle Dance, Consultant** **111 W. 16th Avenue, Third Floor** **Anchorage, Alaska 99501** **(907)563-0013**

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*** TX REPORT ***
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BRISTOL BAY NATIVE ASSOCIATION

PO BOX 310 DILLINGHAM ALASKA 99576
PHONE:(907) 842-5257
TOLL FREE 1-800-478-5257 FAX: (907) 842-5932

FAX TRANSMISSION COVER SHEET

DATE: August 20, 2018

TO: Vlg Admin

FAX:

SENDER: Annie Fritze

RE: Please Post and Share w/in your community - I will email and follow up with a phone call - Quyana - AF

8/20/2018
All but Chignik Bay faxed - will refax - AF

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Chignik Bay

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TO: Vlg Admin

FAX:

SENDER: Annie Fritze

RE: Please Post and Share w/in your community - I will email and follow up with a phone call -

Quyana -

Dance, Danielle

From: Annie Fritze <afritze@bbna.com>
Sent: Tuesday, June 11, 2019 2:47 PM
To: Tnl_2011@live.com; jmetrokin@bbnc.net; snoonkesser@swrsd.org; ctyoftog@unicom-alaska.com; cityoftogiak@outlook.com; togwater@hushmail.com; mlee@swrsd.org; mkohler@avec.org; bakelkok@bbha.org; rclark@bbahc.org; Gayla Hoseth; rcoupchiak@bbahc.org; btoyukak@bbahc.org; Carla Akelkok; Roger.Wassillie@alaska.gov; Kristina Andrew; customer@uui-alaska.com; norm@bbedc.com; Senator.Lyman.Hoffman@akleg.gov; Representative.Bryce.Edgmon@akleg.gov; Program Managers
Cc: Dance, Danielle; Dan Breeden; Pearson, Isaac; Thomas Woods
Attachments: Bristol Bay Togiak Newsletter.docx

Follow Up Flag: Follow up
Flag Status: Flagged

[External Email]

Togiak Community Stakeholders:

Bristol Bay Native Association (BBNA) was awarded a Federal Emergency Management Agency (FEMA) grant to develop Tribal Hazard Mitigation Plans (THMP's) for twenty (20) tribes in the Bristol Bay Region. We would like to take this time to acquaint you to the project, with the BBNA THMP Team, and to welcome your input and participation.

BBNA represents all tribes within the Bristol Bay Region, and as such provides support for the Federal Emergency Management Agency (FEMA) pre-disaster mitigation planning project. On behalf of the twenty tribes in this region, BBNA contracted Bristol Engineering Services Company, LLC (Bristol) for the development of their Tribal Hazard Mitigation Plan (THMP). The THMP was prepared to meet the requirements of the Stafford Act and Title 44 of the Code of Federal Regulations (CFR). By meeting these requirements, it makes the Tribal communities eligible for funding through state and federal mitigation grant programs.

We are excited to announce that the draft THMP for the Tribal Council of Portage Creek will be made available to the Tribal offices for public review and comment June 11-24, 2019
This plan is available on BBNA's web page for public comment at:

https://www.bbna.com/wp-content/uploads/DRAFT-FEMA-THMP-Togiak-June-2019.pdf

The goal is to receive comments, identify key issues or concerns, and improve ideas for mitigation. When the draft plan is complete, the results will be presented to the community

before submitting to FEMA for their preliminary approval and returned back to the Tribal Council for formal adoption.

Public comments should be received no later than June 24, 2019. Comments can be made via email, fax, or phone to Danielle Dance, Bristol Engineering Services Company, LLC at ddance@bristol-companies.com, (907)563-0013 or by fax at (907)563-6713. If no comments are received by the end of the comment period it will be assumed that there were no comments on the draft.

Please contact me should you have any additional questions at afritze@bbna.com, (907)842-6143 or Danielle Dance at ddance@bristol-companies.com, (907)563-0013

Annie Fritze
Transportation and Infrastructure Program Manager
afritze@bbna.com
907-842-6143

Bristol Bay Native Association
Transportation and Infrastructure Development

June 2019 Newsletter 2
Togiak

This newsletter discusses the Bristol Bay Native Association Transportation and Infrastructure Department's Tribal Hazard Pre-Mitigation Plan for your Tribal Council. This newsletter has been prepared to inform interested agencies, stakeholders, and the public about the project and to solicit comments. This newsletter and the draft mitigation plan can also be viewed on the BBNA's website at www.bbna.com

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Bristol Bay Native Association was awarded a Federal Emergency Management Agency (FEMA) grant to develop Tribal Hazard Mitigation Plans (THMP's) for twenty (20) tribes in the Bristol Bay Region. On behalf of the twenty tribes, BBNA contracted Bristol Engineering Services Company, LLC (Bristol) to prepare your THMP.

The THMP identifies all natural hazards that affect the community, including earthquake, flood/erosion, severe weather, and wildland/tundra fire hazards, etc. The plan identifies the people and facilities potentially at risk and ways to mitigate damage from future hazard impacts. The public participation and planning process is documented as part of this project.

Why Do We Need A Hazard Mitigation Plan?
A FEMA approved and community adopted THMP enables your Tribal council's eligibility to apply for funding through state and federal mitigation grant programs.

The purpose of hazard mitigation is to reduce potential losses from future disasters. The intent of mitigation planning is to maintain a process that leads to hazard mitigation actions. This THMP identifies the natural hazards that affect the Tribal communities, identifies actions to reduce losses from those hazards, and develops long-term strategies to reduce the impacts of future events on people, property, and the environment, and establishes a coordinated process to implement the plan.

The THMP establishes goals and objectives and associated actions to reduce and mitigate the threat of natural hazards to life, property, infrastructure, economic stability and emergency response capabilities in the Tribal communities while encouraging the protection and restoration of cultural and natural resources.

We Need Your Help

We are excited to announce that the draft THMP for the Togiak Tribal Council is available at the Tribal office for public review and comment.
This plan is also available on BBNA's web page at www.bbna.com for public comment. The goal is to receive comments, identify key issues or concerns and improve ideas for mitigation. When the draft plan is complete, the results will be presented to the community before submitting to FEMA for their preliminary approval and returned back to the Tribal Council for formal adoption.

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Comments can be made via email, fax, or phone to Danielle Dance, Bristol Engineering Services Company, LLC at: ddance@bristol-companies.com, (907)563-0013 or by fax at (907)563-6713.

Public Participation

Public involvement is important to the planning process of the THMP. This meets the requirements of 44 CFR 201.7(c)(1)(i).

The purpose of this newsletter is to encourage public involvement as a continuous effort throughout the project. The goal is to receive comments, identify key issues or concerns, and improve mitigation ideas from all stakeholders in your community.

We encourage you to take an active part in preparing the Tribal Hazard Mitigation Plan development effort. The purpose of this newsletter is to keep you informed and to allow you every opportunity to voice your opinion regarding these important projects.

If you have any questions, comments or requests for more information, please contact:

Danielle Dance, THMP Consultant
111 W. 16th Avenue, Third Floor
Anchorage, Alaska 99501
(907)563-0013
ddance@bristol-companies.com

Annie Fritze, BBNA DOTID
PO Box 310
Dillingham, Alaska 99576
(907)842-6143
afritze@bbna.com

BRISTOL BAY NATIVE ASSOCIATION
P.O. BOX 310
DILLINGHAM, ALASKA 99576
PHONE (907) 842-5257

Aleknagik
Chignik Bay
Chignik Lagoon
Chignik Lake
Clarks Point
Curyung
Egegik
Ekuk
Ekwok
Igiugig
Iliamna
Ivanof Bay
Kanatak
King Salmon
Kokhanok
Koliganek
Levelock
Manokotak
Naknek
New Stuyahok
Newhalen
Nondalton
Pedro Bay
Perryville
Pilot Point
Port Heiden
Portage Creek
South Naknek
Togiak
Twin Hills
Ugashik

January 9, 2019

The Honorable Bryce Edgmon
State Capitol Room 208
Juneau, AK 99801

RE: Introducing BBNA's Tribal Hazard Mitigation Planning Project

Dear Representative Edgmon:

Bristol Bay Native Association (BBNA) was awarded a Federal Emergency Management Agency (FEMA) grant to develop Tribal Hazard Mitigation Plans (THMP's) for twenty (20) tribes in the Bristol Bay Region. We would like to take this time to acquaint you to the project, with the BBNA THMP Team, and to welcome your input and participation.

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It is the goal of the Tribal organizations to create a disaster-resistant community for the Tribal members and the general public. The THMP includes information to assist government leaders and residents with current and future planning efforts to efficiently and effectively mitigate natural hazards in their communities.

We are excited to announce that the draft THMP for the Tribal Councils of **Aleknagik, Chignik Bay, Chignik Lagoon, Chignik Lake, Clarks Point, Egegik, Ekuk, Kanatak, Levelock, Manokotak, New Stuyahok, Nondalton, Perryville, Pilot Point, Port Heiden, Portage Creek, Togiak and Twin Hills** will be made available to their Tribal offices for public review and

comment in the next few months. These plans will also be made available on BBNA's web page for public comment at www.bbna.com. The goal is to receive comments, identify key issues or concerns and improve ideas for mitigation. When the draft plan is complete, the results will be presented to the community before submitting to FEMA for their preliminary approval and returned back to the Tribal Council for formal adoption.

A FEMA approved and community adopted THMP enables the Tribal council's eligibility to apply for funding through state and federal mitigation grant programs.

Sincerely,
Bristol Bay Native Association

Ralph Andersen,
President/Chief Executive Officer

cc: Dan Breeden, BBNA DOTID Director
Annie Fritze, BBNA DOTID Program Manager
Isaac Pearson, BESC Senior Engineer
Danielle Dance, BESC Civil Engineer

BRISTOL BAY NATIVE ASSOCIATION
P.O. BOX 310
DILLINGHAM, ALASKA 99576
PHONE (907) 842-5257

January 9, 2019

The Honorable Lyman Hoffman
PO Box 886
Bethel, AK 99559

RE: Introducing BBNA's Tribal Hazard Mitigation Planning Project

Dear Senator Hoffman:

Bristol Bay Native Association (BBNA) was awarded a Federal Emergency Management Agency (FEMA) grant to develop Tribal Hazard Mitigation Plans (THMP's) for twenty (20) tribes in the Bristol Bay Region. We would like to take this time to acquaint you to the project, with the BBNA THMP Team, and to welcome your input and participation.

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Sincerely,
Bristol Bay Native Association

Ralph Andersen,
President/Chief Executive Officer

cc: Dan Breeden, BBNA DOTID Director
Annie Fritze, BBNA DOTID Program Manager
Isaac Pearson, BESC Senior Engineer
Danielle Dance, BESC Civil Engineer

APPENDIX C

Plan Maintenance

- Maintenance Monitoring Form (THMP Form 4-1)
- Plan Update Evaluation Form (THMP Form 4-2)

MAINTENANCE MONITORING FORM

Use this form to track the status of implementation of the identified mitigation actions, once a year. Use the information to provide the Council with a brief status report.

Date	**Evaluator**	**Comments** *(Brief Status Overview of Mitigation Actions)*

Date	**Evaluator**	**Comments** *(Brief Status Overview of Mitigation Actions)*

PLAN UPDATE EVALUATION FORM

Plan Section	Considerations	Explanation
Planning Process	Have any internal or external agencies been invaluable to the mitigation strategy?	
	Can any procedures (e.g., meeting announcements, plan updates) be done differently or more efficiently?	
	Has the Planning Team undertaken any public outreach activities?	
	How can public participation be improved?	
Capability Assessment	Have jurisdictions adopted new policies, plans, regulations, or reports that could be incorporated into this plan?	
	Are there different or additional administrative, human, technical, and financial resources available for mitigation planning?	
	Are there different or new education and outreach programs and resources available for mitigation activities?	

