



Tanana River Floodplain Studies

Channel Change, Debris, Ice, Groundwater

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Project Description

Phase I of the Northern Rail Extension

3300-foot bridge over the Tanana River near Salcha (Boondox area), 40 miles south of Fairbanks.

2.5-mile long levee

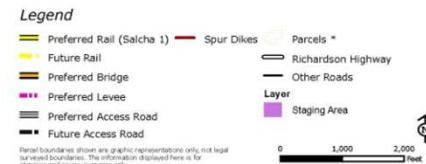
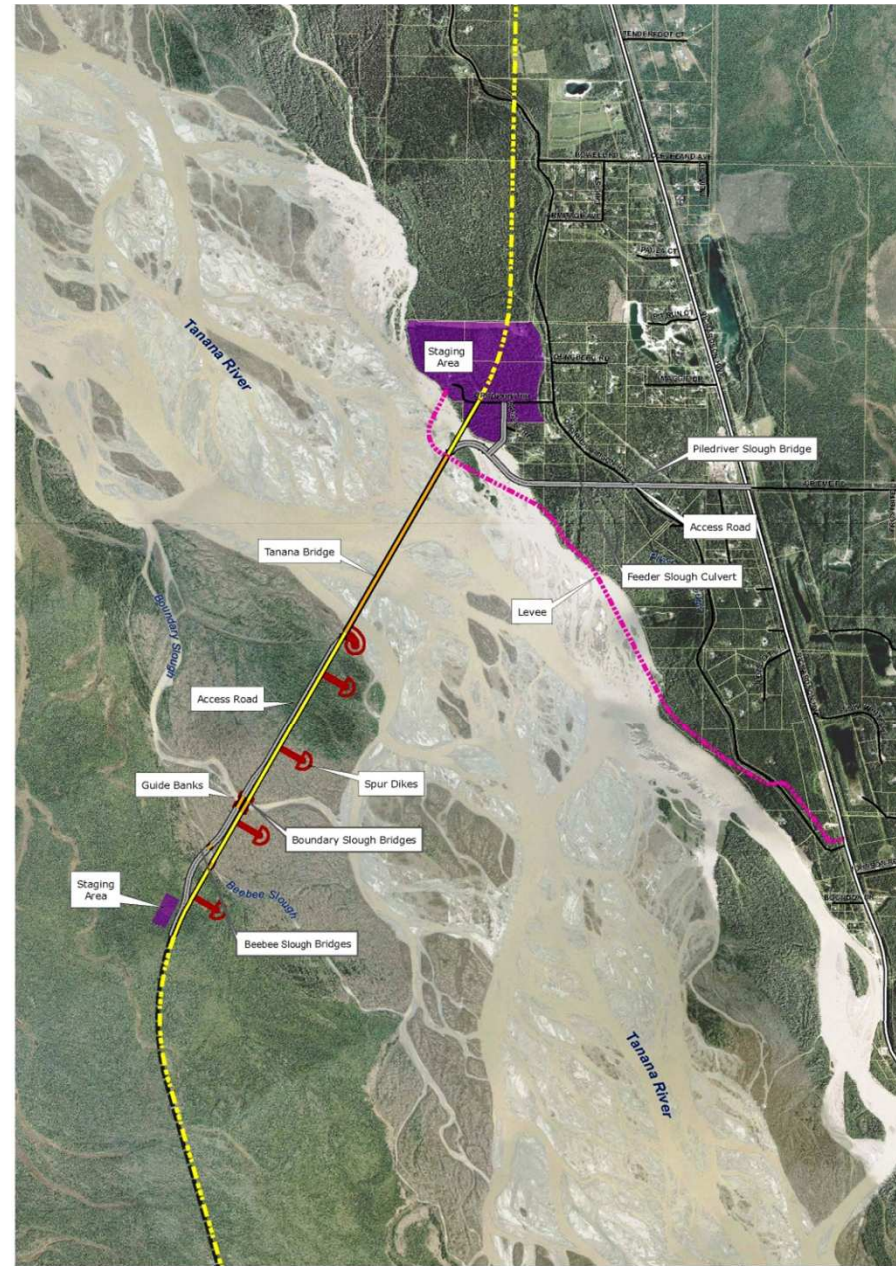
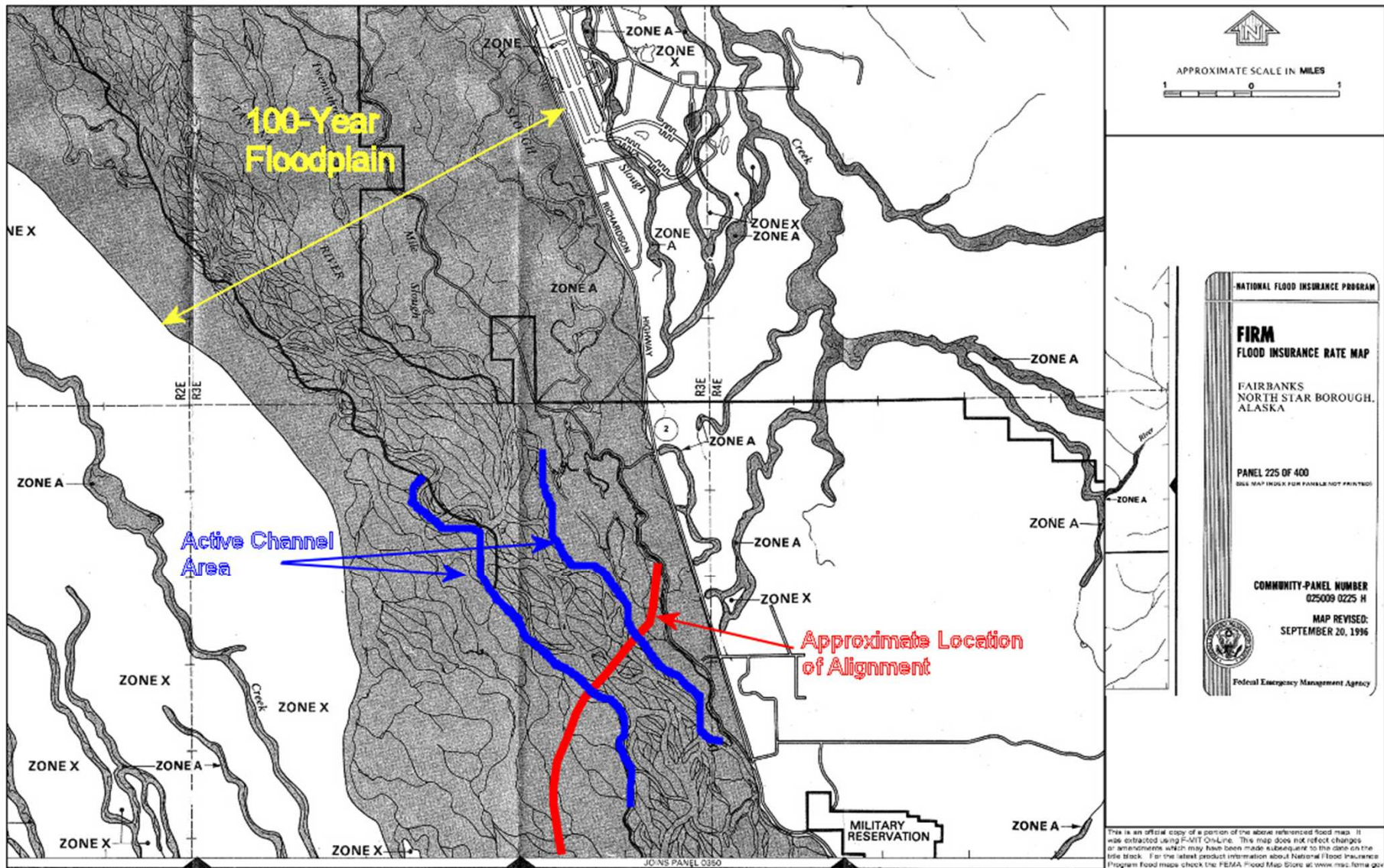


