

NATIVE VILLAGE OF PORT HEIDEN TRIBAL TRANSPORTATION SAFETY PLAN

MARCH 2017



PREPARED FOR
The Native Village of Port Heiden

PREPARED BY
Bristol Engineering Services Corporation

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ABBREVIATIONS

°F	Degrees Fahrenheit
in.	inches
ATV	all-terrain vehicle
AURORA	Alaska Uniform Response Online Reporting Access
BIA	Bureau of Indian Affairs
CDC	Center for Disease Control
DMV	Department of Motor Vehicles
DOT	Department of Transportation
EMS	Emergency Medical Services
EMT	Emergency Medical Technician
FHWA	Federal Highway Administration
GCI	General Communication Incorporated
HAZWOPER	Hazardous Waste Operations and Emergency Response Standard
OSHA	Occupational Safety and Health Administration
NR	no response
NVOPH	Native Village of Port Heiden
TTSP	Tribal Transportation Safety Plan
VPSO	Village Public Safety Officer

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1 INTRODUCTION

In August 2016, the Native Village of Port Heiden (Tribe or NVOPH) contracted with Bristol Engineering Services Corporation (Bristol) to develop this strategic Tribal Transportation Safety Plan (TTSP). The TTSP meets United States Department of Transportation (US DOT) Federal Highway Administration (FHWA) standards, and was outlined in reference to the FHWA manual titled “Developing Safety Plans, A Manual for Local Rural Road Owners.” The Tribe plans to apply for funding through this source for safety improvement projects in subsequent years.

The purpose of this plan is to use existing data to identify transportation safety issues, prioritize activities to address these issues, and identify potential funding sources to implement the activities. The TTSP evaluates all modes of transportation including, but not limited to; aviation systems, ferry and water systems, local roads, summer and winter trails, snowmobile and all-terrain vehicle (ATV) trails, pedestrian transportation, and bus and transit systems.

1.1 MISSION

The mission of the NVOPH’s Tribal Transportation Safety Plan is to save lives and prevent injuries on the local transportation system by implementing strategies using the 4 E’s of Safety: **E**ducation, **E**nforcement, **E**ngineering, and **E**mergency services. The strategies are prioritized within this plan from evaluation of crash data, public involvement, and the condition of existing transportation facilities.

1.2 PROCESS

The steps taken to write this plan are outlined below:

DRAFT REPORT

1. Perform an initial site visit to evaluate existing conditions and obtain feedback from the community regarding major transportation safety concerns
 - ✓ Site visit on August 18-19, 2016 (trip notes and photolog attached in Appendix A)
2. Evaluate information collected during site visit to narrow down safety concerns to six (6) emphasis areas to highlight in this plan
 - ✓ Information organized and emphasis areas recommended to Tribe in a memorandum submitted by Bristol on August 24, 2016
 - ✓ Emphasis areas amended and approved at a meeting on September 12, 2016
3. Write the draft report and review by the Tribe
 - ✓ Submitted for Review on September 15, 2016

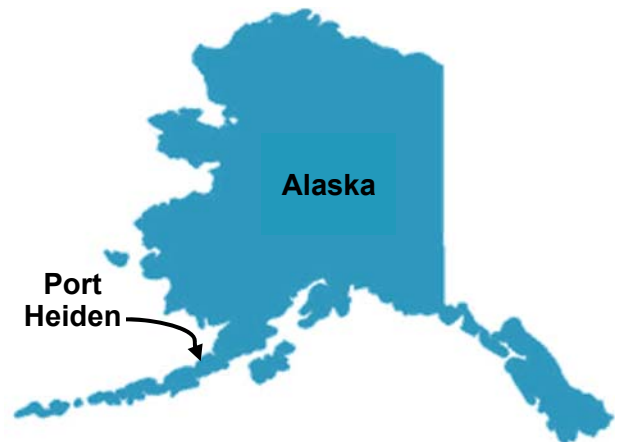
FINAL REPORT

1. Conduct a community survey to collect more crash data and receive feedback from the public on transportation safety priorities
 - ✓ A total of 17 surveys were completed
2. Hold a public meeting to present the draft report and receive comments
 - ✓ Presentation held on December 13, 2016
 - ✓ Emphasis areas and implementation plan were adjusted based on public comment
3. Submit the Final Draft TTSP
 - ✓ The Final Draft TTSP was submitted in February 2017

1.3 BACKGROUND

1.3.1 LOCATION

At the mouth of the Meshik River, Port Heiden, Alaska resides on the northern side of the Alaska Peninsula. The town is located in the Lake and Peninsula Borough, approximately 424 miles southwest of Anchorage, and near the Aniakchak National Monument and Preserve. The town's general coordinates are 56.9241 latitude and -158.6613 longitude, Section 4, Township 038S, Range 059W of the Seward Meridian [DCCED, 2016].



1.3.2 HISTORY

Port Heiden is a traditional Alutiiq community that maintains a subsistence lifestyle. The area is rich in Native Alaskan history and culture. Before the 1900s, the site was known as the old village of Meshik. In the 1900s, influenza epidemics drove residents to other villages. During World War II, around 5,000 people were stationed nearby at the Fort Morrow base, which was closed after the war. In the early 1950s, a school was opened, attracting people from surrounding villages. Approximately 20 years later, Port Heiden was incorporated as a second class city in 1972. Since then, much of the old townsite was lost to erosion, and major infrastructure has been relocated inland [DCCED, 2016]. Today, approximately 100 people call Port Heiden home, including about 30 children under the age of 18. In 2015, the NVOPH started a farm complete with reindeer, pigs, chickens, and rabbits. The farm brings the community together by creating jobs and contributing to their subsistence lifestyle [NVOPH, 2016].

1.3.3 TRANSPORTATION

The transportation system in Port Heiden consists of a state-owned airport, a natural boat harbor, and a small road system for local transportation via automobiles, all-terrain vehicles (ATVs) and snowmobiles. Port Heiden can only be reached by air and sea. The airport consists of a lighted, gravel runway and gravel crosswind runway. The existing boat harbor does not have a dock, but a boat haul-out, beach off-loading area, boat fuel sales, and marine storage facilities are available. Twice per year, cargo is delivered from Seattle by barge, which is lightered and offloaded on the beach. Gravel roads connect the widely spread out community in a loop, and subsistence trails extend outward to the mountains for hunting and berry picking.

1.3.4 CLIMATE

Categorized within the southwest maritime climate zone, Port Heiden experiences persistent overcast skies, high winds, and frequent cyclonic storms [DCCED, 2016]. Severe weather and erosion along the shore in Port Heiden is a serious threat to the community's infrastructure and roads. Temperatures typically range from 40 to 60°F in summer and -10 to 30°F in winter. The area receives approximately 15 inches and 54 inches of rainfall and snowfall on average per year, respectively [WRCC, 2005]. This information is summarized in Table 1 below:

Table 1-1: Monthly Climate Summary for Port Heiden, Alaska Station 507700 for Period of Record: 9/1/1949 to 12/31/2005

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	28.5	28.0	32.5	37.6	46.5	52.7	57.3	58.1	53.6	43.1	36.2	29.8	42.0
Average Min. Temperature (F)	16.4	15.8	19.8	26.0	34.7	41.1	46.4	47.7	42.6	32.1	25.2	18.5	30.5
Average Total Precipitation (in.)	0.87	0.50	0.89	0.74	0.84	1.10	1.62	1.97	2.05	2.22	1.40	1.03	15.22
Average Total Snow Fall (in.)	11.3	9.0	6.9	6.9	1.8	0.1	0.0	0.0	0.0	2.5	5.8	9.5	53.8
Average Snow Depth (in.)	3	2	1	0	0	0	0	0	0	0	1	2	1

Source: Western Regional Climate Center, Alaska Summaries: www.wrcc.dri.edu/summary/climsmak.html

Like most of Alaska, Port Heiden experiences extended daylight in the summer and conversely, dark and lengthy winters. In July, the area receives approximately 19 daylight hours, and only approximately 6 daylight hours in January [ABS, 2008].

Another climate concern is severe weather that threatens the community's infrastructure. Storm waves up to 15 feet tall erode the shoreline and wash away the boat ramp with each tidal cycle. Heavy winds up to 130 miles per hour wear down roadway surfaces and blow signage away [DCCED, 2016].



Port Heiden's eroding shoreline, 2016

2 EXISTING RESOURCES

2.1 SAFETY PARTNERS

Safety partners are essential to a successful safety plan. The following safety partners provided information and valuable assistance in the development of this plan:

- Native Village of Port Heiden
- City of Port Heiden
- Bristol Engineering Services Corporation
- Bristol Bay Native Corporation

Information collected from these sources helped to identify safety needs within the community as well as provide direction for future safety measures.

An organizational chart describing the 2016 jobs/positions within NVOPH is attached in Appendix B. This chart shows the management structure within the Tribe and the individuals responsible for project oversight.

2.2 OVERVIEW OF EXISTING EFFORTS

There have been several safety efforts in the past in Port Heiden with varying effectiveness. These efforts include community outreach, transportation maintenance and improvements, staff safety training, and formal transportation planning documents. There are also numerous emergency response resources for the area, which are discussed in Section 2.3.

2.2.1 COMMUNITY OUTREACH

The following list details current and past community outreach safety efforts in Port Heiden:

- Currently, the City maintains a helmet ordinance for ATV riders, however, the ordinance is not strictly enforced.
- The Tribe has tried holding community safety meetings in the past, but participation was minimal because most people have busy schedules and work multiple jobs.
- The Village Public Safety Officer (VPSO) position is currently vacant in Port Heiden. There is a job posting online for the position [BBNC, 2016]. According to NVOPH, they have received multiple applications and even have a fully furnished VPSO house, but none of the applicants were qualified for the position. Funds for the position are available through the City. Community members work to police each other to encourage safe driving habits such as wearing seatbelts and avoiding impaired driving.
- In the past, Port Heiden has experienced problems with unprepared tourists traveling to the Aniakchack Caldera. The Tribe recently updated their website to help ensure visitors will have a safe trip. The website includes Tribe contact information, a gear list, services provided by the Tribe, hunting guides, and other local travel resources.
- In February 2016, the Tribe attended the Alaska Forum on the Environment which included educational seminars regarding topics such as managing dust in rural Alaska, marine debris cleanup, and emerging contaminants. These types of educational resources help the community manage health and safety resources.

2.2.2 TRANSPORTATION MAINTENANCE AND IMPROVEMENTS

Transportation maintenance is an ongoing effort by the Tribe to maintain safe travel conditions. The following list explains maintenance and improvement efforts and their effectiveness at improving transportation safety:

- The City and the Tribe continually regrade the roads to mitigate potholes, erosion, and flooding.
- Calcium chloride has been used for dust suppression on the airport runway once before. However, this treatment requires repeated application at least once per year at the beginning of the dry season in order to work effectively. The Tribe now uses a water truck for dust control on the runway and roads, as needed.
- Signage on the transportation system is minimal and consists of one street sign, a few 'children at play' and 'speed limit' signs, and some signage at the road crossing over the airport runway. Most signs are damaged or faded and go unnoticed by the community. Damage is primarily attributed to the heavy winds experienced in Port Heiden.



Windblown signs near store, 2016

2.2.3 STAFF SAFETY TRAINING

Staff members and construction crews participate in several types of safety training, which are listed below:

- Generally, safety briefings are held daily at any construction project.
- There are approximately seven (7) trained emergency medical technicians (EMTs) within the community, and one operating emergency medical services (EMS) vehicle. The community EMTs take a refresher course every 2-3 years, as required.
- Some workers take a Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) training annually as required by the Occupational Safety and Health Administration (OSHA). The HAZWOPER program helps protect workers at hazardous sites such as the brownfields contaminated sites and the class III landfill in Port Heiden.

These safety measures and training courses generally include operation of equipment and safety vehicles as well as transportation of hazardous waste, which applies to transportation safety in this plan.



Hauling gravel for construction projects, 2015

2.2.4 TRANSPORTATION PLANNING DOCUMENTS

Various formal transportation safety and planning documents exist for Port Heiden and its geographical region, which include:

- Port Heiden Long-Rang Transportation Plan
- Port Heiden 5 Year Plan
- Alaska State Highway Safety Plan
- Southwestern Alaska Transportation Plan
- Alaska Federal Lands Long-Range Transportation Plan

These plans were referenced to ensure this TTSP is consistent with other local planning efforts.

2.3 EMERGENCY RESPONSE RESOURCES

Emergency response resources in the area are listed below:

- Port Heiden has a Volunteer Fire Department. According to community members, the local fire truck and fire safety equipment are out of date, and firefighting training is needed.
- Port Heiden Clinic for primary care, operated by the Bristol Bay Area Health Corporation. The Clinic hours are from 9:00 am to 3:00 pm.
- The King Salmon Post of the Alaska State Troopers serves Port Heiden for emergency situations. Unfortunately, the response time to Port Heiden from King Salmon is too long, so crashes and incidents often go unreported and are handled by locally trained EMTs.
- The Bristol Bay Borough Police Department provides police, dispatch, jail, Department of Motor Vehicles (DMV), and passport services for the communities of King Salmon, Naknek, South Naknek, and nearby communities if necessary.
- The US Coast Guard and Alaska Army National Guard assist with search and rescue missions at sea.
- The Tribe also offers volunteer search and rescue services on land and at sea using personal vehicles, since there are no dedicated vehicles.
- There is a DOT building for safety and maintenance equipment at the airport, but it is locked and only accessible by State personnel.



