



**U.S. Army Corps
of Engineers**
Alaska District

ALASKA BASELINE EROSION ASSESSMENT

Erosion Information Paper – Talkeetna, Alaska

Current as of October 26, 2007

Community Information

Talkeetna (towl-KEET-nuh), population 840, is at 115 miles north of Anchorage, at mile 226.7 of the Alaska Railroad. The paved Talkeetna Spur Road runs 14 miles east off the George Parks Highway, at mile 98.7. The community is unincorporated, and is in the Matanuska-Susitna Borough. Three rivers converge in the community: the Talkeetna River that flows along the northern boundary; the Chulitna River that enters the Talkeetna River west of the community; and the Susitna River which flows to the southeast along the western and southern boundary. Fishing, hunting, recreation, and sightseeing are common community activities at the rivers and shorelines.

Description of Erosion Problem

Talkeetna experiences recurring erosion from the Susitna and Talkeetna Rivers. Typical water flow along the bank causes erosion and is accelerated during high water and flood events. Sudden releases of water impounded by Ice jams, spring breakup, and boat wakes contribute to erosion. The riverbanks range from gradual beaches to vertical cut banks up to 10 feet above the normal water level. Most of the shore land soils are easily eroded. The rivers are braided channel, moveable bed type watercourses. Multiple river channels migrate seasonally, and often more frequently; eroding different reaches of the bank at different times. The existing erosion area on the Talkeetna River north of the railroad bridge is about 4 miles in length.

Significant erosion accompanied floods of October 1986 and August 2006. Major floods have occurred during the spring, summer, and fall seasons, with the greatest recorded flood in September 1942. Talkeetna is mapped as a flood hazard area.

Potential Damages

Since the early 1900s, the Susitna River has eroded about 2 city blocks away from the western side of the old town site. The August 2006 flood-related erosion caused loss of approximately 40 feet inland along more than 300 feet of the Talkeetna River bank, destroying docking facilities and associated buildings.

Measures have been taken to slow or stop erosion damages. In 1979, more permanent repairs were made to a deteriorated timber and brush fascine constructed in 1951 in an emergency effort to arrest bank erosion by the Corps. The installation of a dike in the early 1980s southwest of the Alaska Railroad Bridge on the Talkeetna River reduced the frequency and severity of erosion along the Talkeetna River and the Susitna River. Recent protective measures include placement of riprap and sandbags by the Matanuska-Susitna Borough and local landowners. The costs of

erosion-related repairs and measures exceed \$50,000, according to the community survey. The Corps' costs through 2006 are nearly \$600,000, as reported in the *Flood Control Projects Summary*.

Residences and outbuildings; boat launch, storage and repair facilities; sewer lines and sewage lagoon; and airport runways and buildings are structures of importance less than 100 feet from the river erosion. The community's sewage lagoon along the Talkeetna River upstream of the Alaska Railroad Bridge is at risk. Erosion continues in unprotected areas and often overtops measures such as sand bags. The floodplain of the Talkeetna River by the community is wide, and development has occurred primarily on the south side, near the mouth of the river. The erosion problems in the community have been increasing, especially north of the railroad bridge, due to ongoing new development in areas affected by natural river changes.

Photos and Diagrams

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

References

DCCED, DCA. 2007. *Community Online Database*.

NFIPFIRM 020021 5100C. Undated. MSB, DPW, available at www.matsugov.us

USACE. 1972. *Flood Plain Information: Talkeetna, Alaska*. Alaska District, U.S. Army Corps of Engineers.

USACE. 1996. *Talkeetna River Overflow Flood Level Determination Report*. Alaska District, U.S. Army Corps of Engineers.