Figure 1. Phase 1 Overview

Proposed Tanana Crossing Project
Salcha, Alaska

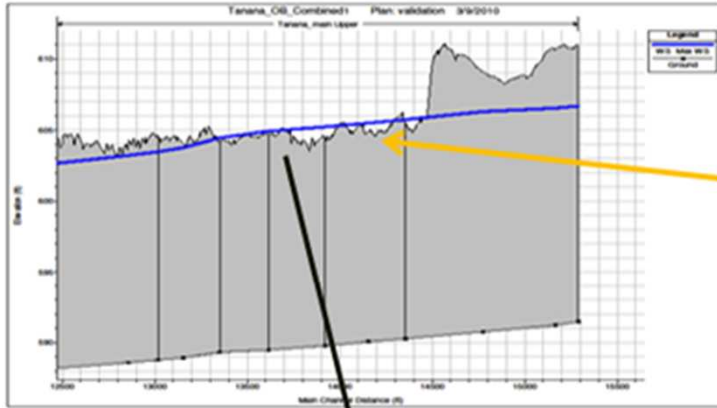
Map: Bradberry, MD 03 ADP 3 Final
Data Source: ADOT, FCR
Data: FCR, ADOT, HRC
Date: 1/16/2020

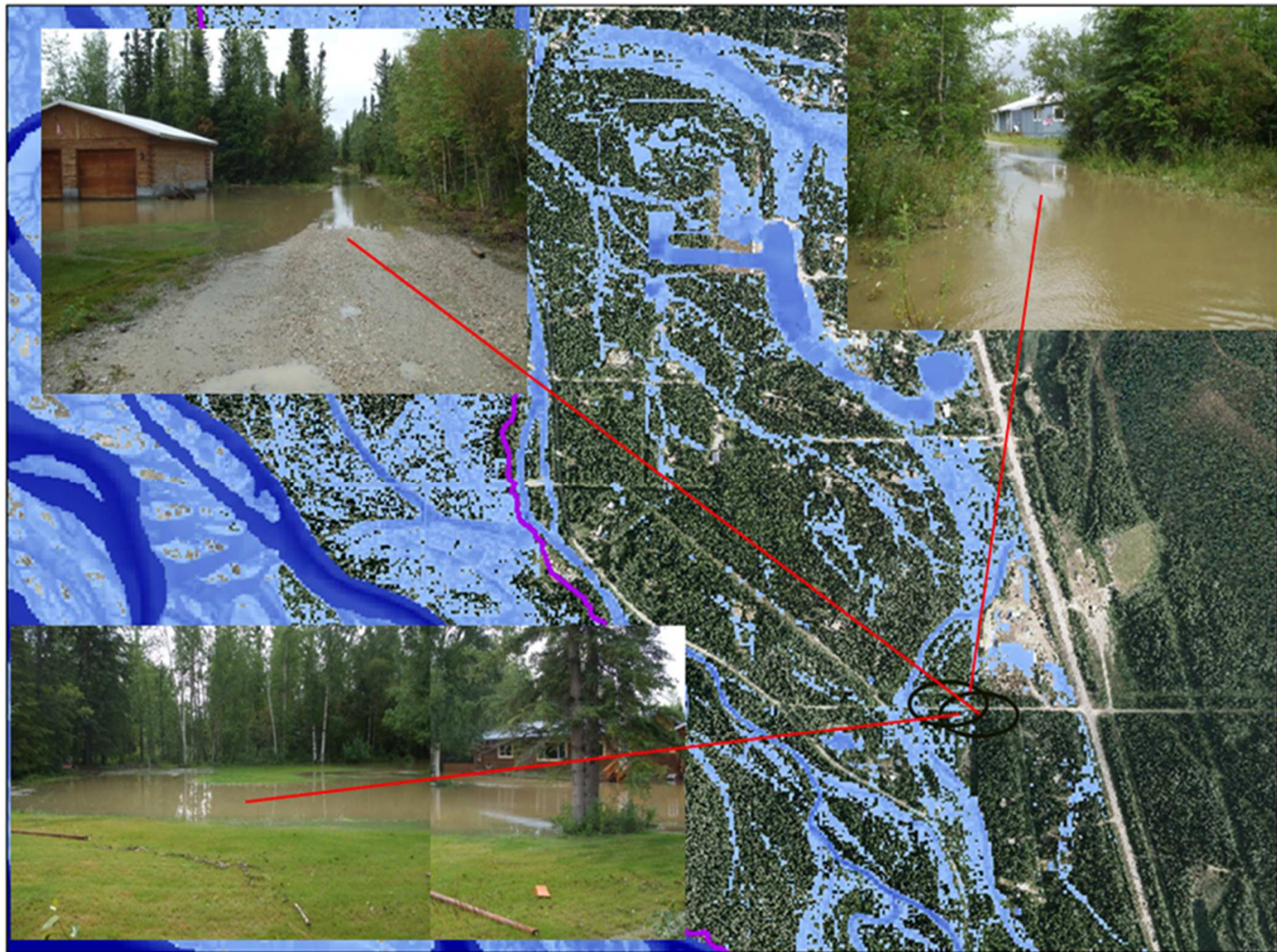
Entire Project is in a Flood Zone



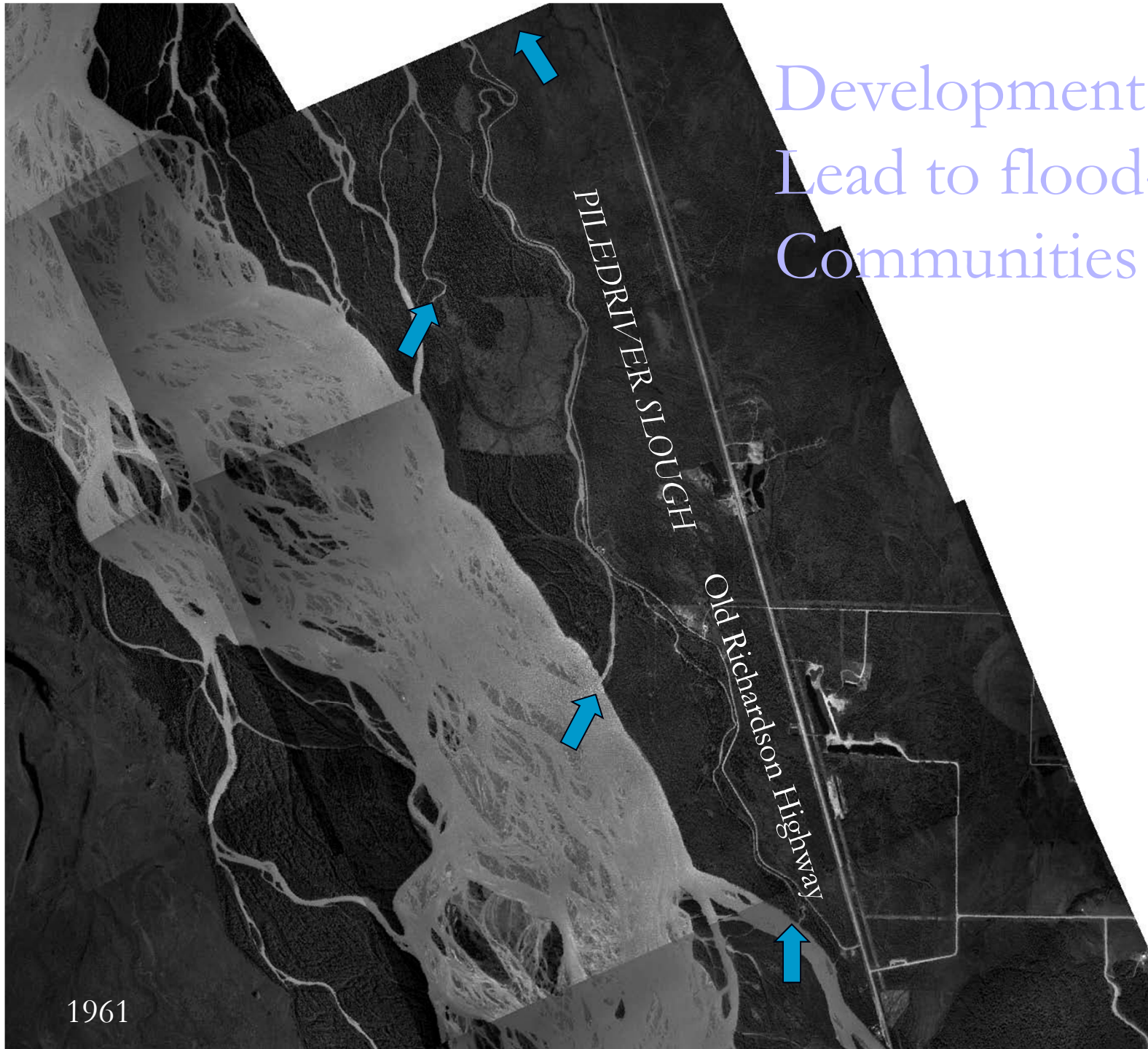


2008 flood (50-year event)

