

BIRCH LAKE



QUICK FACTS

Lake Catchment Area	647 acres
Surface Area	125 acres
Maximum Depth	7.4 ft
Average Depth	3 ft

Common Fish

Largemouth bass, Northern pike, Yellow perch, Black crappie, Bluegill

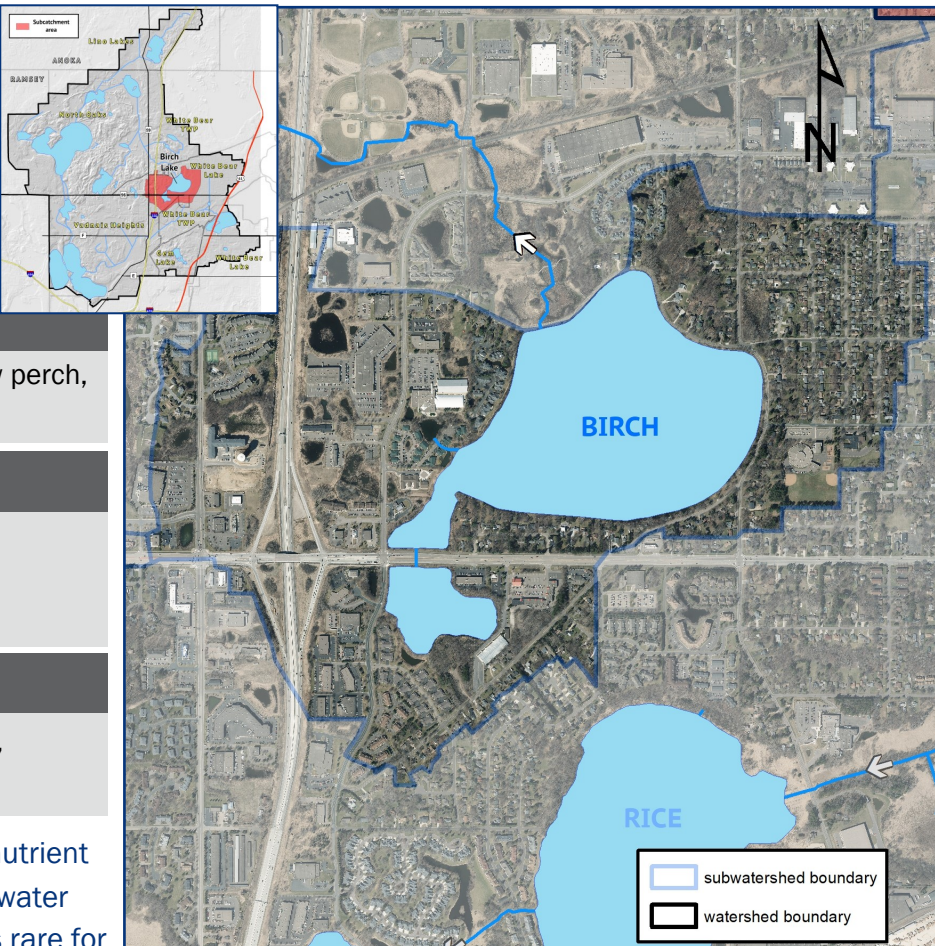
Common Vegetation

Fern pondweed, Large-leaf pondweed, Water celery, Canada waterweed, Slender naiad, White water lily

Invasive Species

Eurasian watermilfoil, Purple loosestrife, Reed canary grass

LOCATION: Birch Lake is in the City of White Bear Lake, and has a mix of residential and commercial properties in its subwatershed, including County Highway 96 and Interstate 35E. The lake outlets to the north into Rotary Stream, under 35E, and on to Wilkinson Lake in North Oaks.