*Port Heiden Emergency Medical Services
Vehicle, 2016*

Contact details for these entities and more are listed in Appendix C [AK SAR, 2016].

3 DATA SUMMARY

Crash and other safety data are valuable to any transportation safety plan. The data is used to identify safety issues, select appropriate countermeasures, and evaluate performance. Other data may include traffic citations, hospital records, insurance claims, traffic counts, and anecdotal evidence from safety partners. At least three years of data is recommended to look evaluate the overall traffic patterns.

Since there is no local VPSO, ticketing system, or crash reporting system for Port Heiden, crash data is not readily available. In lieu of using crash data, this plan was based on anecdotal evidence from community members and results from a community survey that was conducted in 2016.

3.1 COMMUNITY SURVEY RESULTS

A community survey was conducted in Port Heiden from August to December in 2016 (see Appendix D). The survey included the following questions:

1. How do you get around within the community?
2. For each type of safety issue listed, identify if it's a high, medium, or low priority for your community.
3. What transportation facilities do you think are needed most to reduce safety hazards?
4. Have you or someone you know been in an accident on roads in or around Port Heiden within the last 5 years? Can you please explain the incident(s)?

A total of 17 surveys were submitted to Bristol Engineering, which equates to about 15 percent of the population in Port Heiden. Most surveys were completed by Tribal members or people who are heavily involved in the Tribe or Clinic.

3.1.1 TRANSPORTATION MODES

Question #1 paints a picture of the most common transportation modes used in Port Heiden.

1. HOW DO YOU GET AROUND WITHIN THE COMMUNITY? PLEASE CIRCLE (YOU MAY CIRCLE MORE THAN ONE):
 - 4-WHEELER
 - BIKE
 - WALK
 - TRUCK
 - GET A RIDE
 - OTHER _____

Figures 3-1 and 3-2 show the results of Question #1. Since the option was given to select more than one answer, Fig. 3-1 shows the percentage of respondents that circled multiple modes of travel, whereas Fig. 3-2 shows the percentage of respondents that circled each mode of travel at least once.

FIG. 3-1: MODES OF TRANSPORTATION IN PORT HEIDEN (PERCENT BY ANSWER)

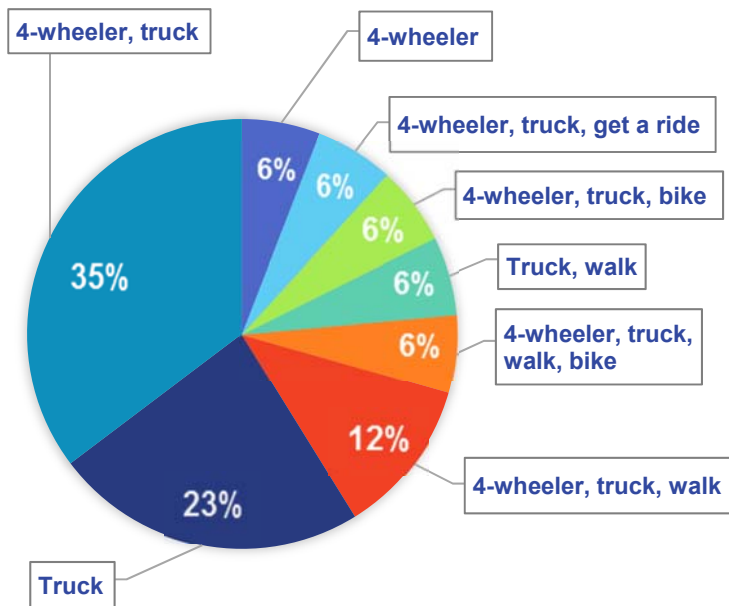
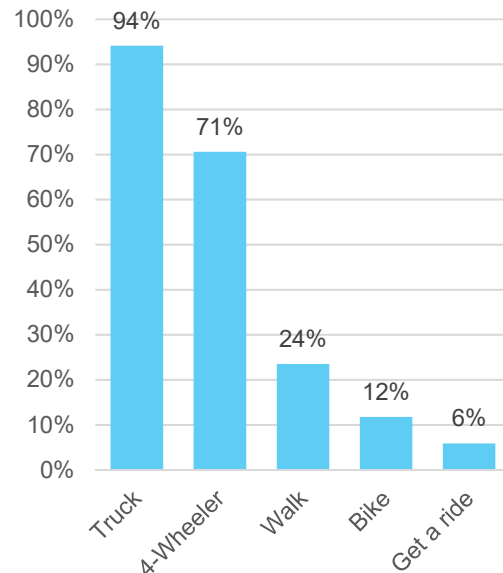


FIG. 3-2: MODES OF TRANSPORTATION IN PORT HEIDEN (PERCENT BY MODE)



The results from Question #1 show that most people drive 4-wheelers, trucks, or both, and some people also walk, bike, or get a ride on occasion. Approximately 35% of survey respondents marked that they drive both a 4-wheeler and truck to get around the community. Approximately 94% of survey respondents drive a truck in addition to other modes of transportation on occasion, and 71% of people drive a 4-wheeler. Only 6% of respondents marked that they get a ride to travel within the community.

3.1.2 TRANSPORTATION SAFETY CONCERNS

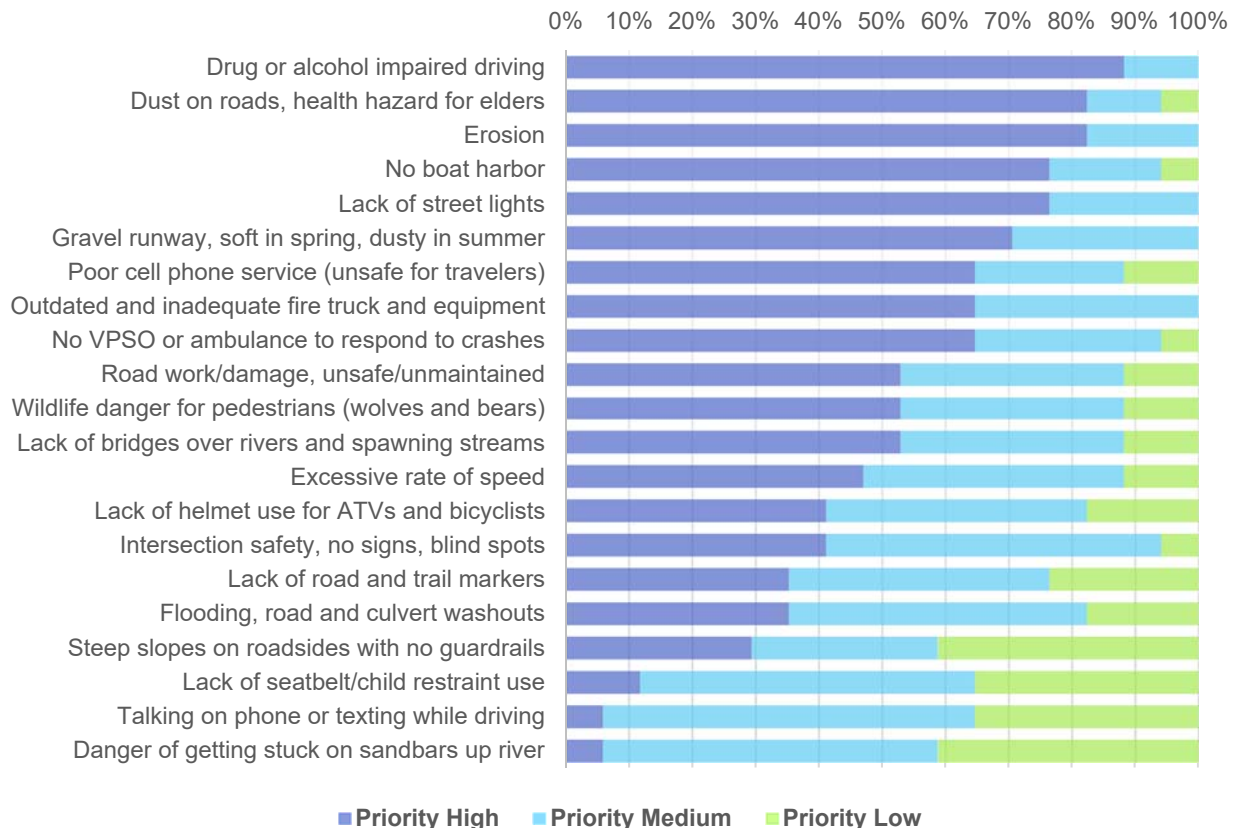
Question #2 helps portray what the community regards as high priorities in terms of transportation safety issues. The list was developed based on concerns expressed by community members during a site visit in August 2016. The results are shown in Fig. 3-3, which are sorted by priority from highest priority to lowest priority.

- PLEASE HELP US PRIORITIZE SAFETY ISSUES AND HEALTH HAZARDS ON THE TRANSPORTATION SYSTEM WITHIN PORT HEIDEN. KEEP IN MIND THAT "SAFETY ISSUES" ARE PROBLEMS THAT CAUSE DEATH, INJURY OR ILLNESS, AND "TRANSPORTATION SYSTEM" MEANS ALL MODES OF TRAVEL INCLUDING ROADS, AIRPLANES, OCEAN AND RIVER TRAVEL, TRAILS, PEDESTRIANS, ETC.

FOR EACH TYPE OF SAFETY ISSUE BELOW, IDENTIFY IF IT'S A HIGH, MEDIUM, OR LOW PRIORITY FOR YOUR COMMUNITY BY CIRCLING EITHER "H" "M" OR "L":

TYPES OF SAFETY ISSUES	HIGH PRIORITY	MEDIUM PRIORITY	LOW PRIORITY
ROAD WORK OR ROAD DAMAGE, UNSAFE OR UNMAINTAINED ROADS	H	M	L
NO BOAT HARBOR	H	M	L
TALKING ON PHONE OR TEXTING WHILE DRIVING	H	M	L
WILDLIFE DANGER FOR PEDESTRIANS (WOLVES AND BEARS)	H	M	L
LACK OF HELMET USE FOR ATVS AND BICYCLISTS	H	M	L
EXCESSIVE RATE OF SPEED	H	M	L
INTERSECTION SAFETY, NO SIGNS, BLIND SPOTS	H	M	L
LACK OF SEATBELT/CHILD RESTRAINT USE	H	M	L
DRUG OR ALCOHOL IMPAIRED DRIVING	H	M	L
LACK OF STREET LIGHTS	H	M	L
DUST ON ROADS, HEALTH HAZARD FOR ELDERS	H	M	L
LACK OF ROAD AND TRAIL MARKERS	H	M	L
POOR CELL PHONE SERVICE (FOR TRAVELERS WHO MAY GET LOST OR STUCK)	H	M	L
LACK OF BRIDGES OVER RIVERS AND SPAWNING STREAMS	H	M	L
GRAVEL RUNWAY, SOFT IN SPRING, DUSTY IN SUMMER	H	M	L
EROSION	H	M	L
FLOODING, ROAD AND CULVERT WASHOUTS	H	M	L
OUTDATED AND INADEQUATE FIRE TRUCK AND EQUIPMENT	H	M	L
NO VPSO OR AMBULANCE TO RESPOND TO CRASHES	H	M	L
STEEP SLOPES ON ROADSIDES WITH NO GUARDRAILS	H	M	L
DANGER OF GETTING STUCK ON SANDBARS UP RIVER	H	M	L
OTHER	H	M	L
OTHER	H	M	L

FIG. 3-3: PORT HEIDEN SAFETY PRIORITIES - SURVEY RESULTS



According to Fig. 3-3, almost 90% of people who completed the survey marked “drug or alcohol impaired driving” as a high safety priority, making it the #1 highest priority. Over 70% of people marked road and runway dust, erosion, and lack of boat harbor and streetlights as high safety priorities. Less than 15% of people were concerned about seatbelt use, distracted driving, and sandbar dangers. At least one person selected “high priority” for every type of safety issue listed. This indicates that the community’s safety priorities broad and multi-modal. These rankings were used to select and prioritize emphasis areas for this plan.

