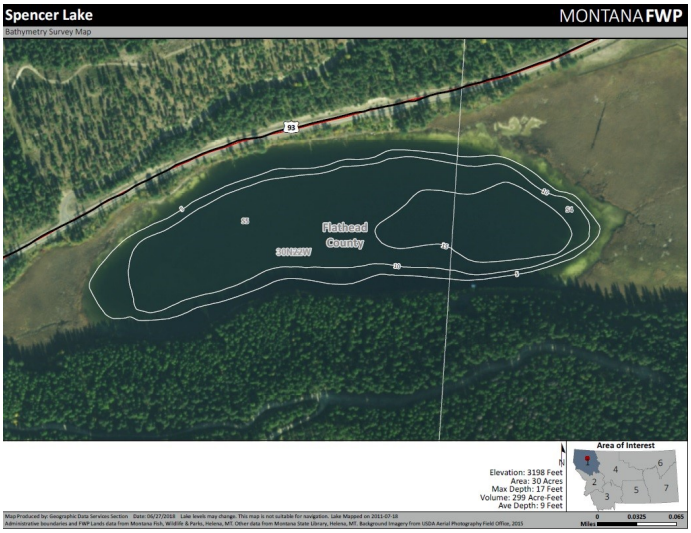
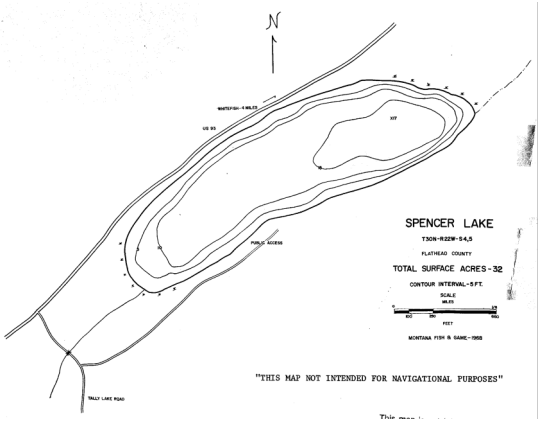
Spencer Lake

Surface Area: 30 acres
Maximum Depth: 18 feet (5.5 meters)
Shoreline Length: 5,460 feet (1.03 miles)
Elevation: 3199 feet (975 meters)



GENERAL INFORMATION
Spencer Lake is located in Flathead County, four miles west of Whitefish on Highway 93. The geology of the catchment is a combination of the Piegan group belt series (58%), alluvium (23%) and glacial till (12%) Surrounding land ownership are State Trust Lands and private. There is no public boat access to Spencer Lake; however, it can be accessed from a pullout on Highway 93 or from a path near the mountain biking trailhead on the southwest corner.



Location: 48.397442 N, 114.417273 W

FISHERIES INFORMATION
Spencer Lake was last stocked with largemouth bass in 2012. Fish distribution includes northern pike, pumpkinseed sunfish, westslope cutthroat trout, and yellow perch. For more information see: https://fwp.mt.gov/fish/stocking.html

