



# Newtok Village Council

---

## Tribal Transportation Safety Plan

December 11, 2017



# Newtok Village Council

## Tribal Transportation Safety Plan

---



### Table of Contents

INTRODUCTION ..... 2

VISION STATEMENT ..... 2

BACKGROUND/EXISTING CONDITIONS..... 2

IDENTIFIED NEEDS..... 3

RELOCATION EFFORTS ..... 5

SAFETY PARTNERS..... 6

PROCESS..... 7

DATA SUMMARY ..... 8

EMPHASIS AREAS ..... 9

EVALUATION & IMPLEMENTATION ..... 22

RESOURCES ..... 22

# Newtok Village Council

## Tribal Transportation Safety Plan

---



### INTRODUCTION

The purpose of the Newtok Village Council (NVC) Tribal Transportation Safety Plan (TTSP) is to provide NVC, the Federal Highway Administration (FHWA), the Bureau of Indian Affairs (BIA), State and local governments with a document that identifies NVC's transportation safety concerns and clearly sets goals and strategies needed to address the concerns identified. Implementation of the plan will improve transportation safety for the NVC, its people, and visitors. As part of an ongoing effort to make safety improvements, this TTSP was developed with input from safety partners (Table 1, Page 4). The community of Newtok is relocating to a new town-site called Mertarvik, which is located approximately nine miles away to the south from Newtok. The relocation has become necessary because of severe erosion and permafrost melting, which is resulting in buildings being damaged and lost, and the area becoming unsafe for living. This TTSP will provide the NVC with the Vision and project recommendations needed to ensure that both Newtok and Mertarviks' transportation systems are safe and accessible for residents and other users.

### VISION STATEMENT

During several public meetings, NVC representatives and stakeholders developed the following vision statement for the NVC Transportation Program and this Plan.

**"All community streets in Newtok will be maintained while the residents of Newtok relocate to Mertarvik. New community streets and trails in Mertarvik will be developed to ensure residents have access to a safe transportation system by 2023"**

### BACKGROUND/EXISTING CONDITIONS

Newtok is located along the banks of the Ninglick River, on Nelson Island in the Yukon-Kuskokwim Delta Region, approximately 100 miles northwest from Bethel and 500 air miles northwest from Anchorage. Bethel is considered the rural community hub for residents of Newtok, and access to Anchorage, the urban hub of Alaska, has additional challenges. The major transportation access into and out of Newtok is via airplane and there is no year-round road access. Transportation within the community is by ATV, snow machine and walking as the roads are constructed with lumber (known as "board-roads"), and inter-village transportation is by boat in the summer and snow machine in the winter. At the new village site, the roads will be constructed with a gravel material, which will enable the use of cars and trucks.

# Newtok Village Council

## Tribal Transportation Safety Plan



The NVC is a federally recognized tribe of 350 Yupik Eskimos that live along the Ninglick River on Alaska's Bering Sea coast. The governing body is the NVC. These resilient people have lived in the area for over 2,000 years. Their original migratory lifestyle ended when the US Bureau of Education mandated that Alaska Native children attend schools that were constructed by the government in locations with little regard to threats from natural disasters. Despite such threats, and despite a very high unemployment rate, resulting in a per capita median income 68 percent below the national average, the community has been able to survive at its current location based on a subsistence economy. The residents of Newtok are clear that they want to preserve their identity as an independent village within the region.

Newtok and Mertarvik are both located with subarctic, arctic and maritime climates. The winters are long and cold with short and mild summers, with temperatures ranges from a low of -48 F in the winter to a high of 87 F in the summer. Annual precipitation averages 16 inches of rain and 53 inches of snow.



### IDENTIFIED NEEDS

Since 2002, there have been six federal disasters declared in Newtok due to specific flood events. However, the primary threat to Newtok is coastal/riverine erosion. Thawing permafrost, in combination with river currents and coastal storms



# Newtok Village Council

## Tribal Transportation Safety Plan



result in average shoreline erosion rates of 70 – 90 feet per year at the existing village site, as documented by the US Army Corps of Engineers<sup>1</sup>. Coastal erosion also increases the impact of other adverse weather events. For example, Newtok is now much more susceptible to wind driven storms/flooding because a significant amount of shoreline and landmass in the area no longer exists to act as a buffer. GAO Report 04-142 identified Newtok as one of four Alaskan villages in imminent danger that need to relocate to a safe site. The report noted that between 1954 and 2001 the village lost more than 4,000 feet of land to erosion. The yellow line in the Figure 2 below demonstrates where the extent of land at Newtok as of 2016.