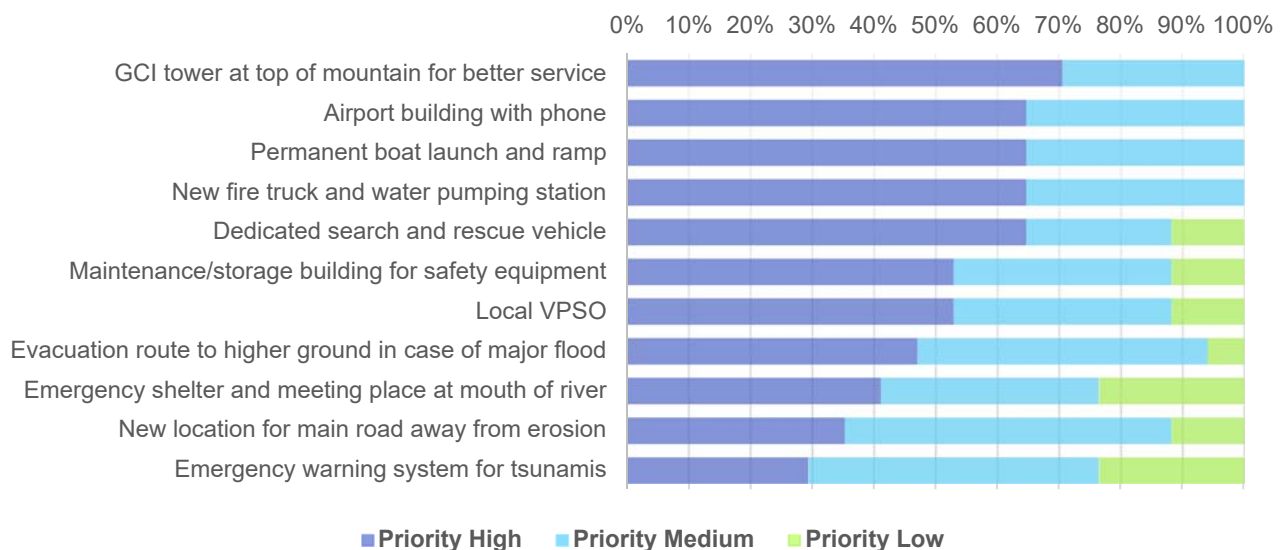
3.1.3 TRANSPORTATION SAFETY NEEDS

Question #3 was oriented towards safety needs and transportation facilities than safety issues. The results of Question #3 are displayed in Fig. 3-4.

3. WHAT TRANSPORTATION FACILITIES DO YOU THINK ARE NEEDED MOST TO REDUCE SAFETY HAZARDS?

TYPES OF SAFETY FACILITIES	HIGH PRIORITY	MEDIUM PRIORITY	LOW PRIORITY
AIRPORT BUILDING WITH PHONE	H	M	L
MAINTENANCE/STORAGE BUILDING FOR SAFETY EQUIPMENT	H	M	L
PERMANENT BOAT LAUNCH AND RAMP	H	M	L
EMERGENCY SHELTER AND MEETING PLACE AT MOUTH OF RIVER	H	M	L
LOCAL VPSO	H	M	L
NEW FIRE TRUCK AND WATER PUMPING STATION	H	M	L
GCI TOWER AT TOP OF MOUNTAIN FOR BETTER SERVICE	H	M	L
DEDICATED SEARCH AND RESCUE VEHICLE	H	M	L
EMERGENCY WARNING SYSTEM FOR TSUNAMIS	H	M	L
NEW LOCATION FOR MAIN ROAD AWAY FROM EROSION	H	M	L
EVACUATION ROUTE TO HIGHER GROUND IN CASE OF MAJOR FLOOD	H	M	L
OTHER	H	M	L
OTHER	H	M	L

FIG. 3-4: PORT HEIDEN SAFETY FACILITIES - SURVEY RESULTS



Results of Question #3 show that approximately 70% of people who filled out the survey marked “GCI tower at top of mountain for better service” as a high priority for transportation safety needs. According to the public, cell phone service is Port Heiden in spotty, and service declines farther away from town, which can be a serious safety hazard for people who are traveling for subsistence activities or recreation in the National Park. At least five people marked “high priority” for every item listed in Question #3, and nobody marked “low priority” for the top four items shown in Fig. 3-4. This indicates that the majority of the community agrees that all aspects of transportation safety could use improvement in Port Heiden.

3.1.4 TRANSPORTATION ACCIDENTS

Question #4 of the survey helped gather data about recent transportation-related accidents in Port Heiden.

4. HAVE YOU OR SOMEONE YOU KNOW BEEN IN AN ACCIDENT ON ROADS IN OR AROUND PORT HEIDEN WITHIN THE LAST 5 YEARS?

YES

NO

CAN YOU PLEASE EXPLAIN THE INCIDENT(S)? INCLUDE: WHO WAS INVOLVED AND HOW OLD WERE THEY, WHAT VEHICLE WAS DRIVEN, WHERE IT OCCURRED, HOW SEVERE WERE THE INJURIES, WAS A MEDIVAC REQUIRED, WHAT CAUSED THE ACCIDENT, WAS ALCOHOL INVOLVED?

According to the survey, 76% of people know someone who has been in an accident in the last 5 years. Of those who reported “yes” to Question #4, 38% mentioned alcohol in the comments section. These results are displayed in Figs. 3-5 and 3-6.

FIG. 3-5: HAVE YOU OR SOMEONE YOU KNOW BEEN IN AN ACCIDENT IN THE LAST 5 YEARS?

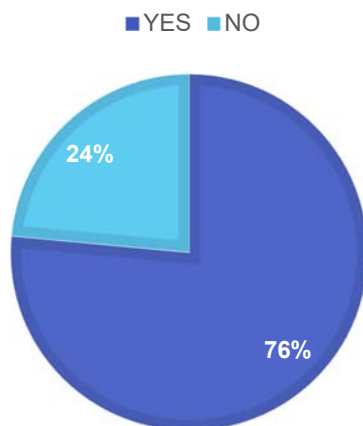
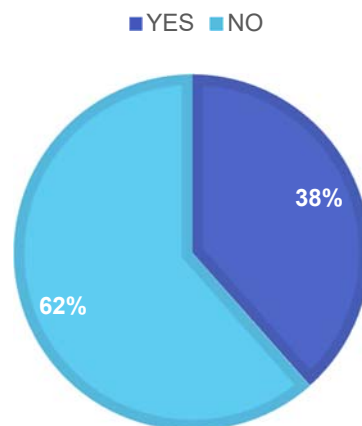


FIG. 3-6: FOR INCIDENTS REPORTED IN SURVEY, WAS ALCOHOL INVOLVED?



Since the question was open-ended, most answers were written in short-phrases and incomplete sentences. In order to represent the results in an organized manner, the answers were aggregated by category including person(s) involved in the accident, age of the person(s), vehicle driven, type and cause of incident, time of day or year, injuries that occurred, and the involvement of alcohol. The written portion of Question #4 is summarized in Table 3-1. This table may not represent all recent crashes in Port Heiden, and is based on human memory, not fact.

Table 3-1: Question #4 Comment Results

Who	Age	Vehicle	Incident	Cause	Time	Injury	Alcohol
NR	NR	Honda	Crash	NR	Night	"Crippled for life"	NR
Female	35	4-wheeler	Crash	NR	NR	Bruises & scrapes	Yes
Male	50	Blazer	Roll-over	NR	NR	None	Yes
Male	25	NR	Crash on side of road	Road too narrow	NR	NR	NR
NR	21	NR	Crash, slid off road	Slippery road surface	Nov 2016	Broken bones	NR
Male	20	Chevy Pickup	Roll-over	Lost control on icy road	2004	Broken collar bone, fractured neck, medivac	NR
Child	NR	4-wheeler	Crash	NR	NR	Broken leg	NR
Male	"Young"	Truck	Roll-over	NR	"Recently"	Broken collar bone, other, medivac required	Yes
Male	20	NR	Crash	Icy road, high speed	NR	Medivac required	NR
NR	NR	4-wheeler	Roll-over	NR	NR	"Brain damage"	Yes

“ I HAVE HELPED RESCUE THOSE INJURED. EVERY PERSON INJURED WAS EXPOSED TO BAD WEATHER, COLD, RAIN, AND ONE WAS EVEN FROZEN TO THE ROAD. BLIND TURNS, SNAKEY ROADS, AND INABILITY TO CONTACT HELP ARE THE ISSUES WE HAVE. ”

- ANONYMOUS SURVEY RESPONDER

Note: Entry marked with "NR" indicates no response provided.

Based on these results, most reported incidents involved people between the ages of 20-35. Many of the reported incidents were vehicle roll-overs and were caused by narrow or icy roads. Some incidents resulted in life-threatening injuries and involved alcohol.

3.2 HOSPITAL RECORDS

Many village clinics in Alaska use the State's Alaska Uniform Response Online Reporting Access (AURORA) database system to record patient care reports. However, the clinic in Port Heiden does not have access to this system because the login information is unknown, and therefore the system is not used.

The clinic does keep paper records of all patients including those involved in accidents on the transportation system. They use two forms, one for EMS use "Alaska Pre-Hospital Patient Report" and one for Health Aids "Patient Encounter Form." The EMS form could provide relevant data for

transportation related incidents including: address of incident, problem reported as, patient age, chief complaint/mechanism of injury, mileage of transportation, time of incident and arrival at destination, location, patient disposition, and suspected drug or alcohol use. These forms were kept private and were not accessible, but blank forms are attached in Appendix C.

“ IN 2016, WE HAD 1 TRUCK ROLL-OVER, 2 ATV ROLL-OVERS, AND 1 LOST PERSON/NEAR DROWNING. ”

- PORT HEIDEN CLINIC EMT

Each year, the Port Heiden Clinic applies for the First Responder Mini-Grant, which includes an Annual Southern Region EMS Survey to collect basic data about EMS systems within the Southern Region. The most recent survey completed by Port Heiden was for the reporting period January 1 to December 31, 2015. The survey indicated that there was 1 drowning/near drowning and 1 other incident.

3.3 ADDITIONAL RESEARCH

Bristol collected several personal anecdotes from community members during a site visit on August 18-19, 2016. Any severe and memorable incidents that have occurred in the past will help the Tribe get a picture of Port Heiden's transportation safety issues. However, it is important to note that these stories are based on memory, not fact, and may not be accurate or completely represented.



Boys driving 4-wheeler wearing helmets. 2016

3.3.1 CRASHES

- Four years ago, a male driver took the corner by the pumice pit too sharp on a 6-wheeler and crashed with no helmet, resulting in brain damage.
- A male driver crashed on a 4-wheeler on a trail up in the mountains and broke his leg.
- A woman driver crashed her 4-wheeler and was “crippled for life.”
- Two boys riding a 4-wheeler recently crashed and were not wearing helmets. The incident was reported to their parents, and the boys were seen wearing helmets later that week.
- A male driver drove off a road down a “12-foot cliff.” His bike fell on him hurting his back, stranding him for hours.

3.3.2 OTHER INCIDENTS

- The city once experienced a two-week power outage and did not have a radio to call out in case of an emergency.
- During a heavy storm, a culvert washed out by the school. The bus had to stop before it reached the school, and adults helped to carry children over the water. The road had washed out underneath causing deep puddles. Electrical cables buried shallow under the road could have been a serious safety hazard.
- During a winter whiteout, a woman had called to say she was walking home. When she did not return within 30 minutes, a volunteer search and rescue team set out to find her, which took several hours. She had gotten lost due to lack of lighting, signs and road markers.

3.4 CRASH REPORTING SYSTEM

The Tribe plans to begin implementing an incident reporting system in the future to help analyze the effectiveness of safety measures put forth in this plan.

Typically, emphasis areas are chosen based on evaluation of crash data. Currently, Port Heiden does not have a VPSO to document and record local crashes. Until the position is filled, the Tribe has committed to developing their own reporting system to implement with this plan. The objective of the new crash reporting system is to collect complete and accurate data immediately after an incident takes place within the community. This information will be evaluated by the Tribe to aid in the development of this Safety Plan in future updates.

The Tribe plans to create a form to record data and a database or filing system to organize the data. The form will gather information about the incident including: date, time, specific location (road name or closest building), people involved, injuries or fatalities, use of drugs or alcohol, property damage, probable causes of the accident, types vehicles involved, speed of involved vehicles, weather, wildlife involved, and other relevant information to tell the full story of the incident. The online database or paper filing system will keep records organized for easy searchability.

A Tribal Representative may need to be appointed and trained to manage the system in future years. Additionally, collecting data will require participation with the Clinic, EMS operators, and community members who arrive on scene to provide medical assistance. Other potential resources to help gather data for the reporting system include: hospital/emergency responder records, insurance databases, road safety audits, or state safety records.

4 EMPHASIS AREAS

During the site visit in August 2016, Bristol was able to speak one-on-one with many community members, and afterwards, compiled and organized notes regarding safety concerns and potential solutions that were discussed during the visit. This list was used to identify key safety emphasis areas for this Safety Plan. An emphasis area is an area of opportunity to improve safety through a comprehensive 4 E approach (engineering, enforcement, education, and emergency services), as appropriate. The complete list of notes from the site visit including a photographic log is included in Appendix A for reference.

Although the list of safety concerns from the community is extensive, the Tribe is focusing on seven (7) emphasis areas for this Plan:

- | | |
|----------------------------|---------------------------|
| 1. Road Conditions | 5. Air Quality |
| 2. Airport Safety | 6. Emergency Preparedness |
| 3. Marine and Water Safety | 7. Impaired Driving |
| 4. Pedestrian Safety | |

These emphasis areas are based on factors such as frequency of mention during the site visit and highest potential to prevent injury and death on the transportation system.



Damaged speed limit sign, 2016

4.1 ROAD CONDITIONS

4.1.1 BACKGROUND

Many of the roads in Port Heiden are not up to current safety standards and require improvement to increase safety. For example, some roads are built narrow with high embankments, yet have no guardrails to protect drivers. Additionally, all existing roads are surfaced with either crushed gravel or pumice, which are susceptible to erosion from high winds and heavy rain. Poor drainage along the roads can cause severe flooding, putting drivers at risk for getting stuck in muddy torrents. Residents have also indicated that electrical wires were buried shallow under the road surface. Constant erosion may expose the wires over time and present a safety hazard.