Plan Section	Considerations	Explanation
Plan Maintenance Procedures	Was the plan monitored and evaluated as anticipated?	
	What are needed improvements to the procedures?	
Hazard Profile	Has a natural and/or technical or human-caused disaster occurred?	
	Should the list of hazards addressed in the plan be modified? What hazards need to be addressed? Are there hazards that need to be added or removed? If so, list the hazards.	
	Are there new data sources and/or additional maps and studies available? If so, what are they and what have they revealed? Should the information be incorporated into future plan updates?	
Risk Analysis	Do any new critical facilities or infrastructure need to be added to the asset lists?	
	Have any changes in development trends occurred that could create additional risks?	

Plan Section	Considerations	Explanation
Mitigation Strategy	Are the goals still applicable?	
	Should new mitigation actions be added to the community's Mitigation Action Plan?	
	Do existing mitigation actions listed in the community's Mitigation Action Plan need to be reprioritized?	
	Have elements of the plan been incorporated into other planning mechanisms?	

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APPENDIX D

Funding Sources

CLIMATE RESILIENCE IN ALASKAN COMMUNITIES

Catalog of Federal Programs

PRODUCT OF THE

Coastal Erosion Working Group

OF THE ARCTIC EXECUTIVE STEERING COMMITTEE

September 2, 2015

In February 2015, the newly established Arctic Executive Steering Committee (AESC), in one of its first actions, established a Coastal Erosion Working Group (CEWG). The CEWG, which included representatives from the Executive Office of the President as well as ten Federal agencies, was tasked with examining opportunities for Federal action to address the imminent threats that coastal erosion and flooding pose to Alaskan Arctic coastal communities. Representation on the working group drew from both headquarters and the Alaska region, ensuring good knowledge of State and local stakeholders' needs.

One of the recommendations that the CEWG presented at the June meeting of the AESC, was to catalog Federal programs that could be useful for Alaskan coastal communities seeking to address erosion, flooding, and other resilience challenges. The following "Catalog of Federal Resilience Programs for Alaskan Communities" was developed by the CEWG in response to this recommendation. We hope this resource will support communities in Alaska in identifying Federal resources available to help address some of great challenges they are facing.

Ambassador Mark Brzezinski
Executive Director, Arctic Executive Steering Committee

Overview

According to the U.S. National Climate Assessment, over the past 60 years, climate change has caused the Alaskan Arctic to warm twice as rapidly as the rest of the United States, and accelerated rates of erosion caused by the combination of repeated extreme weather events, thawing permafrost, and decreased arctic sea ice are threatening the way of life in native villages.

Developed under the leadership of the Arctic Executive Steering Committee's (AESC) Coastal Erosion Work Group (CEWG), this catalog of Federal technical assistance programs and funding resources is the result of collaboration across Federal agencies to identify existing programs that may be used to assist coastal communities in Alaska facing challenges associated with climate-related risks. Although a variety of Federal programs are available to provide assistance, lack of information about the full range of resources available can present a barrier to communities securing assistance. This compendium is intended to help Alaskan communities identify Federal resources that can be used to support local efforts to gather and evaluate information about the risks posed by coastal erosion and other hazards; building capacity to mitigate those risks; advance onsite measures; and, if necessary, relocate community assets.

Each program's entry describes its purpose and funding potential, eligible applicants, and activities typically undertaken with its support. The Quick Reference Program Matrix serves to identify which programs can support the following activities:

> **Information Gathering and Evaluation:** Risk assessment and monitoring activities, including assessing hazards like coastal erosion, mapping subsistence patterns, and tracking natural climate variability;
> **Capacity Building:** Training, education, and community planning efforts, including digital access to tools and development of administrative needs to inform resilience planning;
> **On-site Measures:** Maintaining and strengthening infrastructure, land, and livelihoods within a community. Examples include redesigning roads and evacuation routes due to climate change impacts and investing in infrastructure that generates economic returns; and
> **Relocation:** Activities that support the relocation of entire communities or certain community assets, including new site identification and development.

Contributing agencies include the Departments of Agriculture, Energy, Health and Human Services, Housing and Urban Development, the Interior, Transportation, Homeland Security, Commerce, the Environmental Protection Agency, and the U.S. Army Corps of Engineers. While this guide attempts to be as comprehensive as possible in describing relevant Federal grant programs, programs are continually evolving and are subject to change.

About the Arctic Executive Steering Committee

President Obama established the AESC in his January 2015 Executive Order 13689 on *Enhancing Coordination of National Efforts in the Arctic*. The Executive Order directed Federal agencies to strengthen international cooperation to mitigate the greenhouse gas emissions driving climate change, understand more fully and manage more effectively the adverse effects of climate change, protect life and property, develop and manage resources responsibly, enhance the quality of life of Arctic inhabitants, and serve as stewards for valuable and vulnerable ecosystems. The AESC was charged with guiding executive departments and agencies and enhancing coordination of Federal Arctic policies across agencies and offices, and with State, local, and Alaska Native tribal governments and stakeholders.

The CEWG, co-chaired by the Department of Housing and Urban Development (HUD) and the Department of the Interior (DOI), was created to examine opportunities for improving Federal actions to address the imminent threat of coastal erosion and flooding impacting Alaskan Arctic coastal communities.

Quick Reference Programs Matrix

Agency	Program	Page	Information Gathering		Capacity Building				On-Site Measures				Relocation		
			Risk Assessment	Monitoring	Technical Training	Environmental Education	Preserving Traditional Lifestyles	Strategic Planning	Infrastructure Strengthening	Coastal Erosion Control	Recovery of Critical Infrastructure	Economic Development	Site Evaluation	Development	Infrastructure
Department of Homeland Security - Federal Emergency Management Agency	Flood Mitigation Assistance	12						X	X						
	Hazard Mitigation Grant Program	12						X	X	X	X				
	Pre-Disaster Mitigation Grant Program	13						X	X	X	X				
	Risk Mapping, Assessment, and Planning	13	X	X	X			X							
Department of Commerce – Economic Development Authority	Economic Adjustment Assistance Program	14	X					X	X		X	X	X	X	X
	Public Works Program	14							X		X	X		X	X

Agency	Program	Page	Information Gathering		Capacity Building				On-Site Measures				Relocation		
Department of Commerce – National Oceanic and Atmospheric Administration	Alaska Center for Climate Assessment and Policy	15	X					X							
	Alaska Ocean Observing System	15	X	X											
	Analyze, Forecast, and Support	16	X	X											
	Integrated Ocean and Coastal Mapping Program	16	X	X											
	National Oil and Hazardous Substances Pollution Contingency Plan	16	X	X				X							
	Climate Program	17	X		X	X									
	Observations	17	X	X											
Department of Energy	Alaska START Program	17			X	X		X	X		X	X			X
	Tribal Energy Program	18			X	X		X	X		X	X			X

Agency	Program	Page	Information Gathering		Capacity Building				On-Site Measures				Relocation		
Department of the Interior	Alaska Climate Science Center	19	X	X	X			X					X		
	ANILCA Sec. 1318 Historic Assistance	19					X								
	Landscape Conservation Cooperatives	19	X	X											
	North Slope Science Initiative	20	X	X		X									
	Subsistence – ANLICA Title VIII	20					X	X							
Department of the Interior - Bureau of Indian Affairs	Cooperative Landscape Conservation	20			X			X							
	Indian Energy Resource Development Program	21			X							X			X
	Tribal Transportation Program	21							X			X			X
Department of Transportation	Transportation Investment Generating Economic Return	22						X	X			X			X

Agency	Program	Page	Information Gathering		Capacity Building				On-Site Measures				Relocation		
Department of Transportation - Federal Aviation Administration	Airport Improvement Program	22							X						X
Department of Transportation - Federal Highway Administration	Federal-aid Highway Apportioned Funds	23							X			X			X
	Tribal Transportation Program	23						X	X			X			X
Department of Transportation - Federal Transit Administration	Public Transportation on Indian Reservations Program Tribal Transit Program	24						X	X		X				X
Environmental Protection Agency	Alaska Native Villages Grant	24			X				X						X
	Clean Water Act Indian Set-Aside Program	25						X	X						X

Agency	Program	Page	Information Gathering		Capacity Building				On-Site Measures				Relocation		
Environmental Protection Agency	Environmental Justice Collaborative Problem-Solving Cooperative Agreement Program	25							X					X	
	Environmental Justice Small Grants	26						X							
	Indian General Assistance Program	26	X	X											
	Office of Water Climate Ready Water Utilities Program	27	X					X							
	Safe Drinking Water Act (SDWA) Tribal Set-Aside Program	27						X	X						X
Health and Human Services	ACF/ANA Environmental Regulatory Enhancement	28			X		X	X				X			
	CDC/NCID/ Arctic Investigations Program	29	X	X		X									

Agency	Program	Page	Information Gathering		Capacity Building				On-Site Measures				Relocation		
Health and Human Services	CDC/NIOSH American Indian/ Alaska Native Program	29			X	X									
	CDC/NIOSH Climate Change Initiative	30	X												
	NIH/NIEHS Alaska Community Action on Toxics	30	X	X	X	X	X	X							
	NIH/NIEHS Research to Action	31	X	X	X	X	X	X							
	NIH/NIEHS The Center for Indigenous Environmental Health Research	31	X	X	X	X	X	X							
Department of Housing and Urban Development	Community Development Block Grant	32	X	X	X						X			X	X
	Emergency Solutions Grants Program	33							X		X				
	Indian Community Development Block Grant	33							X		X	X		X	X

Agency	Program	Page	Information Gathering		Capacity Building				On-Site Measures				Relocation		
Department of Housing and Urban Development	Mortgage Insurance for Disaster Victims – 203(h)	34												X	
	Native American Housing and Self-Determination Act - Indian Housing Block Grant Program	34	X	X	X	X		X	X	X	X		X	X	X
	Section 184 Loan Guarantee Program	35												X	
	Title VI Loan Guarantee Program	35							X	X	X			X	X
US Army Corps of Engineers	Continuing Authorities Program	35							X	X					
	International and Interagency Support Services	36	X	X			X	X	X	X	X		X	X	X
	Planning Assistance to States	36	X					X					X		
	Tribal Partnership Program	37	X					X	X	X			X	X	X

Agency	Program	Page	Information Gathering		Capacity Building				On-Site Measures				Relocation		
US Department of Agriculture	Business and Industry Loan Guarantee	37										X			
	Community Facilities Loans and Grants	38												X	
	Electric Loans	38							X						X
	Rural Business Development Grant	38										X			
	Rural Energy for America Loans and Grants	39							X						X
	Sewer, Water, Solid Waste Loans and Grants	39							X						X
	Single Family Direct and Guaranteed Loans	40												X	
	Single Family Repair Loans and Grants	40									X				
	Telecom Loans	41							X						X

Department of Homeland Security (DHS) – Federal Emergency Management Agency (FEMA)

Program Name: Flood Mitigation Assistance (FMA)

Purpose: Authorized to reduce or eliminate claims under the National Flood Insurance Program (NFIP) by eliminating the long-term risk of flood damage to structures insured under the NFIP.

Eligible Applicants: States, U.S. territories, Federally-recognized tribes apply on behalf of local communities, who must be participating in the NFIP.

Funding Range: Severe Repetitive Loss structures can be funded at 100% federal cost; repetitive loss structures can be cost-shared at 90% federal cost. Insured structures and planning grants are cost-shared at 75 percent federal, 25 percent non-federal. Maximum Federal share for planning sub-applications per Applicant is $50,000 for State plans and $25,000 for local plans. Technical assistance up to $50,000 is available for states who were awarded FMA grant funds totaling at least $1million in FY 2014.