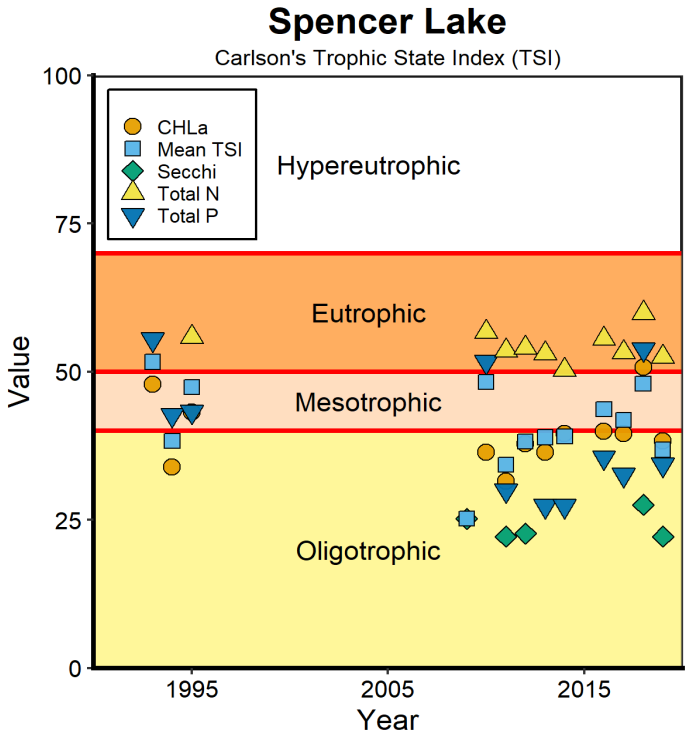
ADDITIONAL INFORMATION

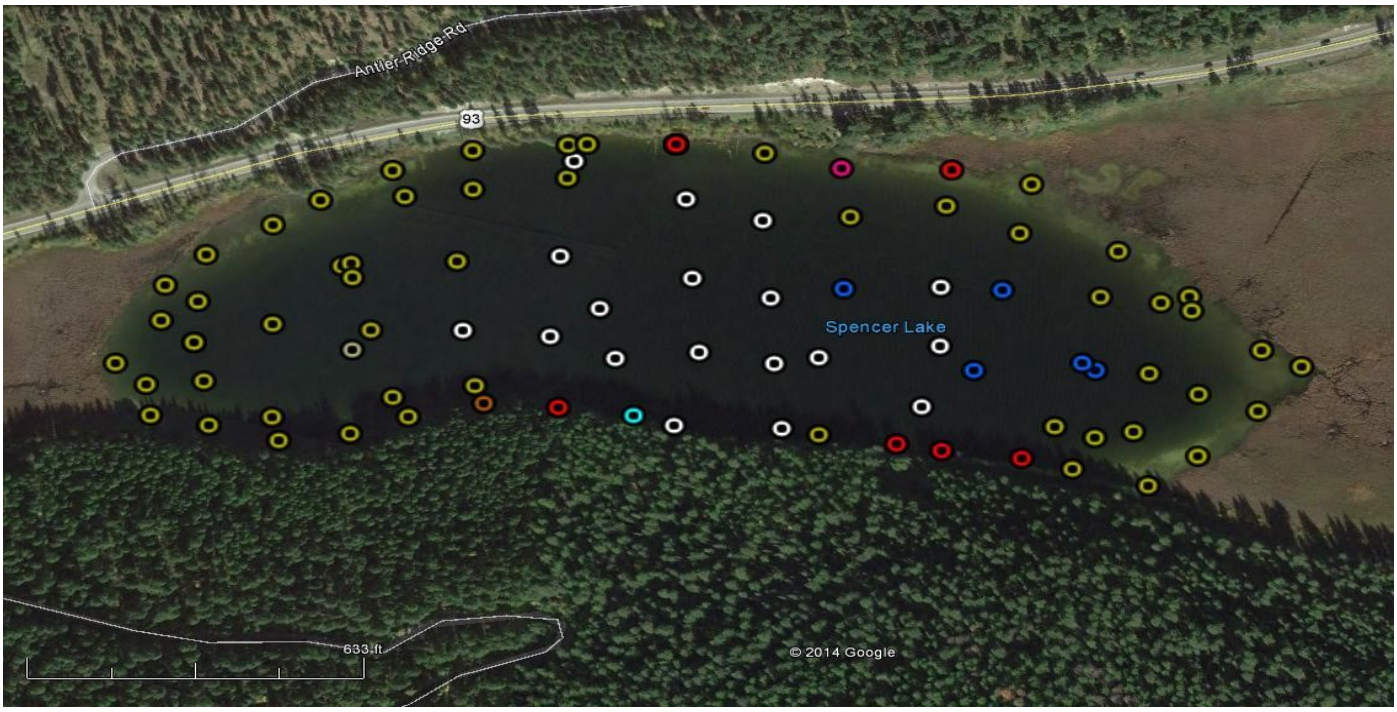
- A macrophyte survey was conducted in 2014
- There is no current NMLN citizen volunteer

Spencer Lake view from the Bar W Ranch.

