



## Lake Information

<b>WATERSHED</b>	<b>LAKE CLASS</b>
Upper Liard	C
<b>SURFACE AREA</b>	<b>ELEVATION</b>
2,180 ha	694 m
<b>MAXIMUM DEPTH</b>	<b>AVERAGE DEPTH</b>
58 m	38 m
<b>SURFACE TEMP</b>	<b>REGULATIONS</b>
16.5°C	General waters
<b>SAMPLING DATES</b>	<b>NET SETS</b>
June 24 – 27	69

### Location

Simpson Lake is located within the Liard watershed in the southeastern Yukon. This lake lies within the Traditional Territory of the Kaska Dena Council.

### Access and Use

Simpson Lake is accessed along the Robert Campbell highway, 73 km north of Watson Lake. There is a government campground at the southern end of the lake, with an accessible boat ramp.

# Simpson Lake 2014

## Overall Status

### Lake Trout

In accordance with the 2014 survey, the results of Simpson Lake showed a moderate density of large-bodied lake trout. This population appears healthy.

### Lake Whitefish

The 2014 survey of Simpson Lake captured few lake whitefish, an indication the population may be small. However, round whitefish were captured in larger numbers. This may be an important prey species for lake trout in this lake.

### Recommendation

The recommendation for future surveys is to perform an Angler Harvest Survey on Simpson Lake to determine recreational pressure. In addition, if this lake is surveyed in the future, net sets should be increased to ensure greater precision in the population estimate.

## Lake Trout

During the 2014 Simpson Lake survey, a total of 46 lake trout were sampled.

### Population Estimate and Density

The population of lake trout in Simpson Lake, as assessed during the 2014 survey, was estimated at **7,240** (estimate range: 3,663 – 10,936). This equates to a density of 3.3 lake trout per hectare.

### Length and Weight

These lake trout ranged in size (fork length) from 337 mm to 812 mm, with an average length of 594 mm and weight of 2,784 g.

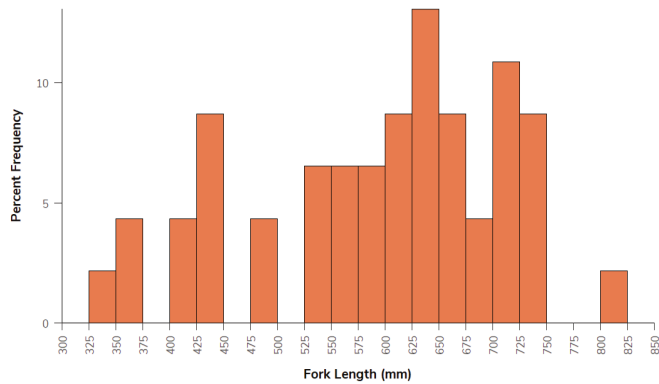


Figure 1. Length frequency distribution of sampled lake trout in Simpson Lake (2014), n = 46.

### Age and Growth

Age structures were obtained from seven fish, with an age range from 5 to 30 years.

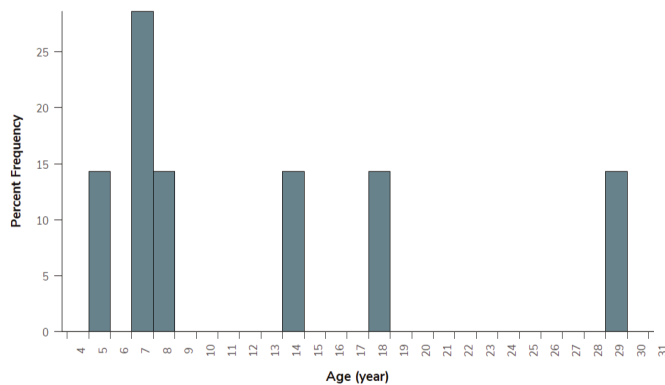


Figure 2. Age frequency distribution of age-analyzed lake trout in Simpson Lake (2014), n = 7.

### Suggested citation:

Government of Yukon. 2024. Lake Trout and Lake Whitefish Monitoring Program: Simpson Lake 2014. Government of Yukon, Whitehorse, Yukon, Canada.

## Lake Whitefish

Only 8 lake whitefish were captured during the 2014 survey.

### Length and Weight

Sampled whitefish ranged in length from 364 mm to 570 mm in length, with an average fork length and weight of 501 mm and 2,000 g. Age structures were not obtained.

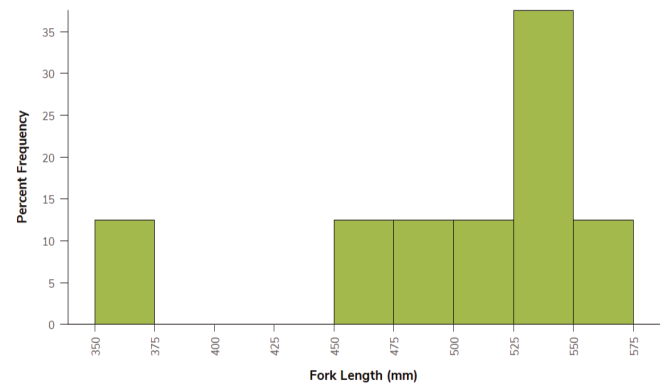


Figure 3. Length frequency distribution of sampled lake whitefish in Simpson Lake (2014), n = 8.

## Temperature and Dissolved Oxygen

Temperature and dissolved oxygen profiles were taken in the main basin, near the center of the lake, on June 27, 2014. Dissolved oxygen levels gradually decreased with depth; however, they remained optimal for lake trout throughout the water column.

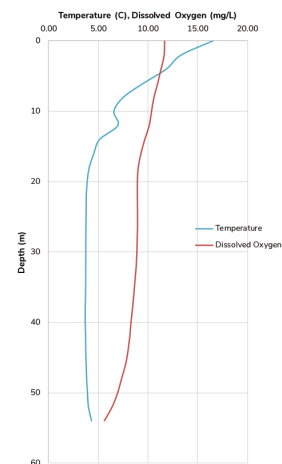


Figure 4. Temperature (C) and dissolved oxygen (mg/L) as measured in Simpson Lake, June 27, 2014.