**Figure 2.** US Army Corps of Engineers

Newtok has already lost its sewage disposal system, solid waste site, barge landing, and boat dock to erosion. Residents, particularly the very young and elderly people are experiencing significant public health problems because there is no proper way to handle human or solid waste. When the community loses its potable water supply, which is expected to occur in 2018 or 2019, there will be a public health crisis. There is standing water throughout the town site due to thawing permafrost, and most homes are inundated with mold due to frequent flooding --- all of which contribute to well document local health issues. Losing the boat dock and barge landing site has created significant safety issues. It is expected that the school and airport are condemned in four years or less, and when this occurs the community will no longer be viable. In November 2003 the US Government acknowledged the need to relocate the village and conveyed

<sup>1</sup> [http://www.poa.usace.army.mil/Portals/34/docs/civilworks/BEA/Newtok\\_Final%20Report.pdf](http://www.poa.usace.army.mil/Portals/34/docs/civilworks/BEA/Newtok_Final%20Report.pdf)

# Newtok Village Council

## Tribal Transportation Safety Plan

---



12,000 acres on Nelson Island (9 miles upriver) to the Newtok Native Corporation for a new town-site (reference PL 108-129). The new site is known as **Mertarvik**. **Yup'ik meaning, "Getting water from the spring"**.

Newtok has 128.5 miles of roadway on its inventory, and the new village site has 17.5 miles of roadway on its inventory. These roads provide the residents with access to goods and services, along with access to the airport. Because of the size of the community and the construction materials used for roads, walking and biking are the primary mode of transportation.

Most of the local roads are BIA inventory roads and maintained by NVC using BIA funds. Annual maintenance and operations costs are approximately \$100,000. The board-road network in Newtok is narrow, aging, and in need of additional street lighting. There is no Division of Motor Vehicles (DMV) office in Newtok, resulting in no required vehicle registration. Vehicles consist mainly of ATVs and snow machines. At the new village site it is expected that more residents will purchase cars and trucks as their primary mode of transportation, resulting in a need for driver licenses. Residents will need to travel to Bethel to obtain a driver license. Ensuring the provision of safe transportation facilities are provided as part of the development of the Mertarvik is critical.

### RELOCATION EFFORTS

NVC has been working with several State and Federal agencies since the 1990s. Some progress has been made on developing a new town-site in Mertarvik, including the construction of nine new homes, a barge landing, two community wells, and a road to a quarry site. The foundation for a community building that will serve as an evacuation center (MEC) and temporary school has also been installed. Accomplishments over the last two years also include the following.

- ✓ Executed Contract for Professional Project Management Services
- ✓ Prepared a Final Town site Plan and Plat
- ✓ Prepared an Overarching Environmental Impact Statement
- ✓ Prepared Shell and Core Design Documents for the Evacuation Center
- ✓ Prepared Design Documents for a Community Energy System
- ✓ Completed Preliminary Design of a Community Water and Sewer System
- ✓ Completed Preliminary Design of a Community Solid Waste Disposal Site
- ✓ Purchased and Mobilized a Construction Equipment Fleet
- ✓ Developed a Construction Man-Camp
- ✓ Prepared a Housing Master Plan
- ✓ Evaluated Excess Military Barracks at JBER for Use as Permanent Housing
- ✓ Submitted an Application for Department of Defense (DOD)'s Innovative Readiness Training (IRT) Program

Additional funds needed to develop Mertarvik total approximately \$130 million. In order to make significant progress in 2018 - 2019, an additional \$28 million is needed now, as summarized in the following near-term Construction Plan. This TTSP will help to ensure that safety is a significant focus for development in Mertarvik, as well as in Newtok during the relocation process.

# Newtok Village Council

## Tribal Transportation Safety Plan



### SAFETY PARTNERS

Safety planning would not be possible without a group effort. The NVC has come together to pool resources and work as a team to provide insight and leadership to coordinate the Vision of the Plan. The committee members are identified in Table 1.

*Table 1. NVC Safety Partners.*

NVC Transportation Committee		
Member	Organization/ Department	Contact Information
Romy Cadiente	NVC – Relocation Coordinator	bunjing2@gmail.com
Paul Charles	NVC – President	Newtokvillagecouncil.member@gmail.com
Andrew John	NVC – Tribal Administrator	wwt10nnc@gmail.com
Officer	Newtok VPSO	Newtokvillagecouncil.member@gmail.com
Other Safety Partners Include:		
Newtok Volunteer Fire Department	Newtok Community Members	
Yukon Kuskokwim Health Corporation	Bethel Search and Rescue	
University of Alaska Fairbanks Center for Safety In Transportation		

The University of Fairbanks (UAF) Center for Safety in Transportation (CSET), with the planning and project management support of DOWL, is working with the community of Newtok during the relocation process to Mertarvik. In 2018, UAF CSET will be focusing on the following tasks relating to transportation safety in Mertarvik and Newtok. The partnership between UAF CSET and NVC will be ongoing over the next five years to accomplish the tasks below.