Program Activities: Projects include the elevation, relocation and acquisition of flood prone structures, and projects to address minor, localized flooding issues, such as upgrading culverts, building detention ponds, and otherwise improving local stormwater management facilities.

Because this program is funded by resources collected from NFIP policyholders, the recent focus of the program has been on mitigating severe repetitive loss structures in order to reduce the drain on the National Flood Insurance Fund (NFIF).

Severe repetitive loss structures and repetitive loss structures are prioritized for funding to maximize cost-effectiveness and reduce claims to the NFIF.

Additional Information: http://www.fema.gov/media-library-data/1432854343618-674f4cfd5dd49813a9aef429e5d49c7d/FMAFactSheetFY2015.pdf

Program Name: Hazard Mitigation Grant Program (HMGP)

Purpose: Provides grants to states, Indian tribal governments and local governments to implement long-term hazard mitigation measures after a major disaster declaration. The purpose of the program is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the recovery from a disaster.

Eligible Applicants: Funds become available only after a disaster is declared. The Governor of the state determines availability, however it is frequently available anywhere within the state or tribe in which the declaration was made.

Funding Range: The amount of assistance available under the HMGP is a percentage of FEMA's assistance made available under the response and recovery programs for the declared major disaster.

HMGP funds are generally 15 percent of assistance under these programs for states with a Standard State Mitigation Plan and 20 percent of assistance under these programs for those with an Enhanced State Mitigation Plans. Small impoverished communities may be eligible for up to a 90% Federal cost share in accordance with the Stafford Act.

Program Activities: Some examples of projects eligible for HMGP and the PDM grant funds include the development of all-hazards mitigation plans at the tribal, state and local levels, the seismic retrofitting of critical public buildings, and acquisition, relocation or elevation of flood-prone properties located in the floodplain.

Additional Information: http://www.fema.gov/hazard-mitigation-grant-program

Program Name: Pre-Disaster Mitigation Grant Program (PDM)

Purpose: Designed to assist States, territories, Federally-recognized tribes, and local communities in implementing a sustained pre-disaster natural hazard mitigation program.

Eligible Applicants: States, U.S. territories, Federally-recognized tribes.

Funding Range: In 2015, each state is eligible to receive a set aside of 1 percent of the total appropriated PDM funding, or $250,000; $5 million is set aside for Federally-recognized Tribal governments to receive a set aside of 1 percent of the total appropriated PDM funding, or $250,000; The balance of PDM Grant Program funds will be distributed on a competitive basis to all eligible applicants.

Program Activities: Elevation, acquisition, or floodproofing structures, seismic or wind retrofit of structures, major or minor flood hazard reduction activities, mitigation planning

Additional Information: http://www.fema.gov/media-library-data/1432847398289-878c470e718239eedcaadc8d52ea1823/PDMFactSheetFY2015.pdf

Program Name: Risk Mapping, Assessment, and Planning (Risk MAP)

Purpose: Not only is flooding one of the most common and costly disasters, flood risk can also change over time because of new building and development, weather patterns and other factors. FEMA is working with federal, state, tribal and local partners across the nation to identify flood risk and help reduce that risk through the Risk Mapping, Assessment and Planning (Risk MAP) program.

Eligible Applicants: State, regional, Tribal, and local communities can use enhanced hazard data to make more informed decisions regarding risk.

Funding Range: Varies.

Program Activities: Risk MAP provides high quality flood maps and information, tools to better assess the risk from flooding and planning and outreach support to communities to help them take action to

reduce (or mitigate) flood risk. Each Risk MAP flood risk project is tailored to the needs of each community and may involve different products and services.

Additional Information: http://www.fema.gov/risk-mapping-assessment-and-planning-risk-map

Department of Commerce (DOC) – Economic Development Administration (EDA)

Program Name: Economic Adjustment Assistance Program

Purpose: Helps communities design and implement strategies to address evolving economic changes that are causing or threaten to cause serious structural damage to the underlying economic base or undermining locally-developed development goals.

Eligible Applicants: (1) District Organization of a designated Economic Development District; (2) Indian Tribe or a consortium of Indian Tribes; (3) State, county, city, or other political subdivision of a State, including a special purpose unit of a State or local government engaged in economic or infrastructure development activities, or a consortium of political subdivisions; (4) institution of higher education or a consortium of institutions of higher education; or (5) public or private non-profit organization or association acting in cooperation with officials of a political subdivision of a State.

Funding Range: Investments range from $100,000 to $1,250,000; the average is approximately $829,000.

Program Activities: Can be used to conduct feasibility or environmental studies, capitalize revolving loan funds, and to fund the construction of publicly-owned infrastructure, such as water and sewer facilities, access roads, rail spurs, and broadband, to support the expansion of area businesses; business incubators; job training facilities; and other infrastructure investments.

Additional Information: http://www.eda.gov/pdf/about/Economic-Adjustment-Assistance-Program-1-Pager.pdf

Program Name: Public Works Program

Purpose: The Public Works Program provides strategic-investments to help communities build or expand access to the infrastructure assets that are the most basic building blocks of an economy and are required to support the growth and economic development of distressed regions.

Eligible Applicants: (1) District Organization of a designated Economic Development District; (2) Indian Tribe or a consortium of Indian Tribes; (3) State, county, city, or other political subdivision of a State, including a special purpose unit of a State or local government engaged in economic or infrastructure development activities, or a consortium of political subdivisions; (4) institution of higher education or a consortium of institutions of higher education; or (5) public or private non-profit organization or association acting in cooperation with officials of a political subdivision of a State.

Funding Range: Investments range from $200,000 to $3,000,000, the average is approximately $1.4 million.

Program Activities: Traditional infrastructure through this program including water and sewer system improvements, industrial parks, business incubator facilities, expansion of port and harbor facilities, skill-training facilities, and the redevelopment of brownfields. Also, technology-based facilities; research and development commercialization centers; facilities for workforce development; wet labs; multi-tenant manufacturing facilities; research, business and science parks with fiber optic cable; and telecommunications infrastructure and development facilities.

Additional Information: http://www.eda.gov/pdf/about/Public-Works-Program-1-Pager.pdf

DOC – National Oceanic and Atmospheric Administration (NOAA)

Program Name: Alaska Center for Climate Assessment & Policy

Purpose: NOAA's Regional Integrated Sciences & Assessments (RISA) program supports research teams that help expand and build the nation's capacity to prepare for and adapt to climate variability and change.

Eligible Applicants: NOAA 5 year funding agreement with ACCAP; ACCAP awards funding to other entities to accomplish its five year goals.

Funding Range: Varies.

Program Activities: Partner with stakeholders to inform realistic community plans and climate adaptation strategies using the most scientifically accurate, reliable, and up-to-date information.

Additional Information: http://cpo.noaa.gov/ClimatePrograms/ClimateandSocietalInteractions/RISAProgram/RISATeams/ACCAP.aspx

Program Name: Alaska Ocean Observing System

Purpose: Address regional and national needs for ocean information, gather specific data on key coastal and ocean variables, and ensure timely and sustained dissemination and availability of these data.

Eligible Applicants: AOOS Funding is based on a five year plan focusing on: safe marine operations; coastal hazard mitigation; tracking ecosystem and climate trends; and monitoring water quality.

Funding Range: $0-$500k.

Program Activities: (1) Enables advances in scientific understanding to support the sustainable use, conservation, management, and understanding of healthy ocean and coastal resources.

(2) Improves the Nation's capability to measure, track, explain, and predict events related directly and indirectly to weather and climate change, natural climate variability, and interactions between the oceanic and atmospheric environments.

Additional Information: http://www.ioos.noaa.gov/regions/aoos.html

Program Name: Analyze, Forecast, and Support

Purpose: Field forecast and warnings, facilities supporting the mission and programmatic leadership in the provision of life saving decision support services.

NWS has initiated Impact Based Decision Support Services (IDSS) to provide better, more useful information to partners, emergency managers, and decision makers to foster an appropriate public response.

Eligible Applicants: None, work is performed by NOAA.

Funding Range: N/A

Program Activities: Provides decision support services, warning coordination, and Arctic environmental intelligence (timely, reliable, and actionable information to help plan for and adapt to economic and ecological impacts, including disasters) to the State of Alaska and Alaska Native partners, industry and community stakeholders, and federal and other local officials.

Addresses mitigation science and technology gaps in the Arctic as well as forecast challenges to improve IDSS), such as: scarcity of in-situ observations (e.g., wave, ocean, and ice buoys, weather observation platforms, river gauge) in the Arctic; performance concerns with weather, water, ocean and wave prediction models in the Arctic region as compared to the rest of the US; and the lack of maturity of tactical and medium range weather and sea ice modeling capabilities.

Additional Information: http://www.weather.gov/organization/afs

Program Name: Integrated Ocean & Coastal Mapping Program

Purpose: Planning, acquiring, integrating, and disseminating ocean and coastal geospatial data and derivative products in a manner that permits easy access to and use by the greatest range of users.

Eligible Applicants: Participation in the IOCM approach (map used many times) is voluntary but coordination with and leveraging of other partner efforts are encouraged.

Funding Range: N/A

Program Activities: Federal mapping coordination.

Additional Information: http://iocm.noaa.gov/

Program Name: National Oil and Hazardous Substances Pollution Contingency Plan (NCP)

Purpose: Area Committees -- composed of federal, state, and local government officials -- must develop detailed, location-specific Area Contingency Plans.

Eligible Applicants: Federal, state, and local government officials serve on the committees. Participation and input by Alaska Native entities to the committees is encouraged.

Funding Range: N/A

Program Activities: Planning, preparedness, and exercises support resiliency to oil spills. Environmental Sensitivity Indices (ESI) maps and other tools assess the risk from oil spills and would also be useful potential species impacts.

Additional Information: http://response.restoration.noaa.gov/

Program Name: Climate Program

Purpose: Fund high-priority climate science, assessments, decision support research, outreach, education, and capacity-building activities designed to advance our understanding of Earth's climate system, and to foster the application of this knowledge in risk management and adaptation efforts.

Eligible Applicants: None, work is performed by NOAA.

Funding Range: Varies.

Program Activities: Varies.

Additional Information: http://cpo.noaa.gov/

Program Name: Observations

Purpose: Collection of space, atmosphere, water, and climate observational data owned or leveraged by National Weather Service. The Office is responsible for the development, acquisition and management of cost-effective observing technologies, hardware and software enhancements, maintenance and repairs, logistics, cost management, technical data verification, and life-cycle replacements of NWS observational platforms.

Eligible Applicants: None, work is performed by NOAA.

Funding Range: N/A

Program Activities: Weather and sea ice observations.

Additional Information: http://www.nws.noaa.gov/om/osd/portal.shtml

Department of Energy (DOE)

Program Name: Alaska Strategic Technical Assistance Response Team (START) Program

Purpose: To provide technical assistance in strategic energy planning to accelerate clean energy and energy efficiency projects and move projects closer to implementation.

Eligible Applicants: Any Indian Tribe, including any Alaska Native village or regional or village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act (43 U.S.C. 1601 et seq.).

Funding Range: Varies.

Program Activities: The START team, which consists of DOE, including its national laboratories, and the Denali Commission, along with DOE's national laboratories and other local and national experts, assists rural Alaska Native communities in developing strategic energy plans to help mitigate the impacts of climate change by conducting energy awareness and training programs, and pursuing new renewable energy and energy efficiency opportunities. As a competitive technical assistance opportunity, Alaska START is aimed at achieving the following goals:

- Reducing the cost and use of energy for rural Alaska consumers and communities
- Increasing local capacity, energy efficiency, and conservation through training and public education
- Increasing renewable energy deployment and financing opportunities for communities and utilities.

