

**Agency: Commerce, Community and Economic Development**

**Grants to Municipalities (AS 37.05.315)**

**Grant Recipient: Unalakleet**

**Project Title:**

**Project Type: Other**

# Unalakleet - Erosion Control

**State Funding Requested: \$4,550,000**  
One-Time Need

**House District: 39 / T**

**Brief Project Description:**

Seawall funding, rock revetment, and piling, develop an a hazard mitigation plan.

**Funding Plan:**

**Total Cost of Project: \$36,200,000**

	<u>Funding Secured</u>		<u>Other Pending Requests</u>		<u>Anticipated Future Need</u>	
	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>
Federal Funds	\$18,200,000	08	\$8,450,000	11		
State Funds	\$5,000,000	08				
<b>Total</b>	<b>\$23,200,000</b>		<b>\$8,450,000</b>			

**Detailed Project Description and Justification:**

Complete the seawall that is funding now thru the Corp of Engineer. Rock revetment is plan to go around the mouth of the river for approximately 700 feet and plans for pile driving sheet metal for another 400-500 feet. This leaves a part of the river mouth not protected with piling or rock revetment and possible lost of the project that is plan if all of the river mouth is not builded up either with rock revetment or sheet piling. If only a portion of the erosion control is built, the next storm may wash away whatever work is done next summer.

**Project Timeline:**

The project timeline is hoping to start this summer after the first phase is done with the Corp of engineer.

**Entity Responsible for the Ongoing Operation and Maintenance of this Project:**

The City of Unalakleet

**Grant Recipient Contact Information:**

Name: Herbert Ivanoff  
 Address: Box 28  
 Unalakleet, AK 99684  
 Phone Number: (907)624-3531  
 Email: counk@alaska.com

Has this project been through a public review process at the local level and is it a community priority?  Yes  No

*For use by Co-chair Staff Only:*

\$1,741,000  
Approved

6:29 PM 5/4/2010

8.1 **PRIORITY # 1** Erosion control – seawall funding and rock revetment, develop a hazard mitigation plan, and develop an emergency shelter out of the old school gym or other options

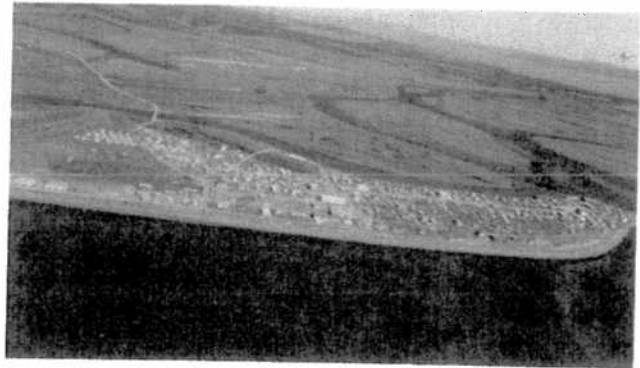
8.1.1 **Project Description**

**Background**

*General background -*

Unalakleet is located on Norton Sound at the mouth of the Unalakleet River. It lies 148 miles southeast of Nome and 395 miles at

approximately 63.873060° North Latitude and -160.788060° West Longitude. The area encompasses 2.9 sq. miles of land and 2.3 sq. miles of water. There is no record of damage in Unalakleet from earthquakes or tsunamis. However, Unalakleet is subject to ice-jam and stream-overflow flooding from the Unalakleet River. Prior to 2003, the U.S. Army Corps of Engineers had reported a low frequency of flooding at Unalakleet and had found Unalakleet to be in a low flood hazard area. Over the last six or seven years, residents report that some areas along the river are subject to river flooding, and coastal areas are threatened by more frequent and stronger fall storms, stronger winds, more floods, and less snow. The natural barrier of sea ice that has protected the community of Unalakleet has greatly declined due to climate changes. The storms of 2003, 2004, and 2005, were devastating and have left the residents vulnerable to future storms. The storm that caused a tremendous amount of damage throughout the Norton Sound region during the week of September 23<sup>th</sup>, 2005 left no community in this region untouched. Coastal erosion from the 10-foot plus waves warrants concern to the residents of Unalakleet.



The community's proximity to both fresh and salt water can be a precarious location when fall storms erode the sandy area at the mouth of the river and the gravel areas along the shore where they water transmission lines are located. The community lacks a breakwater barrier to protect the village from the destructive waves when storms hit the community from the south or southwest. Several areas along the coastline used by the people in Unalakleet are vulnerable to erosion and flooding during the storm season. The beaches have historically been susceptible to damage and erosion from storm conditions, tidal surges, and from the sea ice conditions. The next devastating storm can quite possibly erode much of the lower end of the community away.