1. Conduct focus groups and provide input on safe road design and necessary features.
2. Review interim plan set and provide feedback on elements such as traffic control, access points, and intersection details.
3. Provide education and outreach on how to use roads safely in mixed-use roadway environments (e.g., walking, biking, and ATVs) where people currently only have experience with boardwalks.
4. Provide all education and outreach materials in Yupik.
5. Provide signage near utilities.
6. Provide reflective gear and bike helmets for children.
7. Provide a map that outlines the existing trail system between Newtok, Mertarvik, Tununak, Toksook Bay and Nightmute. Residents travel between the villages to access health care, school, and other public facilities, as well as to visit family and attend community events. Having a map of some sort that identifies the trails and markers would help the residents safely navigate between communities. Mertarvik will be a new community with an evacuation center, power, airport and other infrastructure, as well as have residents living there. It is imperative that safe trail markers and a map be developed for the Nelson Island residents.

# Newtok Village Council

## Tribal Transportation Safety Plan



8. Help to provide a search and rescue framework for Newtok/Mertarvik. This may include educational campaigns (so residents know who to call when in trouble), a radio system, and GPS units that can be checked out to residents traveling between Newtok and Mertarvik.
9. Help instill a safety culture that fits with the Newtok community traditions and heritage;

These tasks directly align with the intended outcomes of UAF CSET Year 1 – Outreach tasks by developing connections with an isolated communities and fostering relationships with the residents of Newtok and agencies/parties involved. These efforts will also serve to directly inform future UAF CSET research efforts.

Working with the UAF CSET and FHWA's Tribal Transportation Safety Program, NVC hopes to highlight transportation safety as a number one priority in Newtok and Mertarvik. UAF CSET will focus heavily on the education component for transportation safety in Newtok and Mertarvik during the relocation effort.

### PROCESS

The planning process incorporated into this Safety Plan project was guided by the *FHWA's Developing Safety Plans, A Manual for Local Rural Road Owners*, by community safety survey used to determine transportation related safety needs, and by incorporating the transportation goals from the Native Village of Newtok, August 2011, *Long Range Transportation Plan*. The process, shown below in Figure 3, is cyclical and consists of a general six-step process, with stakeholder involvement and communication utilized throughout the process.



**Figure 3.** Tribal Transportation Safety Plan Development Process, FHWA, 2012



# Newtok Village Council

## Tribal Transportation Safety Plan



### DATA SUMMARY

Like most rural communities in Alaska, there is limited formal crash data reporting in Newtok and surrounding villages. Crash statistics in rural Alaska are very difficult to collect due to small communities not having a police presence, resulting in a lack of reporting. Most crashes are documented at the local or regional health clinic/hospital, or, rarely, they are self-reported to the Alaska State Troopers. Another avenue for crash data reporting is Lifemed, the medivac company servicing the YK Delta. Through this planning process, Lifemed reported that in the last nine years they have transported three snow machine and one ATV accident patients out of Newtok.

The State of Alaska Department of Transportation and Public Facilities (DOT&PF), Alaska Highway Safety Improvement Program, in partnership with the National Highway Traffic Safety Administration, collects traffic safety statistics for all traffic fatalities and non-fatal motor vehicle traffic crash data for the State of Alaska. Data is primarily collected through police reports.

The following table shows the leading causes of injury hospitalization and death on the Yukon-Kuskokwim Delta that occurred from 1992-2011, per the Alaska Native Injury Atlas (2014, October).

**Table 2.** Alaska Native Injury Atlas – Yukon-Kuskokwim Region Data – Injury resulting in Hospitalization.

Injury resulting in Hospitalization				
Mechanism of Injury	N	%	Rate <sup>i</sup>	Y-K AN/AI Vs. Alaska AN/AI <sup>ii</sup>
Snow Machine	530	9.8%	14.1	1.9*
All-Terrain Vehicle	306	5.7%	7.2	1.2*
Other Vehicle	182	3.4%	4.4	0.9*
Struck by Person/Object	868	16.1%	n/a	n/a

<sup>i</sup> Hospitalization rate per 10,000 age-adjusted to 2000 US standard population

<sup>ii</sup> Rate Ratio indicates if the injury is greater (>1) or less (<1) than the risk for AN/ AI statewide

