

-161°55'

-161°50'



At Focus Area 1, a peninsula with modern houses as experienced over 100m of loss since 1990. Archaeological remains in the form of historic fish processing pits are also at risk.

The shipping channel has also taken to moving erratically in recent years, jeopardizing the all-important biannual delivery of fuel and supplies that Quinhagak residents need to survive and live comfortably.

The Qanirtuuq, the mighty braided river upon which Quinhagak is sited, is the lifeblood of the community. It brings the annual salmon runs back to the village every summer, and acts as a highway for accessing vital subsistence resources further inland, by boat and snow machine.



Map projection (Main and inset): NAD 1983 Alaska Albers Ellipsoid: GRS80

Yuuyaraq Today, Yuuyaraq Tomorrow: Modeling Erosion Threats to Yup'ik Traditional Land Use Areas (October 2022)

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Descriptive Notes and Data Sources

This is a map of subsistence activity in the immediate vicinity of Quinhagak, an Alaskan Native Yupik community of around 700 people on the coast of the Bering Sea. Climate change-driven erosion poses a threat to centuries-old traditional subsistence areas and modern infrastructure alike. This map draws on data from the 1999 survey work of Joseph Pleasant (Former land manager, Qanirtuuq Corp.), a 2005 map entitled "Area Use Map Quinhagak" by the Coastal Villages Region Fund, a 1990 aerial image of uncertain provenance, and the ethnographic interviews conducted by the authors from 2019-2021. The inset satellite imagery, hosted on ESRI Living Atlas, dates from 2019. The underlying basemap is derived from Open Street Maps data, with symbology and data modified by the authors.

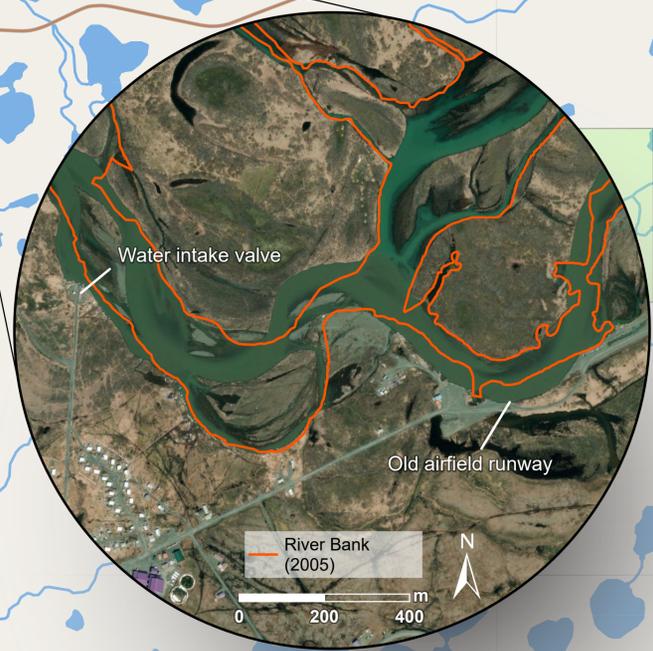
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-161°55'

-161°50'

59°45'

59°45'



At Focus Area 2, rapid erosion has led to the abandonment of Quinhagak's old airfield in 2004. More than 40m of land has been eroded since 2005. The erosion here is devastating, as it threatens residential areas and Native Allotments, and also cuts off access to important fishing places and gravel harvesting pits to the east.

The area around the water intake valve is also at risk and may need to be dismantled soon, endangering the community's fresh water supply and sewage system.

- Legend**
- ▲ Areas of Concern
 - Native Allotments
 - Fish Processing and Drying Racks (2005)
 - Berry Harvesting Area (2005)
 - Airfield runways
 - Gravel roads
 - Small Mammal Hunting
 - Bird Hunting
 - Fish Camps and Fishing Activity
 - Vegetation Harvesting

