



U.S. Army Corps  
of Engineers  
Alaska District

## **ALASKA BASELINE EROSION ASSESSMENT**

### **Erosion Information Paper - Wainwright, Alaska**

Current as of September 29, 2008

#### **Community Information**

Wainwright (WANE-rite), population 540, is on the Chukchi Sea coast, 3 miles northeast of the Kuk River estuary, and about 72 miles southwest of Barrow. The community is incorporated as a 2nd class city in the North Slope Borough. The shoreline and lagoon are used for boat storage and fishing.

#### **Description of Erosion Problem**

The Wainwright coastal bluff is periodically eroded by storm surges, melting permafrost, and late-forming coastal ice. Erosion is reportedly more severe in the fall until the ice pack moves in. The bluff is about 20 feet high. The community is high enough to avoid serious flooding from coastal storm surges, although spring snowmelt cannot properly drain and causes minor flooding in lower areas.

#### **Potential Damages**

The 1995 *Barrow and Wainwright Beach Nourishment Program: Budget and Cash Flow Update* prepared by BTS/LCMF, Inc., stated the Wainwright Beach Nourishment Project began with material dredged from offshore borrow source sites and placed on the beach in 1995 to dissipate wave and storm energy, and to provide a buffer zone. Approximately 95,000 cubic yards of material were placed on the beach. Subsequent storms reportedly have removed most of the gravel beach nourishment material. Shallow water to prevent the full force of waves from hitting the bluff.

A direct-bury sewer system was installed along the front of the community between 1997 and 1999. A gabion (Concertainer) wall was installed about 3 years ago to protect a section of the line on the south corner of town. A storm removed the bottom row of the wall shortly after it was installed and it has been attacked by storms in the last 3 years. Sandbagging to expand protection to the northern end and repair the gabions to the south was planned for the summer of 2008. In the summer of 2008, major portion of the gabion wall was destroyed by a storm with further erosion of the bank. The gabion wall is being currently worked on by adding additional sandbagging to protect the community from any further destruction until a better plan of protection has been provided.

Several residences are within 20 feet of the bluff after the July 30, 2008 storm. Two subsistence cellars have been lost over the last 10 years with 20 cellars remaining in the community. Erosion during a September 1986 storm reportedly left 4 homes hanging over the edge of the bluff. An entire street of homes was moved back and half of the lots have since eroded away.

## Photos and Diagrams

No photos were provided by community or other sources. The attached diagram shows the linear extent of erosion.

## References

- AK DOT&PF. 1984.** *Task Force on Erosion Control, Final Report.* Alaska Department of Transportation and Public Facilities.
- BTS/LCMF. 1995.** *Barrow and Wainwright Beach Nourishment Program: Budget and Cash Flow Update.* Prepared by LCMF for North Slope Borough CIPM Department.
- Mason, et al. 1997.** *Living with the Coast of Alaska.* Mason, Owen K.; Neal, William J.; Pilkey, Orrin H. et al.
- USACE. 2008.** *Alaska Community Erosion Survey, OMB approved number 07100001,* expires September 30, 2009 administered to Joseph Ahmaogak, mayor of the city of Wainwright on March 31, 2008.

---

## Additional Information

This information paper, as well as those for other communities, can be accessed on the internet at [www.alaskaerosion.com](http://www.alaskaerosion.com). For more information please contact the Corps of Engineers, project manager at (907) 753-5694 or email [Alaska.Erosion.POA@usace.army.mil](mailto:Alaska.Erosion.POA@usace.army.mil)

CHUKCHI SEA



WAINWRIGHT INLET

Date of Aerial Photo: 20 July 03

**NOTE:** The extent of erosion shown on this figure is based on interviews with the community. This data has not been field verified. This figure is only intended to show areas of erosion, not rates or severity of erosion



Alaska District  
Corps of Engineers  
Civil Works Branch

--- Linear Extent of Erosion



Alaska Baseline Erosion  
Wainwright, Alaska