\* Statistically significant difference between rates, p<0.05

n/a Not Applicable

**Table 3.** Alaska Native Injury Atlas – Yukon-Kuskokwim Region Data – Injury resulting in Death.

Injury resulting in Death				
Mechanism of Injury	N	%	Rate <sup>i</sup>	Y-K AN/AI Vs. Alaska AN/AI <sup>ii</sup>
Drowning	121	18.4%	31.0	1.6*
Off-Road Vehicle	52	7.9%	13.3	1.5*
Motor Vehicle	19	2.9%	4.5**	0.3*

<sup>i</sup> Death rate per 100,000 age-adjusted to 2000 US standard population

<sup>ii</sup> Rate Ration indicates if the injury is greater (>1) or less (<1) than the risk for AN/ AI statewide

# Newtok Village Council

## Tribal Transportation Safety Plan

---



\* Statistically significant difference between rates,  $p < 0.05$

\*\* Rate is based on 10-19 deaths and should be interpreted with caution

n/a Not Applicable

There were a number of concerns voiced in the Tribal Transportation Safety Plan Survey that was completed by the public and Safety Partners committee members with regards to pedestrian safety on the boardwalks with the community. Material from the survey can be found in Appendix A. The top concerns are listed below:

1. Boardwalk improvements.
2. Drinking and drug use while driving.
3. Lack of trail marking and maintenance.
4. Lack of street lights and reflectors on poles and guy wires.

### EMPHASIS AREAS

This section highlights emphasis areas that the NVC wants to focus on over the next five years to improve transportation safety. Focus areas include the following:

- Install and Repair Street Lights;
- Board road Improvements;
- Impaired Driving;
- Installation of Safety Signs;
- Increase Trail Safety – Shelters, Markings, GPS locations;
- ATV, Boating and Snow Machine Safety;
- Additional Basic Safety Education;
- Roadway Construction; and
- Increased Data Collection.

Each emphasis area is further described on pages 11-25 of this plan.

# Newtok Village Council

## Tribal Transportation Safety Plan



### Description of Emphasis Area 1: Install Street Lights in Mertarvik. Repair Street Lights in Newtok

Emphasis Area			Strategic Linkage		
Area 2: Install Street Lights in Mertarvik. Repair Street Lights in Newtok.			Identified as a high safety concern among the residents and Newtok Village Council.		
Objectives			Success Indicators		
<ul style="list-style-type: none"> <li>Increase lighting for high non-motorized use areas</li> <li>Repair overall community lighting in Newtok</li> </ul>			<ul style="list-style-type: none"> <li>Reduction of incidents during dark months and night travel</li> </ul>		
	Actions	Target Output	Potential Partners	Performance Measure	Evaluation
Education	N/A	N/A	N/A	N/A	N/A
Enforcement	N/A	N/A	N/A	N/A	N/A
Engineering	Design and Install street lighting  Replace working street lights with LED streetlights	Working street lights in Newtok in locations that are needed to provide the highest safe, sustainable, and efficient usage  New street lights in the Mertarvik to provide the highest safe, sustainable, and efficient usage on the transportation system	NVC  City  BIA  DOT&PF  FHWA  UAF CSET	Reduction in the number of pedestrian, bicycle and vehicle conflicts involving intersection safety	Annual statistics  Feedback via, meeting comments or annual survey, from tribal members
EMS	N/A	N/A	N/A	N/A	N/A

# Newtok Village Council

## Tribal Transportation Safety Plan



### Description of Emphasis Area 2: Boardroad Improvements in Newtok

Emphasis Area			Strategic Linkage		
Area 2: Boardroad Improvements in Newtok.			Identified as a high safety concern among the residents and Newtok Village Council.		
Objectives			Success Indicators		
<ul style="list-style-type: none"> <li>Increase the safe movement of community members and visitors in Newtok</li> </ul>			<ul style="list-style-type: none"> <li>Reduction of serious injuries along the boardroad network in Newtok</li> </ul>		
	Actions	Target Output	Potential Partners	Performance Measure	Evaluation
Education	Promote awareness in the safe use of the boardwalks and Boardroads	Safe boardwalks	NVC City UAF CSET	Number of classes administered  Number of individuals trained	Annual statistics  Feedback via, meeting comments or annual survey, from tribal members
Enforcement	Promote safe use of the facility by the local law enforcement	Reduction of vehicle, ATV and snow machine, and speed related accidents due to unmaintained Boardroads	NVC VSPOs	Reduction of crashes on existing Boardroads	Annual statistics  Feedback via, meeting comments or annual survey, from tribal members and VSPOs
Engineering	Design and Construct for preventative maintenance on Boardroads in Newtok	Maintained Boardroads in locations that are needed to provide the highest safe, sustainable, and efficient usage in Newtok	NVC City BIA ADOT&PF FHWA	Reduction in the number of pedestrian, bicycle and vehicle incidents on the existing Boardroads	Annual statistics  Feedback via, meeting comments or annual survey, from tribal members and VSPOs
EMS	Increase the safety of the emergency response personnel	Safe and efficient emergency response	NVC VSPOs Clinic	Response time	Annual statistics  Feedback via, meeting comments or annual survey, from tribal members and VSPOs

