



Lake Information

WATERSHED	LAKE CLASS
Alsek	F
SURFACE AREA	ELEVATION
40, 821 ha	781 m
MAXIMUM DEPTH	AVERAGE DEPTH
91 m	31 m
SURFACE TEMP	REGULATIONS
9.4°C	Conservation waters
SAMPLING DATES	NET SETS
August 6 – 11	129

Location

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

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 2013

Overall Status

Lake Trout

Kluane Lake has a high density and healthy population of large-bodied lake trout. The lake trout population in Kluane receives minimal angling pressure, relative to other Yukon lakes, due to its remote location, wind and size.

Lake Whitefish

The lake whitefish population in Kluane Lake was found to be healthy, with a higher relative density when compared to similar sized lakes in the Yukon.

Recommendation

The 2013 survey of Kluane Lake was conducted prior to the natural diversion of the Kaskawalsh Glacier away from Slims River, historically a major input to this lake. As such, the data from this survey serves as baseline for lake trout and lake whitefish population levels. It is recommended that Kluane Lake is reassessed based on these prior levels. A slight increase in the number of net sets should also occur to increase our ability to determine population change. It is also recommended that habitat mapping of lake trout spawning locations is conducted along with analysis of ages.

Lake Trout

During the 2013 survey, a total of 168 lake trout were captured. Age structures were obtained from 51 lake trout. Ages ranged from 4 to 38 years.

Population Estimate and Density

The population of lake trout within Kluane Lake was estimated at **168,712** (estimate range: 99,487 – 240,691). This equates to a density of 4.3 lake trout per hectare.

Length and Weight

Lake trout ranged in fork length from 240 mm to 950 mm. The sampled fish had an average length of 552 mm and average weight of 2,348 g.

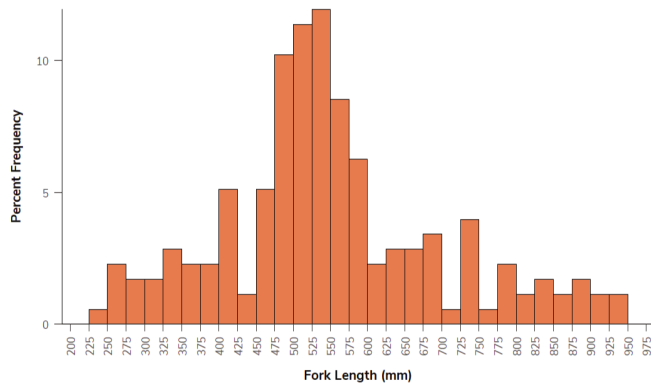


Figure 1. Length frequency distribution of sampled lake trout in Kluane Lake (2013), n = 168.

Age and Growth

Age structures were obtained from 33 lake trout. Ages ranged from 5 to 38 years.

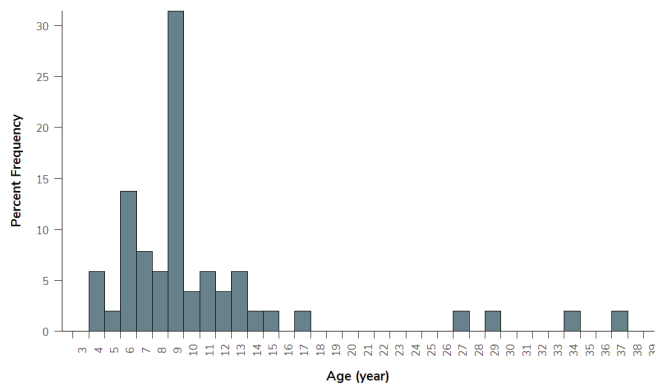


Figure 2. Age distribution of age-analyzed lake trout in Kluane Lake (2013), n = 33.

Suggested citation:

Government of Yukon. 2024. Lake Trout and Lake Whitefish Monitoring Program: Kluane Lake 2013. Government of Yukon, Whitehorse, Yukon, Canada.

Lake Whitefish

Overview

A total of 471 lake whitefish were captured during this survey. These sampled whitefish ranged in size from 217 mm to 545 mm in fork length, with an average length of 376 mm and weight of 792 g. Age structures were analyzed from 202 lake whitefish. Ages ranged from 3 to 37 years.

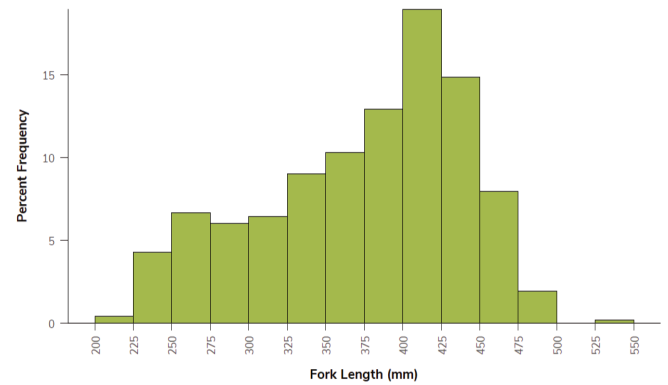


Figure 3. Length frequency distribution of sampled lake whitefish in Kluane Lake (2013), n = 471.

Temperature and Dissolved Oxygen

Temperature and dissolved oxygen profiles were taken in two locations, the main basin and Talbot Arm. Temperatures and dissolved oxygen were optimal in the main basin from the surface to 60 m (maximum equipment depth). In Talbot Arm, temperatures steadily declined, with dissolved oxygen constant through the water column.

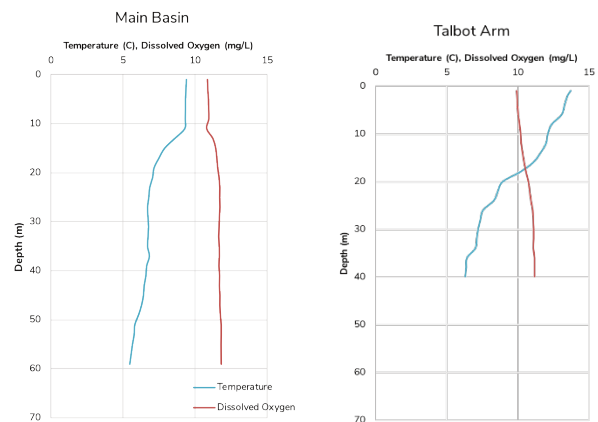


Figure 4. Temperature (C) and dissolved oxygen (mg/L) as taken in the Main and Talbot Arms basins of Kluane Lake on August 8, 2013.