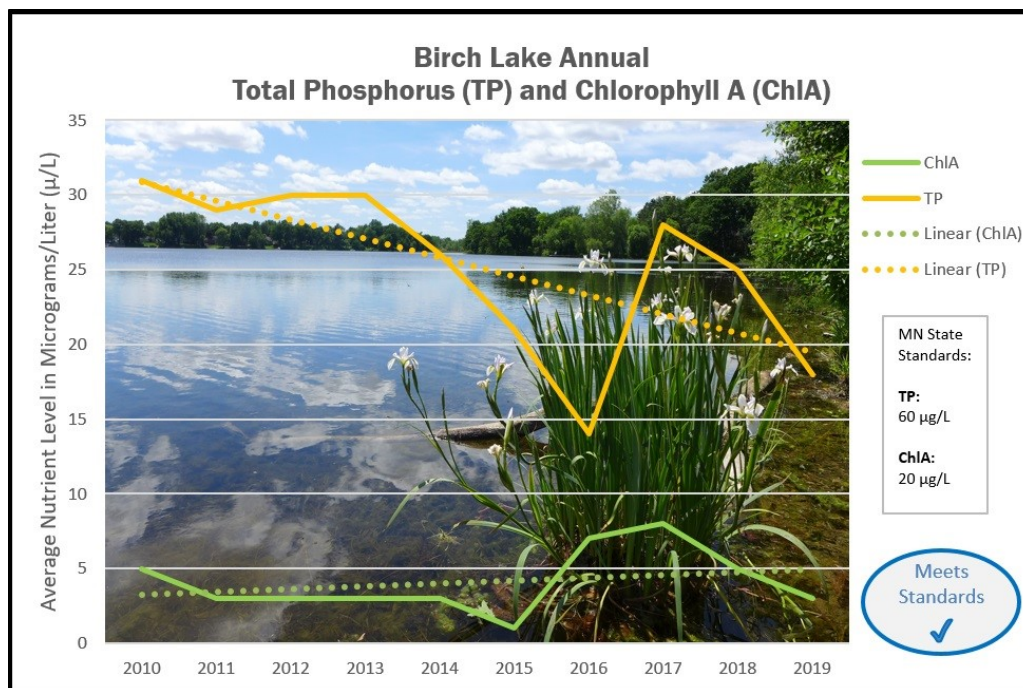
LAKE SUMMARY: Birch Lake has nutrient levels well below State standards and water clarity to the bottom of the lake. This is rare for an urban waterbody. Birch Lake has abundant native vegetation, which helps to maintain its high water quality. Due to its close proximity to Cty 96 and 35W, there is a risk for chloride (road salt) accumulation. The Birch Lake Improvement District (BLID) partners with VLAWMO to conduct chloride sampling—chloride levels are below State standards but show an upward trend.

Trophic State Index (TSI): A TSI rating is an additional calculation based on the lake data averages. These values are used in water management to compare lakes using a consistent scale.

Birch Lake	2019	Clear		Moderately Clear		Green	Very Green
		Oligotrophic		Mesotrophic		Eutrophic	Hypereutrophic
		20	30	40	50	60	70 80
Trophic State Index (TSI): Overall		[Bar chart showing TSI Overall score at approximately 45]					
TSI Transparency: Secchi Disk		[Bar chart showing TSI Transparency score at approximately 45]					
TSI Chlorophyll A: ChlA		[Bar chart showing TSI Chlorophyll A score at approximately 45]					
TSI Total Phosphorus: TP		[Bar chart showing TSI Total Phosphorus score at approximately 45]					

NUTRIENT SUMMARY:

Phosphorus (TP) and Chlorophyll-a (ChIA) are well below State standards and have shown a slight downward trend in the last 16 years. Financial support and volunteer time from the BLID plays an important role



PICTURE POST:

A picture post was installed at the Birch Lake north shoreline in 2019. A collaborative effort between VLAWMO and the BLID, the post is a tool for phenology monitoring of the shoreline. Phenology, the study of environmental changes over time, helps lake residents and managers keep a record of environmental conditions—even gradual ones. Volunteers take photos in a 360° panorama to document shoreline changes, ice in/out, algae blooms, aquatic vegetation, storm damage, and more that turns up in the photos. Visit vlawmo.org/get-involved to learn more and add to this valuable data collection.

PROJECT SUCCESS:

Birch Lake has received 1 large shoreline restoration, 9 residential shore restorations, and 1 raingarden. Each project was supported by VLAWMO's cost-share program. The large restoration on the North side of the lake, spans 850 feet of shoreline. It included hundreds of native plants and an access path. A partnership between the City of White Bear Lake, the BLID, and VLAWMO supports annual maintenance and monitoring. In 2020, an iron-enhanced-sand filter was installed to reduce nutrients flowing into the lake. An adjacent habitat restoration occurred with support from MN DNR Conservation Partners Legacy funds to provide optimal filter function.



Visit VLAWMO.org under the "waterbodies" page for a complete list of Birch Lake reports and studies.

Updated 1/20/2020 - NV