Get to Know:

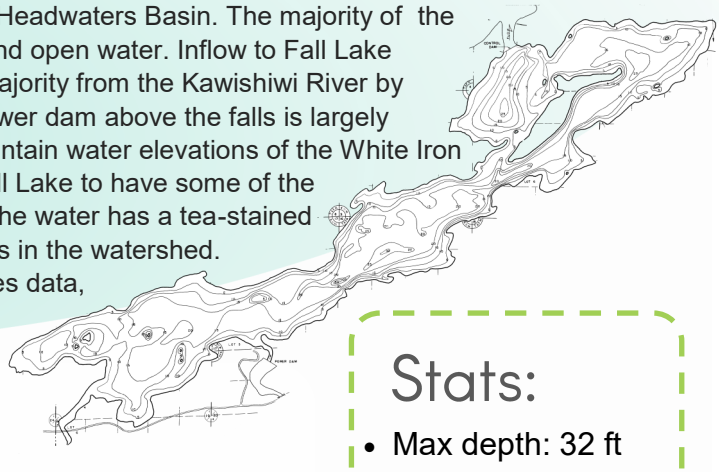
Fall Lake

Rainy River Headwaters

At a Glance:

Fall Lake is located approximately three miles northeast of Ely, MN, and Winton, MN is located along its southwestern shore. Fall Lake belongs to the Lower Kawishiwi River subwatershed within the larger Rainy River Headwaters Basin. The majority of the watershed is composed of forest, wetlands, and open water. Inflow to Fall Lake is from Shagawa River, Fall Creek, and the majority from the Kawishiwi River by way of Kawishiwi Falls. The Minnesota Power dam above the falls is largely responsible for water levels - needing to maintain water elevations of the White Iron Chain within a regulated range. This leads Fall Lake to have some of the greatest water level fluctuations in the area. The water has a tea-stained appearance due to the abundance of wetlands in the watershed.

For current water quality and invasive species data, see reverse side.

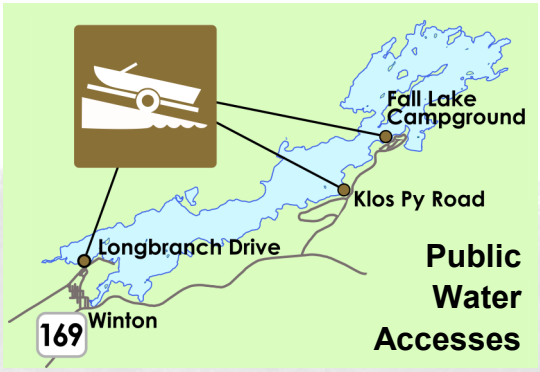


Good to Know:

Citizen scientists have been monitoring the water quality of Fall Lake since 2011 with the support of the Minnesota Pollution Control Agency. See the reverse side for a summary of their findings.

Recreational opportunities around Fall Lake include a 1.5 mile round trip hike to Kawishiwi Falls and Fall Lake Campground. The northern portion of Fall Lake is part of the **Boundary Waters Canoe Area Wilderness**. A limited number of permits are available for certain motorized boats to access this portion of the lake.

A **paleolimnological study** was performed on Fall Lake, in 2013 by UMD's Natural Resources Research institute. They used chemical and biological clues found in lake sediment to better understand conditions in the lakes and on land prior to European settlement.



The University of Minnesota's **Hubachek Wilderness Center** sits on Fall Lake and exists to teach classes and conduct research on the effect of climate change on northern forests.

Areas of Concern:

Fall Lake has one confirmed aquatic invasive species: **Rusty Crayfish**, but is also designated as infested with **Spiny Waterflea**. Other threats in the area include: Curly-leaf Pondweed and Eurasian Watermilfoil. For more information on Fall Lake invasive species, see reverse side.

As with many Minnesota lakes, fish in Fall Lake have **elevated levels of mercury.** Refer to the Minnesota Department of Health guidelines for advice on how much fish can safely be eaten.

Climate change may present multiple challenges, including warming waters. Being a well-mixed (polymictic) lake, Fall Lake's cool-water fish species may experience a disproportionate amount of stress leading to declining burbot, cisco, and lake whitefish populations.

Stats:

- Max depth: 32 ft
- Avg depth: 13 ft
- Area: 2,258 acres
- % Littoral area: 52%
- Shoreline: 31 mi
- % Public shoreline ownership: 64%
- Water level fluctuation: 6 ft
- Water residence time: 30 days
- Avg transparency: 5.6 ft
- Trophic State: Mesotrophic
- Fish species include: black crappie, bluegill, burbot, green sunfish, hybrid sunfish, lake whitefish, northern pike, rock bass, smallmouth bass, tullibee (cisco), walleye, yellow perch, shorthead redhorse, white sucker, logperch

Minnesota Lake County

Lake County Soil & Water Conservation District

Care about Fall Lake? Get Involved!

There are many ways you can make a difference. Here are some resources for learning more and getting started:
Lake County Soil and Water Conservation District:
www.LakeCountySWCD.org/Volunteer.php

See reverse side
For water quality and invasive species data

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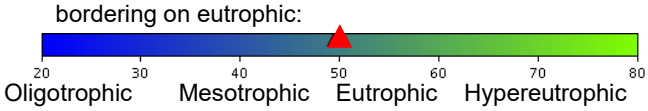
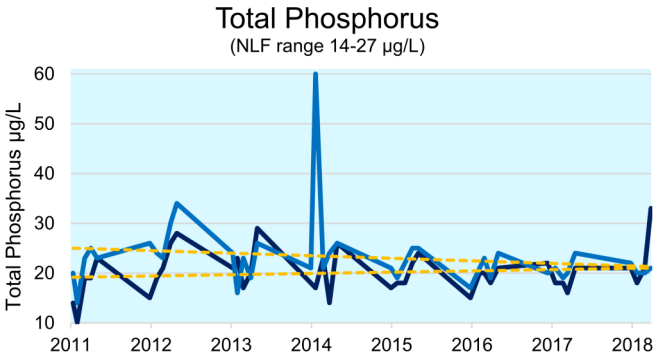
Water Quality

