

## Introduction

The Chena Townsite, located on the outskirts of Fairbanks, Alaska, was the early 20th century home of miners who came to Interior Alaska seeking gold. By 1920 it was abandoned, and what remains has long since crumbled and disappeared underneath trees and the Tanana River. It has been excavated and studied by archeologists for the past two decades to better understand the lives of these early Chena inhabitants, but changes to the area over time have not been well evaluated. One method to accomplish this is repeat photography.

Repeat photography is the process of re-photographing the same location multiple times, often with decades or even centuries between the images. This technique can be used to track changes in vegetation or land use, or to determine the location of old buildings that are no longer present. This makes it useful for evaluating locations such as the Chena Townsite.

## Objectives

The goal of this project was to better understand the ongoing changes to the original Chena Townsite in the past decades by (1) identifying original images from the townsite in UAF archives and (2) capture repeat photographs at various locations across the townsite.

## Methods

- Identified and located relevant images in the APRCA archives related to the Chena Townsite
- Organized and conducted multiple visits to the Chena Townsite to replicate the selected photographs
- Captured images using my personal DSLR Canon Rebel T6i camera and a DJI Mavic Mini drone. As such, repeat photographs were captured using both land-based and drone-assisted techniques
- Used ArcGIS to georeference maps provided by Dr. Cramb
- Designed and developed a webpage to showcase the repeated photographs and historical information about the townsite

## Acknowledgements

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- Dr. Ken Tape – Research Associate Professor, Geophysical Institute
- Dr. Justin Cramb – Assistant Professor, UAF Department of Anthropology
- Alaska and Polar Regions Collections & Archives (APRCA), UAF

## Results



Figure 1: Photos of the original Chena Townsite taken in the early 20th Century, representing the townsite from central Chena Ridge (Left) and the end of Chena Ridge (Center), as well as at the mill structure (Right).

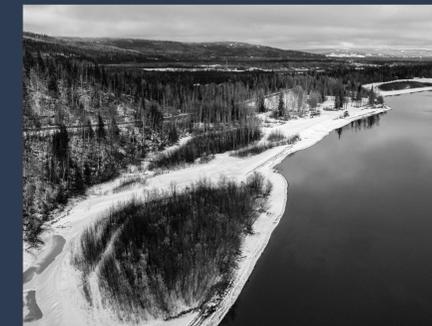


Figure 2: Repeat photos of the Chena Townsite taken in 2023. These were taken from the same locations, using a drone on central Chena Ridge (Left) and the end of Chena Ridge (Center), and on foot at the site of the old mill (Right).

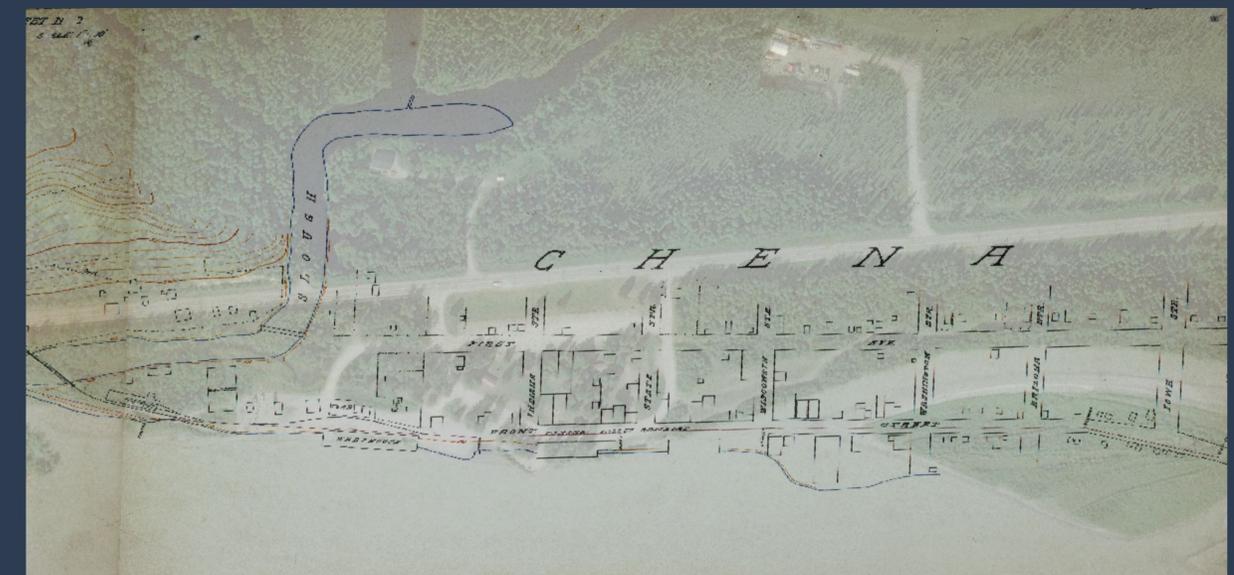


Figure 3: Georeferenced map overlaid on satellite imagery of the Chena Townsite location.