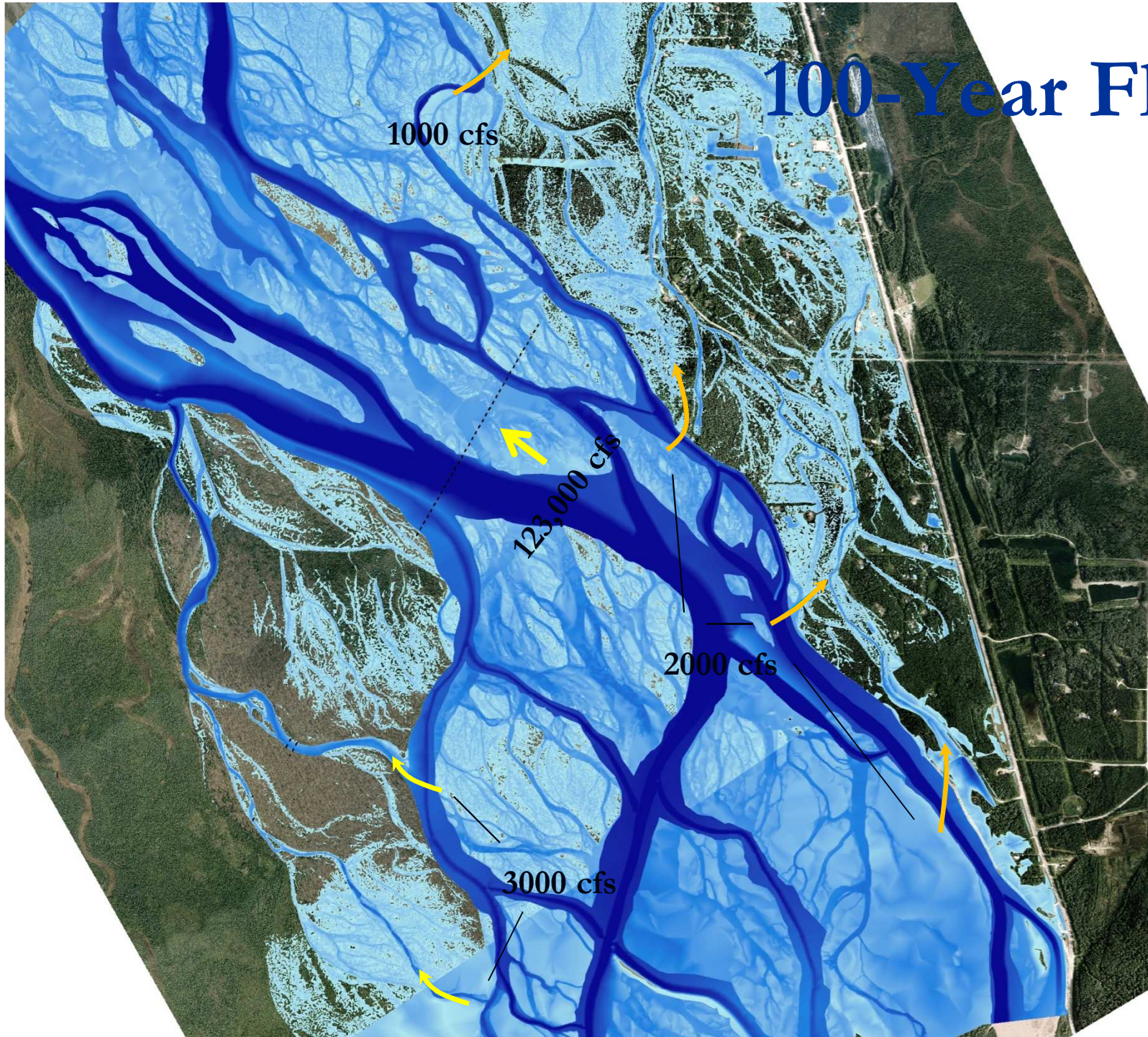


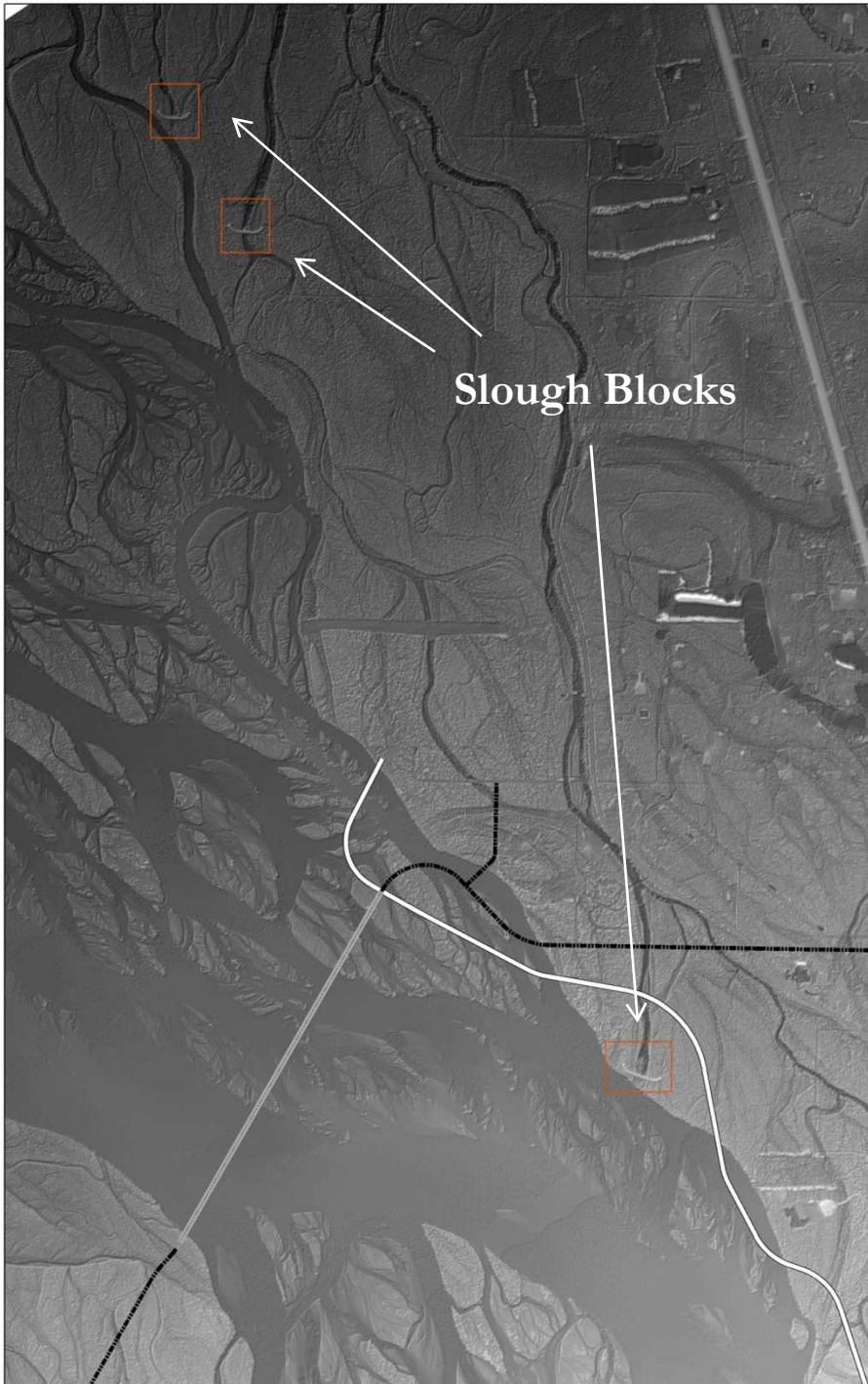


Development Patterns Lead to flood-prone Communities



100-Year Flood

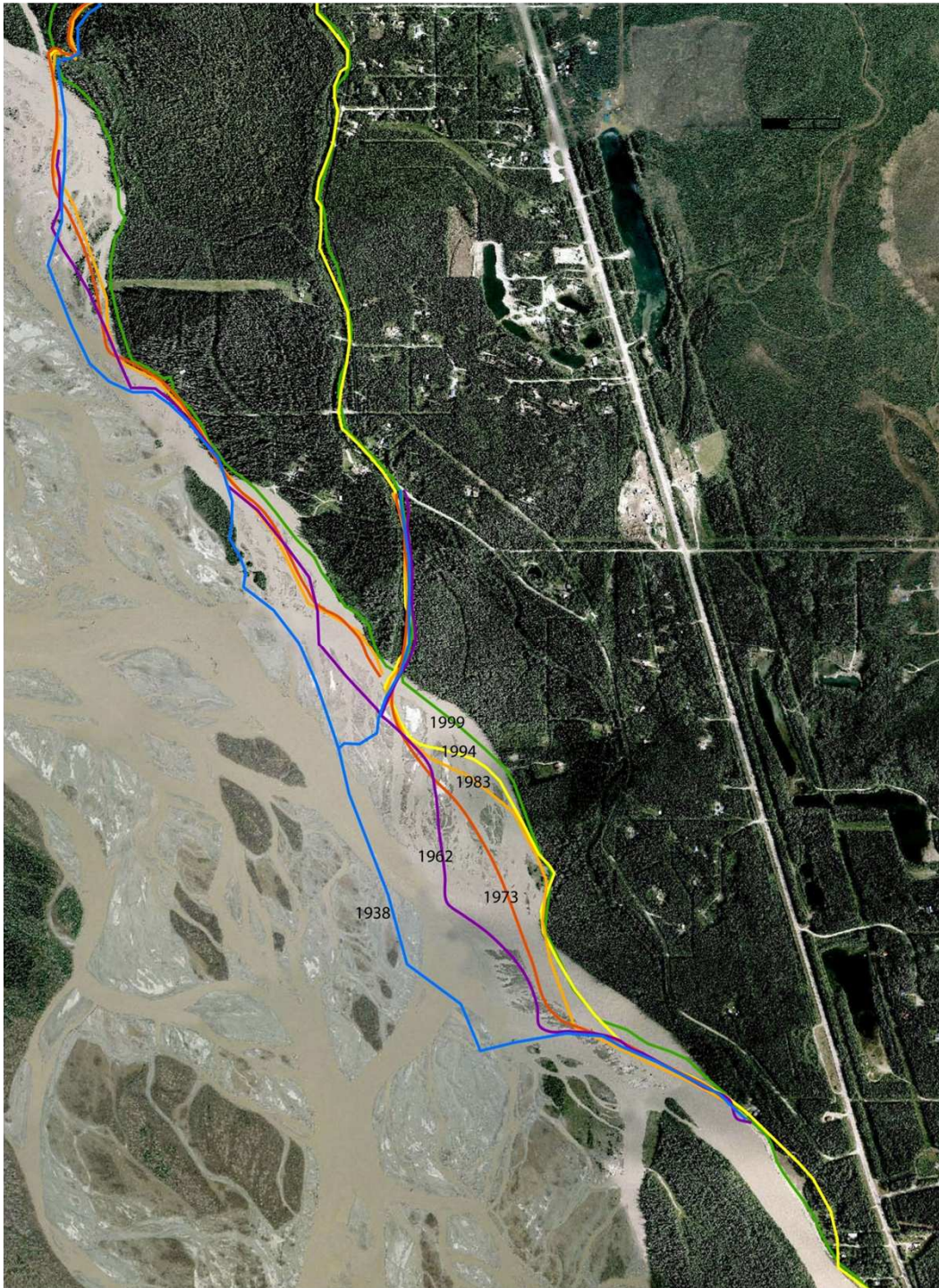






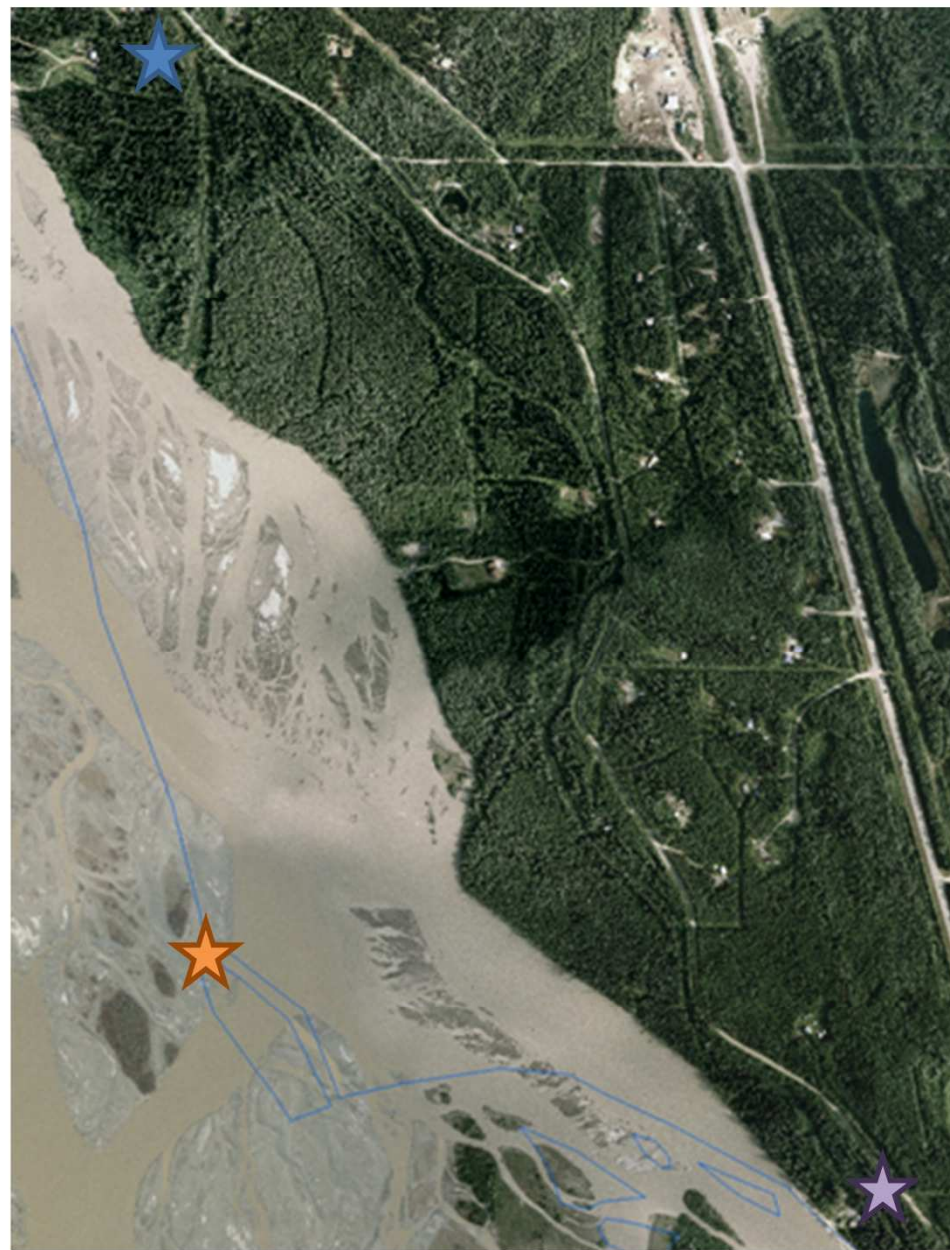
Bank Migration