# Newtok Village Council

## Tribal Transportation Safety Plan



**Description of Emphasis Area 3: Impaired and Distracted Driving in Newtok and Mertarvik (All vehicles including boats) – (All education materials will be developed in Yu’pik and English)**

Emphasis Area			Strategic Linkage		
Area 3: Impaired and Distracted Driving in Newtok and Mertarvik (All vehicles including boats).			Identified as a high safety concern among the residents and Newtok Village Council.		
Objectives			Success Indicators		
<ul style="list-style-type: none"> <li>Reduce alcohol and drug related crashes</li> <li>Reduce texting and driving</li> </ul>			<ul style="list-style-type: none"> <li>Reduction in impaired driving related crashes</li> </ul>		
	Actions	Target Output	Potential Partners	Performance Measure	Evaluation
Education	Develop brochure/marketing campaign targeting vehicle users that may use alcohol and drugs while driving	Zero impaired driving related crashes Zero distracted driving related crashes	NVC School VPSOs UAF CSET	Number of pamphlets created and issued to all community members Number of impaired or distracted driving accidents Number of classes administered Number of individuals trained	Annual statistics Feedback via, meeting comments or annual survey, from tribal members Survey input from community members
	Develop brochure/marketing campaign targeting vehicle users that may be distracted drivers	Increase awareness of impaired or distracted driving			
	Schedule speakers to visit schools to present about the effects of impaired and distracted driving				
	Request the help of Substance Abuse Program				
Enforcement	Pass a local resolution enforcing no texting while driving	Zero DUIs	VPSOs	Reduction in repeat citations	Annual statistics
	Issuing of citations by local law enforcement	Zero texting while driving crashes	NVC City	Zero observance of texting while driving	Feedback via, meeting comments or annual survey, from tribal members
	Perform effective sobriety checks				Survey input from community members
Eng.	N/A	N/A	N/A	N/A	N/A
EMS	Consequences of impaired driving education	Increase awareness of the high dangers associated with impaired driving	NVC VPSOs Clinic	Number of classes administered Number of individuals trained	Annual statistics Feedback via, meeting comments or annual survey, from tribal members



# Newtok Village Council

## Tribal Transportation Safety Plan



### Description of Emphasis Area 4: Install Safety Signs (All education materials will be developed in Yu'pik and English)

Emphasis Area			Strategic Linkage		
Area 4: Install Safety Signs in Mertarvik.			Identified as a high safety concern among the residents and Newtok Village Council.		
Objectives			Success Indicators		
<ul style="list-style-type: none"> <li>Reduce incidence of vehicle, ATV and snow machine accidents</li> <li>Increase wayfinding</li> </ul>			<ul style="list-style-type: none"> <li>Reduction of vehicle accidents</li> <li>Reduction in speeding</li> </ul>		
	Actions	Target Output	Potential Partners	Performance Measure	Evaluation
Education	Promote awareness of sign usage	Reduction of vehicle accidents	NVC	Number of classes administered	Annual statistics
	Promote awareness of the dangers of maintaining excessive speeds	Reduction in speeding	City UAF CSET	Number of individuals trained	Feedback via, meeting comments or annual survey, from tribal members
Enforcement	Incorporate local law enforcement to issue citations	Reduction of vehicle accidents	NVC	Number of citations	Annual statistics
	Promote reducing speed limits throughout the community	Reduction in speeding	VPSOs	Reduction of speed related incidents	Feedback via, meeting comments or annual survey, from tribal members  Quarterly citation review
Engineering	Establish appropriate sign locations	Install signs in locations that are most likely to provide the highest safe, sustainable, and efficient usage	NVC	Number of signs installed	Annual statistics
	Establish speed limits throughout the community	Increase speed compliance	City BIA DOT&PF FHWA		Feedback via, meeting comments or annual survey, from tribal members  Survey input from community members
EMS	Develop brochure/marketing campaign targeting traffic sign safety education	Increase awareness of the dangers associated with disregarding traffic signs	NVC	Pamphlets created and issued to all community members	Annual statistics
	Develop brochure/marketing campaign targeting safe speed education	Increase awareness of the dangers related to improper speed management	VPSOs  City  Clinic	Number of classes administered  Number of individuals trained	Feedback via, meeting comments or annual survey, from tribal members