Additional Information: http://www.energy.gov/indianenergy/office-indian-energy-start-team

Program Name: Tribal Energy Program

Purpose: To provide financial and technical assistance that enables tribes to evaluate and develop their renewable energy resources and reduce their energy consumption through efficiency and weatherization.

Eligible Applicants: Federally recognized Indian tribes, bands, nations, Alaska Native villages; other organized tribal groups and communities – including Alaska Native regional and village corporations; tribal energy resource development organizations.

Funding Range: Varies.

Program Activities: DOE's Tribal Energy Program promotes tribal energy sufficiency and fosters economic development and employment of energy efficiency on tribal lands through the use of renewable energy and energy efficient technologies through government-to-government partnerships. The Tribal Energy program provides financial opportunities through a competitive process; technical assistance through DOE's national laboratories; and education and training through webinars, student internships, and workshops to help build the knowledge and skills essential to developing, implementing and sustaining energy efficiency and renewable energy efficiency and renewable energy projects.

Additional Information: http://apps1.eere.energy.gov/tribalenergy/

Department of the Interior (DOI)

Program Name: Alaska Climate Science Center

Purpose: The Alaska Climate Science Center (AK CSC) provides scientific information, tools, and techniques that managers and other parties interested in land, water, wildlife and cultural resources can use to anticipate, monitor, and adapt to climate change.

Eligible Applicants: Any

Funding Range: No specific funding levels or deadlines.

Program Activities: The Center and its partners provide expertise in climate science, ecology, environmental impacts assessment, modeling, cultural impacts, and advanced information technology.

Additional Information: https://www.doi.gov/csc/alaska/

Program Name: Alaska National Interest Lands Conservation Act (ANILCA) Sec. 1318 Historic Assistance

Purpose: Technical assistance in preserving cultural resources.

Eligible Applicants: All Tribes and Corporations in Alaska.

Funding Range: No specific funding levels or deadlines.

Program Activities: Wide variety of activities related to cultural resources.

Additional Information: Telephone: (907) 644-3456

Program Name: Landscape Conservation Cooperatives

Purpose: Science and technical assistance.

Eligible Applicants: Any village or other entity.

Funding Range: No specific funding levels or deadlines.

Program Activities: Examples: provide tools to assess coastal hazards, including accelerated coastal erosion associated with climate change. Specific projects include: acquisition and analysis of imagery to quantify historical erosion rates and enable communities to consider the stability of existing and future infrastructure; data and modeling needed to predict the severity of flooding based on the circumstances and magnitude of storms; community vulnerability assessments that incorporate coastal erosion as well as other aspects of coastal change.

These projects are underway or are newly completed. A shared effort is planned by LCCs in Alaska to work with partners and communities to utilize these tools and information during the winter of 2015-16.

Additional Information: Arctic Landscape Conservation Cooperative: http://arcticlcc.org/

Western Alaska Landscape Conservation Cooperative:
https://westernalaskalcc.org/SitePages/Western%20Alaska%20LCC.aspx

Program Name: North Slope Science Initiative

Purpose: To facilitate and improve collection and dissemination of ecosystem information pertaining to the Alaskan North Slope region, including coastal and offshore regions. To improve scientific and regulatory understanding of terrestrial, aquatic, and marine ecosystems for consideration in the context of resource development activities and climate change.

Eligible Applicants: Any.

Funding Range: No specific funding levels or deadlines.

Program Activities: Provide resource managers with the data and analyses they need to help evaluate multiple simultaneous goals and objectives related to each agency's mission on the North Slope. The NSSI uses and complements the information produced under other North Slope science programs. The NSSI also facilitates information sharing among agencies, non-governmental organizations, industry, academia, international programs, and members of the public to increase communication and reduce redundancy among science programs.

Additional Information: http://www.northslope.org/

Program Name: Subsistence – ANLICA Title VIII

Purpose: Technical assistance related to subsistence.

Eligible Applicants: Any Tribe or village in Alaska.

Funding Range: No specific funding levels or deadlines.

Program Activities: Examples: 1) subsistence mapping in coastal communities to document where people go for particular resources at particular times of the year; and 2) document the flow of resources through sharing networks, which could be greatly disrupted if whole communities and groups of families are relocated.

Additional Information: Telephone (907) 644-3596.

DOI – Bureau of Indian Affairs (BIA)

Program Name: Cooperative Landscape Conservation (shifting to Tribal Climate Resilience in FY16)

Purpose: Funding for tribal climate adaptation, and ocean & coastal planning. Engagement and technical support, not operational funds.

Eligible Applicants: Federally Recognized Tribes.

Funding Range: Current administrative limit is $250k per award.

Program Activities: BIA is investing in technical assistance to support adaptation planning, including coordination, training, travel support for relevant training, and digital access to data and tools.

Additional Information: http://www.indianaffairs.gov/WhoWeAre/BIA/climatechange/index.htm

Program Name: Indian Energy Resource Development Program

Purpose: Assist tribes in development of tribal energy resources. This includes the Tribal Energy Development Capacity (TEDC) grant program to build capacity to develop conventional or renewable energy resources on Indian lands.

Eligible Applicants: Federally Recognized Tribes.

Funding Range: Varies depending on appropriations.

Program Activities: The TEDC grant program helps tribes in assessing, developing, or obtaining the managerial, organizational and technical capacity needed to develop energy resources on Indian land and to account properly for resulting energy production and revenues.

Additional Information: http://www.bia.gov/WhoWeAre/AS-IA/IEED/DEMD/TEDCP/index.htm

Program Name: Tribal Transportation Program

Purpose: To provide funding to tribes for access to basic community services that enhance the quality of life in Indian country, such as construction and/or reconstruction of roads, bridges, docks and trails. The TTP replaces the former Indian Reservation Roads (IRR) program. Note that this program is the same as the Department of Transportation's (DOT) TTP, although DOT can additionally provide strategic planning.

Eligible Applicants: Federally Recognized Tribes.

Funding Range: TTP is formula funded.

Program Activities: New roads can be built based on the specific needs for evacuation routes, or redesigning if impacted roads by changes due to climatic variances (flooding, snow fences and road shelters, etc.). TTP funds can also be used for facility preservation, road maintenance and bridge maintenance, as well as "emergency relief for federally owned roads" (this includes tribal or native roads and facilities that are transportation related). Equipment storage, material storage, equipment purchase are other allowable uses.

Additional Information: BIA: http://www.bia.gov/WhoWeAre/BIA/OIS/Transportation/index.htm; DOT: http://flh.fhwa.dot.gov/programs/ttp/

Department of Transportation (DOT)

Program Name: Transportation Investment Generating Economic Return (TIGER)

Purpose: Discretionary grants that focus on capital projects that generate economic development and improve access to reliable, safe and affordable transportation for disconnected communities, while emphasizing improved connection to employment, education, services and other opportunities, workforce development, or community revitalization.

Eligible Applicants: State, local and tribal governments, including U.S. territories, transit agencies, port authorities, metropolitan planning organizations (MPOs), and other political subdivisions of State or local governments.

Funding Range: $500M nationwide funds. Funding cannot exceed $200M and no more than $125M in a single state. TIGER can cover up to 80% in an urban area and 100% in a rural area. Minimum award for urban is $10M and rural is $1M. The annual funding for TIGER changes annually based on the appropriations and authorizations.

Program Activities: Eligible projects for TIGER Discretionary Grants are capital projects that include, but are not limited to: highway or bridge projects eligible, (including bicycle and pedestrian related projects); public transportation projects; passenger and freight rail transportation projects; port infrastructure investments (including inland port infrastructure); and intermodal projects. Eligibility requirements must be satisfied.

Additional Information: http://www.transportation.gov/tiger

DOT – Federal Aviation Administration (FAA)

Program Name: Airport Improvement Program

Purpose: Airport improvement planning and development.

Eligible Applicants: Public-use airports included within the National Plan of Integrated Airport Systems (NPIAS).

Funding Range: State of Alaska: 93.75% Federal, 6.25% cost sharing.

Program Activities: The AIP is authorized to provide grant funding for eligible airport improvements as requested by eligible airport sponsors. This would potentially include measures to safeguard airport infrastructure from erosion.

Additional Information: http://www.faa.gov/airports/aip/

DOT – Federal Highway Administration (FHWA)

Program Name: Federal-aid Highway Apportioned Funds

Purpose: Planning, preventive maintenance, infrastructure preservation, construction of highways and bridges, safety, congestion mitigation, and air quality improvement.

Eligible Applicants: State of Alaska Department of Transportation and Public Facilities.

Funding Range: Alaska receives approximately $480M in apportionment funds annually. Federal share is typically 80%.

Program Activities: In Alaska, Federal-aid highway apportioned funds may be used for roads, pedestrian facilities, and snowmobile trails. Funding may be available to assist villages with improving or repairing roads and boardwalks.

Additional Information: http://www.fhwa.dot.gov/federalaid/projects.cfm

Program Name: Tribal Transportation Program (TTP)

Purpose: To provide funding to tribes for access to basic community services that enhance the quality of life in Indian country, such as construction and/or reconstruction of roads, bridges, docks and trails. The TTP replaces the former Indian Reservation Roads (IRR) program. Note that this program is the same as the DOI BIA TTP, although DOT can additionally provide strategic planning.

Eligible Applicants: Federally recognized Tribes.

Funding Range: In MAP-21, the TTP is authorized at $450 million/year and funds are distributed through a statutory formula. The federal share is 100%.

Program Activities: Eligible uses for TTP funds are identified in 23 USC 202(a). These include transportation planning, design, construction, and maintenance of roads and bridges as well as any other project that would be eligible under Title 23. The project must be on or for a facility that provides access to or is located within tribal land. The planning and construction of emergency escape or relocation routes are eligible activities.

Additional Information: DOT: http://flh.fhwa.dot.gov/programs/ttp/;
BIA: http://www.bia.gov/WhoWeAre/BIA/OIS/Transportation/index.htm

DOT – Federal Transit Administration (FTA)

Program Name: Public Transportation on Indian Reservations Program Tribal Transit Program (TTP)

Purpose: Provide grants to Indian tribes for program activities eligible under FTA's Rural Areas Formula Program, 49 U.S.C. 5311.

Eligible Applicants: Federally recognized Indian Tribes and Alaskan Native villages, groups, or communities.

Funding Range: $25 million formula program and $5 million discretionary program. Discretionary funds are made available annually on a competitive basis.

Program Activities: Operating assistance to enable tribes to start new transit services; capital to enable tribal investment in new or replacement equipment; and funding for tribal transit planning studies. Examples of eligible resilience projects may include elevating or relocating transit assets that are located in a special flood hazard area, protecting transit assets vulnerable to high winds, installing mitigation measures that prevent the intrusion of floodwaters into underground segments of a public transportation system, strengthening systems that remove rainwater from public transportation facilities, and other projects that address identified vulnerabilities. However, relocating non-transit assets would not be considered an eligible resilience project.

Additional Information: http://www.fta.dot.gov/grants/15926_3553.html

Environmental Protection Agency (EPA)

Program Name: Alaska Native Village Grant

Purpose: To assist Alaska Native Villages and Alaska rural communities with the construction of new or improved drinking water and wastewater systems.

Eligible Applicants: The applicant must be an unincorporated community that has between 25 and 600 people; a second-class city (no population limits); or a first class city with not more than 600 residents.

Funding Range: Funding varies.

Program Activities: The program is planning, designing and constructing new and or improved water and wastewater infrastructure in various communities throughout the State of Alaska to improve the health and sanitation conditions in rural Alaska.

