U.S. Army Corps of Engineers
Alaska District

Erosion Information Paper – Anchor Point, Alaska

Current as of April 29, 2008

Community Information

Anchor Point (AN-kur Point), population 1,803, is on the Kenai Peninsula at the Anchor River and North Fork junction, 14 miles northwest of Homer at mile 156 of the Sterling Highway. The community is unincorporated in the Kenai Peninsula Borough. The Anchor River drainage supports healthy runs of king salmon, silver salmon, pink salmon, Dolly Varden, and steelhead. Recreational fishing is the dominant stream use.

Description of Erosion Problem

The Anchor River, coastal beach, and bluffs along Cook Inlet are eroding. A 1983 report, *Surficial Geology and Late Pleistocene History of the Anchor Point Area*, stated storm and wind-driven waves, gully erosion, periodic land sliding of bluff material, overland runoff, and debris flow following heavy rainstorms as conditions causing and contributing to beach and coastal bluff erosion. Direct wave attack on the bluff toe is rare in the Anchor Point area. A 2004 *Anchor Point Study*, funded by the U.S. Fish and Wildlife Service, stated "Historical accounts from local residents indicate the beach toe does not change significantly with the seasons, as a result of storms, or over many years of observation."

Major flooding and erosion in October and November 2002 caused extensive bank sloughing and channel widening which resulted in significant damage and changes to the Anchor River floodplain. The 2002 events were reported to be at least 100-year events that caused extensive damage to roads, reshaped salmon stream channels, and damaged riparian habitat, especially in the lower reaches of the Anchor River. A 1985 Corps *Section 14: Streambank Protection Report*, stated a November 1983 flood (a 25-year event) and a 1984 event that damaged the Anchor River State Recreation Area parking lot, picnic area, and the south approach to the Old Sterling Highway Bridge.

Potential Damages

Access to cabins in the Clark Peterson Subdivision was cut off during a 2002 flood-erosion event. Flood waters reached 13 feet above the top of the four 8-foot culverts that pass under the Sterling Highway. Piping and seeping through the highway roadbed is monitored by the state Department of Transportation and Public Facilities (DOT/PF). Erosion in 2007 destroyed a recreational cabin near Black Water Bend Bridge and brought the river within about 45 feet of Mile 152 of the Sterling Highway.

The DOT/PF reportedly placed gabions to protect the campground and private property along the riverbank in 1980. A 1985 Corps *Anchor Point Navigation Improvements Reconnaissance Report* stated that the gabions were being outflanked by the river at the upstream end of the project. In 1985, the previous owner of the Silver King Tackle Shop constructed a log bulkhead

to protect his property; however the shop is still at risk from bank erosion and flooding-erosion events.

Photos and Diagrams

Attached are photos provided by the Kenai Office of Emergency Management and the Kenai Watershed Forum *Anchor Point Study*. The attached diagram shows the approximate linear extent of erosion.

References

Reger, Richard D. and Petrik William A. 1983. *Surficial Geology and Late Pleistocene History of the Anchor Point Area, Alaska.* Division of Geological and Geophysical Surveys Public Data File 93-50b.

Kenai Watershed Forum. *Anchor Point Study*. Website: http://www.kenaiwatershed.org/anchor.html

Riehle, J.R. 1980. *Shoreline Classification and Compilation of Erosion Rates, Kachemak Bay to Trading Bay, Upper Cook Inlet, Alaska (draft).* J.R. Riehle, Division of Geological and Geophysical Surveys.

USACE. 1985. Section 14 Streambank Protection Report for Anchor River. Alaska District, U.S. Army Corps of Engineers.

USACE. 1995. *Anchor Point Navigation Improvements Reconnaissance Report.* Alaska District, U.S. Army Corps of Engineers.

USACE. 2008. Alaska Community Erosion Survey, OMB approved number 07100001, expires September 30, 2009 administered to John Mohorcick, KRC manager and Ann Bayless, Anchor Point resident and Greg McCullough, 42-year resident on April 28 and 29, 2008.

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

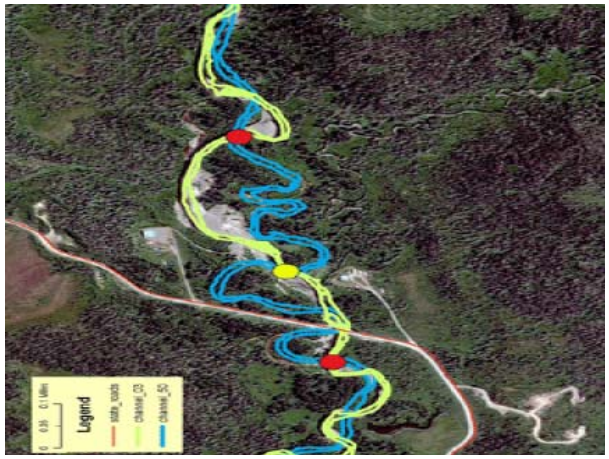


Photo 1: North Fork Anchor River stream channel movement 1950 (blue) and 2003 (green); aerial photo Courtesy of the Kenai Watershed Forum, Anchor Point Study.