# Newtok Village Council

## Tribal Transportation Safety Plan



### Description of Emphasis Area 5: Increase Trail Safety – Shelters, Markings, and GPS locations for Newtok and Mertarvik

Emphasis Area			Strategic Linkage		
Area 5: Increase Trail Safety – Shelters, Markings and GPS locations for Newtok and Mertarvik.			Identified as a high safety concern among the residents and Newtok Village Council.		
Objectives			Success Indicators		
<ul style="list-style-type: none"> <li>Reduce incidents of trail related accidents and search and rescue efforts</li> <li>Install trail shelters, trail markers and GPS locate all trail markers</li> </ul>			<ul style="list-style-type: none"> <li>Reduction of trail related accidents</li> <li>Successful installation of trail shelters, trail markers</li> <li>Successful GPS locate for all trail markers</li> </ul>		
	Actions	Target Output	Potential Partners	Performance Measure	Evaluation
Education	Promote awareness of and purpose of trail shelters	Increased awareness of the dangers and consequences of improperly navigating trails	NVC	Pamphlets issued	Annual statistics
	Promote awareness and purpose of trail markers		School	Number of classes administered	Feedback via, meeting comments or annual survey, from tribal members
	Promote awareness and purpose of GPS-assisted navigation	Increased awareness of location and purpose of GPS-assisted navigation	City	Number of individuals trained	Survey input from community members
		Increased awareness of location and purpose of trail shelters	UAF CEST		
Enforcement	Promote the prescribed use of trail shelters	Increased awareness of location and purpose of trail shelters	VPSOs	Pamphlets Issued	Annual statistics
	Incorporate VPSOs		NVC		Feedback via, meeting comments or annual survey, from tribal members
	Promote the use of GPS trackers	Reduce the number of trail related incidents			Survey input from community members
Engineering	Design and Construct trail shelters	Installed trail shelters	NVC	Number of trail shelters built and visited	Trail shelter sign in sheet evaluation
	Determine appropriate trail shelter locations	Installed trail markers	City		
	Design and Construct trail markers and signage	Share GPS tracking with trail users	BIA	Successful use and sharing of GPS located tracks	Feedback via, meeting comments or annual survey, from tribal members
		Zero trail related incidents	DOT&PF		
	GPS locate all trail markers		FHWA	Reduced trail related incidents	Survey input from community members

# Newtok Village Council

## Tribal Transportation Safety Plan



EMS	Promote use and location of trail shelters	Increased awareness of and purpose of trail shelters	NVC	Purchase of GPS trackers for community member to rent for safe travel	Annual statistics
	Promote the use of GPS tracks	Increased awareness of and purpose of GPS trail markings	VPSOs Clinic		Feedback via, meeting comments or annual survey, from tribal members  Survey input from search and rescue team

### Description of Emphasis Area 6: ATV, Boating, and Snow Machine Safety in Newtok and Mertarvik

Emphasis Area			Strategic Linkage		
Area 6: ATV, Boating and Snow Machine Safety in Newtok and Mertarvik.			Identified as a high safety concern among the residents and Newtok Village Council.		
Objectives			Success Indicators		
<ul style="list-style-type: none"> <li>Reduce incident of ATV, Boating and Snow Machine accidents</li> </ul>			<ul style="list-style-type: none"> <li>Reduction of ATV, Boating and Snow Machine injuries</li> <li>Increased knowledge of areas in need of safety upgrades projects</li> </ul>		
	Actions	Target Output	Potential Partners	Performance Measure	Evaluation
Education	Develop brochure targeting ATV, Boating and Snow Machine safety	Increased awareness of the dangers and consequences of improperly utilizing ATVs, Boats and Snow Machines	NVC	Pamphlets issued	Annual statistics
	Promote awareness of ATV, Boating and Snow Machine safety		School	Number of classes administered	Feedback via, meeting comments or annual survey, from tribal members
	Hold safety clinics		UAF CSET	Number of individuals trained	
	Organize a helmet campaign and distribution program				
Enforcement	Incorporate VPSOs to ticket excessive speed or reckless behavior	Reduce the number of ATV, Boat and Snow Machine accidents	NVC VPSOs	Reduction of the annual ATV, Boat and Snow Machine related incidents and injuries	Annual statistics  Feedback via, meeting comments or annual survey, from tribal members