The ANV Program provides technical support to communities to design and construct water and wastewater systems. It is meant to assist Alaska Native Villages and Alaska rural communities with the construction of new or improved drinking water and wastewater systems. This funding can also be used to provide training and technical assistance in the operations and maintenance of these systems.

Additional Information: http://water.epa.gov/type/watersheds/wastewater/Alaska-Native-Village-and-Rural-Communities-Grant-Program.cfm

Program Name: Clean Water Act Indian Set-Aside Program

Purpose: Provides funding, 2% of the CWA SRF, for wastewater infrastructure to Indian tribes and Alaska Native Villages. The CWISA Program is administered in cooperation with the Indian Health Service (IHS). EPA uses the IHS Sanitation Deficiency System priority lists to identify and select projects for CWISA program funding. To be considered for CWISA Program funding, tribes must identify their wastewater needs to the IHS Sanitation Deficiency System.

Eligible Applicants: All federally recognized tribes, Alaska Native Villages, and tribes on former reservations in Oklahoma are eligible for CWISA Program funds.

Funding Range: Funding varies.

Program Activities: The program is planning, designing and constructing new and or improved wastewater infrastructure in various communities throughout the State of Alaska to improve the health and sanitation conditions in Alaska Native Villages. EPA issues all or the vast majority of funds to the Indian Health Service for Administration.

Additional Information: http://water.epa.gov/type/watersheds/wastewater/clean-water-indian-set-aside-grant-program.cfm

Program Name: Environmental Justice Collaborative Problem-Solving Cooperative Agreement Program

Purpose: Provides funding for eligible applicants for projects that address local environmental and public health issues within an affected community. The CPS Program is designed to help communities understand and address exposure to multiple environmental harms and risks.

Eligible Applicants: Nonprofit organizations including, but not limited to, environmental justice networks; Federally recognized tribal governments; or Tribal organizations (includes American Indian/Alaska Native groups, cooperatives, partnerships, associations).

Funding Range: Up to $120,000.

Program Activities: Funds enable community-based organizations to partner with stakeholders from across industry, government, academia to develop and implement solutions that will significantly address

environmental and/or public health issues at the local level. Projects must use the CPS Model, comprised of seven elements of a successful collaborative partnership, to address local environmental and/or public health issues.

Additional Information: http://www.epa.gov/environmentaljustice/grants/ej-cps-grants.html

Program Name: Environmental Justice Small Grants

Purpose: The purpose of this grant program is to support activities designed to empower and educate communities to understand environmental and public health issues and to identify ways to address these issues at the local level. EPA anticipates awarding up to 25% of fiscal year 2015 awards to fund projects that support community climate resiliency.

Eligible Applicants: Incorporated non-profit organizations including, but not limited to, environmental justice networks, faith based organizations and those affiliated with religious institutions; federally recognized tribal governments; or tribal organizations.

Funding Range: Varies (up to $30,000).

Program Activities: Supports and empowers communities working on solutions to local environmental and public health issues. The program assists recipients in building collaborative partnerships to help them understand and address environmental and public health concerns in their communities. Successful collaborative partnerships involve not only well-designed strategic plans to build, maintain, and sustain the partnerships, but also working towards addressing the local environmental and public health issues.

Additional Information: http://www.epa.gov/environmentaljustice/grants/ej-smgrants.html

Program Name: Indian General Assistance Program (IGAP)

Purpose: Provide General Assistance Program (GAP) grants to federally recognized tribes and tribal consortia for planning, developing, and establishing environmental protection programs. The GAP program is exempt from competition, therefore, applications that meet the stated requirements in program regulations and guidance will be funded if funds are available.

Eligible Applicants: All federally recognized tribes in Region 10 are eligible to receive funds. Tribal consortia that meet the eligibility requirements may also receive funding, if available.

Funding Range: Typically $75,000 - $125,000 per year per grantee in Alaska (special projects not included).

Program Activities: Funding is provided under GAP for the purposes of planning, developing, and establishing tribal environmental protection programs. For example a tribe could use GAP funds to develop a climate change adaptation plan or to establish environmental protection programs that compliment non-environmental protection programs.

Activities related to establishing education, outreach, public participation, compliance assistance, and coordination programs for tribal environmental staff to work effectively with regulated entities are allowable.

Specific examples of allowable activities: climate change vulnerability/risk assessment; climate change preparedness/adaptation program (e.g., zoning rules and regulations; tax incentives; building codes/design standards; utility rates/fee setting; public safety rules and regulations); outreach and education; emergency management powers; community outreach/education programs; developing voluntary or partial environmental protection programs; participating in environmental policy making; coordinating with EPA or other federal agencies on the implementation of federal environmental protection programs; and entering into joint environmental protection programs with neighboring tribal, state, or local environmental agencies.

Additional Information: http://yosemite.epa.gov/R10/TRIBAL.NSF/Grants/IGAP

Program Name: Office of Water Climate Ready Water Utilities Program (CRWU)

Purpose: Assists drinking water, wastewater, and stormwater utilities, in addressing climate change impacts. Through the development of practical and easy-to-use tools, EPA promotes a clear understanding of climate science and adaptation options by translating complex climate projections into accessible formats. This information helps utility owners and operators better prepare their systems for the impacts of climate change.

Eligible Applicants: All water utilities can ask for assistance.

Funding Range: No direct funding. This is a technical assistance program.

Program Activities: Extreme weather events, sea level rise, shifting precipitation patterns and temperature variability, all intensified by climate change, have significant implications for the sustainability of the water sector. By planning for, assessing and adapting to these challenges, the water sector can fulfill their public health and environmental missions and begin the process of becoming climate ready.

Additional Information: http://water.epa.gov/infrastructure/watersecurity/climate/index.cfm

Program Name: Safe Drinking Water Act (SDWA) Tribal Set-Aside Program

Purpose: Provides grants to Indian Tribes, Alaska Native Villages, and to the State of Alaska for the benefit of the native villages. The grant funds are used to address the most significant threats to public health associated with Public Water Systems that serve Indian Tribes. Most types of projects that improve the health of the public being served by the public water system are eligible for funding, 2% of the SDWA State Revolving Fund.

Eligible Applicants: Any federally recognized Indian tribe is eligible to receive a project grant through the program. Eligible systems must serve tribes or Alaskan Native Villages, though they can be owned by someone other than the tribe. Private systems are also eligible.

Funding Range: Funding varies.

Program Activities: The program is planning, designing and constructing new and or improved drinking water infrastructure in various communities throughout the State of Alaska to improve the health and sanitation conditions in Alaska Native Villages. Funds may also be used to conduct project feasibility studies, engineering design work, and for project administration. EPA issues all or the vast majority of funds to the Indian Health Service for Administration.

Additional Information: http://water.epa.gov/grants_funding/dwsrf/allotments/tribes.cfm

Department of Health and Human Services (HHS)

Program Name: Administration for Children and Families (ACF) / Administration for Native Americans (ANA) Environmental Regulatory Enhancement

Purpose: To provide funding for the costs of planning, developing, and implementing programs designed to improve the capability of tribal governing bodies to regulate environmental quality pursuant to federal and tribal environmental laws.

Eligible Applicants: Federally recognized Indian tribes; Consortia of Indian tribes; Incorporated non-federally recognized tribes; Incorporated state-recognized tribes; Alaska Native villages, as defined in the Alaska Native Claims Settlement Act (ANCSA) and/or non-profit village consortia; Non-profit Alaska Native Regional Corporation/Associations in Alaska with village specific projects; Other tribal or village organizations or consortia of Indian tribes; and Tribal governing bodies (IRA or traditional councils) as recognized by the Bureau of Indian Affairs.

Funding Range: $300,000 per Budget Period.

Program Activities: The ERE program supports the principle that projects must follow tribal cultural preservation and natural resource management priorities in order to achieve environmentally healthy, sustainable Native American and Alaska Native communities. The Administration for Native Americans (ANA) is therefore interested in supporting locally designed projects that strengthen tribal environmental regulatory programs in a manner consistent with the goals of native communities. Program areas of interest for this FOA include, but are not limited to, the following:

Providing training and education to employees responsible for enforcing, or monitoring compliance with, environmental quality laws; Developing laws, regulations, and ordinances to protect the environment; Enforcing and monitoring environmental quality laws, regulations, and ordinances; Establishing baseline condition for regulatory purposes; Informing the community about regulations and environmental

stewardship; Building the technical and program capability of the tribe or organization to perform essential environmental program functions to meet tribal and federal regulatory requirements; Establishing demonstration projects to exhibit technologies, which can lead to compliance with environmental regulations.

Additional Information: http://www.acf.hhs.gov/grants/open/foa/index.cfm?switch=foa&fon=HHS-2014-ACF-ANA-NR-0777

Program Name: Center for Disease Control (CDC) / National Center for Infectious Diseases (NCID) / Arctic Investigations Program (AIP)

Purpose: AIP's mission is the prevention of infectious diseases in people of the Arctic and sub-Arctic. AIP places a special emphasis on diseases of high incidence and concern among the Alaska Native and other northern indigenous peoples. AIP conducts infectious disease surveillance, evaluate prevention services, and conduct applied research in collaboration with our partners.

Eligible Applicants: N/A

Funding Range: Intramural.

Program Activities: AIP focuses its research on priority areas that are of regional importance. These priority areas include: Surveillance in Alaska; Elimination of health disparities; Emerging infectious diseases; Preparedness and response; Circumpolar health; Water and sanitation. Focusing on these priority areas allows AIP to achieve its mission of preventing infectious diseases in the Arctic and sub-Arctic. These research priorities also provide a platform for strong partnerships, which combine CDC subject-matter expertise with local knowledge and community involvement. By working together, AIP has become a national and international research leader.

Additional Information: http://www.cdc.gov/ncezid/dpei/aip/

Program Name: CDC – National Institute for Occupational Safety and Health (NIOSH) American Indian/Alaska Native Program

Purpose: Collaborate with American Indian and Alaska Native (AI/AN) communities, organizations and partners to provide occupational safety and health (OSH) support.

Eligible Applicants: Tribal representatives, tribal employers, or their designees in need of occupational safety and health support can contact CDC/NIOSH directly to access a variety of programs.

Funding Range: N/A

Program Activities: Addresses occupational safety and health in tribal communities. NIOSH provides technical expertise in OSH through field studies and investigations, conducts health hazard evaluations (HHEs) and fatality investigations, and provides resources on specific OSH topics. We can offer technical assistance (tribal representatives, tribal employers/employees, and their designees). These include Health Hazard Evaluations, Fatality Investigations, and safety program support.

Additional Information: http://www.cdc.gov/niosh/

Program Name: CDC –NIOSH Climate Change Initiative

Purpose: Ensure current, emerging, and anticipated worker safety and health issues associated with climate change are appropriately identified and prioritized, and to determine the most important actions that are appropriate for CDC/NIOSH to address. Can provide technical assistance regarding occupational safety and health issues.

Funding Range: No direct funding, no cost for technical assistance.

Program Activities: Promote and coordinate intramural and extramural research, support and help facilitate other CDC/NIOSH initiatives with climate change implications, establish research priorities, recommend appropriate policies to CDC/NIOSH Leadership, interact with other agencies and organizations involved with climate change and participate on standard setting or technology development committees and work groups; Prepare and publish communication products regarding worker safety and health and climate change; Coordinate the provision of occupational safety and health related technical assistance to communities affected by climate change.