Another major safety concern is the inadequacy of roadway signage around town. Neighborhoods with playing children lack speed limit signs, and sharp corners and blind spots lack warning signs. Most existing signs are damaged and go unnoticed by drivers. Finally, none of the roadways or trails have markers, which are especially needed in winter to keep drivers on course. A map showing existing

roads in Port Heiden is attached in Appendix E. The map highlights problem areas identified by NVOPH including blind spots and sharp corners.

4.1.2 OBJECTIVES

The Tribe aims to prevent injury and death on the road system by planning roadway improvement projects that include raising the roads and installing new signage, guardrails, and road markers where needed.

4.1.3 STRATEGIES

A roads safety audit is recommended before detailed strategies are developed. Planning, engineering, and construction will pursue the audit depending on the results. For the purposes of this plan, strategy ideas were categorized into the 4 E's of Safety, and are to be used as the Tribe sees fit. Tribal Transportation Safety Funds can be used to fund a safety audit, as well as engineering and construction services.



Eroding roadway embankment, 2016

Education

- Create and post maps of existing roads and known areas of caution
- Install road markers to prevent people trailing off course
- Install road name signs to help people learn their way around the community and reduce the likelihood of getting lost
- Hold public meetings or post announcements to inform residents of road improvements

Enforcement

- Install speed limit signs in neighborhoods
- Install sharp turn signs at blind spots and warning signs as needed
- Install “slow, children at play” signs in neighborhoods and school zones
- Assign a Tribal Representative to manage projects and record progress

Engineering

- Widen roads
- Install guardrails at locations of steep slopes
- Improve drainage by increasing fill height and installing culverts
- Clear brush at blind corners
- Improve intersections and hazardous areas on the roads
- Control erosion with riprap or geotextile fabric

Emergency Services

- Maintain roads and keep free of potholes so EMS vehicles can transport patients safely, smoothly, and efficiently

4.2 AIRPORT SAFETY

4.2.1 BACKGROUND

Port Heiden’s airport is another priority for transportation safety. There is currently no airport building which is an inconvenience for travelers, but also a major safety issue. There have been reported cases of people being dropped off by a plane and stranded out at the airport for hours due to lack of a ride or cell phone service. This is especially hazardous during bad weather. Long periods of exposure to rain, high winds, snow, or freezing temperatures can cause illness, injury and/or death. A building will provide comfort and shelter for people waiting for rides, as well as accommodate a new public phone for emergency calls.



Airplane parked on Port Heiden's gravel runway, 2016

Another safety concern expressed by the Tribe is the intersection between Airport Road and the ramp between the two runways. This intersection has some signage, but the Tribe explained that there have still been some cases where people attempt to cross while a plane is landing. This intersection is highlighted on the map in Appendix E.

4.2.2 OBJECTIVES

The objective of airport safety is to construct an airport building with seating and a public phone. The building would protect travelers from the weather while they wait for a ride and provide a means to boost emergency preparedness within the community. An airport building could provide many other benefits to the community unrelated to safety such as promote tourism by having a

comfortable and welcoming place upon arrival, provide a platform to advertise about important community details through maps and brochures, and open up job opportunities for residents to maintain the facility.

4.2.3 STRATEGIES

An airport safety audit is recommended before detailed strategies are developed. Planning, engineering, and construction will pursue the audit depending on the results. For the purposes of this plan, strategy ideas were categorized into the 4 E's of Safety, and are to be used as the Tribe sees fit. The Tribe can partner with the State DOT and other entities to accomplish these tasks.

Education

- Install signs to direct traffic safely
- Post maps and safety brochures in the airport building for tourists

Enforcement

- Install a flashing sign that lights up with runway lights when a plane lands to improve alertness and prevent vehicles from entering the runway when in use
- Assign a Tribal Representative to manage projects and record progress
- Report unwanted behavior around airport facilities

Engineering

- Construct a new airport building, or rehabilitate existing buildings, including seating and a bathroom
- Relocate ramp to avoid crossing runway
- Replace surface material of runway

Emergency Services

- Install a public phone or radio in the new airport building for emergency communication
- Keep emergency medical equipment at the airport building

4.3 WATER SAFETY

4.3.1 BACKGROUND

Water safety infrastructure in Port Heiden is virtually nonexistent. There are no bridges where trails cross rivers and spawning streams. This can be hazardous to both drivers and the environment because drivers can get stuck in the water or muddy banks, and disturbance through the water can harm fish and other aquatic wildlife. Additionally, there is no boat launch, dock, ramp, building or any infrastructure whatsoever for marine travel vehicles. A gravel ramp to connect the beach to the road to town must be rebuilt every year because it is washed away each season from storms. Currently, boats take off and land directly on the beach. This method can cause damage to vehicles, and even put people at risk because vehicles can get stuck in sand or tipped over by waves.

4.3.2 OBJECTIVES

The objective of marine and water safety is to provide new and sound infrastructure to protect people traveling on or over waterways, protect aquatic life, and prevent property damage. Infrastructure at a minimum will include new bridges and a boat launch engineered to withstand storms. Other infrastructure to consider includes a dock, a building at the boat launch area for search-and-rescue vehicles and equipment, and other emergency shelters stationed along waterways.

4.3.3 STRATEGIES

A safety audit of water transportation facilities is recommended before detailed strategies are developed. Planning, engineering, and construction will pursue the audit depending on the results. For the purposes of this plan, strategy ideas were categorized into the 4 E's of Safety, and are to be used as the Tribe sees fit.



ATV trail crossing stream without bridge, 2016

Education

- Install signs at the boat launch to educate users about water safety
- Host training seminars to spread knowledge about water safety and proper use of facilities

Enforcement

- Install signs at the boat harbor about rules and regulations of use
- Hire a Harbor Master to monitor the facility
- Assign a Tribal Representative to manage projects and record progress

Engineering

- Construct a mobile seasonal boat ramp system to be taken down during off season
- Construct a safe access road to the boat ramp
- Transform Gold Fish Lake into a boat harbor
- Construct bridges on all stream-road intersections to create safe crossing for drivers and protect wildlife and fish spawning cycles

Emergency Services

- Create emergency shelters along high-use rivers
- Create and distribute maps indicating locations of emergency shelters
- Install lights at the boat harbor to improve vision and ward off wildlife
- Provide a checklist of safety gear for people to keep in their water vehicles

4.4 PEDESTRIAN SAFETY

4.4.1 BACKGROUND

Most people in Port Heiden do not walk as a means of transportation due to a combination of factors. The primary concern is vulnerability to wolves and bears. The community also

experiences extended hours of darkness in the winter, and the community is spread out in a wide loop. Walking long distances in the dark can be unsafe with the presence of wild bears and wolves roaming nearby. However, sometimes vehicles break down or people without a ride may need to revert to walking to reach their essential destinations. Most community members agree that street lights would make a huge impact on pedestrian safety in these conditions. In some reported incidences, people have even slept overnight in the Tribal Building to avoid walking home alone in the dark because the building has bright exterior lights.



Wild caribou in the winter, 2013

4.4.2 OBJECTIVES

The main objective of winter and nighttime pedestrian safety is the installation of street lights along all major streets to protect pedestrians. Lights would not only help pedestrians find their way home in the dark, but would allow them to be more alert about the surrounding wildlife. Street lights are also known to have additional benefits such as helping drivers see at night (and avoid pedestrians), preventing crime, and artificially extending light hours for activity to take place.

4.4.3 STRATEGIES

A safety audit is recommended before detailed strategies are developed to understand the most beneficial placement of pedestrian facilities such as lights and sidewalks. Community involvement strategies such as public meetings and surveys may be used to better understand which types of pedestrian facilities are needed. Planning, engineering, and construction will pursue the audit depending on the results. The planning process should evaluate alternatives to above-grade light poles, which may not stand up against the high winds in Port Heiden. For the purposes of this plan, strategy ideas were categorized into the 4 E's of Safety, and are to be used as the Tribe sees fit.

Education

- Create posters or hold seminars to teach the community about safety precautions to take while walking
- Inform the community about the dangers of wolves and how to avoid an attack

Enforcement

- Continue to encourage the use of radios to report wolf and bear sightings in the village
- Assign a Tribal Representative to manage projects and record progress

Engineering

- Install lights around all neighborhoods and essential service buildings (i.e. school and store) to improve visibility/awareness for pedestrians and help fend off wolves
- Install streetlights on roads anticipated for high pedestrian use
- Construct pedestrian pathways to segregate vehicle and foot traffic
- Install fencing around problem areas to keep wildlife out

Emergency Services

- Install GCI tower at top of hill to improve communication for pedestrians, hunters, and hikers in the event of an emergency
- Provide trail maps to tourists
- Encourage all families and businesses to have a radio in their home or facility

The Tribe believes that lights would serve best at the store, school, DOT gravel pit, along CAS Road and Cherry Lane, and in the subdivisions including Old HUD, New HUD, Little HUD, and Trapper Hill. These locations are highlighted on the map in Appendix E.

If and when streetlights are installed, it is important to notify the community that streetlights can help reduce dangers in the dark, but they do not guarantee safety. Tribal members, parents, teachers, and other role models in the community will need to set an example for safety precautions while walking in conditions such as cold weather, in the dark, and in the presence of wildlife. Examples of such precautions include:

- Walking with a partner,
- Notifying someone of travel plans,
- Staying aware of the surroundings and knowing how to detect the presence of wildlife,
- Wearing clothing to allow you to run if needed,
- Dressing for the weather,
- Carrying a flashlight,
- Making loud noises to scare away bears,
- Carrying bear spray, and
- Having a cell phone or radio to call for help if needed.

4.5 AIR QUALITY

4.5.1 BACKGROUND

Rural towns in Alaska constantly battle dust on gravel roads and runways, especially during dry summers. Road dust contains earthen material or dirt that becomes airborne, and is as much of a health hazard as it is a nuisance. Constant inhalation of dust can aggravate heart or lung-related conditions such as asthma. Elders, children, and people with respiratory conditions are especially sensitive to dust related health problems.

In Port Heiden, dust is even more of a concern than most places in Alaska for several reasons. Many of the roads in Port Heiden were built with pumice, which is a very light and porous volcanic rock that is abundant in the area due to the nearby active volcano. Exposure to pumice dust can cause discomfort on skin or eyes due to the particulate nature and may result in respiratory irritation if inhaled. Additionally, a fuel contaminated brownfield site is under active cleanup in Port Heiden. Many residents are worried that the contaminants have spread throughout the town and



Dust from gravel road

can become airborne in dust from vehicle traffic. Finally, as outlined in Section 1.3.4 Climate, Port Heiden experiences heavy winds which results in erosion of the gravel roads and essentially more dust in the air.

Currently, water trucks are used to mitigate dust, as needed, on construction sites. Calcium chloride was applied once to the gravel runway in attempt to reduce dust, but without continual application, the effort was futile. No on-going dust control measures exist for the roads in town. Continuous dust suppression is essential to improving air quality on the transportation system.

4.5.2 OBJECTIVES

The Tribe aims to reduce air pollution and health hazards due to dust from roads and the airport runway through application of a dust suppression chemical as needed during dry conditions.

4.5.3 STRATEGIES

Some form of public involvement is recommended to understand the areas of highest air quality concern before detailed strategies are developed. Public involvement will also help identify the preferred method for dust suppression. For example, some community members are wary about using a dust-suppressing chemical due to the chemical contamination the community has dealt with in the past. Planning, engineering, and construction will pursue the public involvement process depending on the results and priorities of the community. For the purposes of this plan, strategy ideas were categorized into the 4 E's of Safety, and are to be used as the Tribe sees fit.

Education

- Create posters to hang around town to increase awareness about the health risks of road dust and pumice exposure

Enforcement

- Install speed limit signs around town to lower speeds and help reduce dust emissions
- Assign a Tribal Representative to manage projects and record progress

Engineering

- Replace surface course of problem roads with an alternative material such as chip seal or pavement, or use a traditional aggregate mix instead of pumice
- Utilize a dust suppression strategy such as water trucks or a dust palliative during dry conditions, and maintain as needed

Emergency Services

- Provide free dust masks at the clinic to protect sensitive people from dust inhalation

The Tribe plans to mitigate dust pollution by budgeting some of the road maintenance funds for a dust control chemical and labor costs associated with the application on major roads. Typical dust control chemicals include calcium chloride or magnesium chloride. The chemical must be rolled into the surface course at least twice per year as directed by the manufacturer or an engineer. The Tribe may opt to use water instead of a chemical, but water would require more frequent application. The effectiveness of the dust control strategy should be evaluated yearly based on a benefit cost analysis and input from community members.

4.6 EMERGENCY PREPAREDNESS

4.6.1 BACKGROUND

The final emphasis area for this Safety Plan is emergency preparedness. According to community members and the volunteer firefighters, Port Heiden's fire truck and equipment such as alarms and extinguishers are very outdated. In addition, there is no dedicated search and rescue vehicle, and the Tribe's VPSO skiff is reportedly faulty. Cell phone service and internet are unreliable in town and nonexistent out on the subsistence trails. These are just a few examples of the community's lack of adequate safety and emergency response equipment. Tribal members expressed the need for a facility to house their existing equipment to prevent further wear and damage by weather. A dedicated facility would also greatly improve the community's emergency preparedness, as well as endorse the purchase of new equipment, as needed. The installation of more cell phone towers and other communication infrastructure would allow community members and tourists more opportunity to call for help in the event of an emergency both within city limits and out.

