



U.S. Army Corps
of Engineers
Alaska District

ALASKA BASELINE EROSION ASSESSMENT

Erosion Information Paper – Chalkyitsik, Alaska

Current as of November 3, 2007

Community Information

Chalkyitsik (chall-KEET-sick), population 65, is an unincorporated on the west shore of the Black River, about 50 miles east of Fort Yukon in the unorganized borough. Chalkyitsik means “fish-hooking place.” Chalkyitsik is accessible by small riverboat, but no roads connect Chalkyitsik with other communities, although there is a winter trail to Fort Yukon. Barge service is not provided to the community. Hunting, fishing, boat launching and access, and cultural/social events are community activities that use the banks and shore area of the Black River.

Description of Erosion Problem

The village of Chalkyitsik experiences gradual erosion along the entire bank of the Black River (about 2 linear miles). The river moves, abandoning old channels and cutting new ones. The river shore ranges from gradual beach to vertical bluffs about 12 feet above normal water level. A “river oxbow” next to the village is intermittently dry and then flowing as the river shifts. Riverine erosion is mainly caused by natural river flow. Ice jams, spring breakup, and seasonal flooding are factors contributing to severity. According to the community survey, melting permafrost and the activity of people and ATVs along the shore can also increase localized erosion. In 1987, about 3 feet of inland erosion occurred and a 2-story house was moved to prevent it being damaged. In 1997, about 300-feet of the Black River next to the community eroded inland about 10 feet. In 2000, the erosion rate was reported to be about 1 foot per year. According to the Corps *Online Flood Hazard Data*, flooding (with some erosion likely) is a common occurrence. Significant flooding occurred in 1937, 1947 or 1948 and 1967. The 1967 flood was the highest measurable flood.

Potential Damages

Based on the community erosion survey, the river is less than 100 feet from 4 houses, 2 out-buildings, 2 roads, and the water treatment plant/washeteria/clinic building. A hillside area near 5 homes is caving in or slumping. The homes are on high ground and the river does not rise this high, so the cause of the slumping is unknown.

The community reports no erosion protection projects have been undertaken. It is anticipated that the continuing gradual river erosion will eventually reach other community structures and facilities. According to the natural resources manager who completed the survey, future major flooding and erosion events could result in changes in the river channel that could seriously threaten the community.

Photos and Diagrams

No photos have been provided by the community or other sources. A diagram depicting the linear extent of erosion in Chalkyitsik is attached.

References

DCCED, DCRA. 2007. *Community Database online*,

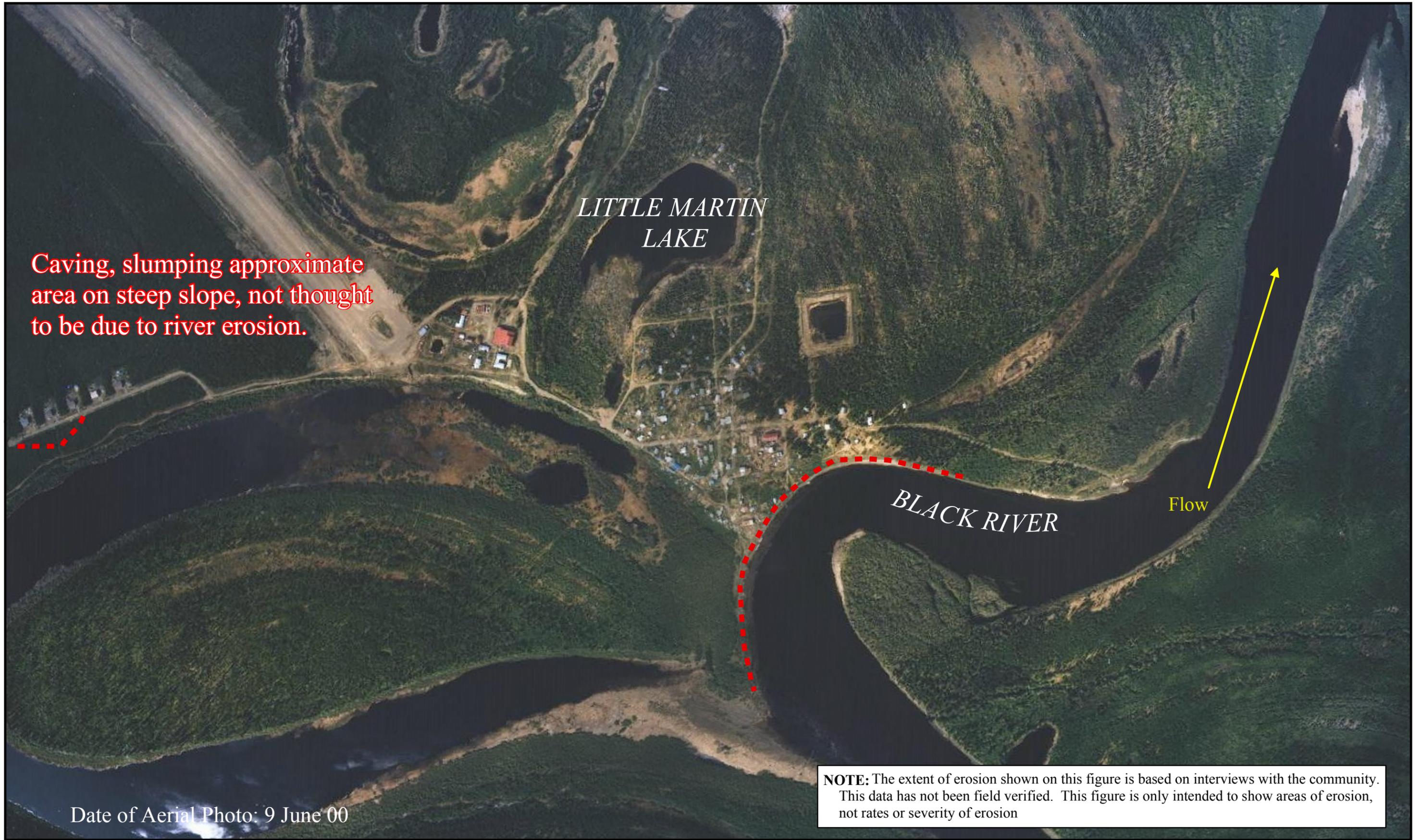
www.commerce.state.ak.us/dca/commdb/CF_COMDB.htm Department of Commerce, Community and Economic Development, Division of Community and Regional Affairs.

USACE. 2007. *Alaska Community Erosion Survey*, OMB approved number 07100001, expires September 30, 2009 submitted by an unknown village council source via facsimile to the Corps of Engineers on October 31, 2007; and a telephone interview conducted with Ken Jonas, Chalkyitsik village council natural resources manager on November 2, 2007.

USACE. 2007. *Flood Hazard Data online*: http://www.poa.usace.army.mil/en/cw/fld_haz/chalkyitsik.htm

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



Alaska District
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Civil Works Branch

- - - - Linear Extent of Erosion



Alaska Baseline Erosion
Chalkyitsik, Alaska