Additional Information: http://www.cdc.gov/niosh/topics/climate/default.html

Program Name: National Institute of Health (NIH) / National Institute of Environmental Health Sciences (NIEHS) Alaska Community Action on Toxics - Protecting the Health of Future Generations: Assessing and Preventing Exposures

Purpose: This community-based participatory research project investigates exposures to two classes of emerging endocrine-disrupting chemicals (EDCs) with the Yupik people of St. Lawrence Island (SLI) in the *Alaskan* Arctic. Exposure to POPs from both distant and local sources is a trend in the Arctic that is likely to increase due to increased global use and production of EDCs and climate warming. The aim of this exposure assessment is to provide information, ownership of data, and training for the people of SLI so that they can plan and participate in public health actions to reduce environmental health risks.

Eligible Applicants: Yupik people of St. Lawrence Island (SLI) in the Alaskan Arctic.

Funding Range: N/A

Program Activities: The purpose of this project is to initiate research partnerships that work in collaboration with the two Yupik villages of SLI to assess multiple exposure routes of two emerging EDCs-polybrominated diphenyl ethers (PBDEs) and perfluorinated compounds (PFCs). The project will assess exposures to PBDEs and PFCs in surface waters through analyses of contaminant levels and biomarkers for xenobiotic chemicals in the threespine stickleback fish. The research team will also analyze household dust for PBDEs and PFCs. Because the Yupik people of SLI depend on the harvest of wild foods to sustain them and their way of life, the research team will analyze levels of PBDEs and PFCs in traditional foods which are likely a major exposure pathway due to the biomagnification of POPs in marine mammals and fish that are critical components of the Yupik diet. This study will include a human

biomonitoring component in order to assess levels of PBDEs and PFCs in human blood serum in relation to measures of thyroid health.

Finally, the research team collaborates with the leadership, elders, and youth of SLI to develop measures to prevent and mitigate environmental exposures through community educational programs and public policy actions, including community-based research institutes for college credit, health fairs for all community members, and workshops for health care providers.

Additional Information:
http://tools.niehs.nih.gov/portfolio/index.cfm/portfolio/grantDetail/grant_number/R01ES019620

Program Name: NIH / NIEHS Research to Action

Purpose: Bring together community members and environmental and occupational health researchers to investigate the potential health risks of environmental and occupational exposures that are of concern to the community. The overall goal is to support changes to prevent or reduce exposure to harmful environmental exposures and improve the health of a community.

Eligible Applicants: All projects must include at least one research scientist in environmental or occupational health sciences in addition to at least one member of a community-based organization (CBO) who works directly and regularly with the affected community. The partnership between the research scientist and CBO should be equitable and draw upon the unique strengths that each brings to the partnership. Alaska Native and Native Hawaiian Serving Institutions encouraged to apply.

Funding Range: Direct costs must be less than $500,000 in any year, and need to reflect actual needs of the proposed project. The maximum period is 5 years.

Program Activities: Data collection, translation of research into public health action, and project evaluation are all required. Information collected will be translated into public health action using a variety of strategies; applicants must develop an education, outreach, prevention or intervention program(s) designed to improve overall understanding of the problem amongst community members, healthcare professionals or policymakers and to promote actions that will prevent or reduce harmful environmental / occupational exposures and improve human health. Finally, applicants must implement an evaluation plan to assess project outputs and impacts relevant to the proposed project's goals and objectives.

Additional Information:
http://www.niehs.nih.gov/research/supported/dert/programs/peph/prog/rta/index.cfm

Program Name: NIH/NIEHS The Center for Indigenous Environmental Health Research

Purpose: Partner with American Indian and Alaskan Native communities to build capacity to evaluate environmental health exposures, increase environmental health literacy and resilience, and inform program and policy development. The Center's Community Engagement Core will collaborate with

American Indian and Alaska Native (AI/AN) communities to develop culturally-relevant policies and assets-based programs that reinforce resilience to mitigate adverse health effects.

Eligible Applicants: N/A

Funding Range: N/A

Program Activities: The specific aims of the CEC are: 1) Dialogue: To equitably engage AI/AN stakeholders and CIEHR members for the ethical and culturally-appropriate translation and application of Center findings; 2) Knowledge: To strengthen the environmental health literacy (EHL) of AI/AN leaders, policy-makers and community members; 3) Action: To strengthen community resilience and capacity to promote environmental health in AI/AN communities on tribal lands and in urban settings; and 4) Evaluation: To assess the effectiveness of the CEC activities and contributions to the mission of the Center. The CEC will achieve the aims by utilizing long-term partnerships with tribal, rural, and urban AI/AN communities. The CEC will also build on the knowledge, lessons learned, strategies, and resources from the two established Centers located at the same institution: the Southwest Environmental Health Sciences Center and Center for American Indian Resilience. All CEC strategies and activities will be informed by community-based participatory research (CBPR) principles, which have been shown to be effective in AI/AN communities. Major strategies will include: 1) guiding the development of Community Advisory Boards (CABs) for each proposed research project and pilot projects; 2) giving presentations at tribal meetings, AI/AN health events, regional forums and national conferences; 3) conducting baseline assessments of EHL, implementing EHL community interventions and testing effectiveness; 4) developing and administering CBPR training to tribal leaders, community members, and researchers; 5) identifying and implementing strategies for enhancing community assets and resilience that improve health, build community capacity, and foster policy change; and 6) conducting short, mid, and long-term evaluation of CEC activities. The CEC will collaborate with the CABs and AI/AN partners to disseminate and translate successful research outcomes to tribal leadership, local communities, regional and national AI/AN forums, and scientific audiences to reduce environmental health risks and build AI/AN resilience across the U.S.

Additional Information:
http://projectreporter.nih.gov/project_info_description.cfm?aid=8994391&icde=25964664&ddparam=&ddvalue=&ddsub=&cr=3&csb=default&cs=ASC

Department of Housing and Urban Development (HUD)

Program Name: Community Development Block Grant

Purpose: To provide funding to metropolitan cities, urban counties and states to support their housing and community development strategies to develop viable urban communities.

Eligible Applicants: Funds are allocated by formula to metropolitan cities, urban counties and States.

Funding Range: Annual formula grants are provided to Alaska's two CDBG grantees – the State of Alaska and the Municipality of Anchorage.

Program Activities: Develop viable urban communities by providing decent housing and a suitable living environment, and by expanding economic opportunities, principally for low-and moderate-income persons.

Additional Information:
http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment

Program Name: Emergency Solutions Grants Program

Purpose: To provide grant funds to State and local governments for the rehabilitation or conversion of buildings for use as emergency shelter for the homeless, for the payment of certain expenses related to operating emergency shelters, for essential services related to emergency shelters and street outreach for the homeless, and for homelessness prevention and rapid rehousing.

Eligible Applicants: The homeless, homelessness prevention and rapid re-housing.

Funding Range: Annual formula grants for the State of Alaska and the Municipality of Anchorage.

Program Activities: Rehabilitation or conversion of buildings for use as emergency shelter for the homeless, for the payment of certain expenses related to operating emergency shelters, for essential services related to emergency shelters and street outreach for the homeless, and for homelessness prevention and rapid re-housing.

Additional Information: portal.hud.gov/hudportal/HUD?src=/hudprograms/esg

Program Name: Indian Community Development Block Grant

Purpose: Development of viable Indian and Alaska native communities, including decent housing, a suitable living environment, and economic opportunities, principally for persons of low and moderate income.

Eligible Applicants: Federally-recognized Tribes or Indian Organizations on behalf of Federally-recognized Tribes. For the standard ICDBG program, applicant must submit an application under the annual Notice of Funding Availability (NOFA). Applications for imminent threat grants are processed on a first come, first serve basis.

Funding Range: The Alaska Office of Native American Programs has an estimated ICDBG allocation for FY2015 of $6,500,000 for grant awards. The ICDBG program also has a national set-aside of approximately $3,500,000 to fund Imminent Threat applications.

Program Activities: The competitive ICDBG program may be used for new construction, rehabilitation, and acquisition of residential units and public facilities as well as housing services, economic development projects. There is also a national set-aside for ICDBG Imminent Threat (IT) grants that are intended to alleviate or remove threats to health or safety as described at 24 CFR Part 1003, subpart E.

These grants provide a solution to problems of an urgent nature that were not evident at the time of the ICDBG Single Purpose funding grant cycle or require immediate action. These are non-competitive grants up to $450,000 ($900,000 for Presidentially-Declared Disasters) on a first come first serve basis. 70 percent of each grant must support activities that benefit low and moderate income persons.

Additional Information:
http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/ih/codetalk/fundingprogram#IHBG

Program Name: Mortgage Insurance for Disaster Victims – 203(h)

Purpose: This program provides mortgage insurance to protect lenders against the risk of default on mortgages to qualified disaster victims.

Eligible Applicants: Eligible customers are anyone whose home has been destroyed or severely damaged in a Presidential declared disaster area.

Funding Range: No down payment is required. The borrower is eligible for 100 percent financing. Closing costs and applicable fees must be paid according to program requirements.

Program Activities: Insure mortgages.

Additional Information: portal.hud.gov/hudportal/HUD?src=/hudprograms/mifdv_section203h

Program Name: Native American Housing and Self-Determination Act (NAHASDA) - Indian Housing Block Grant Program

Purpose: Supports a range of affordable housing activities on Indian reservations and Indian areas.

Eligible Applicants: Federally-recognized Tribes and their Tribally Designated Housing Entities are eligible to participate in this program.

Funding Range: Annual formula block grant to Indian Tribes and/or TDHEs. Alaska recipients received $94,588,589 State-wide in FY 2015 for the Indian Housing Block Grant program.

Program Activities: IHBG funding can be used for a variety of activities including new construction, rehabilitation, acquisition, housing services, and crime prevention. The Title VI loan guarantee program can be used to leverage all the above activities with a private market loan.

Additional Information:
http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/ih/codetalk/fundingprogram#IHBG

Program Name: Section 184 Loan Guarantee Program

Purpose: Provides homeownership opportunities to Native American living on trust, restricted, and simple fee land.

Eligible Applicants: Native Americans, Tribes, or Tribally Designated Housing Entities.

Funding Range: Varies.

Program Activities: This program offers HUD approved loan guarantees to private sector lenders who make home mortgage loans to eligible participants.

Additional Information:
http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/ih/codetalk/fundingprogram#IHBG

Program Name: Title VI Loan Guarantee Program

Purpose: To obtain financing for up to five times the amount of the Tribe's annual NAHASDA IHBG.

Eligible Applicants: Federally Recognized Tribes and their Tribally Designated Housing Entities are eligible to participate in this program.

Funding Range: Varies.

Program Activities: Financing can be used for any affordable housing purpose in accordance with an approved Indian Housing Plan.

Additional Information:
http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/ih/codetalk/fundingprogram#IHBG

US Amy Corps of Engineers (USACE)

Program Name: Continuing Authorities Program (CAP)

Purpose: Plan, design, and construct certain flood risk management and navigation improvements without specific congressional authorization. The basic objective of this program is to allow the Corps to respond more quickly to problems or needs where the apparent project scope and costs are small.

Eligible Applicants: State, Local, and Tribal Governments and ANCSA Corporations.

Funding Range: The amount of Federal participation is limited by Congress, and varies for each individual authority, however it is typically $5 million Federal, cost shared 65% Federal, 35% Non-Federal.

Program Activities: Several authorities exist under CAP which allow the Corps to assist communities with aquatic ecosystem, flood damage reduction, small navigation, and emergency streambank and shoreline protection projects. An example of the type of work supported by this program is the construction of a small revetment at Shishmaref to reduce risks of coastal erosion.

Additional Information:
http://planning.usace.army.mil/toolbox/agree.cfm?Id=229&Option=Continuing%20Authorities%20Program%20(CAP)&List=Process

Program Name: International and Interagency Support Services

Purpose: Planning, design, and/or construction for others.