# Newtok Village Council

## Tribal Transportation Safety Plan



Engineering	Design and install a lifejacket community usage station near regularly used boating areas	Install a lifejacket community station in locations that are most likely to be utilized the most	NVC  AK Dept. of Fish and Game (ADF&G)	Reduction in drownings and near drownings  Increase in the use of life jackets by adults and children	Annual statistics  Feedback via, meeting comments or annual survey, from tribal members
	Safe ATV usage education  Safe Boating education  Safe Snow Machine usage education  Promotion for the use of helmets  Organize First Aid/ CPR training for Search and Rescue volunteers	Increased awareness of the potential dangers related to the operation of ATVs, Boats, and Snow Machines  Increase for the use of helmets while riding or driving ATVs and Snow Machines	Clinic  NVC  VPSOs  Search and Rescue	Number of classes administered  Number of individuals trained  Number of individuals using helmets	Annual statistics  Feedback via, meeting comments or annual survey, from tribal members

# Newtok Village Council

## Tribal Transportation Safety Plan



### Description of Emphasis Area 7: Non-Motorized Safety Education in Newtok and Mertarvik

Emphasis Area			Strategic Linkage		
Area 7: Non-Motorized Safety Education in Newtok and Mertarvik.			Identified as a high safety concern among the residents and Newtok Village Council.		
Objectives			Success Indicators		
<ul style="list-style-type: none"> <li>Reduce incident of Pedestrians and bicycle accidents and incidents</li> </ul>			<ul style="list-style-type: none"> <li>Reduction of serious injuries related to non-motorized transportation</li> </ul>		
	Actions	Target Output	Responsible Agency	Performance Measure	Evaluation
Education	Promote pedestrian and bicycle safety	Increase awareness of the potential dangers while walking and biking	NVC	Pamphlets issued	Annual statistics
	Develop brochure targeting pedestrian and bicycle safety		School	Number of classes administered	Feedback via, meeting comments or annual survey, from tribal members
	Hold annual safety rodeo in Newtok and Mertarvik		UAF CSET	Number of individuals trained Number of participants at safety rodeo	Feedback from participants at safety rodeo
Enforcement	Incorporate education in the schools for both motorized and non-motorized users	Reduction of serious injuries related to non-motorized transportation	School	Number of annual pedestrian and biking related incidents and injuries	Annual statistics
	Incorporate education in local driving classes/ manuals regarding non-motorized users and driving		VPSOs		Feedback via, meeting comments or annual survey, from tribal members and from VPSOs
Engineering	Design and install separated pathways in Mertarvik  Design and install pedestrian and bicycle crossings in Mertarvik	Add sidewalks and pedestrian crossings during the design of roads for the new village site	NVC City BIA DOT&PF FHWA	Reduce the number of people walking in the roadway	Annual statistics  Feedback via, meeting comments or annual survey, from tribal members



# Newtok Village Council

## Tribal Transportation Safety Plan



EMS	Safe bicycle usage education	Increased awareness of the potential dangers related to the walking and bicycling	Clinic	Number of classes administered	Annual statistics
	Safe pedestrian education		NVC	Number of individuals trained	Feedback via, meeting comments or annual survey, from tribal members
	Promotion for the use of helmets while biking	Increase for the use of helmets while biking	School	Number of individuals using helmets	

# Newtok Village Council

## Tribal Transportation Safety Plan



### Description of Emphasis Area 8: New Road Construction in Mertarvik

Emphasis Area			Strategic Linkage		
Area 8: New Road Construction in Mertarvik.			Identified as a high safety concern among the residents and Newtok Village Council.		
Objectives			Success Indicators		
<ul style="list-style-type: none"> <li>Construct a shared road system for use by cars, trucks, ATVs, pedestrians, and bicycles</li> </ul>			<ul style="list-style-type: none"> <li>Motorized and non-motorized users have adequate space for safe use of the road network and clear lines of sight</li> </ul>		
	Actions	Target Output	Responsible Agency	Performance Measure	Evaluation
Education	Promote awareness in the safe use of the new gravel surfaced roads	Increase awareness of safe use of the gravel surfaced roads	NVC	Pamphlets issued	Annual statistics
	Develop brochure targeting safe use of gravel surfaced roads		School VPSOs	Number of classes administered Number of individuals trained	Feedback via, meeting comments or annual survey, from tribal members
Enforcement	Promote safe use of the facility by the local law enforcement	Reduce the number of vehicle accidents related to unsafe use of the gravel surfaced roads	NVC	Collect crash and traffic data	Annual statistics
		Reduce the number of speed related incidents	VPSOs	Analyze data to determine areas of high crash/accident movements	Feedback via, meeting comments or annual survey, from tribal members
Engineering	Design and construct gravel surfaced roads for the new village site	Gravel surfaced roads constructed throughout the new village site that will provide the highest safe, sustainable, and efficient usage	NVC	Collect crash and traffic data	Annual traffic count statistics
			City BIA DOT&PF FHWA	Analyze data to determine areas of high crash/accident movements	Annual accident and crash reporting statistics from law enforcement and/or clinic Feedback via, meeting comments or annual survey, from tribal members

