



U.S. Army Corps  
of Engineers  
Alaska District

## **ALASKA BASELINE EROSION ASSESSMENT**

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

Current as of January 9, 2008

#### **Community Information**

Salcha (SALL-chuh), population 946, encompasses 72 square miles of land, 2.2 square miles of water, in an area southeast of North Pole and to the mouth of the Salcha River. The Salcha River is 33 miles southeast of Fairbanks on the Richardson Highway and flows into the Tanana River. Salcha is unincorporated and within the Fairbanks North Star Borough (FNSB).

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

Erosion at Salcha is associated with natural riverine processes in the Tanana River floodplain, which is underlain by deep deposits of sand and gravel. Causing and contributing to erosion are river flow, changing water levels, aufeis (overflow onto existing ice), flooding, ice-jams, channel migration, and high sediment and gravel loads (millions of tons each year). The section of Salcha with the most extensive flooding and erosion history is between the Boon Dox Bar on Old Richardson Highway and Stringer Road. Piledriver Slough and 23-Mile Slough traverse through this large, low density residential area with a low river bank estimated at 3 to 4 feet high.

The erosion is an ongoing concern of many riverfront property owners; be they on the Upper or Lower Chena, Salcha, Chatinika or Tanana Rivers. Private riverbank erosion concerns correspond with high flows.

The Tanana Valley Watershed Association is currently in the early stages of preparing a riparian management plan that will hopefully lead to best management practices for riverfront property owners not only related to erosion, but also vegetation clearing, landscaping and land development practices occurring above the ordinary high water mark; an area often out of the jurisdiction of the Corps and other wetland regulators. The plan may result in recommendations for inclusion into the FNSB zoning code as they relate to riverine riparian management issues, not just erosion control.

The Corps reported in a 2004 *Letter Report to Congress*, flooding during 16 of the last 26 years with damage to homes, septic systems, wells, roads, driveways and stream banks. The report indicated a 2003 flood caused by an ice jam on the Tanana River braid adjacent to the Boon Dox Subdivision damaged 42 properties, although erosion damage to structures or the extent of land lost to erosion was not indicated. Two residences have been lost to erosion at Piledriver Slough and erosion could significantly increase if the channel of the Tanana River shifts. No known erosion threats are documented in the Sewell Subdivision or in the vicinity of the Salcha River where it enters the Tanana River.

The State of Alaska Department of Transportation and Public Facilities (DOT&PF) constructed the only structural erosion control project in the area. It is of bank armoring next to the Richardson Highway, extending out as a finger dike to divert the Tanana river flow away from the bank, and a levee downriver from Boon Dox Bar for approximately 2000 feet. Erosion along the Tanana River during April through May of 2003 caused some damage to the levee.

A 2004 Corps of Engineers letter to Congress reported that unarmored levees as structural flood and erosion damage reduction measures to address the multiple sources of flooding, groundwater seepage, and erosion do not appear to be viable measures. The letter further indicated that armored levees would require flood proofing and drainage facilities inside the levied area to be viable. A Corps study of existing conditions and potential flood damage reduction measures was initiated in 2003 under Section 105 of the 1948 Flood Control Act. Those investigations are ongoing.

### **Potential Damages**

Three residences in the Boon Dox, Benerth, and Bradbury subdivision areas were estimated to be within 100 feet of the Tanana River. Two additional residences upstream from the Boon Dox subdivision, along the Richardson Highway, may be at risk after a slough became active following flooding events in 2000.

### **Photos and Diagrams**

No photos were provided by the community or other sources. The attached diagram depicts the linear extent of erosion in an area upstream from the focus area in this erosions information paper.