Up to 1500 feet of bank retreat since 1938





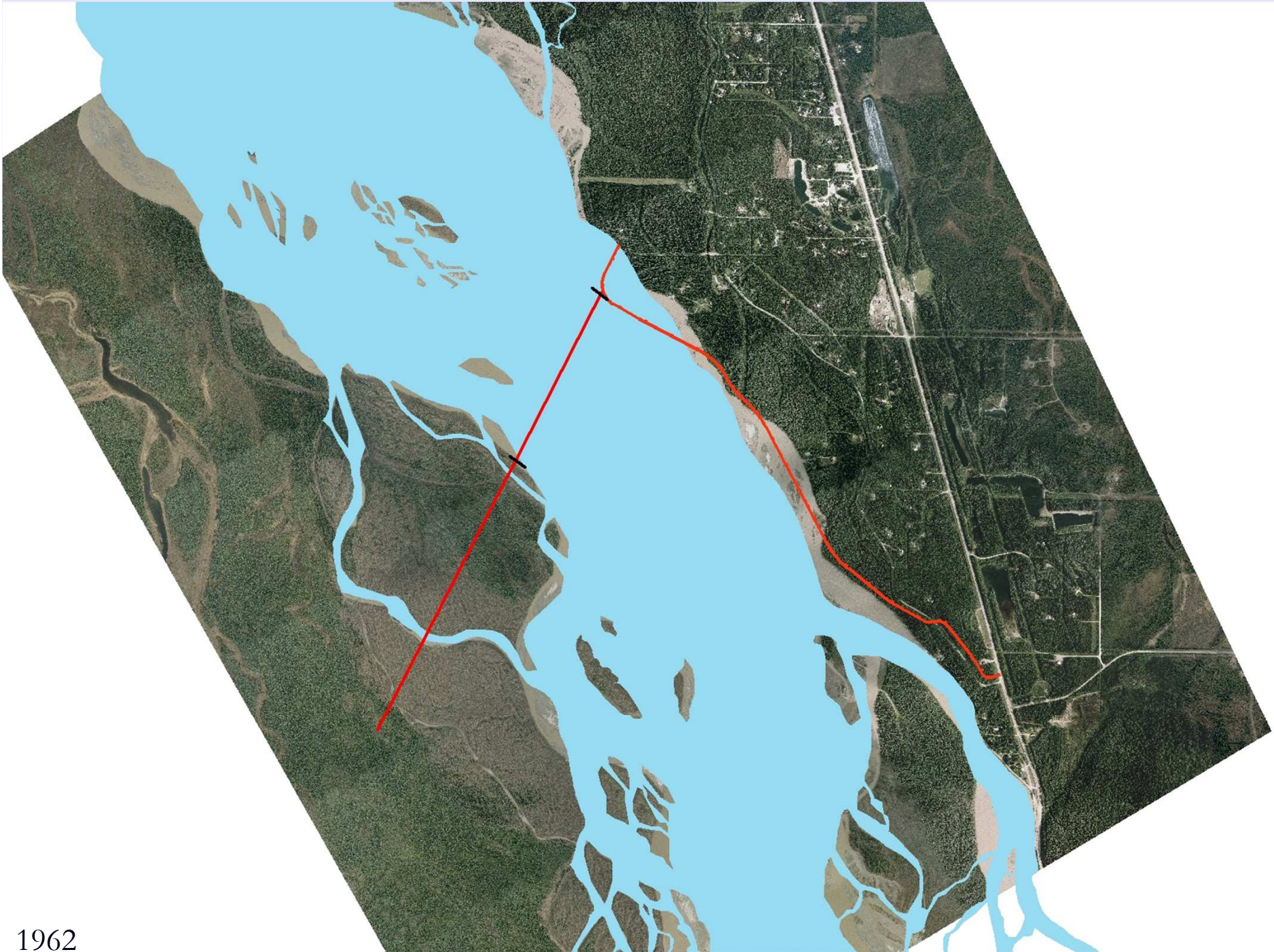
1938



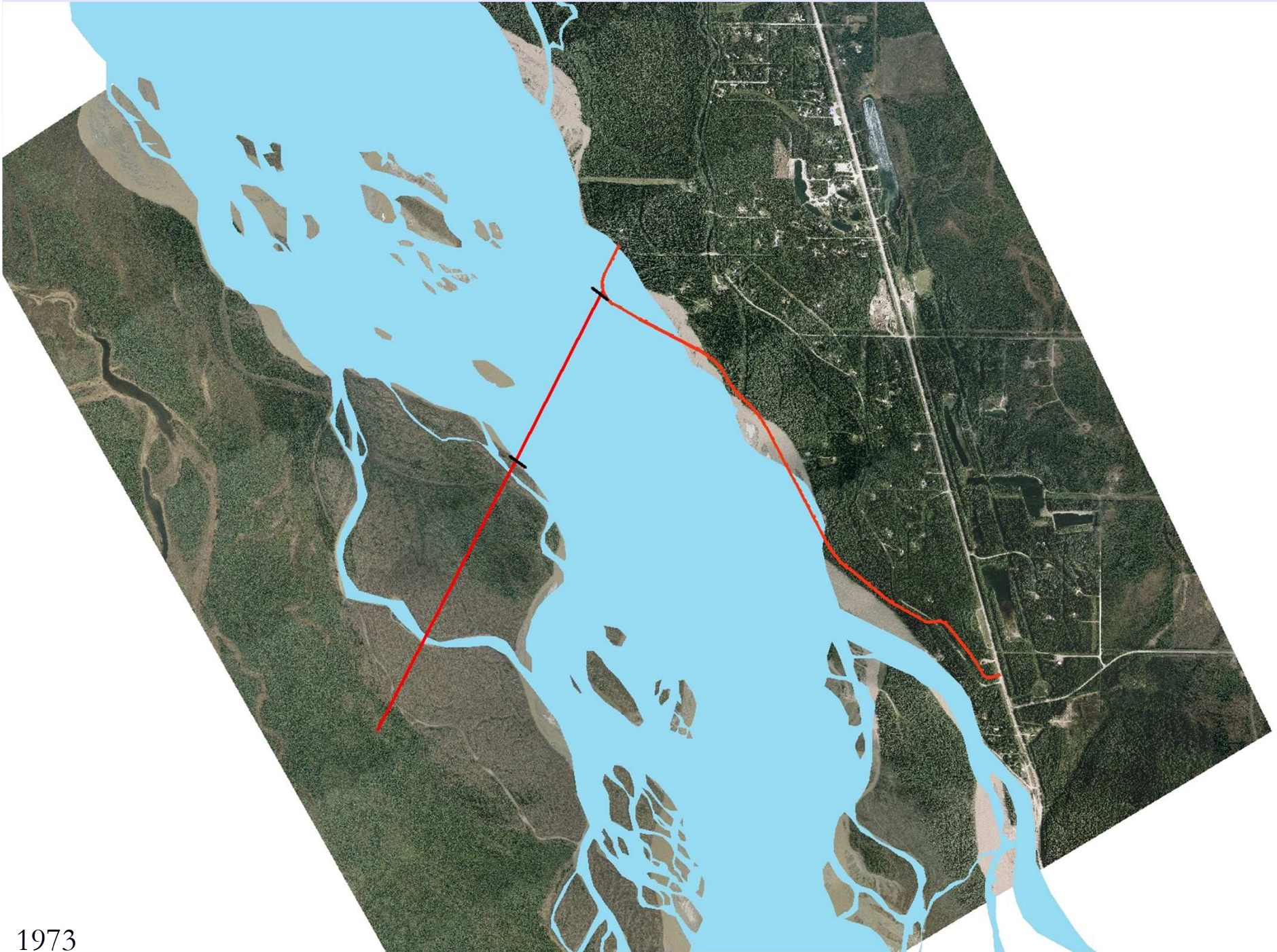
2005



1938



1962



1973



1983



1994



1999



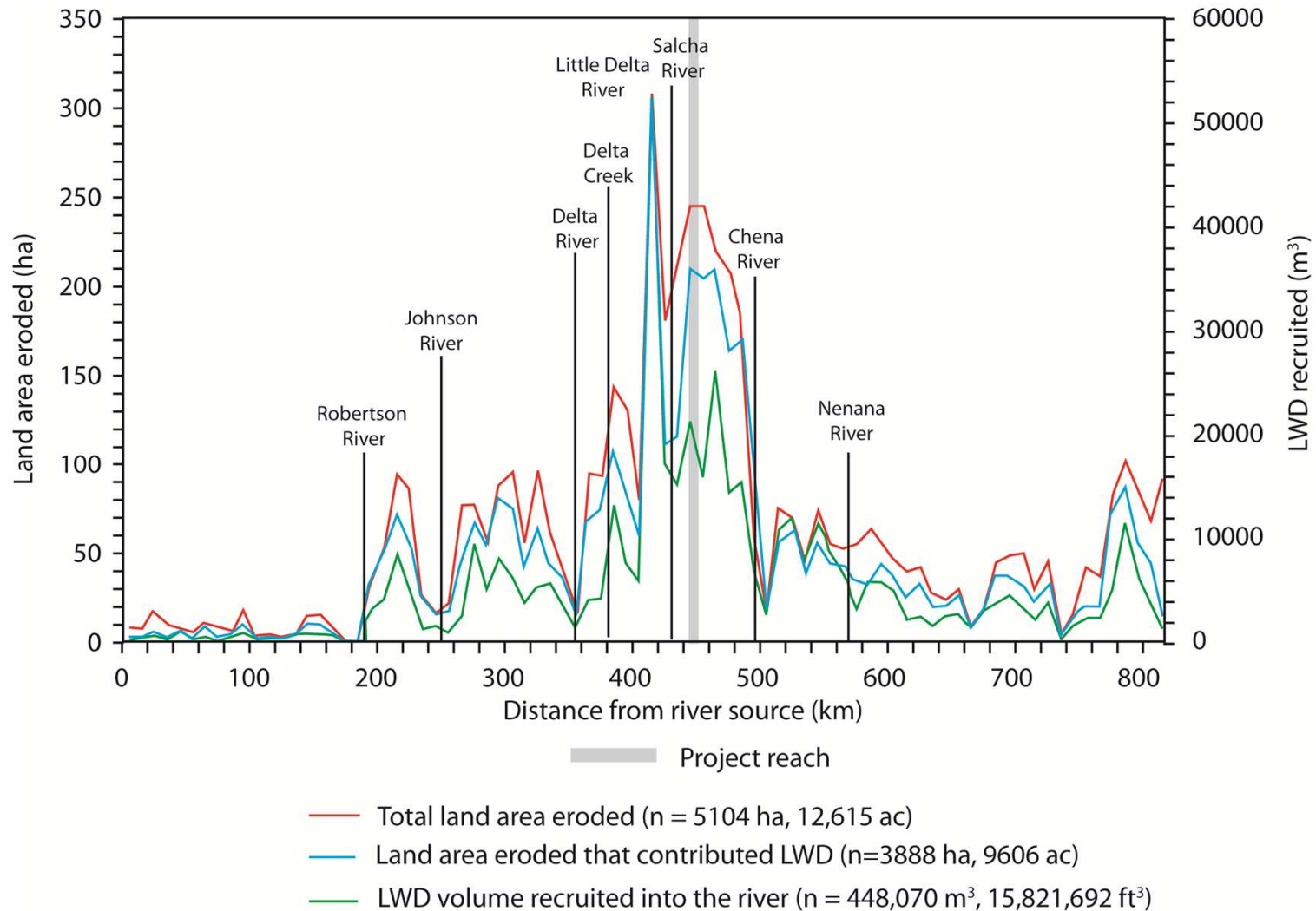
2005