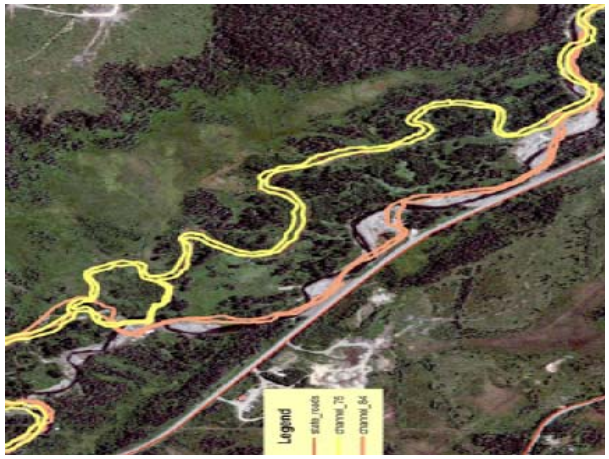


Photo 2: This photo shows the channel movement from 1975 to 1984; the channel now is very close to the Sterling Highway; aerial photo graphic courtesy of the Kenai Watershed Forum, Anchor Point Study.

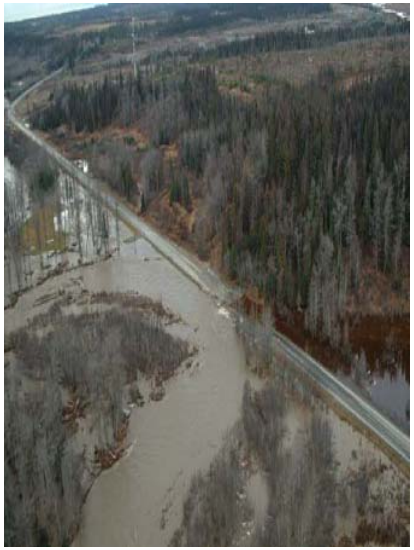
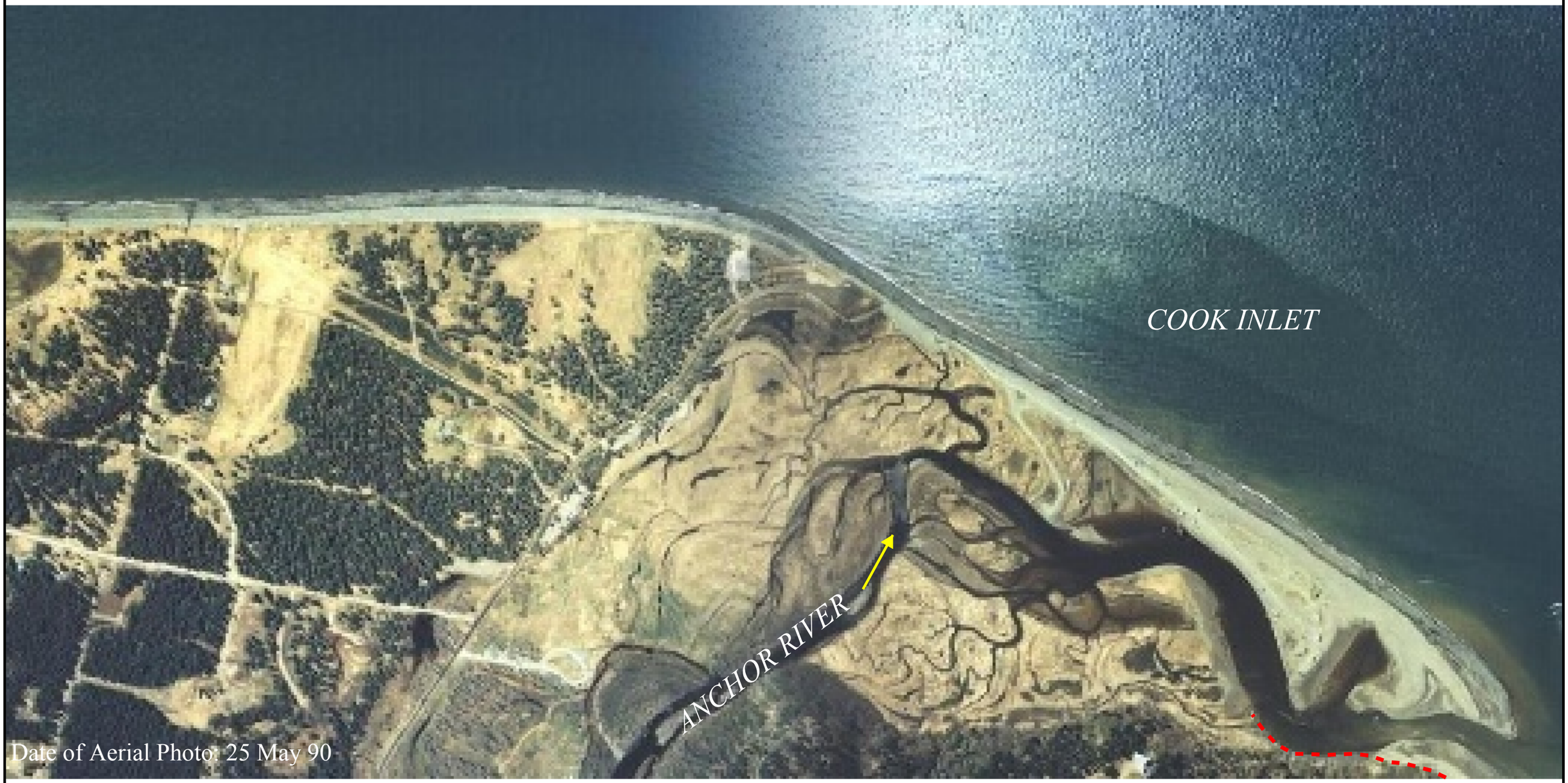


Photo 3: Anchor River by Black Water Bend, October 24, 2002. Photo courtesy KPB, OEM.



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

Anchor Point, Alaska