4.6.2 OBJECTIVES

Saving lives and preventing illness or injury is the main objective of all transportation emergency preparedness measures. These measures include improving emergency response time by constructing new communication infrastructure and dedicating a storage facility for safety equipment. The storage building will maintain organization of the equipment for easy access in emergencies, store all safety equipment in one area, and protect the equipment to extend its useful lifetime, ultimately improving the effectiveness of emergency response and transportation safety resources in Port Heiden.

4.6.3 STRATEGIES

A safety audit or public involvement process regarding transportation emergency services is recommended before detailed strategies are developed. Planning, engineering, and construction will pursue depending on the results. For the purposes of this plan, strategy ideas were categorized into the 4 E's of Safety, and are to be used as the Tribe sees fit.

Education

- Create maps showing evacuation routes to high ground in the event of a major storm
- Hold a training seminar to educate the community on evacuation procedures and flood dangers

Enforcement

- Allocate funds to hire a VPSO to enforce transportation safety, respond to crashes or other emergencies, keep record of all incidents
- Assign a Tribal Representative to manage projects and record progress

Engineering

- Construct a building or garage to store transportation maintenance and safety equipment, this will keep everything in one easily accessible location and increase the lifespan of the equipment by protecting it from the elements
- Maintain the facility to keep equipment organized, functional, and up-to-date

Emergency Services

- Construct an evacuation route from the town to higher ground in the hills
- Stock the facility with needed equipment including fire suppression gear, medical supplies, EMS vehicles, and search-and-rescue skiffs
- Install additional communication infrastructure improve cell phone service and radio transmission for people to reach out in the event of an emergency

Proposed projects will be budgeted via the Tribe's Bureau of Indian Affairs (BIA) Roads funds or other means as determined by the Tribe. New communication infrastructure will require coordination with the local utility company. Locations and types of new facilities will be determined through a public involvement process.

The Tribe has several options for constructing a new storage facility. Prefabricated buildings are often a popular choice for villages because they save time on construction and shipping costs. Additionally, the community of Port Heiden has experience with recycling materials such as old water tanks and refurbishing them into garages and other buildings, which is another option for the proposed facility. Regardless of the method used, an engineer will be involved in the facility design. The facility will be heated and large enough to house a fire truck, emergency medical vehicle, search and rescue skiff, and all or most of the Tribe's transportation safety and maintenance equipment. The building will be maintained and operated by the Tribe.

4.7 IMPAIRED DRIVING

4.7.1 BACKGROUND

Port Heiden is considered a "damp" community because there are no restrictions on alcohol, but there are currently no bars or liquor stores within the community. Drinking and driving has been a constant safety hazard for the community. Drug and alcohol impaired driving was rated the top safety priority in the 2016 community survey. For people who marked "yes" to Question #4 on the survey, 38% mentioned that alcohol was involved in the reported crash. However, anecdotal evidence suggests that most wrecks involve alcohol, despite the survey results.

Currently, there is no official enforcement to penalize drunk driving, but the community does try to police each other by taking away car keys whenever someone attempts to drive after drinking. Additionally, there is no data available for Port Heiden regarding drunk driving and car crashes. However, the Center for Disease control prepares a fact sheet for each state in the US about drunk driving. According to the sheet, approximately 222 people were killed in crashes involving a drunk driver in Alaska between 2003-2012. This number does not include unreported incidents that occur in rural villages. The drunk driving fact sheet is attached to this plan in Appendix F, and can be used to assist the Tribe in spreading awareness about drunk driving within their community.

4.7.2 OBJECTIVES

The objective of this emphasis area is to save lives and prevent serious injury by reducing drunk driving on local roads in Port Heiden.

4.7.3 STRATEGIES

Public involvement is recommended before detailed strategies are developed regarding mitigating drunk driving. Planning, engineering, and construction will pursue the public involvement process

depending on the results. For the purposes of this plan, strategy ideas were categorized into the 4 E's of Safety, and are to be used as the Tribe sees fit.

Education

- Hold meetings and hang posters about the dangers of drunk driving in schools and public places, educate people about the dangers of drunk driving using statistical evidence

Enforcement

- Hire a VPSO to ticket people who drive under the influence
- Assign a Tribal Representative to manage projects and record progress

Engineering

- Utilize social engineering and campaign strategies to discourage drunk driving, examples include t-shirts, stickers, and social media sites

Emergency Services

- Openly advocate use of the Tribal Building for people to rest and sober up before driving
- Create a call-line to offer rides to people who have been drinking and need to travel

5 IMPLEMENTATION PLAN

The Native Village of Port Heiden plans to implement this Tribal Transportation Safety Plan in the 2017 calendar year. The Tribe will schedule projects based on priorities recommended by the community and approved by the Tribe. More information regarding project scheduling may be added in the plan during yearly updates.

Attached in Appendix G is an Implementation Plan Matrix for each Emphasis Area listed in this plan. The matrix is to be used by the Tribe to plan safety projects, and includes the following information:

- Objectives of the emphasis area
- The strategic linkage, or evidence that shows a need to prioritize the emphasis area
- Success indicators, or completed tasks that demonstrate successful implementation of the proposed projects
- For each of the 4 E's of Safety:
 - Actions and proposed strategies to improve the safety emphasis area
 - Target output, or goal of each strategy listed
 - Responsible parties that are assigned to each task listed, subject to change with management positions (see NVOPH organizational chart, Appendix B)
 - Date of completion, estimated for each strategy listed, which may be on-going
 - Performance measures that indicate the completion of a project
 - Monitoring and evaluation methods to analyze the effectiveness of a completed project or strategy, which can help improve future project planning

5.1 EVALUATION PROCESS

At least once per year, this plan will be evaluated by the Tribe, the Tribe's BIA Roads Administrator, or other staff members as directed by the Tribe. The plan will be updated as needed. For example, emphasis areas may be removed, added, or modified as safety measure are successfully implemented or as safety concerns change. A Tribal meeting will be held to discuss major changes to the plan as well as strategies for future safety projects and decisions regarding potential funding sources.

5.2 NEXT STEPS

Several steps still need to be taken after this plan is finalized. The recommended actions for the Tribe are listed below in chronological order:

1. Develop an official resolution to adopt this plan
2. Use this plan and data provided in this plan to apply for funds for safety projects through the Tribal Transportation Safety Funds and other sources
3. Apply for safety audits to evaluate the existing transportation facilities and receive recommended solutions to improve safety
4. Include the public in decision making processes via public meetings and announcements to ensure proposed projects are benefitting the community to the best of the Tribe's ability
5. Select strategies outlined in this plan to address safety concerns and begin planning projects, starting with the highest priority emphasis areas

6. Develop a detailed project schedule to keep projects on track and ensure success
7. Apply for funding for engineering, design, and construction services for high priority projects
8. Monitor and evaluate construction activities and performance measures outlined in the Implementation Plan
9. Record completed projects and maintain as-built documents for future use
10. Update this plan and repeat these steps when projects are completed, or every 5 years



Young girl wearing helmet on small 4-wheeler, 2016

6 REFERENCES

The primary resource used to develop this plan was the Federal Highway Administration's "Developing Safety Plans – A Manual for Local Rural Road Owners." Existing local transportation plans and safety plans were also referenced in the development of this plan. They include:

- Port Heiden 5 Year Plan
- Alaska State Highway Safety Plan
- Southwestern Alaska Transportation Plan
- Alaska Federal Lands Long-Range Transportation Plan

Additional sources used to gather information for this plan are cited below:

ABS, 2008. ABS Alaskan. Sunlight Hours by Month in Alaska. Website:

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<http://www.nativevillageofportheiden.com/>

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APPENDIX A:

SITE VISIT NOTES AND PHOTOGRAPHIC LOG

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Initial Site Visit Notes – Safety Concerns

Roads

- Dust is a health hazard because of volcanic ash/pumice, contaminated soil
- Lack of signs, intersection signs needed, existing signs are damaged and go unnoticed
- No street lights
- Some points of poor visibility (1) driveway near pumice pit, (2) blind corner past landfill, limited visibility from brush overgrowth on road sides and sharp corners
- Electrical wires buried shallow under roads
- Bike and 4-wheeler crashes, no helmet
- Helmet ordinance for city, but not strictly enforced, adults don't wear helmets to set a good example for children
- Excessive speed isn't a major problem, but signs would be help in neighborhoods where children play, and for young drivers
- Main road to harbor is sinking and blowing away, reroute main road?
- Need for snow fencing
- Sinking/eroding roads need to be raised
- Road markers for winter

Trails

- Trails used for Aniakchak and berry picking/subsistence hunting
- No signs or trail markers
- Tourists come unprepared and often get lost, used to give out maps, now use website to communicate preparedness via phone or email
- Trails need to be hardened

Airport

- No building at airport for passengers/pilots to rest, no access to a phone in case of emergency, building would be inviting for outsiders
- Runway gets soft in spring, contaminated?
- Use water truck for dust, tried calcium chloride once on runway
- Fuel facility at airport?

Weather

- Erosion problems, Gold Fish Lake is only ~70 ft from shore now, could be used as boat harbor in future (3 yrs)?
- Culverts washout, flooding issues
- 100-130 mph winds blow away posts/signage and wears down roads
- Emergency warning system for tsunamis?
- Evacuation route/procedure in case of major flood?

Pedestrians

- Unsafe for pedestrians because of wolves and bears
- No street lights
- Town is spread out
- No pedestrian facilities i.e. sidewalks, crosswalks, etc.

Transit

- No taxi or bus, but there is a need for rides i.e. elders to store, etc.

Harbor

- Ramp washes away every year
- Boat launch needs resurfacing after every tide
- No vehicle to pull out boom for spills
- Need for maintenance/storage building to house safety equipment, skiffs, fuel, etc., high priority

Rivers

- No bridge at North River, and people get stuck on four-wheelers
- Bridges are needed so people don't drive through spawning streams
- Sandbars and shallow water can be dangerous and increase risk of getting stuck
- Emergency shelter/meeting place at mouth of river?

Existing Safety Resources

- No VPSO, they police each other to keep from driving impaired, no drunk tank
- Volunteer search and rescue using personal skiffs, no dedicated vehicle
- Green VPSO skiff doesn't work well
- Old fire truck (from early 80s), outdated fire equipment, need training, need fire hydrants and extinguishers, alarms, pumping station for water trucks, currently takes 1.5 hours to fill truck – poor response time
- Fairly new rescue vehicle (10 yrs old)
- Clinic with 2 health aids, EMT vehicle, 6-7 trained EMTs in village

Utilities

- Limited fuel facilities, Coast Guard and Fish & Wildlife come for fuel
- Electrical is all underground, newer lines buried deep, but older lines are shallow especially as roads wear down
- Major electrical boxes close to road, hazard during snow plowing
- Cell phone service is unreliable, frequent dropped calls
- Only one tower, GCI for phones and some internet, VHS
- Hughesnet for internet, approximately \$90-100 per month, terrible connection
- Minimal landlines (ACS), satellite for long distance
- New GCI Tower on hill/plateau?
- No radio in case of power outage

Crashes

- Estimated 5 crashes per year (bike/4-wheeler)
- 1-2 per year are severe and require a medivac
- Estimated that most, or at least half, involve alcohol
- No crash reporting system, troopers in King Salmon don't respond
- In town accidents occur mainly in summer, winter accidents primarily occur in back country