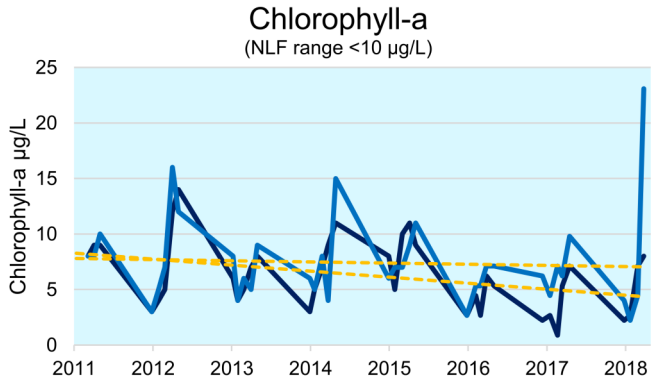
Updated September 12, 2018

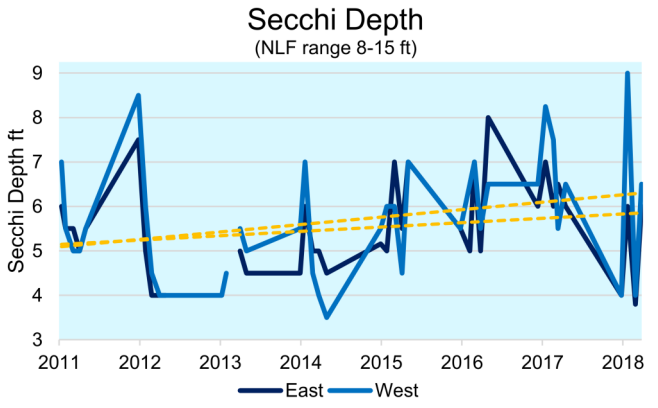
Fall Lake water quality has generally been holding steady over the eight years in which volunteers have been sampling through Citizen Lake Monitoring Plus, a program of the Minnesota Pollution Control Agency (MPCA). Volunteer measurements for Total Phosphorus, Chlorophyll-a, and Secchi depth are shown to the right for both sites sampled. Despite several outliers, Total Phosphorus and Chlorophyll-a means are within expected ranges for lakes of the Northern Lakes and Forests (NLF) ecoregion. While Secchi depth is not, this is due primarily to bog stained water, rather than an impairment. Even so, transparency has been increasing perceptibly since 2011, which may be linked to the improvement in Chlorophyll-a concentration. Total Phosphorus, Chlorophyll-a, and Secchi depth measurements are used to generate a Trophic State Index (TSI) number - a way of characterizing a lake's productivity. Fall Lake's mean TSI is **50**, which is mesotrophic, bordering on eutrophic:



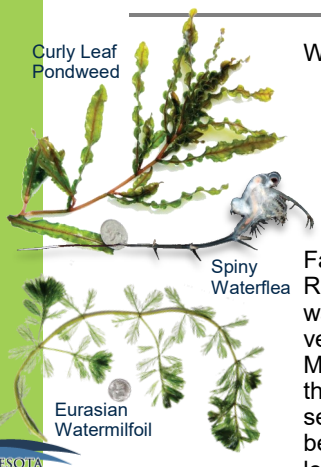
Find water quality data from Citizen Lake Monitoring here: www.rmbel.info/data/







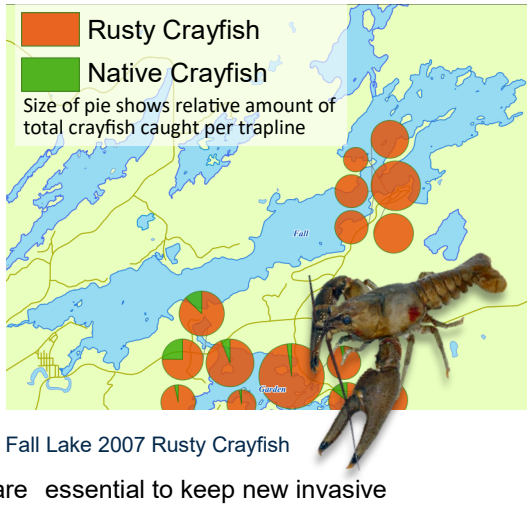
Invasive Species



What is an aquatic invasive species (AIS)?

- Non-native: a species not normally found in an area
- Invasive: a non-native species which causes harm -environmental, economic, or to human health; generally threatens natural resources

Fall Lake has two confirmed invasive species: Rusty Crayfish and Spiny Waterflea. The public water access at the Fall Lake Campground is a very busy access with boats coming from all over Minnesota and the Midwest. Inspectors trained by the DNR are often at the access during the busy season checking boats and educating boaters on best practices for preventing the spread of AIS. To learn more, visit: stopaquatichitchhikers.org



Fall Lake 2007 Rusty Crayfish

Because of the potential for harm, prevention and early detection are essential to keep new invasive species from becoming established. Lake County SWCD is training citizen "sentries" to perform monthly surveys of lakes they frequent, and report on the plants and animals they observe. We are seeking sentries for Fall Lake to provide timely knowledge of new invasions.

Do you want to be trained as a citizen sentry? Visit **www.LakeCountySWCD.org,** find us on Facebook, or follow @LakeCounty_SWCD onTwitter for the latest events and information on how you can get involved!

Minnesota Lake County

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