Eligible Applicants: Federal State, Local, and Tribal Governments.

Funding Range: No per-project limit, all costs are born by the supported entity.

Program Activities: Interagency and International Services (IIS) is the U.S. Army Corps of Engineers (Corps) program providing technical assistance to non-Department of Defense (DoD) federal agencies, state and local governments, tribal nations, private U.S. firms, international organizations, and foreign governments. Most IIS work is funded on a reimbursable basis. The Corps provides engineering and construction services, environmental restoration and management services, research and development assistance, management of water and land related natural resources, relief and recovery work, and other management and technical services. An example of the type of work provided by this 100% stakeholder-funded program is the initiation of an adaptation study for Denali Commission looking at protect in place versus relocation for 31 communities identified by the GAO.

Additional Information:
http://www.usace.army.mil/Missions/MilitaryMissions/InteragencyInternationalSupport.aspx

Program Name: Planning Assistance to States

Purpose: This program permits the Corps to use its technical planning expertise to supplement and support state and Indian tribe efforts to undertake broad, statewide, comprehensive water resources planning. Upon request, the Corps will cooperate with a state or tribe in the preparation of plans for the development, use and conservation of water and related land resources located within the state or tribal boundaries.

Eligible Applicants: State, Local, and Tribal Governments and ANCSA Corporations.

Funding Range: Cost shared at 50 percent federal, 50 percent non-federal. Limited to $2 million per state or tribe annually. Individual studies generally range from $25,000 to $100,000.

Program Activities: Provides assistance to states, local governments, tribes and other non-federal entities for preparation of comprehensive plans for development and conservation of water and related land

resources. Studies are planning level of detail; they do not include detailed design for project construction.

Additional Information:
http://www.poa.usace.army.mil/Portals/34/docs/civilworks/CAP/Section22PlanningAssistancetoStatesandTribes.pdf (note: each Corps District has information about this program on their website).

Program Name: Tribal Partnership Program

Purpose: Secretary of the Army, in cooperation with Indian tribes and the heads of other Federal agencies, to study and determine the feasibility of carrying out projects that will substantially benefit Indian tribes.

Eligible Applicants: Tribal Governments and ANCSA Corporations.

Funding Range: No per-project limit, cost shared based on project purpose.

Program Activities: The U.S. Army Corps of Engineers can conduct studies that will substantially benefit Indian tribes. Topics that could be studied include flood damage reduction, environmental restoration and protection, preservation of natural and cultural resources, and, other projects the Secretary of the Army, in cooperation with Indian tribes and the heads of other Federal agencies, determines to be appropriate. This program provides an opportunity to assist with water resources projects that address economic, environmental and cultural resources needs.

Additional Information: http://www.usace.army.mil/Missions/CivilWorks/TribalNations.aspx

US Department of Agriculture (USDA)

Program Name: Business and Industry Loan Guarantee

Purpose: Can assist rural business with construction, repairs, equipment, machinery, inventory and supplies.

Eligible Applicants: For-profit businesses, Nonprofits and cooperatives, Federally-recognized Tribes, Public bodies and Individuals in rural areas of 50,000 people or less.

Funding Range: $5 – $10 million loan limit with certain exceptions.

Program Activities: Eligible activities include but are not limited to: (1) business conversion, enlargement, repair, modernization, or development; (2) purchase and development of land, easements, rights-of-way, buildings, or facilities; (3) purchase of equipment, leasehold improvements, machinery, supplies, or inventory; (4) debt refinancing when new jobs will be created and other conditions are met;

(5) business and industrial acquisitions when the loan will keep the business from closing and/or save or create jobs.

Additional Information: http://www.rd.usda.gov/programs-services/business-industry-loan-guarantees/ak

Program Name: Community Facilities Loans and Grants

Purpose: Finance essential rural community facilities.

Eligible Applicants: Public bodies, non-profits, Tribes.

Funding Range: Grants are limited to 75% of project cost but average about $30,000 due to limitation of funding. No loan limit.

Program Activities: Funds can be used to purchase, construct, and / or improve essential community facilities, purchase equipment and pay related project expenses.

Additional Information: http://www.rd.usda.gov/programs-services/community-facilities-direct-loan-grant-program/ak

Program Name: Electric Loans

Purpose: Build and repair electric infrastructure.

Eligible Applicants: Electric co-ops and other utilities (primarily).

Funding Range: No loan limit.

Program Activities: Funds may be used to finance electric infrastructure for: maintenance; upgrades; expansion; replacement of distribution, sub transmission and headquarters (service and warehouse) facilities; energy efficiency; and renewable energy systems.

Additional Information: http://www.rd.usda.gov/programs-services/electric-infrastructure-loan-loan-guarantee-program

Program Name: Rural Business Development Grant

Purpose: Facilitate the development of small and emerging business.

Eligible Applicants: Public bodies, non-profits and tribes.

Funding Range: $50,000 - 100,000 maximum grant (depending on activity type).

Program Activities: Congress historically has mandated a portion of this program's funding specifically for Federally Recognized Tribes.

Additional Information: http://www.rd.usda.gov/programs-services/rural-business-development-grants/ak

Program Name: Rural Energy for America Loans and Grants

Purpose: Purchase or install renewable energy systems or make energy efficiency improvements.

Eligible Applicants: Agricultural producers and rural small businesses.

Funding Range: Loan guarantees to $25M; Grants to $250,000 for energy efficiency improvements or $500,000 for renewable energy systems.

Program Activities: Funds may be used for the purchase, installation and construction of renewable energy systems, such as: Biomass (for example biodiesel and ethanol, anaerobic digesters, and solid fuels); Geothermal for electric generation or direct use; Hydropower below 30 megawatts; Hydrogen; Small and large wind generation; Small and large solar generation; Ocean (tidal, current, thermal) generation.

Funds may also be used for the purchase, installation and construction of energy efficiency improvements, such as: High efficiency heating, ventilation and air conditioning systems (HVAC); Insulation; Lighting; Cooling or refrigeration units; Doors and windows; Electric, solar or gravity pumps for sprinkler pivots; Switching from a diesel to electric irrigation motor; Replacement of energy-inefficient equipment.

Additional Information: http://www.rd.usda.gov/programs-services/rural-energy-america-program-renewable-energy-systems-energy-efficiency/ak

Program Name: Sewer, Water, Solid Waste Loans and Grants

Purpose: Provides funding for clean and reliable drinking water systems, sanitary sewage disposal, sanitary solid waste disposal, and storm water drainage to households and businesses in eligible rural areas.

Eligible Applicants: This program assists qualified applicants that are not otherwise able to obtain commercial credit on reasonable terms. Eligible applicants include: Most State and local governmental entities, Private non-profits and Federally-recognized Tribes.

Funding Range: Grants are limited to 75% of project cost. No loan limit.

Program Activities: Funds may be used to finance the acquisition, construction or improvement of: drinking water sourcing, treatment, storage and distribution; sewer collection, transmission, treatment and disposal; solid waste collection, disposal and closure; and storm water collection, transmission and disposal.

Additional Information: http://www.rd.usda.gov/programs-services/water-waste-disposal-loan-grant-program/ak

Program Name: Single Family Direct and Guaranteed Loans

Purpose: Finance the purchase of homes for rural residents.

Eligible Applicants: Low and very low income individuals in rural areas of 35,000 people or less.

Funding Range: The maximum loan amount an applicant may qualify for will depend on the applicant's repayment ability. The applicant's ability to repay a loan considers various factors such as income, debts, assets and the amount of payment assistance applicants may be eligible to receive. Regardless of repayment ability, applicants may never borrow more than the Area's Loan Limits (plus certain costs allowed to be financed) for the county in which the property is located.

Program Activities: Funds can be used to build, repair, renovate or relocate a home, or to purchase and prepare sites, including providing water and sewage facilities.

Additional Information:
Single Family Direct Loan: http://www.rd.usda.gov/programs-services/single-family-housing-direct-home-loans/ak
Single Family Guaranteed Loan: http://www.rd.usda.gov/programs-services/single-family-housing-guaranteed-loan-program/ak

Program Name: Single Family Repair Loans and Grants

Purpose: Finance repair of homes.

Eligible Applicants: Very low income homeowners in rural areas. Grants are only available to very-low income homeowners in rural areas that are at least 62 years old.

Funding Range: Loans up to $20,000 at 1%, grants up to $7,500. Loan grant combinations up to $27,500 in certain circumstances.

Program Activities: Loans may be used to repair, improve or modernize homes or remove health and safety hazards. Grants must be used to remove health and safety hazards.

Additional Information: http://www.rd.usda.gov/programs-services/single-family-housing-repair-loans-grants

Program Name: Telecom Loans

Purpose: This program provides financing for the construction, maintenance, improvement and expansion of telephone service and broadband in rural areas.

Eligible Applicants: Most entities that provide telecommunications in qualified rural areas including: State and local governmental entities, Federally Recognized Tribes, Non-profits, including Cooperatives and limited dividend or mutual association and For-profit businesses (must be a corporation or limited liability company).

Funding Range: No loan limit.

Program Activities: Funds may be used to finance broadband capable telecommunications service: Improvements; Expansions; Construction; Acquisitions (in certain cases); Refinancing (in certain cases).

Additional Information: http://www.rd.usda.gov/programs-services/telecommunications-infrastructure-loans-loan-guarantees

APPENDIX E

Mitigation Tracking

- Mitigation Action Implementation Worksheet (Form 6-1)
- Mitigation Action Progress Report (Form 6-2)

MITIGATION ACTION IMPLEMENTATION WORKSHEET

Complete a mitigation action implementation worksheet for each identified mitigation action.

Mitigation Action / Project Title:	
Background / Issues:	
Ideas for Integration:	
Responsible Agency:	
Partners:	
Potential Funding:	
Cost Estimate:	
Benefits (Losses Avoided):	
Timeline:	
Priority:	
Worksheet Completed By:	*(Name / Department)*

MITIGATION ACTION PROGRESS REPORT

Progress Report Period:	*From Date:*	*To Date:*
Action / Project Title:		
Responsible Agency:		
Contact Name:		
Contact Phone / Email:	*Phone:*	*Email:*
Project Status:	❑ Project Completed ❑ Project Canceled ❑ Project on Schedule Anticipated completion date: _____ ❑ Project Delayed Explain:_____	

Summary of Project Progress for this Report Period

1. What was accomplished for this project during this reporting period?

2. What obstacles, problems, or delays did the project encounter, if any?

3. If uncompleted, is the project still relevant? Should the project be changed or revised?

4. Other Comments:

Next Step: What is / are the next step(s) to be accomplished over the next reporting period?

APPENDIX F

Adoption Resolution

Traditional Council of Togiak

Resolution No. _____
Tribal Hazard Mitigation Plan Adoption Resolution

WHEREAS, the Traditional Village of Togiak hereafter "Tribe" is a federally recognized tribe; and

WHEREAS, the Traditional Council of Togaik is the governing body of the Tribe; and

WHEREAS, the Tribe recognizes the threat that natural hazards pose to people and property; and

WHEREAS, the Tribe has prepared a tribal hazard mitigation plan, hereby known as Traditional Village of Togiak Tribal Hazard Mitigation Plan [2019 – 2024] hereafter "Plan", dated [DATE] in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, the Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Togiak from the impacts of future hazards and disasters; and

WHEREAS adoption by the Tribe demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the Plan.

NOW, THEREFORE, BE IT RESOLVED, that the Tribe, hereby adopts the Plan as an official plan.

CERTIFICATION

The Traditional Council of Togiak has adopted this resolution during a meeting held on _____, 2019, in _____, Alaska, with a quorum present.

