



U.S. Army Corps
of Engineers
Alaska District

ALASKA BASELINE EROSION ASSESSMENT

Erosion Information Paper – Juneau-Douglas, Alaska

Current as of October 26, 2007

Community Information

The City and Borough of Juneau (JEW-noh), population 30,650, Auke Bay, and Aukquan are on the mainland of Southeast Alaska, opposite Douglas Island, in the central portion of the Alaskan panhandle, on the narrow southeastern strip bordering the Canadian Province of British Columbia. It is 900 miles northwest of Seattle and 577 miles southeast of Anchorage. The community is incorporated as a unified home rule municipality within the City and Borough of Juneau. Juneau is accessible only by sea and air because of its mountainous terrain and the great distances to other urbanized areas. There are no roads to other southeastern Alaska communities or the Canadian interior. Juneau was built on the Inside Passage along the Gastineau Channel. Douglas is on the northeast coast of Douglas Island. Douglas is connected to Juneau by Juneau-Douglas Bridge which crosses the Gastineau Channel.

Description of Erosion Problem

Erosion in the Juneau area are due primarily to riverine processes associated with the Mendenhall River. High summer base flows from the melting Mendenhall Glacier, and heavy rainfall events in summer and fall can cause major flooding and erosion. Most erosion is upstream of the community, in the broad floodplain area several miles northwest of downtown Juneau. Major flooding and erosion events occurred in 1927 and 1961. The 1984 Thanksgiving Day storm was the last major flood and erosion event. The storm was damaging because it was combined with very high tides and an extreme low-pressure system.

Erosion along the Mendenhall River has primarily involved undeveloped land. The estimated erosion rate is 2 to 10 feet per year. The river is close to cutting through an oxbow on the river. There is erosion along the west end of the Juneau Airport and floatplane pond, and portions of the airport runway fill and floatplane pond dike have been lost.

Limited erosion has been reported on Gold Creek and Montana Creek. Information provided in the community erosion survey indicates that coastal storms and high tides along Gastineau Channel were a cause of erosion.

There is an erosion risk that has been reported at Vintage Park as well. An oxbow is reported to be nearly cut through, if this were to occur a major rip rap project may be necessary. According to the community, this rip rap project is currently being investigated.

According to the community every oxbow in the stream has a potential for erosion. The Melvin park area next to Riverside Drive, the embankment that protects the housing along Killewich, the city lands behind the high school, the housing behind the Post Office, Vintage Park, Meander Way, the wastewater plant, are reportedly subject to erosion unless the embankment is constantly repaired or replaced. The bridge on Lemon Creek at Old Glacier was a site of the “Emergency Gravel Extration” in 2007 to prevent erosion of the stream bank. The community also reports problems at Brotherhood Bridge.

Potential Damages

There are a few structures within 100 feet of the erosion along the Mendenhall River. Erosion along the west end of the Juneau Airport and floatplane pond will likely be corrected by a planned runway safety project. If the Mendenhall River was to cut through the oxbow there would likely be more erosion along the river that could adversely impact housing in the community.

Photos and Diagrams

No photos were provided by the community or other sources. The attached diagram shows the linear extent of erosion areas along the Mendenhall River. The Douglas-Juneau downtown waterfront area is also shown on the diagram.

