

Flathead Lake (Somers Bay)

Surface Area: 122,425 acres
Maximum Depth: 368 feet (112.2 meters)
Somers Bay Depth: 52.5 feet (16 meters)
Drainage Size: 4,522,476 acres
Shoreline Length: 850,080 feet (170 miles)
Elevation: 2,995 feet (913 meters)

GENERAL INFORMATION

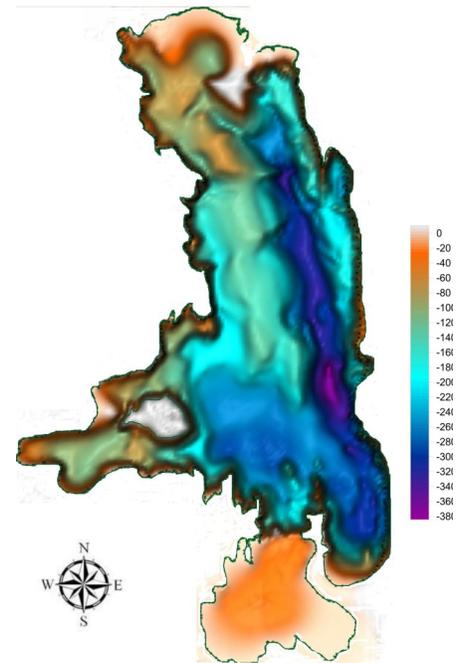
Flathead Lake is located south of Kalispell between the Mission and Salish Mountain Ranges. Somers Bay is located at the northwestern end of Flathead Lake near Somers. The geology of the Flathead Basin is a composite of numerous belt series formations: Appekunny argillite (4%), Grinnel argillite (6%), Missoula group (18%), Piegan group (10%), Ravalli group (4%), Siyeh limestone (3%) and Wallace formation (5%); alluvium (14%), undifferentiated Cambrian (3%), glacial (8%) and undifferentiated tertiary sedimentary rocks (5%). The geology includes the Canadian portion of the watershed, hence the slight overlap in conventional designation of formations. All geological formations that composed <3% of the total basin composition were not listed (Ellis & Craft, 2008).

FISHERIES INFORMATION

Native fish found in this large body of water. Include: Bull trout, Westslope cutthroat trout, Mountain whitefish, Pygmy whitefish, Largescale sucker, Longnose sucker, Northern pikeminnow, Peamouth chub, Redside shiner, Slimy sculpin, Longnose dace. Introduced sport fish include lake trout, rainbow trout, lake whitefish, Brook trout, Yellowstone cutthroat trout, Golden trout, Brown trout, Kokanee salmon, Arctic grayling, Yellow perch, Northern pike, Largemouth bass, Smallmouth bass, Black bullhead, Central mudminnow, Walleye, White sucker, and Black crappie. For more information see: <https://fwp.mt.gov/fish/stocking.html>

ADDITIONAL INFORMATION

- This is the largest lake in the study with multiple volunteers and sample sites. The program has had up to 16 monitoring locations on Flathead Lake. Currently, there are seven monitoring locations on the lake and discussed in this report. Data for historical monitoring sites can be obtained by contacting WLI. More information on Flathead Lake can be found at <https://flbs.umt.edu/newflbs/flathead-lake/lake-facts/>
- Current NMLN citizen volunteers include: Chris Frechette and Asta Bowen



Somers Bay Location: 47.065243 N, 114.226066 W



Volunteer Carroll Blend on Flathead Lake.

LAKE METRICS SUMMARY AND SCORES

Metric	Score	Description
Cold-water fish habitat	High	Temperature and oxygen profiles show that Somers Bay was stratified during summer sampling. Summer temperature are within the avoidance thresholds for salmonids to about eight meters.
Nutrient Levels	Low	Flathead Lake (Somers Bay) often ranks low among large lakes for total phosphorus, total nitrogen, and chlorophyll (a).
Nutrient Trend	Consistent	No nutrient trend is apparent.
Trophic Status	Oligo-trophic	Carlson's Trophic Index trend shows Flathead Lake is consistently oligotrophic.
Dreissenid Colonization Potential (Calcium)	High	Calcium concentrations collected in 2010, 2011 and 2016 ranged from a low of 22 mg/L (Dayton) to a high of 27 mg/L (Mack Alley). The average calcium concentration for all Flathead lake samples was 24.3 mg/L. The average alkalinity was reported at 87 mg/L.
Known AIS infestations	Moderate	Mysis shrimp and Flowering Rush

Flathead Lake, Somers Bay

Carlson's Trophic State Index (TSI)