Photo 01 - Only existing street name sign by store



Photo 02 - Only existing speed limit sign, damaged



Photo 03 - Blind turn



Photo 04 - Blind spot due to tall brush



Photo 05 - Eroding beach



Photo 06 - Ramp to boat launch area



Photo 07 - Stream crossing ATV trail with no bridge



Photo 08 - Eroding shoulder



Photo 09 - Steep embankment erosion near culvert



Photo 10 - Steep embankment erosion near culvert



Photo 11 - Roadway erosion



Photo 12 - Roadway erosion and poor drainage

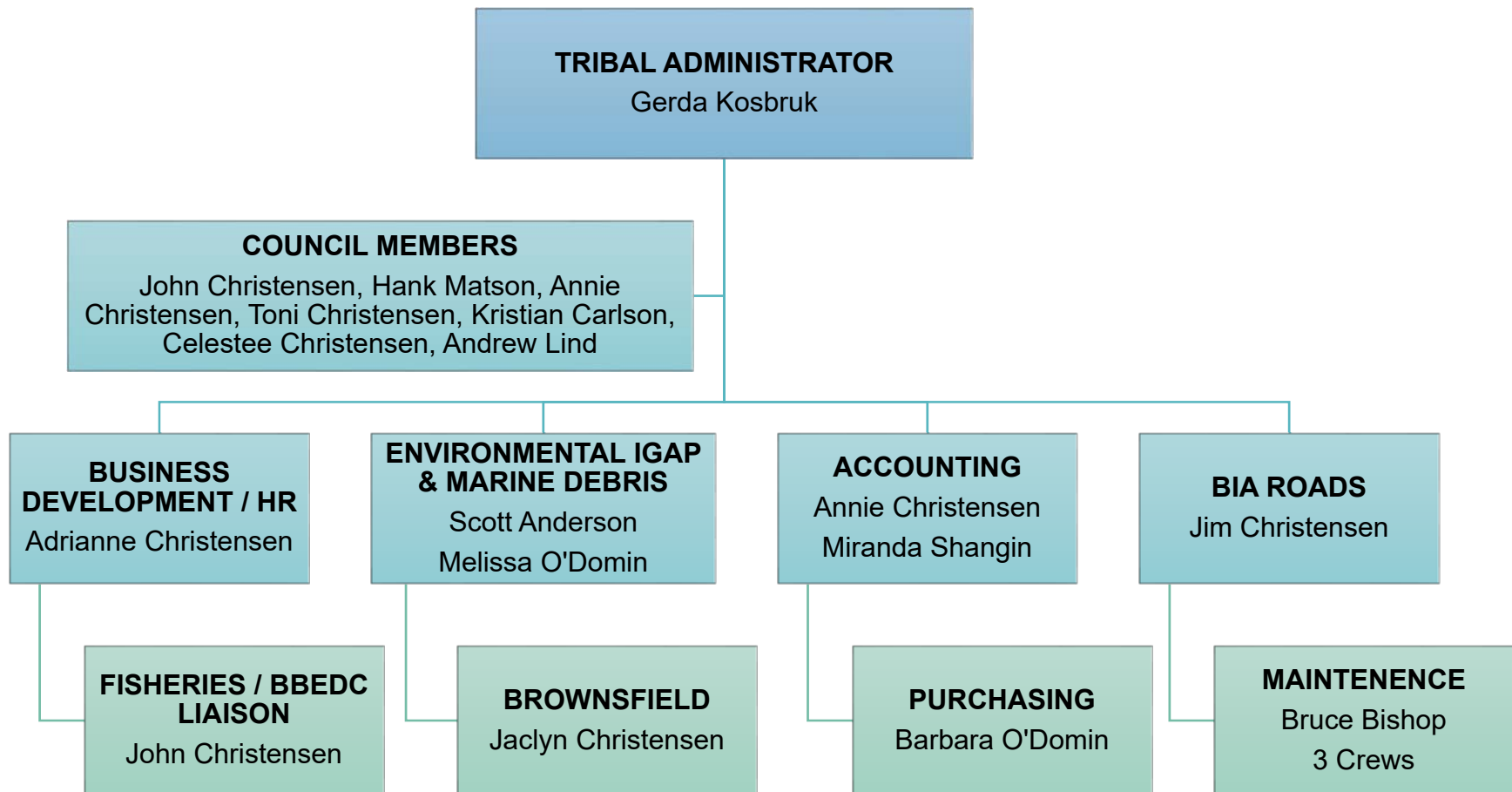
APPENDIX B:

NATIVE VILLAGE OF PORT HEIDEN ORGANIZATIONAL CHART

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NATIVE VILLAGE OF PORT HEIDEN

2016 ORGANIZATIONAL CHART



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APPENDIX C:

EMERGENCY RESPONSE RESOURCES

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Emergency Response Contact Information

Port Heiden Clinic

PO Box 49057
Port Heiden, AK 99549
907-837-2208 or 837-2247

Port Heiden Volunteer Fire Department

Andrew Lind Sr.
PO Box 49050
Port Heiden, AK 99549
907-843-1237 or 444-8546

State Troopers, King Salmon Post

PO Box 226
King Salmon, AK 99613
907-246-3307

Bristol Bay Borough Police Department

Chief of Police: Rodney Enevoldsen
PO Box 655
Bldg. 150, King Salmon Air Force Base
King Salmon, AK 99613
907-246-4222

Coast Guard Rescue Coordination Center

800-399-5555 (Alaska Statewide)
907-271-6700 (Anchorage 24-hour Duty Officer)

Emergency Operations Center Rescue Coordination Center (RCC)

Alaska Air National Guard, Alaska Div. of Emergency Services, and Alaska Dept. of Public Safety
428-7200 (Information)

Civil Air Patrol

Alaska Wing CAP Headquarters
907-552-5317

Alaska Snowmachine Search and Rescue Recovery Team (ASSERT)

Anchorage, AK
907-566-2653

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Reviewed by Physician

☐ YES ☐ NO

ALASKA PRE-HOSPITAL PATIENT REPORT

Crash Report Number

NAME OF SERVICE				PATIENT'S NAME (Last, First, M.I.)					
AMBULANCE NO.	RUN NO.	MO.	DAY	YEAR	ADDRESS				
ADDRESS OF INCIDENT					CITY	STATE	ZIP	PHONE	
PROBLEM REPORTED AS:					SOCIAL SECURITY NO.		DOB: MO	DAY	YEAR
DESTINATION					INSURER	AGE	SEX	☐ WHITE ☐ HISP. ☐ ASIAN/PAC. ISLD. ☐ BLACK ☐ NAT. AM. ☐ UNKNOWN	
MED. CONTROL					NEXT OF KIN			PHONE	

VITAL SIGNS						DRUGS/FLUIDS					
Time	Pulse	B.P.	Resp.	Airway	Pupils	GCS	Skin	IVs.	Time	Med	Amount
		/		☐ Normal ☐ Partly Obstruct. ☐ Obstruct ☐ SaO ₂ _____	L. _____ R. _____	Eye _____ Verbal _____ Motor _____ Total _____ Unknown ☐	☐ Normal ☐ Pale ☐ Sweaty ☐ Cyanotic ☐ _____	Soln _____ Loc _____ Size _____ Attempts _____			
		/		☐ Normal ☐ Partly Obstruct. ☐ Obstruct ☐ SaO ₂ _____	L. _____ R. _____	Eye _____ Verbal _____ Motor _____ Total _____ Unknown ☐	☐ Normal ☐ Pale ☐ Sweaty ☐ Cyanotic ☐ _____	Soln _____ Loc _____ Size _____ Attempts _____			
		/		☐ Normal ☐ Partly Obstruct. ☐ Obstruct ☐ SaO ₂ _____	L. _____ R. _____	Eye _____ Verbal _____ Motor _____ Total _____ Unknown ☐	☐ Normal ☐ Pale ☐ Sweaty ☐ Cyanotic ☐ _____	Soln _____ Loc _____ Size _____ Attempts _____			

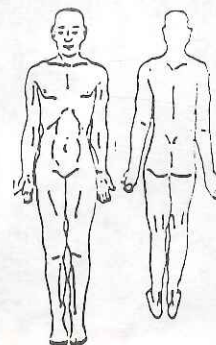
HISTORY

Chief Complaint/Mechanism of Injury:

History:

Assessment:

Treatment:



CHIEF COMPLAINT/MOI

- | | |
|--|--------------------------------------|
| ☐ Trauma | ☐ Cardiac |
| ☐ Burns | ☐ Diabetes |
| ☐ OB | ☐ Drowning |
| ☐ Alcohol | ☐ Respiratory |
| ☐ Frostbite | ☐ Hypothermia |
| ☐ Poisoning | ☐ Drug OD |
| ☐ Seizure | ☐ Behavioral |
| ☐ Other Medical | ☐ Stroke |

LOCATION

- | | |
|-------------------------------------|--|
| ☐ Home/Res. | ☐ Public Building |
| ☐ School | ☐ Industry/Business |
| ☐ Mountains | ☐ Wild/Off-Road |
| ☐ Highway | ☐ Boat/Water |
| ☐ Recreation | ☐ Medical Facility |
| ☐ Unknown | ☐ Other |

SAFETY EQUIPMENT USED

- | | |
|-----------------------------------|--|
| ☐ Lap Belt | ☐ Shoulder Belt |
| ☐ Helmet | ☐ Airbag Deployed |
| ☐ PFD | ☐ Child Safety Seat |
| ☐ None | ☐ Prot. Clothing |
| ☐ NA | ☐ Unknown |

NATURE OF CALL	TRANSPORTED BY	EVENT	TIME	MILEAGE	ODOMETER
☐ Emergent	☐ Ground Ambulance	Incident Occurred		Start	
☐ Non-Emergent	☐ Air Ambulance	Call Received		Scene	
☐ Scene	☐ Helicopter (Military)	En Route		Destination	
☐ Transfer	☐ Helicopter (Commercial)	Arrived at Scene		Base	
☐ Standby	☐ Air Taxi	En Route w/Patient		Total	
☐ Rendezvous	☐ Scheduled Flight	Arrived at Destination			
☐ Not Applicable	☐ Boat	Back in Service			
☐ Unknown	☐ Snowmobile	Equipment Left with Patient:		Personal Belongings with Patient:	
	☐ Other (specify)				

PATIENT DISPOSITION

- | |
|--|
| ☐ Treated/Transported by EMS |
| ☐ Treated/Transferred Care |
| ☐ Treated/Transported by Private Veh. |
| ☐ Treated/Released |
| ☐ No Treatment Required |
| ☐ Patient Refused Care |
| ☐ Dead at Scene |
| ☐ Cancelled |
| ☐ No Patient Found |

☐ WORK RELATED

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Normal/Afterhours/Home Chart note/phone call (circle) Feel safe at home? Y N Notified :

Depression Screening: Feel Sad? Y N Sadder than in past? Y N Feeling like hurting self or others? Y N

Other

Primary

If any yes answers, who was notified/date:**HISTORY** Chief Complaint

Hx of Present Illness



0 1 2 3 4 5 6 7 8 9 10

Past Health Hx

Medicines

LMP: _____ G _____ P _____ Ab _____

If Pregnant, #Weeks: _____

Fundal Ht: _____ Fetal Heart Tones: _____

Immunization Status: _____

Allergies (What & Reaction)

Habit Hx (ETOH, drugs)

EXAM General AppearanceTobacco: 2nd-hand Never Used
Previous Smoker/Chew**Current:** Chew Smoke Both

Thinking about quitting? Y N

Already Quit Referred: Y N

Vital Signs T _____ P _____ R _____ BP _____ WT _____ SPO₂ _____ HT _____ HC _____

Head _____

Eyes _____ Snellen Test (R) _____ (L) _____ (B) _____

Ears (R) _____ (L) _____

Nose/Sinus _____

Mouth/Throat _____

Neck/Nodes _____

Back _____

Lungs/Chest _____

Heart _____

Breast _____

Abdomen _____

Genital/Rectal _____

Extremities _____

Nervous System _____

Skin: _____

Lab Tests/Results: _____

ASSESSMENT**Telemedicine:** Telemedicine (Store & Forward) Consult requested Medical ☐ Dental ☐ Case# _____Polycom (Interactive) Consult requested Medical ☐ Dental ☐ Presented case ☐**PLAN** CHAM Pg# _____

Pt Education: CHAM Pg# _____

Medicines: _____

Special/Other _____

Care: _____

Recheck/Follow-up: _____

w-up: _____

Immunizations/Skin Test Y N

See Immunization form

Normal Lab values:

Coaguchek 0.8-1.4 INR

Hemoglobin: 12-16

Glucose: 70-110

Pain Level on discharge

0 1 2 3 4 5 6 7 8 9 10

Date	Time in:	Time Out:	Doctor	on / /
Gender: M F DOB	Age	Hospital #	Dr's. Assessment	
Name (L)	(F)	(MI)	CHA//CHP	
Village			CHA Level T 1 2 3 4 P (circle one) Standing Orders: ☐	

CHA/P only- Meds Reviewed with Pt? Y N OR NO MEDS Current/updated Medication List given to Pt? - Y N N/A (no meds)**Referral Provider/Midlevel only-** Medication List Reviewed Y N Medication Reconciled Y N N/A (no meds)

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APPENDIX D:

COMMUNITY SURVEY

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PORT HEIDEN 2016 TRIBAL TRANSPORTATION SAFETY PLAN

COMMUNITY SURVEY

1. How do you get around within the community? Please circle (you may circle more than one)

4-wheeler

bike

walk

truck

get a ride

other _____

2. Please help us prioritize safety issues and health hazards on the transportation system within Port Heiden. Keep in mind that “**safety issues**” are problems that cause death, injury or illness, and “**transportation system**” means all modes of travel including roads, airplanes, ocean and river travel, trails, pedestrians, etc.

For each type of safety issue below, identify if it's a high, medium, or low priority for your community by circling either “H” “M” or “L”:

Types of Safety Issues	High Priority	Medium Priority	Low Priority
Road work or road damage, unsafe or unmaintained roads	H	M	L
No boat harbor	H	M	L
Talking on phone or texting while driving	H	M	L
Wildlife danger for pedestrians (wolves and bears)	H	M	L
Lack of helmet use for ATVs and bicyclists	H	M	L
Excessive rate of speed	H	M	L
Intersection safety, no signs, blind spots	H	M	L
Lack of seatbelt/child restraint use	H	M	L
Drug or alcohol impaired driving	H	M	L
Lack of street lights	H	M	L
Dust on roads, health hazard for elders	H	M	L
Lack of road and trail markers	H	M	L
Poor cell phone service (unsafe for travelers who may get lost or stuck)	H	M	L
Lack of bridges over rivers and spawning streams	H	M	L
Gravel runway, soft in spring, dusty in summer	H	M	L
Erosion	H	M	L
Flooding, road and culvert washouts	H	M	L
Outdated and inadequate fire truck and equipment	H	M	L
No VPSO or ambulance to respond to crashes	H	M	L
Steep slopes on roadsides with no guardrails	H	M	L
Danger of getting stuck on sandbars up river	H	M	L
Other _____	H	M	L
Other _____	H	M	L

CONTINUED ON BACK

3. What transportation facilities do you think are needed most to reduce safety hazards?

Types of Safety Facilities	High Priority	Medium Priority	Low Priority
Airport building with phone	H	M	L
Maintenance/storage building for safety equipment	H	M	L
Permanent boat launch and ramp	H	M	L
Emergency shelter and meeting place at mouth of river	H	M	L
Local VPSO	H	M	L
New fire truck and water pumping station	H	M	L
GCI tower at top of mountain for better service	H	M	L
Dedicated search and rescue vehicle	H	M	L
Emergency warning system for tsunamis	H	M	L
New location for main road away from erosion	H	M	L
Evacuation route to higher ground in case of major flood	H	M	L
Other _____	H	M	L
Other _____	H	M	L

4. Have you or someone you know been in an accident on roads in or around Port Heiden within the last 5 years? **Yes** **No**

Can you please explain the incident(s)? Include: who was involved and how old were they, what vehicle was driven, where it occurred, how severe were the injuries, was a medivac required, what caused the accident, was alcohol involved?

