

Swan Lake

Surface Area: 3,276 acres
Maximum Depth: 133 feet (40.5 meters)
Drainage Size: 421,612 acres
Shoreline Length: 111,655 feet (21.15 miles)
Elevation: 3,198 feet (975 meters)

GENERAL INFORMATION

Swan Lake is located between the Mission and Swan Ranges in northwest Montana. The basin area is composed of alluvium (36%) and the Piegan group (30%), Missoula group (15%), Grinnel argillite (13%) and Appekunny argillite (4%) belt series (Ellis & Craft, 2008). There is one motorized public access site located on the east side of the lake. The program has two monitoring locations on Swan Lake—North and South Basin.

FISHERIES INFORMATION

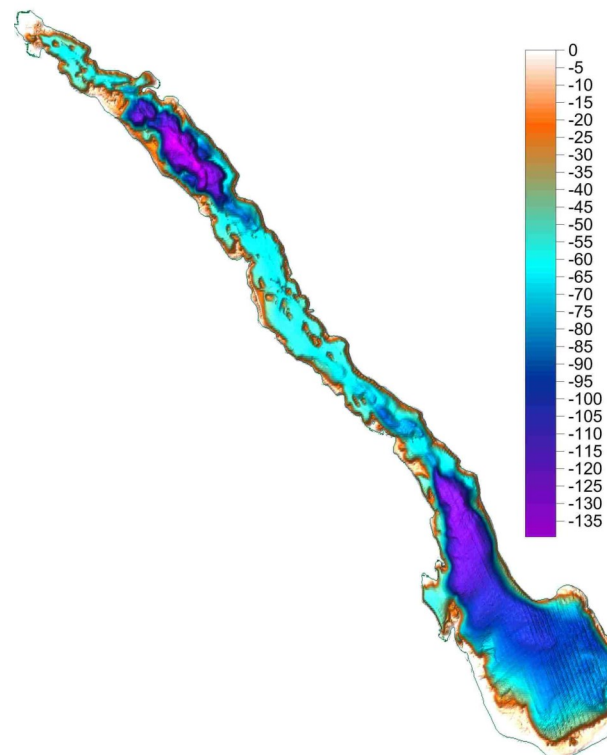
Fish distribution records indicate a presence of brook stickleback, brook trout, bull trout, kokanee, lake trout, largescale sucker, longnose sucker, mountain whitefish, northern pike, northern pike minnow, peamouth, pumpkinseed, pygmy whitefish, rainbow trout, redbside shiner, westslope cutthroat trout, and yellow perch. Tally was last stocked with westslope cutthroat trout in 2007. For more information see: <https://fwp.mt.gov/fish/stocking.html>.

ADDITIONAL INFORMATION

- Of all sites monitored, North Basin is the only site that shows strong stratification during summer monitoring. South Basin also has significantly less oxygen at depths greater than 20 meters, which is likely influenced by the Swan River. More detailed information can be found about Swan Lake in *Swan Lake Water Quality Investigation* (Koopal, 2014) <https://whitefishlake.org/reports-publications/reports/#swan-report>
- Current NMLN citizen volunteers include: Doug Harwood and Sterling Haaland



Volunteer Doug Harwood and Rob Rich join WLI for summer sampling on Swan Lake in 2018.



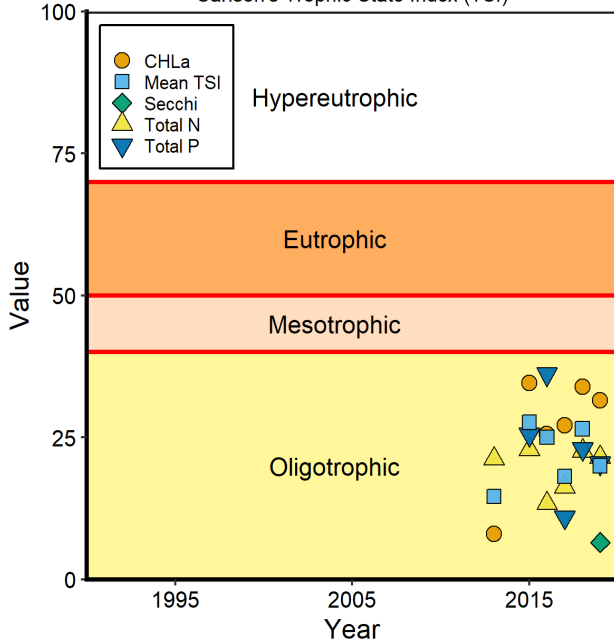
North Basin Location: 47.942975 N, 113.878581 W
South Basin Location: 47.925127 N, 113.859575 W

LAKE METRICS SUMMARY AND SCORES

| Metric | Score | Description |
|---|---------------|---|
| Cold-water fish habitat | High | Temperature and oxygen profiles show that North Basin was stratified or weakly stratified during summer sampling dates. The North Basin remains strongly oligotrophic. Oxygen profiles indicate that the site does not meet the avoidance concentration thresholds for salmonids. Temperature and oxygen profiles show that South Basin was weakly stratified during summer sampling dates. Oxygen profiles indicate that the site has been at avoidance concentration thresholds for salmonids at depths greater than 34 meters. |
| Nutrient Levels | Medium | Swan Lake often ranks in the middle among large lakes (surface area >500 acres) for total phosphorus, total nitrogen, and chlorophyll (a). |
| Nutrient Trend | Consistent | No nutrient trend is apparent |
| Trophic Status | Oligo-trophic | Carlson's Trophic Index trends show Swan Lake as consistently oligotrophic. |
| Dreissenid Colonization Potential (Calcium) | Moderate | Swan Lake's 2011/2016 average calcium concentration was 24.8 mg/L classifying it as a moderate risk for zebra mussel colonization. The 2012 alkalinity level was reported at 82 mg/L. |
| Known AIS infestations | None | |

Swan Lake, North Basin

Carlson's Trophic State Index (TSI)



Swan Lake, South Basin

Carlson's Trophic State Index (TSI)

