U.S. Army Corps of Engineers
Alaska District

Erosion Information Paper - Huslia, Alaska

Current as of September 17, 2007

Community Profile Summary

Huslia (HOOS-lee-uh), population 259, is on the north bank of the Koyukuk River, about 170 river miles northwest of Galena and 290 miles west of Fairbanks. Huslia is a 2nd class city in the unorganized borough and is within the Koyukuk National Wildlife Refuge. Huslia moved to its present location in 1949, because its previous location flooded often and was on swampy ground. The banks of the Koyukuk River are used for many community activities, including access ramps for boats, snow machines, and ATVs; barge access; boat storage; fishing and hunting; cultural and social events; and driftwood collection.

Description of Erosion Problem

The erosion problems in Huslia are reported to primarily result from riverine processes. The conditions causing or contributing to the erosion are reported to include natural river flow, flooding, ice jams, undercutting, spring break-up, boat traffic, vehicle traffic on the beach and the bank, and the loss of permafrost. Much of the community is on higher ground above the river floodplain, but the Koyukuk River at flood stage erodes the sandy, erosion-prone soils under the community. According to the *State Task Force on Erosion Control Report*, the sandy soil material underlying the community settles at approximately a 1:1 slope as the river advances.

The most active erosion area is estimated to be 2,000 feet along the 70-foot-high riverbank. The community survey indicates the riverbank has been eroding at an estimated rate of 10 to 30 feet per year, but substantially greater rates have been reported during recent breakup flooding. The survey reported that the river eroded 2,000 feet of bank inland 60 feet in May of 2003, 100 feet in 2004, and 80 feet in 2005.

Potential Damages

According to the community survey, structures and facilities that are less than 100 feet from the active erosion area (please see attached map) are: three homes; several outbuildings and sheds; a number of water tanks and water lines, and fuel tanks; food storage areas, including drying racks and smokehouses; a retail store; a roadway, boardwalk and other community pathways; boat launches and boat storage and repair structures; a number of utility poles for power, telephone, and cable; and sewer lines. The Alaska Village Electric Cooperative power plant, gas and oil bulk fuel storage facility, numerous homes, and water and sewer pipes have already been relocated to avoid erosion damage at an estimated cost of $450,000.

The *Alaska Legislative Appropriations for Flood and Erosion Control Report* indicates that between 1985 and 1990 Huslia received 6 legislative grants for river bank stabilization and

erosion control, totaling $3,395,000. One grant funded installation of articulated concrete mat along part of the eroding river bank in an attempt to stop erosion, but it failed the following year when the river undercut the structure. The concrete mat slid into the river, and the community survey reported it as a navigational hazard. In 1993, the city received a $50,000 grant for relocation planning through the Alaska Division of Homeland Security and Emergency Management and contracted with ASCG to perform a cost analysis for relocating 2 structures. An additional $400,000 was awarded to the city for site preparation and relocation of the structures.

Flooding also threatens some facilities. The sewage lagoon was reported to be half under water by the city administrator during an interview.

Photos and Diagrams

A diagram showing the linear extent of erosion is attached. Photos of erosion are attached from the Department of Commerce, Community and Economic Development, Division of Community Advocacy Community Photo Library on line at:
http://www.dced.state.ak.us/dca/photos/comm_photos.cfm?comm=Huslia.

References

Alaska DOT/PF. 1984. *Task Force on Erosion Control*.

DCCED, DCA. 1994. *Alaska Legislative Appropriations for Flood and Erosion Control, 1972-1991*, collected by Floodplain Management Program Intern.

DCCED, DCA. 2007. *Capital Projects Database.* Web accessible database:
http://www.commerce.state.ak.us/dca/commdb/CF_RAPIDS.cfm

Huslia Tribal Council. 1999. *Huslia Comprehensive Development Plan.*

USACE. 2007. *Alaska Community Erosion Survey, OMB approved number 07100001*, expires September 30, 2009 completed and submitted by the City of Huslia on August 9, 2007 and interviewed September 19, 2007.