Unalakleet has a subarctic climate with considerable maritime influences when Norton Sound is ice-free, usually from May to October. Winters are cold and dry. Average summer temperatures range 47 to 62; winter temperatures average -4 to 11. Extremes have been measured from -50 to 87. Snow begins melting from the shore and mountains in May but the sea ice is often not melted until June. Summers

are cool with most rainfall occurring in July, August, and September. Precipitation averages 14 inches annually, with 41 inches of snow. Winds from the east predominate at Unalakleet with an average velocity of 11 knots. The maximum wind speed ever recorded at Unalakleet was 56 knots from the east/northeast, although residents report higher gusts. The tidal range at Unalakleet is seldom more than 5 feet. Persistent onshore winds can result in much greater "tides".

Seawall project background - The area where the water transmission lines are on the coast are subject to erosion. Some work has been completed to protect this area, and Village Safe Water has plans to move the water transmission lines out of the erosion zone soon. The mouth of the river is also subject to erosion. Several private homes, the Assembly of God church, a church youth facility, the Alaska Commercial Company, BSSD teacher housing, a privately owned repair shop, the Norton Sound Seafood Plant, and the Unalakleet Lodge are all located in the threatened zone. The Alaska Department of Transportation completed an erosion project in October of 2008 to protect airport property. Kawerak's Transportation Department has plans to pave the airport road along the shoreline in 2009. This will elevate the road a possible foot and help minimize erosion.



Erosion projects are conducted by the U.S. Army Corp. of Engineers in four phases. There is an approximate five to eight year timeline by the Corps. To qualify for the program, the shoreline to be protected must be publicly owned or used. Private land may qualify if the project is necessary to protect nearby public facilities. Unalakleet is about to enter the 4<sup>th</sup> phase of construction of a seawall.

1. Reconnaissance Phase Description-This phase is 100% federally funded and is performed to identify if there is a federal interest and/or economic justification in proceeding to the next phase (feasibility study).

2. Feasibility Study-The purpose of this study is to evaluate alternatives, determine costs and benefits and if there is a plan that has feasible engineering, is environmentally acceptable, and can be economically justified.
3. Pre-construction, engineering, and Design-This phase is cost shared 75% federal and 25% local.
4. Construction-This phase is cost shared and is usually 80% federal and 20% local. Both Village Councils also need to send a letter to their congressional delegation requesting them to name the study in order to add funding to the Corps of Engineers budget for them to start work.

The U.S. Army Corp. of Engineers rock revetment feasibility study and design are completed and an erosion plan is completed. A gabion wall was completed at the mouth of the river in 2000 and repaired in 2007. This gabion wall has shifted and sunk and is battered by logs in the fall storms, but seems to be holding up fairly well. Project funding for a coastal seawall has been obtained from the State of Alaska (\$5,000,000) and the U.S. Corp. of Engineers (\$20,000,000) to begin in 2010. This funding will cover Phase 1 of the construction project to complete 65-75% of the needed seawall. The core rock from the project will be stockpiled for the project from local sources. Grade A and B rock will be obtained from Cape Nome. Due to similar projects going on in the community, it is believed there will be enough heavy equipment and some well trained local labor available for the project. A written request was submitted to the federal government for funding from the Stimulus Act to complete the remainder of the seawall.

Emergency and shelter planning background - The tribe and city will begin working with FEMA to develop a hazard mitigation plan in 2009. The community has some standard emergency response supplies at the fire department. There is no siren to alert the community in times of danger, but the fire truck is equipped with a siren and loud speaker



**If this old gym is replaced with a new one, it is possible that it could be moved to the hillside and used as an emergency evacuation shelter.**

which could be used to alert the community in time of disaster. There is also a local radio station and agencies have a good phone alerting system set up to keep in close communication. Many key community staff have private cell phones. The search and rescue has a small house with no heat or plumbing to store some rescue equipment. Volunteers use their own boats, 4-wheelers, or snowmachines to conduct searches.

The road leading up the hill was elevated to assure a safe escape route. The city and corporation both have potential sites for an emergency evacuation shelter toward the northeast end of the community, past the tank farm, but no particular site has been selected and planning is only in the very beginning stages. The school has funding to rehabilitate the high school. The city is seeking permission to relocate the old gym up the hill for use as an emergency evacuation shelter.