References

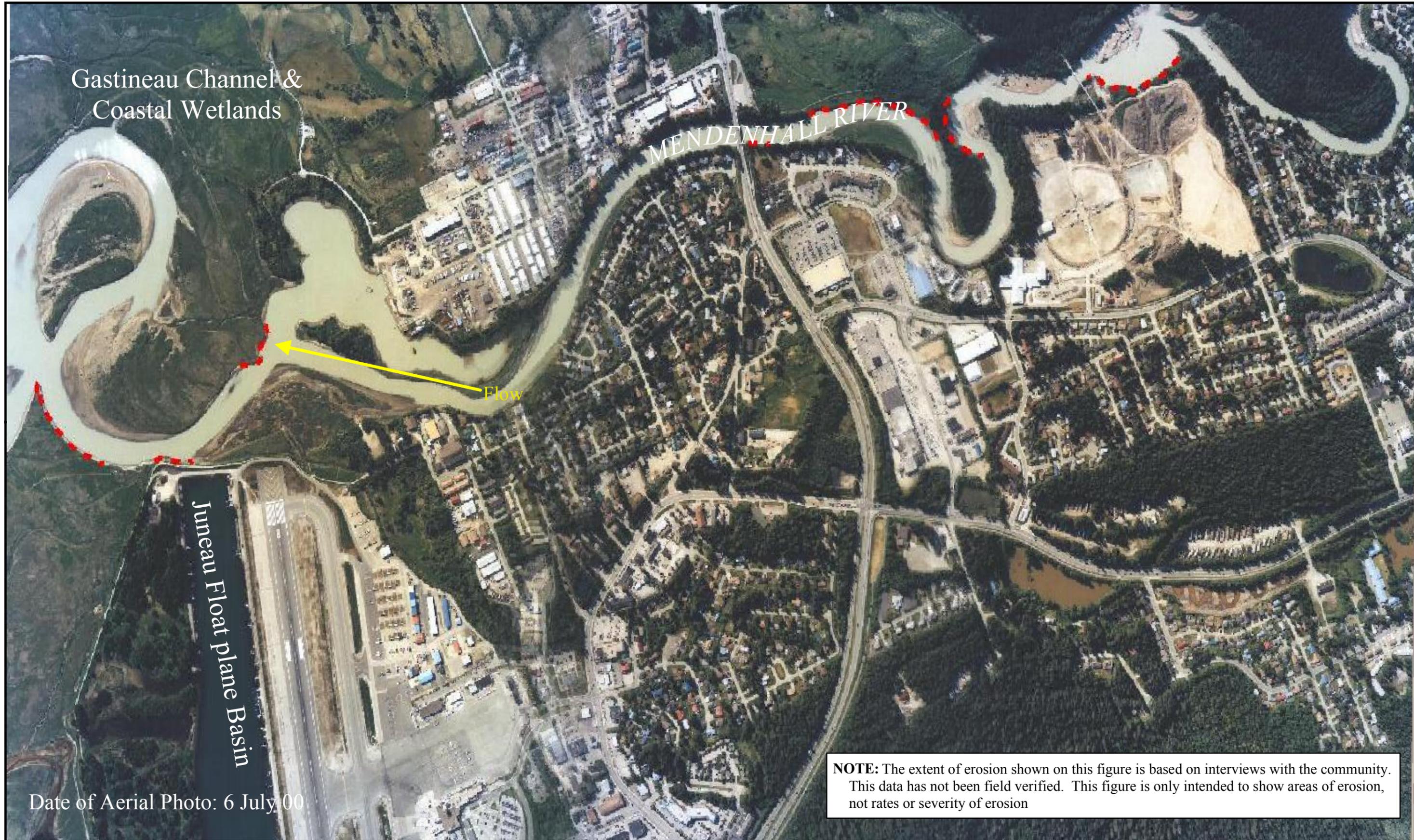
CBJ. 1996. *Juneau Comprehensive Plan on the Web* prepared by the City and Borough of Juneau.

USACE. 1970. *Flood Plain Information, Mendenhall River, Juneau, Alaska.* Alaska District, U.S. Army Corps of Engineers.

USACE. 2007. *Alaska Community Erosion Survey, OMB approved number 07100001*, expires September 30, 2009 submitted by Roger Healy, City and Borough of Juneau engineering director, October 2, 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



Gastineau Channel &
Coastal Wetlands

MENDENHALL RIVER

Flow

Juneau Float plane Basin

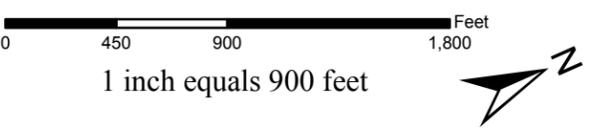
Date of Aerial Photo: 6 July 00

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
Juneau, Alaska

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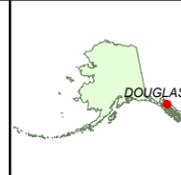


Date of Aerial Photo: 9 June 06



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Linear Extent of Erosion



Alaska Baseline Erosion
Douglas, Alaska