proposed bridge

2008 river bank

Woody Debris

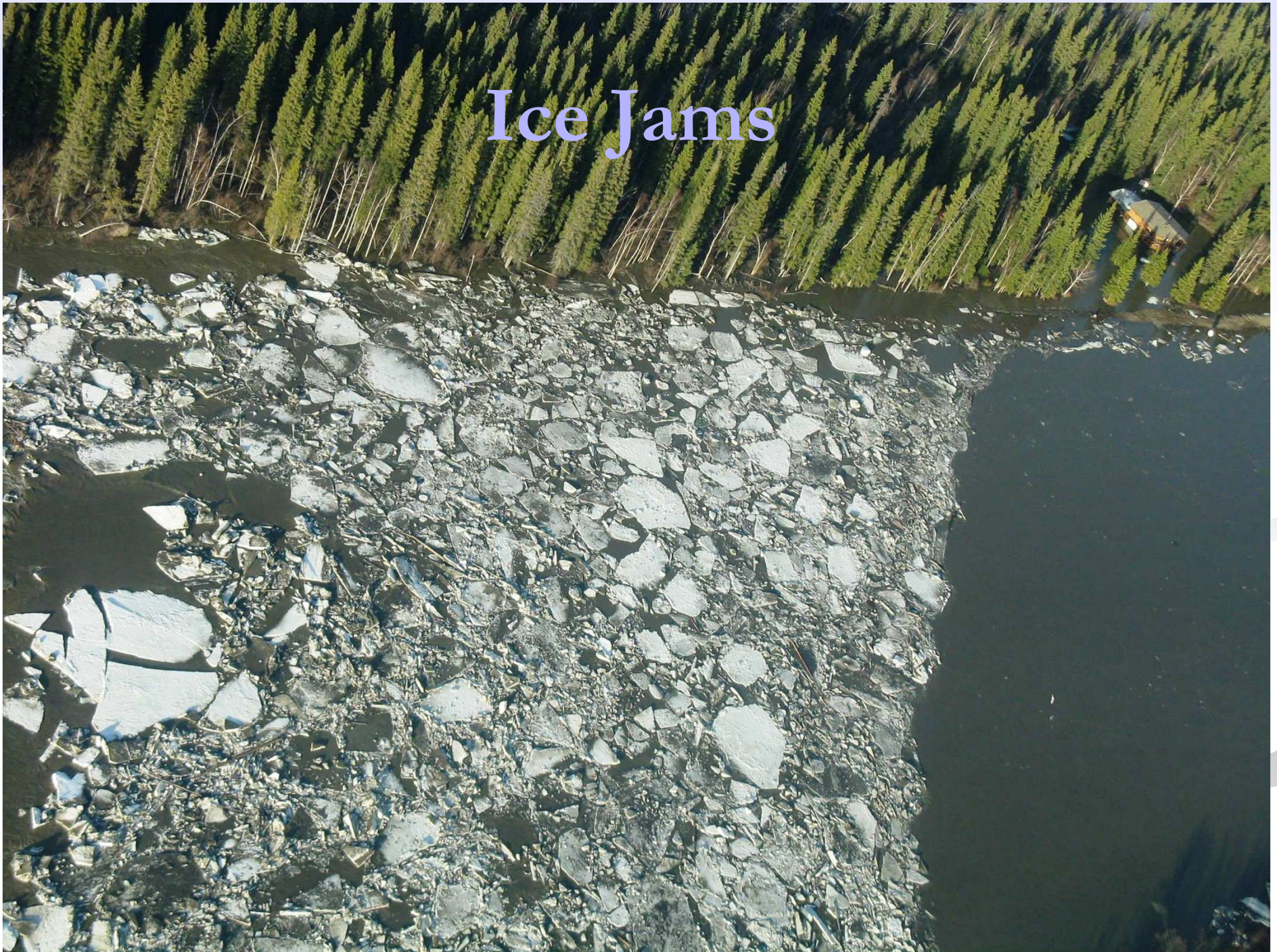


Woody Debris

An aerial photograph of a wide river with muddy, brown water. Several large, dense accumulations of woody debris, including logs and branches, are visible floating in the water. The debris is concentrated in certain areas, particularly in the upper left and lower left. The right bank of the river is lined with dense green vegetation. The overall scene illustrates the scale of woody debris in a river system.

- Enormous debris supply
- Sturdy log length of about 95 feet
- Rootwad width of about 9 feet
- Accumulations on piers factored into bridge design
- Levee height assumes accumulations at the design flood

Ice Jams





Groundwater Upwelling Post Project

