



## Lake information

<b>WATERSHED</b>	<b>LAKE CLASS</b>
Yukon	F
<b>SURFACE AREA</b>	<b>ELEVATION</b>
40, 821 ha	781 m
<b>MAXIMUM DEPTH</b>	<b>AVERAGE DEPTH</b>
91 m	31 m
<b>SURFACE TEMP</b>	<b>REGULATIONS</b>
13.6°C	Conservation waters
<b>SAMPLING DATES</b>	<b>NET SETS</b>
July 27 – Aug 3	131

### Location

Kluane Lake is located approximately 60 km northwest of Haines Junction and borders Kluane National Park and Reserve. Kluane Lake is within the Kluane First Nation Traditional Territory and the asserted traditional territory of the White River First Nation.

### Access and use

Kluane Lake is accessed along the Alaska Highway, with a government campground at Congdon Creek, as well as multiple private campgrounds and residences along the lake. Boat ramps are available in several locations, however not all of them are in useable condition.

## Kluane Lake 2023

### Overall status

#### Lake trout

In accordance with the 2023 survey results, the lake trout population in Kluane Lake shows evidence of both small and large bodied lake trout. This population has shown high levels of recent recruitment, despite some evidence of reduced recruitment following the diversion of the Ä'äy Chù (Slims River).

#### Lake whitefish

The lake whitefish population in Kluane Lake appears to have reduced recruitment for four years following the diversion of the Ä'äy Chù (Slims River). However, the 2023 survey indicates an improvement in recruitment.

#### Recommendation

The recommendation for future surveys is to monitor these populations every 5 years to determine if recent observed changes in recruitment are part of a trend.

## Lake trout

During the 2023 survey, a total of 122 lake trout were captured.

### Population estimate and density

Lake trout population within Kluane Lake was estimated to be at **144,600** (estimate range: 6,296 – 283,329). This equates to a density of 4.6 lake trout per hectare.

### Length and weight

Lake trout ranged in size from 300 mm to 819 mm in fork length. Sampled lake trout had an average length of 536.6 mm and a weight of 1,816.9 g.

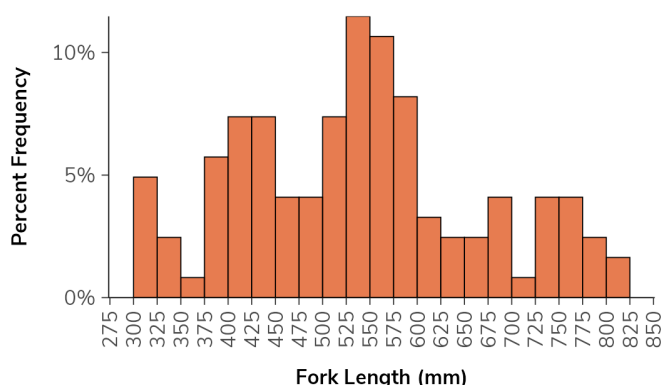


Figure 1. Length frequency distribution of sampled lake trout in Kluane Lake (2023), n = 122.

### Age and growth

Age structures were obtained from 74 individuals. Ages ranged from 5 to 36 years old, with a mean age of 11.8.

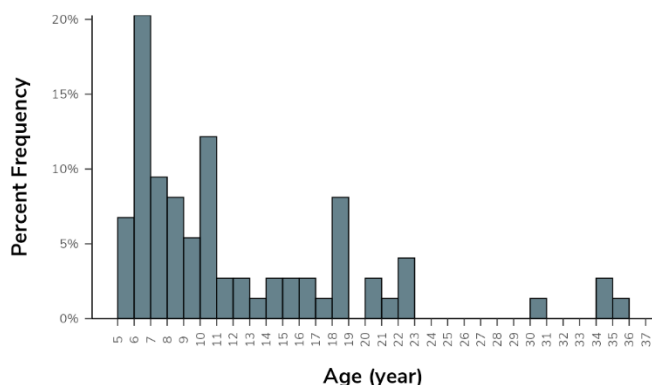


Figure 2. Age frequency distribution of sampled lake trout in Kluane Lake (2023), n = 74.

## Lake whitefish

### Overview

During this survey, 103 lake whitefish were captured in Kluane Lake. The lake whitefish captured ranged from 300 mm to 495 mm, with an average length of 410.9 mm and weight of 1,372 g. Aging structures were obtained from 71 individuals. Ages ranged from 5 to 24, with a mean age of 10.73.

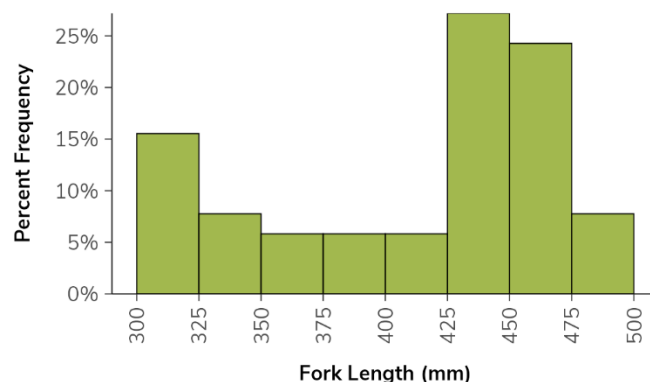


Figure 3. Length frequency distribution of sampled lake whitefish in Kluane Lake (2023), n = 103.

## Temperature and dissolved oxygen

A defined thermocline was observed between 5 m and 12m. Temperature and dissolved oxygen levels were most suitable for lake trout and whitefish from the surface to 40m.

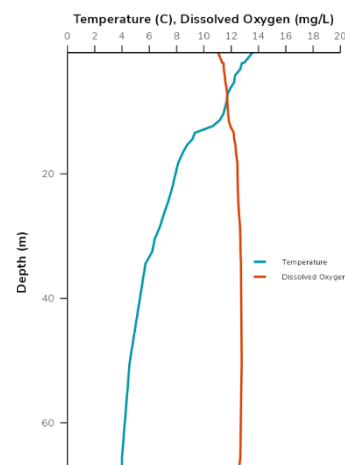


Figure 4. Temperature (C) and dissolved oxygen (mg/L) as measured on Kluane Lake, July 28, 2023.

### Suggested citation:

Government of Yukon. 2025. Lake Trout and Lake Whitefish Monitoring Program: Kluane Lake 2023. Government of Yukon, Whitehorse, Yukon, Canada.