



U.S. Army Corps
of Engineers
Alaska District

ALASKA BASELINE EROSION ASSESSMENT

Erosion Information Paper - Gakona, Alaska

Current as of December 12, 2007

Community Information

Gakona (guh-KOH-nuh), population 234, is at the confluence of the Copper and Gakona Rivers, 15 miles northeast of Glennallen. It is at mile 2 on the Tok Cutoff to the Glenn Highway, just east of the Richardson Highway. The community is unincorporated and in the unorganized borough. The nearby Gakona lodge is one of the few remaining original Alaskan roadhouses and is at the junction of the historic Valdez-Eagle and Valdez-Fairbanks trails.

Description of Erosion Problem

The community survey reports localized erosion associated with the Gakona River and slope erosion associated with roadwork by the Alaska Department of Transportation and Public Facilities (DOT&PF). A 450-foot section of the riverbank adjacent to the Gakona Lodge has significantly eroded, caused primarily by natural river flows and exacerbated by spring ice-jams. Two properties upstream of the lodge are reported to have erosion problems, but distance to the eroding bank was not reported. A 1985 Corps *Trip Report*, states that 2 to 4 feet of bank had eroded as of that year. The current lodge owner reports that during spring 2002, about 9 feet of bank was lost.

Potential Damages

The Gakona lodge has been threatened by Gakona River erosion since at least 1985. A 1985 Corps *Trip Report* identified 3 cabins, a restaurant, tavern, the lodge, and several other support buildings to be at risk. In 2003, the lodge owner determined that the lodge's septic system, fuel storage tanks, and several outbuildings were in danger of being lost. The owner engaged a contractor to dredge and move the river channel 40 yards away from the lodge and install a finger dike with riprap at the upstream end of the property, all for a cost of about \$21,000. The owner indicated that the state provided 560 yards of shot rock for the upstream dike. The owner reported these protection measures have been effective and willows are now growing in the reshaped area. The lodge owner reports that in the fall of 2004, there was about 70 feet of lawn remaining between the lodge and a 10:1 sloping bank to the river.

According to the community survey, there is an eroding road on the way to a fish camp. Members of the community have changed the route they take to the fish camp to avoid the erosion. Rocks occasionally drop onto the Gakona Highway due to slope erosion associated with roadwork being undertaken by DOT&PF.

Photos and Diagrams

Photos of erosion provided by Greg Marshall, owner Gakona lodge are attached. Also, attached is a diagram depicting the estimated linear extent of erosion.

References

USACE. 1985. *Trip Report: Flooding/Erosion problem at Gakona Lodge.* Alaska District, U.S. Army Corps of Engineers.

USACE. 1990. *Record of phone conversation between Corps of Engineers and Senator Murkowski's staff.* Alaska District, U.S. Army Corps of Engineers.

USACE. 2007. *Alaska Community Erosion Survey, OMB approved number 07100001, expires September 30, 2009 administered to Susie Lappi, Gakona village council and Greg Marshall, owner Gakona lodge, on November 29, 2007.*

Additional Information

This information paper, as well as those for other communities, can be accessed on the internet at 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



Photo 1: Erosion, looking east adjacent to the Gakona Lodge, July 2004.



Photo 2: After erosion protection has been installed, looking east adjacent to Gakona Lodge, October 2004.



Photo 3: After erosion protection has been installed, looking west adjacent to Gakona Lodge, October 2004.



Date of Aerial Photo: 28 August 97

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



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- - - - Linear Extent of Erosion



Alaska Baseline Erosion
Gakona, Alaska