



U.S. Army Corps
of Engineers
Alaska District

ALASKA BASELINE EROSION ASSESSMENT

Erosion Information Paper - Yakutat, Alaska

Current as of September 20, 2007

Community Information

The City and Borough of Yakutat (YACK-uh-tat), population 634 is in the lowlands along the Gulf of Alaska, 225 miles northwest of Juneau and 220 miles southeast of Cordova. Yakutat Bay is one of the few refuges for vessels along this stretch of coast. The Hubbard and Malaspina Glaciers are nearby. The city and borough are unified as a home rule borough government

Description of Erosion Problem

Erosion and flooding have recently become an important issue in the community. Erosion problems are reported in four areas. The first is at nearby Russell Fiord which is dammed periodically by the Hubbard Glacier. When the Hubbard Glacier advances enough to cross Russell Fiord, it forms an ice dam that can fill Russell Fiord until the ice dam breaks or the rising water overtops the low mountains that form the western wall of the fiord. Either conclusion to the ice damming process can cause outburst flooding and erosion. Ice damming closed Russell Fiord in 1996 and 2002.

A second area of concern is the Monti Bay coast near developed areas of Yakutat. The low-lying sand-silt beaches of the south shoreline are susceptible to erosion. Islands and navigation improvements shelter part of the community, but even the sheltered beaches can be eroded by locally generated waves. The community survey reports the active erosion area is 5 to 15 feet wide and 6 to 30 feet high and estimates the rate of erosion is ½ to 2 feet per year. Erosion is also occurring by the Ocean Cape dock next to the fish camp buildings and in a section of washed-out road.

A third erosion area is inland from Yakutat, where unnamed streams in the Lost River basin, the Situk River basin, and Ahrnklin River basin are eroding the Forest Highway about 3 miles before its terminus at Harlequin Lake and at other locations from mile 12 to 24. There also is a subdivision development where the sides of the roads are washing out from local run off.

A fourth erosion area is the beaches from Dry Bay to Ocean Cape. As glaciers recede, the glaciers leave behind large lakes which are catching sediment as it is transported downriver. This is what is happening at Alsek Lake on the Alsek River. Alsek River, along with the Dangerous River, is likely the major contributors of sediments to Yakutat's beaches. If the beaches fail to accumulate they will erode back which appears to have begun occurring three years ago. If the erosion cuts into the beach dunes it will eventually being the process of saltwater intrusion into several important estuaries drastically cutting local salmon production.

Potential Damages

If Hubbard Glacier causes the Russell Fiord to overflow into the Situk River and nearby waterways, the resultant flooding and erosion could substantially impact the ecology and economy of the area. Fishing, timber resources, recreation and tourism economy in this area, including large native allotment parcels and a fishing lodge in the Situk River watershed would be threatened.

Wind and wave action are eroding the cast in front of the city hall during winter storms. Erosion threatens a home and an adjacent out building 30 to 50 feet from the shore and another home 80 to 100 feet from shore. The road past the inland subdivision is eroded during heavy rains and could be washed out. There is no alternative access to the subdivision. If the Forest Highway was lost to advancing erosion, rivers in the area and Harlequin Lake would be inaccessible, causing an economic loss of revenue generated by recreational and personal-use fisheries.

Photos and Diagrams

Photos provided by sources other than the community are attached, and no photos have been provided by the community. The attached diagram depicts the linear extent of erosion.

References

R&M Consultants Inc. 2006. *Geotechnical Investigation Yakutat Flood Damage Reduction*. Prepared for Alaska District, U.S. Army Corps of Engineers.

Unknown. 1987. *Community Information: City of Yakutat*.

USACE. 1971. *Letter to Alaska State Housing Authority*. Alaska District, U.S. Army Corps of Engineers.

USACE, 2007. *Alaska Community Erosion Survey*, OMB approved number 07100001, expires September 30, 2009 administered to Tina Ryman, assistant clerk, City and Borough of Yakutat, September 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: Erosion on Forest Highway, September 2007.