Additional Information

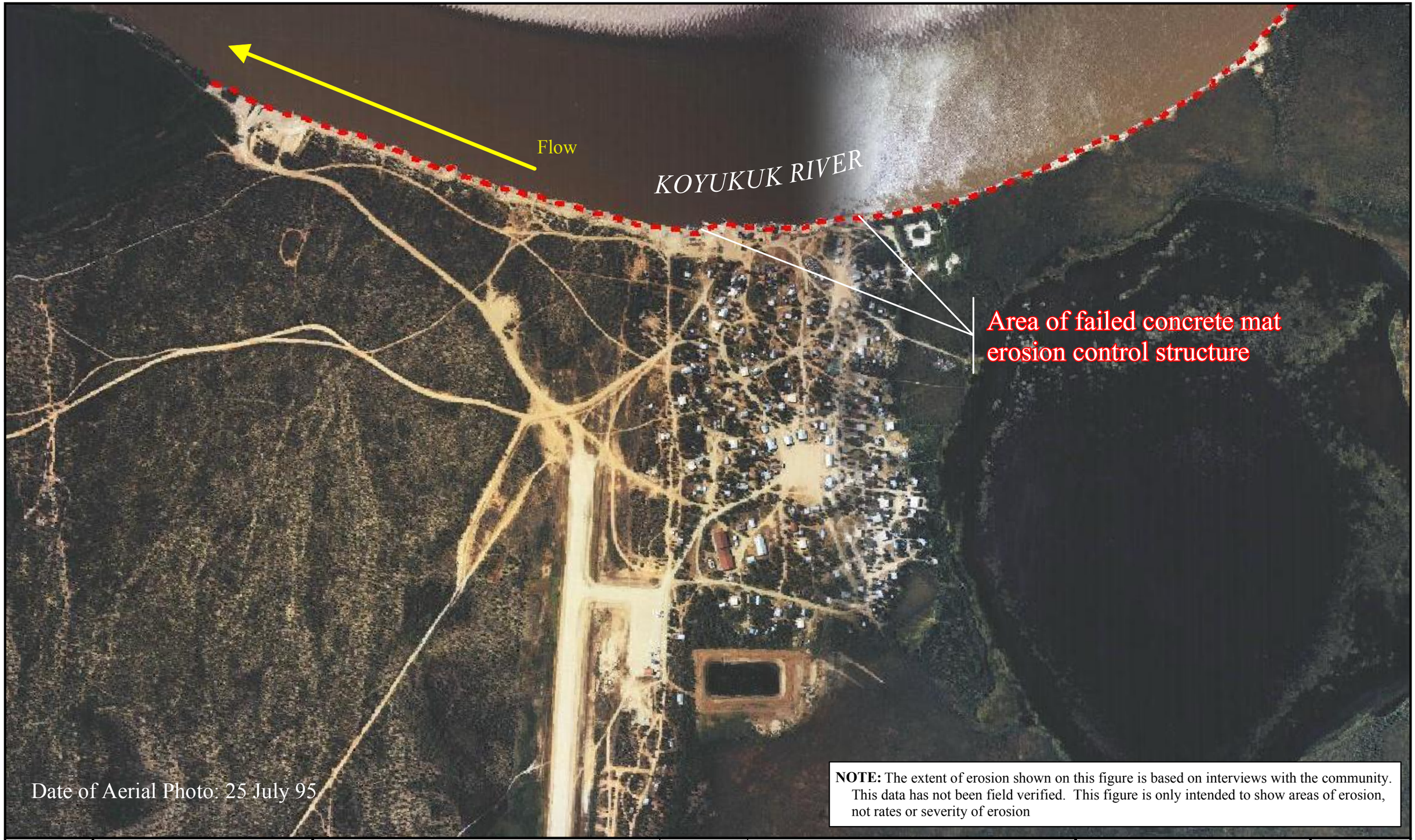
This information paper, as well as those for other communities, can be accessed on the internet at www.alaskaerosion.com. For more information please contact the Corps of Engineers project manager at (907) 753-5694 or email Alaska.Erosion.POA@usace.army.mil

Photo 1: Koyukuk River erosion at Huslia, No date.

Photo 2: Huslia river bank, No date.

Photo 3: Koyukuk River erosion at Huslia, May 2008.

Photo 4: Koyukuk River high water and erosion, No date.



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Civil Works Branch

Linear Extent of Erosion

HUSLIA

Alaska Baseline Erosion

Huslia, Alaska