



Lake Information

WATERSHED	LAKE CLASS
Yukon Headwaters	C
SURFACE AREA	ELEVATION
1441 ha	575 m
MAXIMUM DEPTH	AVERAGE DEPTH
65 m	14.6 m
SURFACE TEMP	REGULATIONS
17.6°C	Special Management
SAMPLING DATES	NET SETS
June 14 - 16	58

Location

Frenchman Lake is located approximately 26 km east of the Village of Carmacks within the Traditional Territory of the Little Salmon/Carmacks First Nation.

Access and Use

Access to Frenchman Lake is via the seasonal Frenchman Lake Road which turns north off the Robert Campbell Highway 39 km east of the Village of Carmacks and connects with the Klondike Highway at km 384, just north of Tatchun Creek. There are two government campgrounds along Frenchman Lake with accessible and popular boat launches.

Frenchman Lake 2020

Overall Status

Lake Trout

To encourage population recovery, the harvesting of lake trout from Frenchman Lake has been prohibited since 2016. Results from the 2020 survey indicate that the population remains small, and is similar in size when compared to 2012 estimates.

Lake Whitefish

Given the whitefish catch rates and age composition, the population of lake whitefish in Frenchman Lake appears resilient.

Recommendation

The recommendation from the 2020 survey is to develop a **Lake Trout Recovery Plan** for Frenchman Lake. The plan should include a habitat assessment and a long-term monitoring program to detect changes in lake trout abundance, recruitment, growth rate, and prey composition.

This plan should be developed in collaboration with the Carmacks Renewable Resource Council and the Little Salmon/Carmacks First Nation.

Lake Trout

During the 2020 survey, we set 65 nets and caught 20 lake trout for a catch rate of 0.31 fish per hour.

Population Estimate and Density

The lake trout population estimate for Frenchman Lake was **2,164** but ranged between 100 – 6,912. Given the range, there is little certainty in this estimate. The large variability is a common issue when estimating populations based on a small sample size. Nevertheless, given how few fish were sampled, it is likely the population is depleted.

Length and Weight

Sampled lake trout ranged in size from 223 mm to 809 mm, with a mean fork length of 557 mm. The average weight of sampled lake trout was 2693 g.

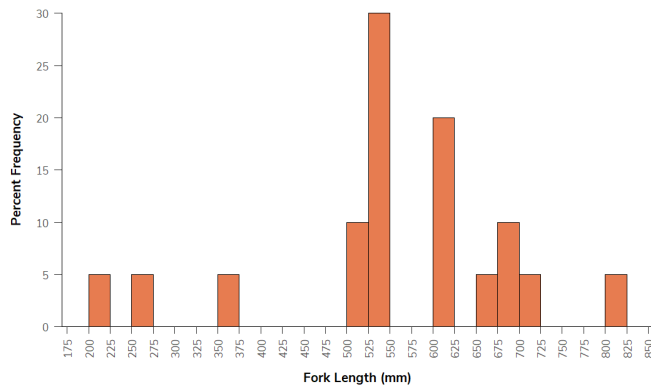


Figure 1. Length frequency distribution of sampled lake trout in Frenchman Lake (2020), n = 20.

Age and Growth

Age structures were obtained from five lake trout. Ages ranged from 13 to 28. Given the small sample size, further growth analysis will be difficult.

Lake Whitefish

There were 155 lake whitefish sampled during this survey.

Length and Weight

Sampled lake whitefish ranged in fork length from 229 mm to 400 mm, with an average fork length of 302 mm. The average weight was 346 g

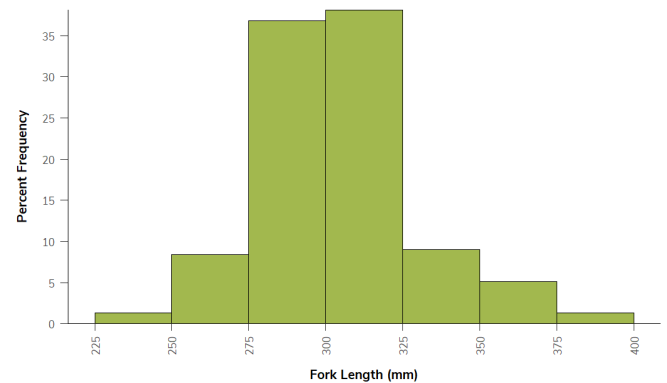


Figure 2. Length frequency of lake whitefish, as sampled in Frenchman Lake (2020), n = 155.

Age and Growth

Age structures were interpreted from 81 lake whitefish. Ages ranged from 4 to 18 years, with a mean age of 7.

Temperature and Dissolved Oxygen

The lake was thermally stratified, with temperatures dropping rapidly between 9 m and 12 m.

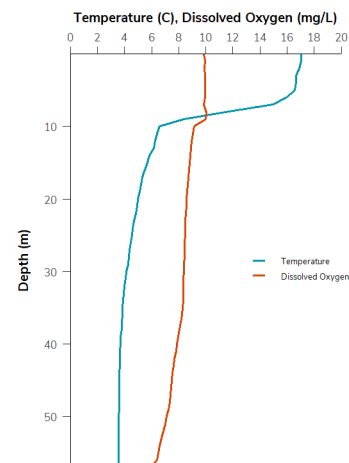


Figure 3. Temperature (C) and dissolved oxygen (mg/L) as measured in Frenchman Lake, July 14, 2020.

Suggested citation:

Government of Yukon. 2024. Lake Trout and Lake Whitefish Monitoring Program: Frenchman Lake 2020. Government of Yukon, Whitehorse, Yukon, Canada.