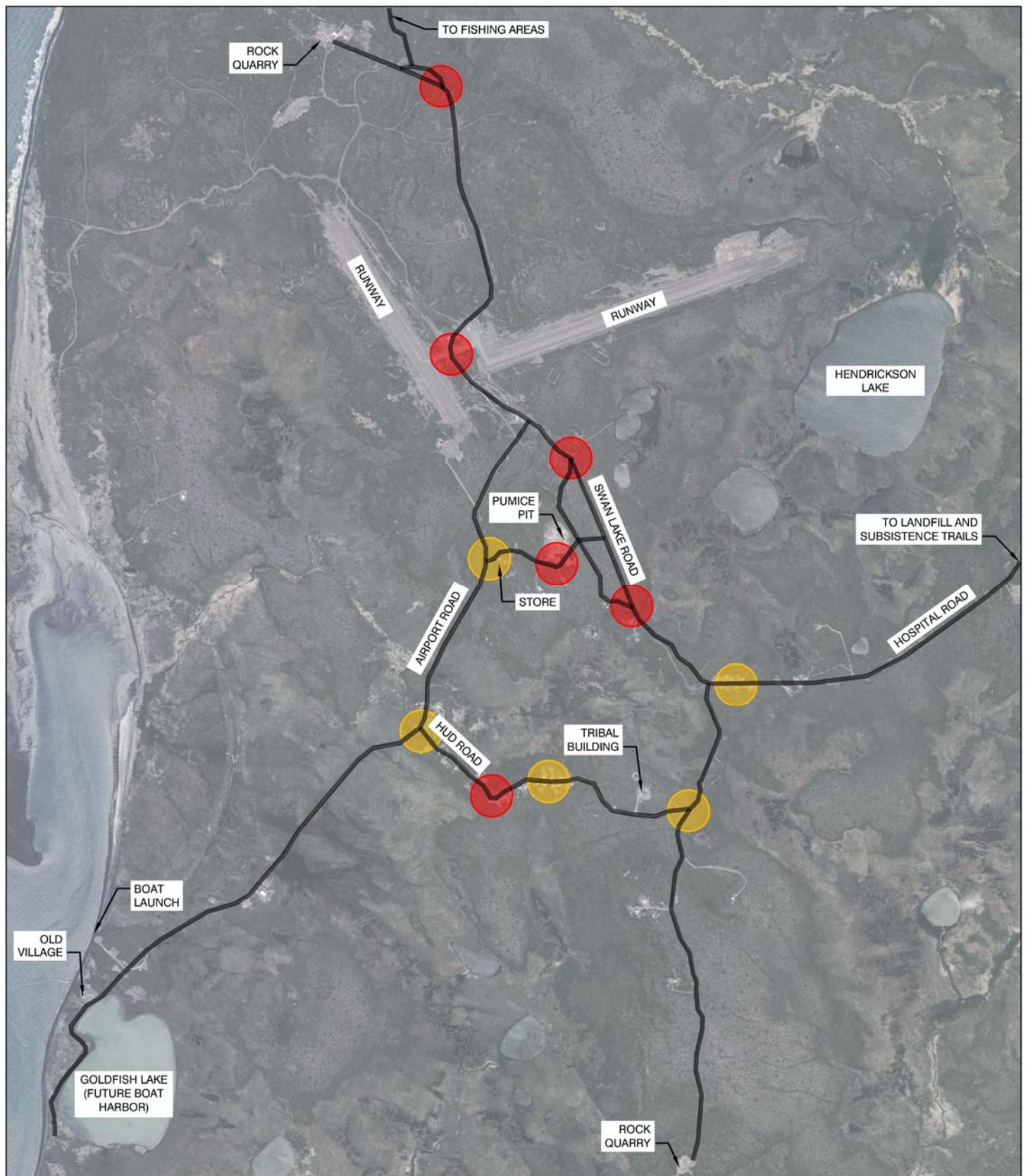
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APPENDIX E:

PROJECT MAPS

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Drawing: K:\JOBS\32170015_PTH_SAFETY_PLAN\50_DESIGN\FIGURES\32170015_PTH_SAFETY_PLAN - FIGURES.DWG - Layout: LAYOUT1
 User: JWANDER Mar 10, 2017 - 5:13pm Xrefs: BR_85X1P.DWG - Images: PTH GOOGLE EARTH.JPG FINALALOGO.PNG



NOTES:

IMAGE SOURCE - GOOGLE EARTH

LEGEND:

- EXISTING ROAD
- SHARP CORNER, BLIND SPOT, OR PROBLEM AREA
- PROPOSED LOCATION OF STREET LIGHTS I.E. SUBDIVISION, OR OTHER ESSENTIAL FACILITY

**FIGURE 1
 PORT HEIDEN, ALASKA
 TRIBAL TRANSPORTATION SAFETY PLAN
 EXISTING FACILITIES & SAFETY CONCERNS**



DATUM:	DATE	MAR 2017	SHEET
PROJECTION:	DWN.	JDW	1
PROJECT No.	SCALE	SHOWN	of
32170015	APPRVD.	IPP	

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APPENDIX F:

SOBERING FACTS: DRUNK DRIVING IN ALASKA

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Sobering Facts: Drunk Driving in

ALASKA



Keep Alaska safe. Keep drunk drivers off the road.

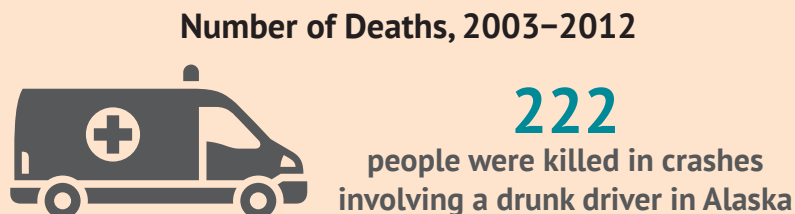
This fact sheet provides a snapshot of **alcohol-involved deaths and drunk driving** and an overview of proven strategies to reduce or prevent drunk driving. The information can help local public health decisionmakers and community partners see gaps and identify relevant strategies to address the problem of drunk driving.

Fast Facts

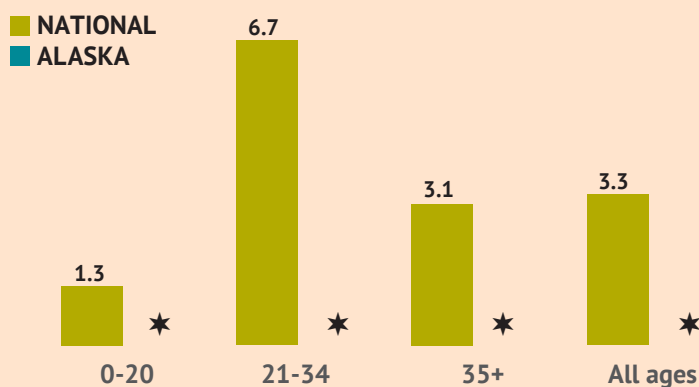
- Drivers with a blood alcohol concentration (BAC) of 0.08% or higher (i.e., drunk drivers) are considered alcohol-impaired by law.
- About one in three traffic deaths in the United States involve a drunk driver.
- Thanks to dedicated efforts, rates of drunk driving and alcohol-involved fatal crashes have gone down in recent years.
- Still, drunk drivers got behind the wheel millions of times in 2010.
- These data show what's happening in your state.

ALCOHOL-INVOLVED DEATHS

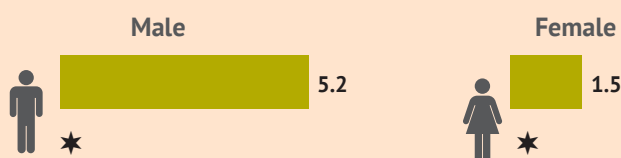
Persons Killed in Crashes Involving a Drunk Driver†



Rate of Deaths by Age (per 100,000 population), 2012



Rate of Deaths by Gender (per 100,000 population), 2012



†Deaths in crashes involving a driver with BAC $\geq 0.08\%$.

Source: Fatality Analysis Reporting System (FARS).

*Fatality rates based on fewer than 20 deaths are suppressed.

DRUNK DRIVING

Percentage of Adults Who Report Driving After Drinking Too Much (in the past 30 days)

NATIONAL
1.9%
report driving after
drinking too much

ALASKA
1.2%
report driving after
drinking too much

Source: Behavioral Risk Factor Surveillance System (BRFSS), 2012.



Centers for Disease
Control and Prevention
National Center for Injury
Prevention and Control

Working together, we can help keep people safe on the road—every day.

ALASKA

DRUNK DRIVING LAWS

- All 50 states and the District of Columbia have laws in place to protect the public from drunk drivers (e.g., driving is illegal with BAC at or above 0.08%).
- In Alaska, sobriety checkpoints are not allowed.
- Ignition interlock laws and license suspensions vary by state. For up-to-date information on your state, check with the Insurance Institute for Highway Safety at www.iihs.org.



For More Information

Visit the Centers for Disease Control and Prevention Web site at www.cdc.gov/motorvehiclesafety for:

- Injuries, costs, and other data related to drunk driving
- Detailed information on effective strategies to reduce or prevent drunk driving

What Works

The strategies in this section are effective for reducing or preventing drunk driving. They are recommended by *The Guide to Community Preventive Services* and/or have been demonstrated to be effective in reviews by the National Highway Traffic Safety Administration.* Different strategies may require different resources for implementation or have different levels of impact. Find strategies that are right for your state.

Strategies to reduce or prevent drunk driving

- 🔑 **Drunk driving laws** make it illegal nationwide to drive with a BAC at or above 0.08%. For people under 21, **“zero tolerance” laws** make it illegal to drive with any measurable amount of alcohol in their system. These laws, along with laws that maintain the **minimum legal drinking age** at 21, are in place in all 50 states and the District of Columbia, and have had a clear effect on highway safety, saving tens of thousands of lives since their implementation.
- 🔑 **Sobriety checkpoints** allow police to briefly stop vehicles at specific, highly visible locations to see if the driver is impaired. Police may stop all or a certain portion of drivers. Breath tests may be given if police have a reason to suspect the driver is intoxicated.
- 🔑 **Ignition interlocks** installed in cars measure alcohol on the driver's breath. Interlocks keep the car from starting if the driver has a BAC above a certain level, usually 0.02%. They're used for people convicted of drunk driving and are highly effective at preventing repeat offenses while installed. Mandating interlocks for all offenders, including first-time offenders, will have the greatest impact.
- 🔑 **Multi-component interventions** combine several programs or policies to prevent drunk driving. The key to these comprehensive efforts is **community mobilization** by involving coalitions or task forces in design and implementation.
- 🔑 **Mass media campaigns** spread messages about the physical dangers and legal consequences of drunk driving. They persuade people not to drink and drive and encourage them to keep other drivers from doing so. Campaigns are most effective when supporting other impaired driving prevention strategies.
- 🔑 **Administrative license revocation or suspension laws** allow police to take away the license of a driver who tests at or above the legal BAC limit or who refuses testing. States decide how long to suspend the license; a minimum of 90 days is effective.
- 🔑 **Alcohol screening and brief interventions** take advantage of “teachable moments” to identify people at risk for alcohol problems and get them treatment as needed. This combined strategy, which can be delivered in health care, university, and other settings, helps change behavior and reduces alcohol-impaired crashes and injuries.
- 🔑 **School-based instructional programs** are effective at teaching teens not to **ride with** drunk drivers. More evidence is needed to see if these programs can also reduce drunk driving and related crashes.

*Sources: The Guide to Community Preventive Services (The Community Guide), Motor Vehicle-Related Injury Prevention, at www.thecommunityguide.org, and National Highway Traffic Safety Administration. (2013). Countermeasures that work: a highway safety countermeasures guide for State Highway Safety Offices, 7th edition, at www.nhtsa.gov/staticfiles/nti/pdf/811727.pdf.