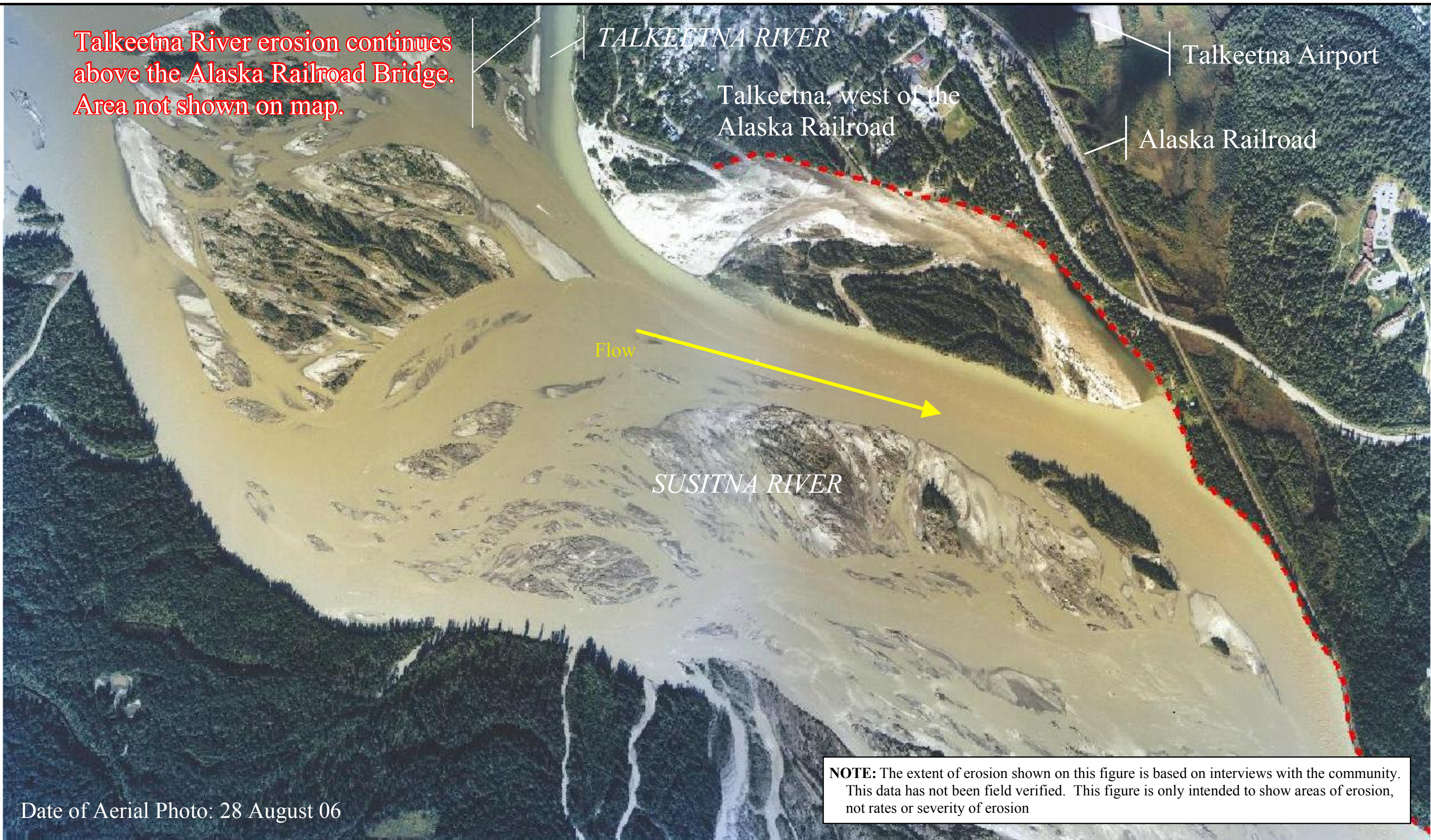
USACE. 2006. *Flood Control Projects Summary*. Alaska District, U.S. Army Corps of Engineers.

USACE. 2007. *Alaska Community Erosion Survey, OMB approved number 07100001*, expires September 30, 2009 administered to Robert Gerlach and Roberta Sheldon, representing Talkeetna Flood and Erosion Control Service Area on October 22, 2007 and a facsimile copy sent to the USACE on September 28, 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

Talkeetna River erosion continues above the Alaska Railroad Bridge. Area not shown on map.



Date of Aerial Photo: 28 August 06

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
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