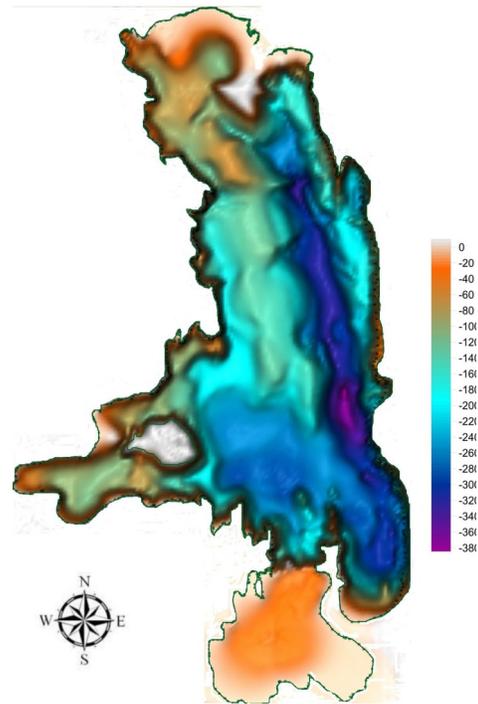


Flathead Lake (Mackinaw Alley)

Surface Area: 122,425 acres
Maximum Depth: 368 feet (112.2 meters)
Mackinaw Alley Depth: 95 feet (20 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. Mackinaw Alley is located on the southern side of Wild Horse Island near Big Arm. 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).



Mackinaw Alley Location: 47.832 N, 114.234 W

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>



Volunteer Rick Nelson on Flathead Lake.

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: Rick & Marilyn Nelson

LAKE METRICS SUMMARY AND SCORES

Metric	Score	Description
Cold-water fish habitat	High	Temperature and oxygen profiles show that Mackinaw Alley was stratified during summer sampling. The summer temperature and dissolved oxygen profiles show that Mackinaw Alley is outside the avoidance threshold ranges for salmonids.
Nutrient Levels	Low	Flathead Lake (Mackinaw Alley) often ranks low among large lakes for total phosphorus, total nitrogen, and chlorophyll (<i>a</i>).
Nutrient Trend	Decreasing	Phosphorous and nitrogen are decreasing.
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 22mg/L (Dayton) to a high of 27 mg/L (Mack Alley). The average calcium concentration for all Flathead lake samples was 24.3mg/L. The average alkalinity was reported at 87mg/L.
Known AIS infestations	Moderate	Mysis shrimp and Flowering Rush

Flathead Lake, Mackinaw Alley

