



## Lake Information

<b>WATERSHED</b>	<b>LAKE CLASS</b>
Yukon Headwaters	B
<b>SURFACE AREA</b>	<b>ELEVATION</b>
131 ha	728 m
<b>MAXIMUM DEPTH</b>	<b>AVERAGE DEPTH</b>
40 m	17 m
<b>SURFACE TEMP</b>	<b>REGULATIONS</b>
12.2°C	General Waters
<b>SAMPLING DATES</b>	<b>NET SETS</b>
June 26,27 + Aug 16,17	24 per survey

### Location

Lewes Lake is located near the South Klondike Highway between Whitehorse and Carcross in the Yukon River watershed. Lewes Lake is in the Traditional Territories of the Carcross/Tagish and Kwanlin Dün First Nations.

### Access and Use

Lewes Lake is accessed by Lewes Lake Road, off the South Klondike Highway. There are a number of permanent residences along the road, with makeshift campsites near the lake. There is no boat ramp available at the lake.

## Lewes Lake 2010

### Overall Status

#### Lake Trout

Two surveys of Lewes Lake were conducted in the summer of 2010. The two surveys were used in an experiment to test the efficacy of the SPIN methodology. The combined results indicated that Lewes Lake has a high density of small-bodied lake trout. This population appears healthy based on this survey.

#### Lake Whitefish

Lewes Lake does not contain lake whitefish. The additional fish species sampled included arctic grayling and round whitefish.

### Recommendation

This lake was used as an experimental waterbody to test the efficacy of the Summer Profundal Index Netting program (SPIN) for the Yukon. The recommendation from the 2010 survey is to perform future surveys in June or July, when water temperatures are cooler, resulting in more available habitat.

## Lake Trout

Eighty-eight lake trout were captured during the two surveys.

### Population Estimate and Density

The estimated population of lake trout was **6,369** (ranging between 5,202 – 7,639). Density estimated from the June survey was 48.6 lake trout per hectare and was 30.5 lake trout per hectare from the August survey.

### Length and Weight

Lake trout sampled averaged 358 mm in length (as measured to the fork) and 533 g in weight.

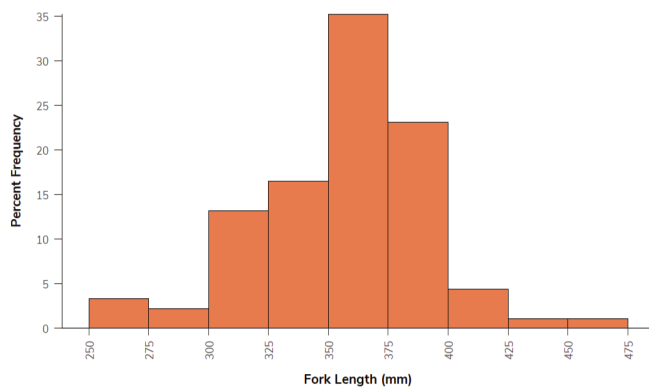


Figure 1. Length frequency distribution of sampled lake trout in Lewes Lake (2010), n = 88.

### Age and Growth

Age structures were taken from 34 lake trout. Ages ranged from 6 to 26 years.

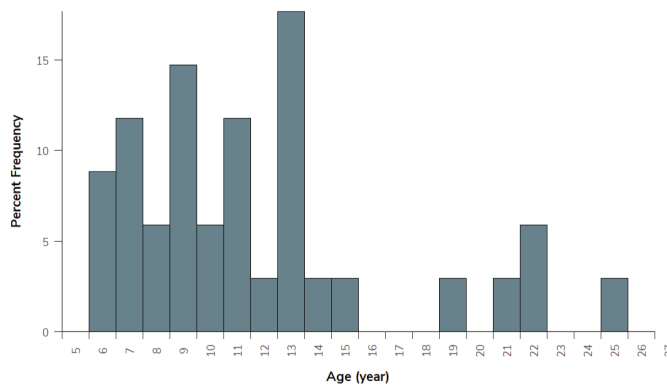


Figure 2. Age frequency distribution of age-analyzed lake trout in Lewes Lake (2010), n = 34.

## Lake Whitefish

### Overview

During the two surveys of Lewes Lake, no lake whitefish were captured.

### Temperature and Dissolved Oxygen

Temperature profiles for June and August show that the lake was strongly stratified during both months. The thermocline (zone of steep temperature decline) was found at a shallower depth in June (8.5 -10.5 m) when compared to August (10.5 -12.5 m). Dissolved oxygen levels were obtained in the August survey. Optimal oxygen levels were found at a depth of 11 m and extended to the lakes bottom.

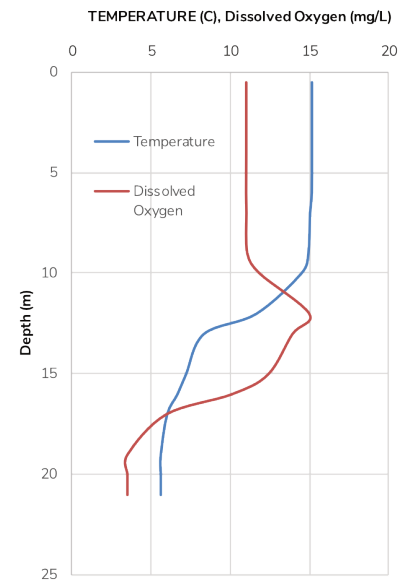


Figure 3. Temperature (C) and dissolved oxygen (mg/L) as measured in Lewes Lake on June 26, 2010.

### Suggested citation:

Government of Yukon. 2024. Lake Trout and Lake Whitefish Monitoring Program: Lewes Lake 2010. Government of Yukon, Whitehorse, Yukon, Canada.