# Newtok Village Council

## Tribal Transportation Safety Plan



EMS	Overall safety awareness for the use of gravel surfaced roads	Increase awareness of the potential dangers associated with the use of gravel surfaced roads	NVC VPSOs Clinic	Pamphlets created and issued to all community members	Annual accident and crash reporting statistics from law enforcement and/or clinic  Feedback, via meeting comments or annual survey, from tribal members
-----	---	--	------------------------	---	---

# Newtok Village Council

## Tribal Transportation Safety Plan



### Description of Emphasis Area 9: Increase Data Collection

Emphasis Area			Strategic Linkage		
Area 9: Increase Data Collection.			Identified as a high safety concern among the residents and Newtok Village Council.		
Objectives			Success Indicators		
<ul style="list-style-type: none"> <li>Increase data collection methods to address and identify risk factors that lead to serious injury or death</li> </ul>			<ul style="list-style-type: none"> <li>Reduction of serious injuries or deaths related to transportation safety</li> </ul>		
	Actions	Target Output	Responsible Agency	Performance Measure	Evaluation
Education	Promote awareness for the need of data collection	Increased awareness for data need	NVC	Number of individuals trained	Annual statistics
	Provide education on data collection methods and uses	Implement classes that provide data collection methods and uses		Reduction of injuries or deaths related to transportation safety	Feedback via, meeting comments or annual survey, from tribal members
	Provide educational opportunities to effectively collect data				
Enforcement	Collect data from local law enforcement	Show the need for a VPSO	NVC AVCP	Hire two (2) full time data collectors	Annual statistics
Engineering	Document insufficient risks for all intermodal transportation facilities	Apply for funds to facilitate recorded risks on intermodal transportation facilities	NVC	Document and track maintenance and operational costs  Document and track all transportation related costs	Annual audit  Feedback via, meeting comments or annual survey, from tribal members
EMS	Collection of the number of medivacs due to intermodal transportation accidents  Collection of the number of traffic related accidents and citations by law enforcement  Collection of the number of search and rescue requests	Increased awareness of potential dangers	NVC  Clinic  VPSOs  Search and Rescue	Reduction of the number of medivacs due to intermodal transportation accidents  Reduction of the number of traffic related accidents and citations by law enforcement  Reduction of the number of search and rescue requests	Annual statistics  Feedback via, meeting comments or annual survey, from tribal members

# Newtok Village Council

## Tribal Transportation Safety Plan

---



### EVALUATION & IMPLEMENTATION

The emphasis areas, goals and strategies will need to be implemented and measured by NVC Transportation Department. One of the first things that NVC can do to start working towards accomplishing the goals and strategies identified in this plan is to develop a Transportation Safety Program.

A Transportation Safety Program will assist to ensure safety education is a priority, provide a basis from which funding can be sought, and projects can be defined and prioritized to provide a stronger likelihood of them being implemented.

A Transportation Advisory and Safety Committee, along with Tribal Transportation Director or Tribal Administrator positions should be established to oversee the progress of the implementing this plan. These entities will evaluate and measure the success of the goals and strategies set forth in this plan at each Transportation Advisory Committee meetings.

The FHWA considers a TTSP to be outdated after 5 years. The NVC Transportation Department should begin re-evaluation of the plan in 2022.

### RESOURCES

Alaska Native Tribal Health Consortium. (2014, October). Alaska Native Injury Atlas: An Update.  
<http://anthctoday.org/epicenter/publications.html>

Tribal Transportation Safety Plan Survey (2017, November).

U.S. Department of Transportation Federal Highway Administration. (2012, March).  
Developing Safety Plans, a Manual for Local Rural Road Owners.  
[https://safety.fhwa.dot.gov/local\\_rural/training/fhwasa12017/fhwasa12017.pdf](https://safety.fhwa.dot.gov/local_rural/training/fhwasa12017/fhwasa12017.pdf)

WHPacific. (2011, March). Newtok Traditional Council: Long Range Transportation Plan.