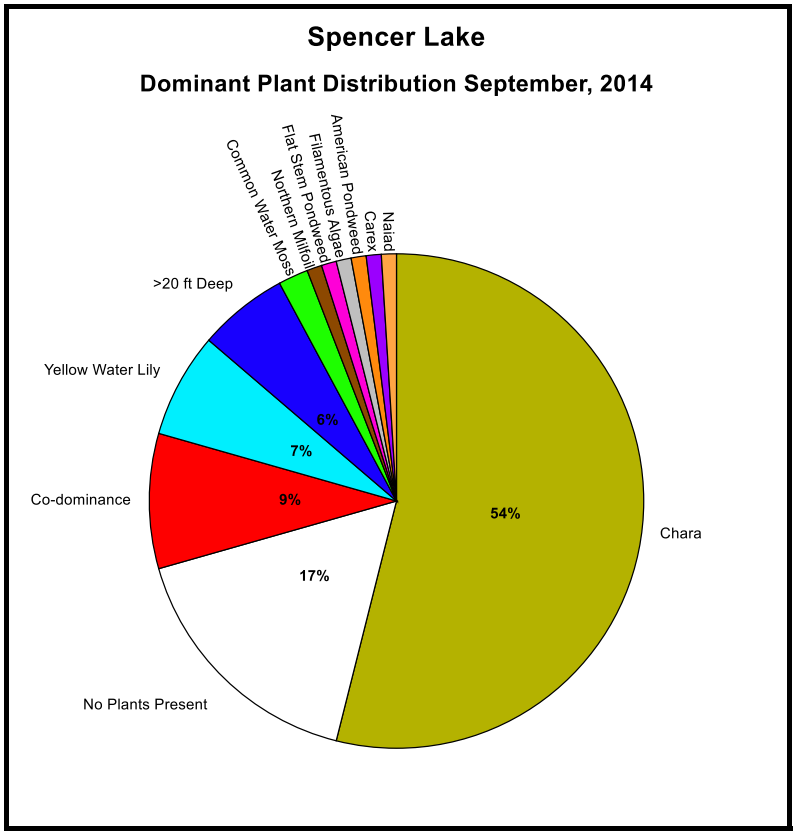
LAKE METRICS SUMMARY AND SCORES

Metric	Score	Description
Cold-water fish habitat	Low	Temperature and oxygen profiles show that Spencer Lake was mixed during all of the summer sampling dates. Temperature profiles indicate that Spencer Lake has been within the avoidance threshold range for salmonids at depths of up to 4 meters during July and August. Fall Hydrolab profiles show that the lake was mixed or very weakly stratified during fall sampling dates. Spencer Lake is considered a warm water fishery.
Nutrient Levels	High	Spencer Lake often ranks among the highest in small lakes for total persulfate nitrogen. In 2018, Spencer ranked the highest of the small lakes for total nitrogen, total phosphorus and chlorophyll (a).
Nutrient Trend	Consistent	No trend is apparent
Trophic Status	Meso-trophic	Carlson's Trophic Index trend shows Spencer Lake is consistently mesotrophic, although total nitrogen levels fall in the eutrophic category.
Dreissenid Colonization Potential (Calcium)	High	Spencer Lake's 2010, 2011 and 2016 average calcium concentration ranks highest among all lakes at 47.6 mg/L classifying it as a high risk for zebra mussel colonization. The 2012 alkalinity level was reported at 220 mg/L.
Known AIS infestations	None	





Co-dominant Plant Species Composition	Percentage of Co-dominant Slice
Yellow Water Lilly / Chara	22.22
Yellow Water Lilly / Northern Milfoil	22.22
Yellow Water Lilly / Chara / Bladderwort	11.11
Northern Milfoil / Chara	11.11
Northern Milfoil / Chara / Yellow Water Lily	11.11
Northern Milfoil / Chara / Naiad	11.11
Chara / Naiad	11.11



A macrophyte survey was conducted on September 2, 2014. A total of 101 sites were surveyed for aquatic plants, shoreline plants, and substrate. Plants that were commonly observed but were not dominant include flat stem pondweed and Richardson's pondweed.

Shoreline plants in order of dominance:
1) Bulrush, 2) Cattail, 3) Carex, 4) Equisetum

Substrate composition for all sites was predominately gyttja, followed by gravel, boulder and cobble. Northern milfoil was discovered in Dollar Lake, making it a good candidate for Eurasian milfoil infestation.

Emergent shoreline vegetation is very dense on the north end of the Spencer Lake.

Northern milfoil.

Northern milfoil is native to Montana and is found in nearly all program lakes. Eurasian watermilfoil, which is often confused with northern milfoil, is a non native invasive plant that roots itself to the bottom of water bodies and can grow in water up to 6 meters deep. It forms dense mats at the water's surface shading out native plants, clogging boat motors, and making swimming nearly impossible. Montana first discovered this plant in Noxon reservoir in 2007.

The easiest way to tell the two milfoils apart is to count the number of leaflets. Eurasian watermilfoil typically has at least 14 leaflet pairs per leaf. EWM has the ability to spread rapidly because it reproduces through stem fragmentation. Pieces the size of postage stamps that have broken off the main stem can reproduce. Eurasian watermilfoil is most commonly spread overland by boats that have not been cleaned between being in an infested water body and a non-infested water body. Eurasian watermilfoil has spread throughout Montana since it was first discovered in Noxon and Cabinet Gorge reservoir. Tosten Dam, Fort Peck Reservoir, the Jefferson River, and the upper and lower Missouri all have current infestations. In the fall of 2011, EWM was discovered in Beaver Lake just north of the town of Whitefish. Beaver Lake is the only program lake where EWM has been found.

Common water moss has rootlets that attach to woody debris and rocks. Fertilization and spore release occurs on the water's surface. It prefers acidic water and requires a pH below 8.4. It is native, and is found in many of the program Lakes.

Northern milfoil (left) Eurasian water milfoil (right). Photo courtesy Heidi Sedivy.

Common water moss.