APPENDIX G:

IMPLEMENTATION PLAN

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NATIVE VILLAGE OF PORT HEIDEN
IMPLEMENTATION PLAN

EMPHASIS AREA			OBJECTIVES			
Road Conditions			Improve and maintain existing roads to reduce safety hazards			
STRATEGIC LINKAGE			SUCCESS INDICATORS			
Community survey results showed 53% of people marked "road work/damage, unsafe/unmaintained roads" as a high priority, 47% marked "excessive rate of speed" as a high priority, and 41% marked "intersection safety, no signs, blind spots" as a high priority			Completed roadway improvement projects, installation of signage			
4E APPROACH	ACTIONS	TARGET OUTPUT	RESPONISBLE PARTIES	DATE OF COMPLETION	PERFORMANCE MEASURES	MONITORING AND EVALUATION
EDUCATION	Create maps of road network and areas of caution, install road markers, install road name signs	Help people learn their way around the village, prevent people from getting lost especially newcomers	Jaclyn Christensen (NVOPH Brownsfield, mapping)	Dec. 2017	Creation of maps, number of maps posted around town or handed out to tourists	Update maps after completion of roadway projects
ENFORCEMENT	Install speed limit signs in neighborhoods and caution signs at intersections	Reduce speeds where children are at play, improve awareness about the rules of the road	Jim Christensen (NVOPH, BIA Roads)	Dec. 2018	Number of signs installed, reduced speeds	Evaluate effectiveness of speed limit signs and locations
ENGINEERING	Widen roads, build up roads and add culverts, install guardrails for areas with steep side slopes, improve blind corners	Improve drainage and erosion problems, reduce the danger of getting stuck in mud, improve safety of steep roads and intersections	Jim Christensen (NVOPH, BIA Roads)	Dec. 2021	Completion of phases for a road improvement project	Record flooding events and compare to previous years
EMERGENCY SERVICES	Maintain roads, keep free of potholes	Maintain safe access to essential services and minimum travel time to clinic	Jim Christensen (NVOPH, BIA Roads)	On-going	Number of times regrading occurs per month	Compare average response times to previous years

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**NATIVE VILLAGE OF PORT HEIDEN
IMPLEMENTATION PLAN**

EMPHASIS AREA			OBJECTIVES			
Airport Safety			Provide an airport building with emergency and essential services, improve safety of runway crossing			
STRATEGIC LINKAGE			SUCCESS INDICATORS			
Community survey results show 65% of people marked "airport building with phone" as a high priority, making it the community's 2nd highest priority for needed transportation safety facilities			Reduced incidences at the airport			
4E APPROACH	ACTIONS	TARGET OUTPUT	RESPONISBLE PARTIES	DATE OF COMPLETION	PERFORMANCE MEASURES	MONITORING AND EVALUATION
EDUCATION	Install a flashing sign that lights up with runway lights when a plane lands	Improve alertness and prevent vehicles from entering runway when in use	Gerda Kosbruk (NVOPH Tribal Administrator)	Dec. 2018	Installation of sign and electrical components	Reduced number of incidents at runway crossing compared to previous years
ENFORCEMENT	Report unwanted behavior around airport facilities	Enforce rules of the runway	Derek with State DOT	Dec. 2018	Number of reports made	
ENGINEERING	Construct new building with seating and bathroom, relocate ramp to avoid runway crossing, replace surface material of runway	Provide shelter and a resting place for travelers, reduce risk of car-to-plane collisions, reduce break-up potential of surface material	Gerda Kosbruk (NVOPH Tribal Administrator)	Dec. 2018	Land use permit obtained, land survey completed, construction completed	Document records during planning process, construction daily reports, fewer cases of plane inability to land due to soft/muddy runway
EMERGENCY SERVICES	Install phone and emergency equipment in building	Provide a means of communication and basic medical aid in the event of an emergency	Gerda Kosbruk (NVOPH Tribal Administrator)	Dec. 2018	Availability and use of phone	Update call list and equipment as needed

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**NATIVE VILLAGE OF PORT HEIDEN
IMPLEMENTATION PLAN**

EMPHASIS AREA			OBJECTIVES			
Water Safety			Provide a safe boat launch, prepare the community with safe water travel procedures and facilities			
STRATEGIC LINKAGE			SUCCESS INDICATORS			
Community survey results show 76% of people marked "no boat harbor" as a high priority for safety issues, and 65% marked "permanent boat launch and ramp" as a high priority for transportation safety facilities			Construction of needed water transportation facilities, reduced number of incidents on local waterways			
4E APPROACH	ACTIONS	TARGET OUTPUT	RESPONISBLE PARTIES	DATE OF COMPLETION	PERFORMANCE MEASURES	MONITORING AND EVALUATION
EDUCATION	Provide a list of safety items to keep in water vehicles, teach people proper use of boat ramp	Improve awareness about safe water travel and procedures	Jim Christensen (NVOPH, BIA Roads)	Dec. 2021	Number of lists/brochurs handed out to community members, rafters, and fishermen	Update safety procedures and train new personnel as needed
ENFORCEMENT	Install signage at the boat harbor, hire a Harbor Master	Enforce safe use of the boat harbor	Jim Christensen (NVOPH, BIA Roads)	Dec. 2021	Number and type of signs installed, documentation of Harbor Master job position opening/hiring	Periodic employee review of Harbor Master
ENGINEERING	Build a seasonal boat ramp system with safe access road, transform Goldfish Lake into boat harbor, build bridges on all stream crossings	Safe and effective use of waterways	Jim Christensen (NVOPH, BIA Roads)	Dec. 2021	Successful requests for proposals, engineering, and construction for all projects	Evaluate and record condition of boat launch during every installation and take-down
EMERGENCY SERVICES	Create emergency shelters (and maps) along rivers, install lights at boat harbor	Provide a safe location for rafters and fishermen to meet in an emergency	Jim Christensen (NVOPH, BIA Roads)	Dec. 2021	Creation of emergency shelters, number of maps posted around town, number of lights installed at harbor	Record and compare incidents of near drowning, search and rescue parties needed, etc.

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**NATIVE VILLAGE OF PORT HEIDEN
IMPLEMENTATION PLAN**

EMPHASIS AREA			OBJECTIVES			
Pedestrian Safety			Improve safety for pedestrians so people can walk to their destinations safely if needed			
STRATEGIC LINKAGE			SUCCESS INDICATORS			
Community survey results show 76% of people marked "lack of street lights" as a high priority, and 53% marked "wildlife danger for pedestrians (wolves and bears)" as a high priority for transportation safety issues			More people opting to walk around town due to increased safety measures associated with wolves, successful installation of street lights			
4E APPROACH	ACTIONS	TARGET OUTPUT	RESPONISBLE PARTIES	DATE OF COMPLETION	PERFORMANCE MEASURES	MONITORING AND EVALUATION
EDUCATION	Hang posters around town about dangers of wolves and how to avoid an attack	Improve community awareness of wolf behavior and safety precautions for pedestrians	Adrianne Christensen (NVOPH Human Resources)	Dec. 2017	Number of posters installed	Evaluate effectiveness of posters, consider hosting a seminar if needed
ENFORCEMENT	Continue to encourage use of radios for wolf sitings	Report all wolf sitings to prevent incidents with pedestrians	Adrianne Christensen (NVOPH Human Resources)	On-going	Reduced number of wildlife-related incidents for pedestrians	Periodically ensure that primary facilities (i.e. school) have radios on hand
ENGINEERING	Install street lights in all neighborhoods and essential service buildings	Improve visibility for pedestrians and fend off wolves from lit areas	Adrianne Christensen (NVOPH Human Resources)	Dec. 2021	Number of street lights installed	Maintain lights and replace as needed, evaluate changes in pedestrian safety
EMERGENCY SERVICES	Install GCI tower at top of hill, encourage all families to have a radio in their home	Provide a means of communication in the event of an emergency for pedestrians, hunters, and hikers	Adrianne Christensen (NVOPH Human Resources)	Dec. 2018	Installation of new cell phone tower, number of radios provided to community	Coordinate with utility companies to maintain facilities and notify outages

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NATIVE VILLAGE OF PORT HEIDEN
IMPLEMENTATION PLAN

EMPHASIS AREA			OBJECTIVES			
Air Quality			Reduce dust creation and exposure on local roads and runways			
STRATEGIC LINKAGE			SUCCESS INDICATORS			
Rated the 2nd highest for safety issues, community survey results show that 82% of people marked "dust on roads, health hazard for elders" as a high priority			Noticable visual reduction in dust during the dry season			
4E APPROACH	ACTIONS	TARGET OUTPUT	RESPONISBLE PARTIES	DATE OF COMPLETION	PERFORMANCE MEASURES	MONITORING AND EVALUATION
EDUCATION	Hang posters around town about health hazards of dust and pumice	Increase awareness about health risks of dust and pumice	Gerda Kosbruk (NVOPH Tribal Administrator)	Dec. 2017	Number of posters	Replace/updated posters and brochures as needed
ENFORCEMENT	Install speed limit signs around town	Lower speeds can reduce dust emissions	Gerda Kosbruk (NVOPH Tribal Administrator)	Dec. 2018	Number of signs	Maintain signage
ENGINEERING	Replace surface course material of all roads and runway, use water trucks during dry conditions	Remove pumice from surface material, suppress dust as much as possible	Gerda Kosbruk (NVOPH Tribal Administrator)	Dec. 2021, maintenance on-going	Improvement of roads	Maintain roads, apply water frequently during dry conditions
EMERGENCY SERVICES	Provide free dust masks at the clinic	Protect sensitive people from dust inhalation	Gerda Kosbruk (NVOPH Tribal Administrator)	Dec. 2017	Continual availability of dust masks	Evaluate use of masks and consider other services as needed

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**NATIVE VILLAGE OF PORT HEIDEN
IMPLEMENTATION PLAN**

EMPHASIS AREA				OBJECTIVES		
Emergency Preparedness				Maintain the transportation system in Port Heiden for maximum emergency preparedness of the community		
STRATEGIC LINKAGE				SUCCESS INDICATORS		
Community survey results show that 65% of people marked both "outdated and inadequate fire truck and equipment" and "no VPSO or ambulance to respond to crashes" as high safety priorities, 53% marked "maintenance/storage building for safety equipment" as a high priority, and 47% marked "evacuation route to higher ground in case of major flood" as a high priority				Improved emergency facilities		
4E APPROACH	ACTIONS	TARGET OUTPUT	RESPONISBLE PARTIES	DATE OF COMPLETION	PERFORMANCE MEASURES	MONITORING AND EVALUATION
EDUCATION	Create maps showing evacuation route in the event of a major storm event	Educate community on evacuation procedure and flood dangers	Jaclyn Christensen (NVOPH Brownsfield, mapping)	Dec. 2021	Number of maps posted around town	Coordinate need for emergency preparedness education with PTH Emergency Plan
ENFORCEMENT	Hire a VPSO	Enforce public safety and keep record of all incidents	Gerda Kosbruk (NVOPH Tribal Administrator)	Dec. 2017	Documentation of VPSO position opening/hiring	Employee reviews of VPSO
ENGINEERING	Construct a building to store transportation maintenance and safety equipment	Keep all safety equipment in one easily accessible location and out of the elements to increase lifespan and functionality	Gerda Kosbruk (NVOPH Tribal Administrator)	Dec. 2021	Successful construction of building, fully stocked and organized functioning equipment	Periodic maintenance of building and inventory of equipment
EMERGENCY SERVICES	Create an evacuation route to higher ground, upgrade fire safety equipment, obtain a dedicated search and rescue vehicle	Keep the community prepared for flood or fire emergencies	John Christensen (NVOPH BBEDC Liaison)	Dec. 2021	Construction of evacuation trail, purchase of new fire equipment	Maintain evacuation route, upgrade fire equipment as needed, keep rescue skiff in working condition

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**NATIVE VILLAGE OF PORT HEIDEN
IMPLEMENTATION PLAN**

EMPHASIS AREA			OBJECTIVES			
Impaired Driving			Reduce drunk driving, and reduce alcohol-related accidents, injuries, and deaths			
STRATEGIC LINKAGE			SUCCESS INDICATORS			
Rated the #1 highest safety concern, community survey results show that 88% of people marked "drug or alcohol impaired driving" as a high priority, anecdotal reports indicate that most car/ATV crashes involve alcohol			Reduced number of alcohol-related accidents per year			
4E APPROACH	ACTIONS	TARGET OUTPUT	RESPONSIBLE PARTIES	DATE OF COMPLETION	PERFORMANCE MEASURES	MONITORING AND EVALUATION
EDUCATION	Hold meetings and hang posters about dangers of driving drunk	Increase awareness about dangers of driving under the influence	Gerda Kosbruk (NVOPH Tribal Administrator)	Dec. 2017	Number of posters or meetings	Compare number of alcohol-related accidents to previous years
ENFORCEMENT	Hire a VPSO to give tickets to drunk drivers	Penalize people who drive intoxicated	Gerda Kosbruk (NVOPH Tribal Administrator)	Dec. 2017	Number of tickets given	Compare number of alcohol-related accidents to previous years
ENGINEERING	Utilize social engineering and campaign strategies i.e. t-shirts, stickers, and Facebook to discourage drunk driving	Keep the dangers of drunk driving at the forefront of local media, provide a constant reminder about model behavior	Gerda Kosbruk (NVOPH Tribal Administrator)	On-going	Reduced amount of drunk driving	Compare number of alcohol-related accidents to previous years
EMERGENCY SERVICES	Advocate use of the Tribal Building for overnight stay instead of driving	Provide a place for people to rest and sober up before driving	Gerda Kosbruk (NVOPH Tribal Administrator)	On-going	Increased use of the building	Compare number of alcohol-related accidents to previous years