### **References**

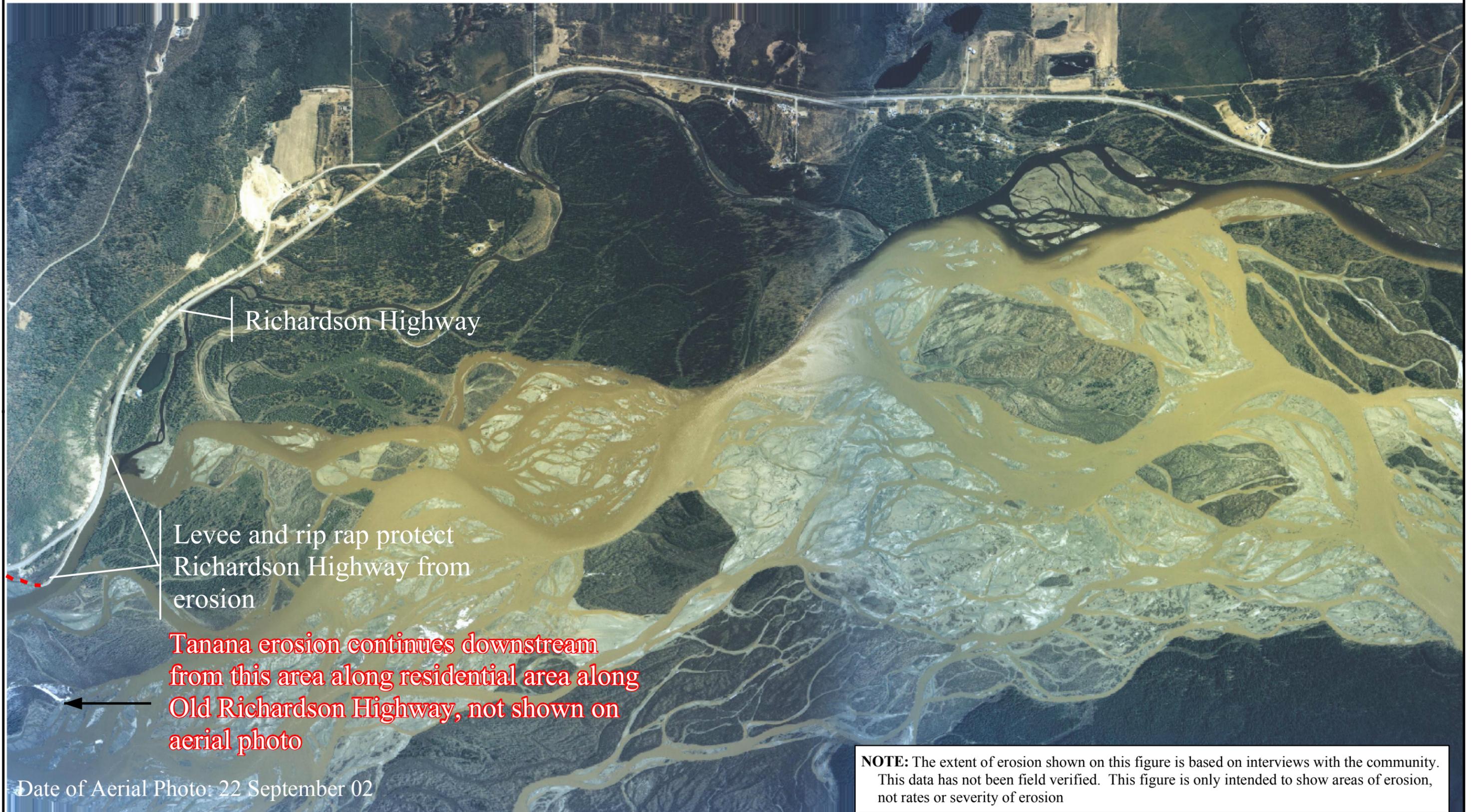
**USACE. 2004.** *Status Letter for Flood Damage Reduction Studies in Salcha, Alaska.* Alaska District, U.S. Army Corps of Engineers.

**USACE. 2008.** *Alaska Community Erosion Survey*, OMB approved number 07100001, expires September 30, 2009 administered to Paul Costello, Fairbanks North Star Borough, director of land development and Karri Shaw, Fairbanks North Star Borough, land management specialist, on January 9, 2008.

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### **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)



Date of Aerial Photo: 22 September 02

**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  
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--- Linear Extent of Erosion  
Tanana Valley



Alaska Baseline Erosion  
Salcha, Alaska