### **Project Needs and Benefits**

The natural barrier of sea ice that has protected the community has greatly decreased. The storms of spring and fall left the homes, businesses, and public property vulnerable to loss of lives and property. Coastal erosion from the pounding waves is a concern since there is no breakwater barrier or seawall to protect Unalakleet. In the event of a storm with winds greater than the last storm vital infrastructure could be lost. In order to mitigate these concerns; an adequate breakwater, seawall, rock revetment and other erosion control measures are needed. The community also needs to swiftly complete the various steps to finish the Hazard Mitigation Plan and plan for construction of an emergency evacuation shelter up on the hillside, to assure there is a safe place to evacuate the community in time of a disaster.

### **Potential Constraints to Project Development**

Many of Alaska's coastal communities are in similar danger from erosion and funding is limited. The rural location and relatively smaller population of Unalakleet makes it harder to compete for funding and convince outside agencies of the severity of the problem. Unalakleet was not eligible for some funding sources because they did not have a Hazard Mitigation Plan, but this planning process will begin in 2009. It is a time consuming document to produce involving multiple agency input.

## **8.1.2 Project Implementation**

### **Plan of Action**

- Keep good communications with VSW, DOT, Kawerak, and other agencies on erosion issues in Unalakleet. Keep the community aware of the project through posters, radio announcements and public meetings.
- Work with the U.S. Army Corp. of Engineers to avoid delays on the seawall project.
- Continue to seek funding for the final stages of the project. Use Kawerak's grant writer assistance program to hire a grant writer to explore funding sources, seek matching funds from the community, and apply for funds for the various stages of planning and construction: easements, environmental studies, gravel, permits, construction, business plan, inspections, and policies and procedures for center operations. BIA funding is potentially available through KTP only if the seawall will protect existing roads nearby.

- Continue contact Federal Emergency Management Agency (FEMA) and other agencies for assistance in completing a Hazard Mitigation Plan. Keep in close contact with Golovin, Shaktoolik, and Savoonga who are also working on these kinds of plans.
- Select a site for the emergency evacuation shelter and begin the planning. Keep in close contact with the BSSD to see if using the old gym is a possibility.
- Form an emergency planning committee to set achievable goals for obtaining supplies, getting an alert siren for the community, and looking into other options for renovation of old buildings for use as an emergency evacuation shelter.

#### **Organizations Responsible and Contact Information**

- City of Unalakleet, PO Box 28, Unalakleet, AK 99684
- Native Village of Unalakleet, PO Box 270, Unalakleet, AK 99684
- Unalakleet Native Corporation, PO Box 100, Unalakleet, AK 99684
- Volunteer Fire Dept. /Search &Rescue, P.O. Box 270, Unalakleet, AK 99684

#### **Funding Possibilities and Other Contact Information**

- ***Kawerak Transportation Program*** - Ken Waterman - PO Box 948, Nome, AK 99762, 907-443-4264, [trans.plan1@kawerak.org](mailto:trans.plan1@kawerak.org)
- ***U.S. Department of Homeland Security, Federal Emergency Management Agency***, P.O. Box 10055, Hyattsville, MD 20782-7055, 1-800-621-FEMA (3362), Fax: 1-800-827-8112, <http://www.fema.gov/assistance/index.shtm> , [FEMA-Correspondence-Unit@dhs.gov](mailto:FEMA-Correspondence-Unit@dhs.gov)
- ***U.S. Army Engineer District***, Alaska, CEPOA-PM-C - Julie Anderson, P.O. Box 6898, Elemendorf AFB, AK. 99506-6898, 907-753-5685 Fax: 907-753-5526, [Julie.l.Anderson@poa02.usace.army.mil](mailto:Julie.l.Anderson@poa02.usace.army.mil)
- ***Community Development Block Grants (CDBG)*** - Department of Commerce, Community, and Economic Development Division of Community Advocacy - 211 Cushman Street, Fairbanks, AK 99701-4639, <http://www.dced.state.ak.us/dca/grt/blockgrants.htm>, Jo E. Grove, Block Grants-Program Manager, [Jo.Grove@alaska.gov](mailto:Jo.Grove@alaska.gov), 907-451-2716; Fax: 907-451-2742, Jill Davis, Grants Administrator, [Jill.Davis@alaska.gov](mailto:Jill.Davis@alaska.gov), 907-451-2717; Fax: 907-451-2742
- ***Indian Community Development Block Grants (ICDBG)*** - Barbara Gallegos 602-379-721, <http://www.hud.gov/offices/pih/ih/grants/icdbg.cfm>