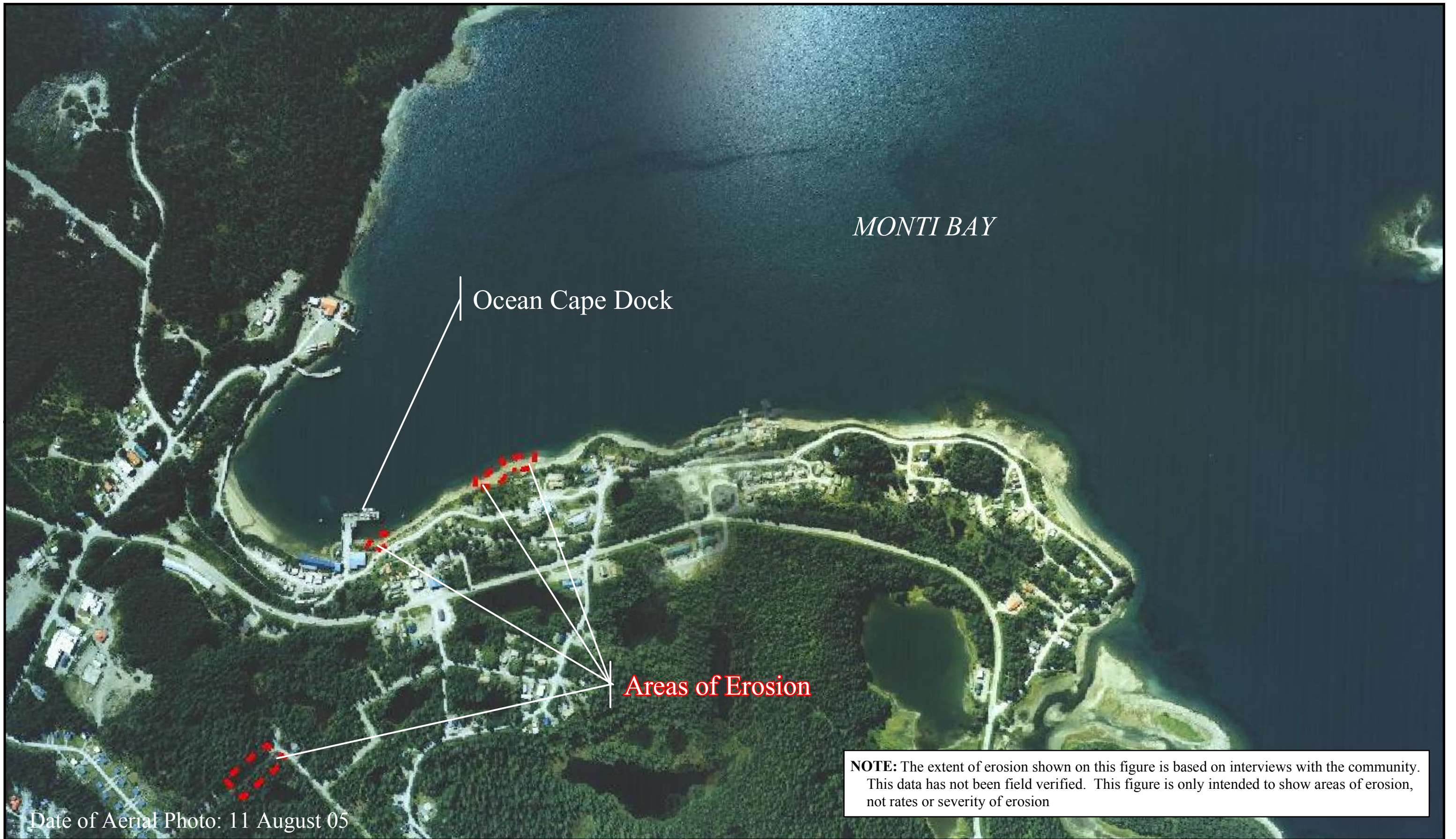
Photo 2: Erosion by Ocean Dock, September 2007.



Photo 3: Erosion on inland subdivision road, September 2007.



Photo 4: Erosion on inland subdivision road, September 2007.



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--- Linear Extent of Erosion



Alaska Baseline Erosion
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