For ____ Against ____ Abstain ____ Present____ Absent ____

_____ _____
Signature Date

_____
Print Name / Title

_____ _____
Signature Date

_____
Print Name / Title

APPENDIX G

FEMA Approval & THMP Plan Review Tool

FEMA Region 10 Tribal Mitigation Plan Review Tool

The *Tribal Mitigation Plan Review Tool* records how the tribal mitigation plan meets the regulations in 44 CFR §§ 201.7 and 201.5 (if applicable) and offers FEMA plan reviewers an opportunity to provide feedback to the tribal government.

- **Section 1**: The Regulation Checklist documents FEMA's evaluation of whether the plan has addressed all requirements. If plan requirements are not met, FEMA uses each Required Revisions section to indicate necessary changes.
- **Section 2**: The Strengths and Opportunities for Improvement summary identifies plan's strengths as well as areas for improvement as part of the next plan update.

The FEMA mitigation planner must reference the *Tribal Mitigation Plan Review Guide* when completing the *Tribal Mitigation Plan Review Tool*.

<table>
<tr><td>Tribal Jurisdiction:

Traditional Village of Togiak</td><td colspan="2">Title of Plan:
Traditional Village of Togiak
Hazard Mitigation Plan
[2019 – 2024]</td><td>Date of Plan:

August 2019</td></tr>
<tr><td colspan="2">Tribal Point of Contact:
Brice Enyngowuk</td><td colspan="2" rowspan="3">Address:
Traditional Council of Togiak
PO Box 310
Togiak, AK 99678</td></tr>
<tr><td colspan="2">Title:
Administrator</td></tr>
<tr><td colspan="2">Agency:
Traditional Council of Togiak</td></tr>
<tr><td colspan="2">Phone Number:
907-493-5003</td><td colspan="2">Email:
togiakadmin@bbna.com</td></tr>
</table>

State Reviewer (if applicable):	**Title:**	**Date:**

FEMA Reviewer:	**Title:**	**Date:**
Date Received in FEMA Region 10		
Plan Not Approved		
Plan Approvable Pending Adoption		
Plan Approved		

Section 1: REGULATION CHECKLIST

1. Standard Regulation Checklist **Regulation** (44 CFR § 201.7 Tribal Mitigation Plans)	**Location in Plan (section and/or page number)**	**Met**	**Not Met**
ELEMENT A. PLANNING PROCESS			
A1. Does the plan document the planning process, including how it was prepared and who was involved in the process? [44 CFR § 201.7(c)(1)]	Section 3.1 – 3.2		
A2. Does the plan document an opportunity for public comment during the drafting stage and prior to plan approval, including a description of how the tribal government defined "public"? [44 CFR § 201.7(c)(1)(i)]	Section 3.3		
A3. Does the plan document, as appropriate, an opportunity for neighboring communities, tribal and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? [44 CFR § 201.7(c)(1)(ii)]	Section 3.3.1		
A4. Does the plan describe the review and incorporation of existing plans, studies, and reports? [44 CFR § 201.7(c)(1)(iii)]	Section 3.4		
A5. Does the plan include a discussion on how the planning process was integrated to the extent possible with other ongoing tribal planning efforts as well as other FEMA programs and initiatives? [44 CFR § 201.7(c)(1)(iv)]	Section 3.5		
A6. Does the plan include a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within the plan update cycle)? [44 CFR § 201.7(c)(4)(i)]	Section 4.0 – 4.3		
A7. Does the plan include a discussion of how the tribal government will continue public participation in the plan maintenance process? [44 CFR § 201.7(c)(4)(iv)]	Section 4.1		
ELEMENT A: REQUIRED REVISIONS			
ELEMENT B. HAZARD IDENTIFICATION AND RISK ASSESSMENT			
B1. Does the plan include a description of the type, location, and extent of all natural hazards that can affect the tribal planning area? [44 CFR § 201.7(c)(2)(i)]	Section 5.1		
B2. Does the plan include information on previous occurrences of hazard events and on the probability of future hazard events for the tribal planning area? [44 CFR § 201.7(c)(2)(i)]	Section 5.1		

1. Standard Regulation Checklist **Regulation** (44 CFR § 201.7 Tribal Mitigation Plans)	Location in Plan (section and/or page number)	Met	Not Met
B3. Does the plan include a description of each identified hazard's impact as well as an overall summary of the vulnerability of the tribal planning area? [44 CFR § 201.7(c)(2)(ii)]	Section 5.4		
ELEMENT B: REQUIRED REVISIONS			
ELEMENT C. MITIGATION STRATEGY			
C1. Does the plan include a discussion of the tribal government's pre- and post-disaster hazard management policies, programs, and capabilities to mitigate the hazards in the area, including an evaluation of tribal laws and regulations related to hazard mitigation as well as to development in hazard-prone areas? [44 CFR §§ 201.7(c)(3) and 201.7(c)(3)(iv)]	Section 6.1		
C2. Does the plan include a discussion of tribal funding sources for hazard mitigation projects and identify current and potential sources of Federal, tribal, or private funding to implement mitigation activities? [44 CFR §§ 201.7(c)(3)(iv) and 201.7(c)(3)(v)]	Section 6.2		
C3. Does the Mitigation Strategy include goals to reduce or avoid long-term vulnerabilities to the identified hazards? [44 CFR § 201.7(c)(3)(i)]	Section 6.3		
C4. Does the plan identify and analyze a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with emphasis on new and existing buildings and infrastructure? [44 CFR § 201.7(c)(3)(ii)]	Section 6.4		
C5. Does the plan contain an action plan that describes how the actions identified will be prioritized, implemented, and administered by the tribal government? [44 CFR § 201.7(c)(3)(iii)]	Section 6.5		
C6. Does the plan describe a process by which the tribal government will incorporate the requirements of the mitigation plan into other planning mechanisms, when appropriate? [44 CFR § 201.7(c)(4)(iii)]	Section 6.6		
C7. Does the plan describe a system for reviewing progress on achieving goals as well as activities and projects identified in the mitigation strategy, including monitoring implementation of mitigation measures and project closeouts? [44 CFR §§ 201.7(c)(4)(ii) and 201.7(c)(4)(v)]	Section 6.7		
ELEMENT C: REQUIRED REVISIONS			

1. Standard Regulation Checklist **Regulation** (44 CFR § 201.7 Tribal Mitigation Plans)	**Location in Plan (section and/or page number)**	**Met**	**Not Met**
ELEMENT D. PLAN UPDATES			
D1. Was the plan revised to reflect changes in development? [44 CFR § 201.7(d)(3)]	N/A		
D2. Was the plan revised to reflect progress in tribal mitigation efforts? [44 CFR §§ 201.7(d)(3) and 201.7(c)(4)(iii)]	N/A		
D3. Was the plan revised to reflect changes in priorities? [44 CFR § 201.7(d)(3)]	N/A		
ELEMENT D: REQUIRED REVISIONS			
ELEMENT E. ASSURANCES AND PLAN ADOPTION			
E1. Does the plan include assurances that the tribal government will comply with all applicable Federal statutes and regulations in effect with respect to the periods for which it receives grant funding, including 2 CFR Parts 200 and 3002, and will amend its plan whenever necessary to reflect changes in tribal or Federal laws and statutes? [44 CFR § 201.7(c)(6)]	Section 7.0		
E2. Does the plan include documentation that it has been formally adopted by the governing body of the tribal government requesting approval? [44 CFR § 201.7(c)(5)]	Section 7.0		
ELEMENT E: REQUIRED REVISIONS			

2. Enhanced Regulation Checklist **Regulation** (44 CFR § 201.5 Enhanced Tribal Mitigation Plans)	**Location in Plan (section and/or page number)**	**Met**	**Not Met**
ENHANCED ELEMENT F. STANDARD PLAN REQUIREMENTS			
F1. Does the enhanced plan include all elements of the standard tribal mitigation plan? [44 CFR §§ 201.3(e)(3), 201.5(b), and 201.7]	N/A		
ENHANCED ELEMENT F: REQUIRED REVISIONS			
ENHANCED ELEMENT G. INTEGRATED PLANNING			
G1. Does the enhanced plan demonstrate integration to the extent practicable with other tribal and/or regional planning initiatives and FEMA mitigation programs and initiatives? [44 CFR §§ 201.3(e)(3) and 201.5(b)(1)]	N/A		
ENHANCED ELEMENT G: REQUIRED REVISIONS			
ENHANCED ELEMENT H. TRIBAL MITIGATION CAPABILITIES			
H1. Does the tribal government demonstrate commitment to a comprehensive mitigation program? [44 CFR §§ 201.3(e)(3) and 201.5(b)(4)]	N/A		
H2. Does the enhanced plan document capability to implement mitigation actions? [44 CFR §§ 201.3(e)(3), 201.5(b)(2)(i), 201.5(b)(2)(ii), and 201.5(b)(2)(iv)]	N/A		
H3. Is the tribal government using existing mitigation programs to achieve mitigation goals? [44 CFR §§ 201.3(e)(3), 201.5(a) and 201.5(b)(3)]	N/A		
ENHANCED ELEMENT H: REQUIRED REVISIONS			

2. Enhanced Regulation Checklist **Regulation** (44 CFR § 201.5 Enhanced Tribal Mitigation Plans)	**Location in Plan (section and/or page number)**	**Met**	**Not Met**
ENHANCED ELEMENT I. HMA GRANTS MANAGEMENT PERFORMANCE			
I1. With regard to HMA, is the tribal government maintaining the capability to meet application timeframes and submitting complete project applications? [44 CFR §§ 201.3(e)(3), 201.5(b)(2)(iii)(A)]	N/A		
I2. With regard to HMA, is the tribal government maintaining the capability to prepare and submit accurate environmental reviews and benefit-cost analyses? [44 CFR §§ 201.3(e)(3) and 201.5(b)(2)(iii)(B)]	N/A		
I3. With regard to HMA, is the tribal government maintaining the capability to submit complete and accurate quarterly progress and financial reports on time? [44 CFR §§ 201.3(e)(3) and 201.5(b)(2)(iii)(C)]	N/A		
I4. With regard to HMA, is the tribal government maintaining the capability to complete HMA projects within established performance periods, including financial reconciliation? [44 CFR §§ 201.3(e)(3) and 201.5(b)(2)(iii)(D)]	N/A		
ENHANCED ELEMENT I: REQUIRED REVISIONS			

Section 2: STRENGTHS AND OPPORTUNITIES FOR IMPROVEMENT

INSTRUCTIONS: The purpose of the ***Strengths and Opportunities for Improvement*** section is for FEMA to provide more comprehensive feedback on the tribal mitigation plan to help the tribal government advance mitigation planning. The intended audience is the tribal staff responsible for the mitigation plan update. FEMA will address the following topics:

1. Plan strengths, including specific sections in the plan that are above and beyond the minimum requirements; and
2. Suggestions for future improvements.

FEMA will provide feedback and include examples of best practices, when possible, as part of the *Tribal Mitigation Plan Review Tool,* or, if necessary, as a separate document. The tribal mitigation plan elements are included below in italics for reference. FEMA is not required to provide feedback for each element.

Required revisions from the **Regulation Checklist** are not documented in the **Strengths and Opportunities for Improvement** section. Results from the **Strengths and Opportunities for Improvement** section are not required for Plan Approval.

Describe the mitigation plan strengths areas for future improvements, including areas that may exceed minimum requirements.

- Planning process
- *Hazard identification and risk assessment*
- *Mitigation strategy (including Mitigation Capabilities)*
- *Plan updates*
- *Adoption and assurances*
- *Enhanced Plan - Integrated planning*
- *Enhanced Plan - Tribal government mitigation capabilities (commitment to a comprehensive mitigation program)*
- *Enhanced Plan - HMA grants management performance*