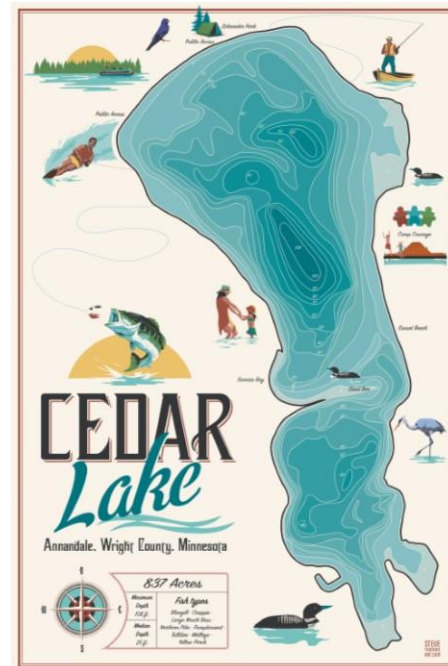


**CEDAR LAKE CONSERVATION CLUB (CLCC)
WRIGHT COUNTY, MN
WATER QUALITY COMMITTEE
2021 YEAR IN REVIEW**



[Water Quality Review](#)

[Watercraft Cleaning Station](#)

[Aquatic Invasive Species Control \(CD3\)](#)

[No Starry Stonewort Found on Cedar](#)

[Zebra Mussels | What to Expect and Stewardship Practices](#)

[Manned Access Inspections](#)

[Wright County Aquatic Invasive Species Prevention Aid](#)

[Water Quality Committee Responsibilities and Members](#)

Cedar Lake, Wright County MN 2021 Water Quality Review

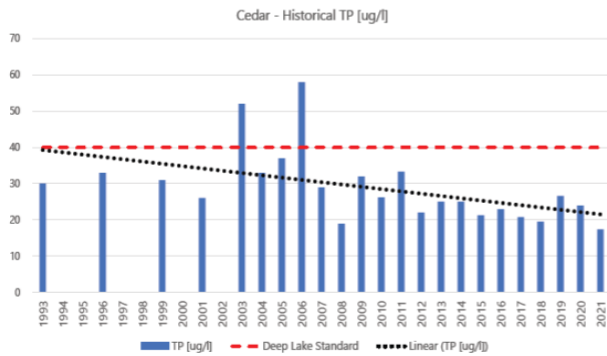
2021 was a year of exceptional drought and unusually high temperatures in Wright County. The second year of the COVID pandemic kept many closer to home, and the lake traffic was heavy. Cedar Lake had exceptionally clear water in 2021 but did experience—as did many high-quality lakes—filamentous algae due to the drought and heat. Monitoring of Cedar’s water quality has been performed for decades by the Clearwater River Watershed District. Samples are regularly taken from our lake during the summer months and analysis is done by a laboratory.

Cedar’s 2021 average water quality values were the best since monitoring started in the early 1990’s. Clearly, our Clearwater River Watershed District (CRWD) project implemented in 2006—and with enhancements and ongoing maintenance—is delivering results, even with wide variations in climate factors.

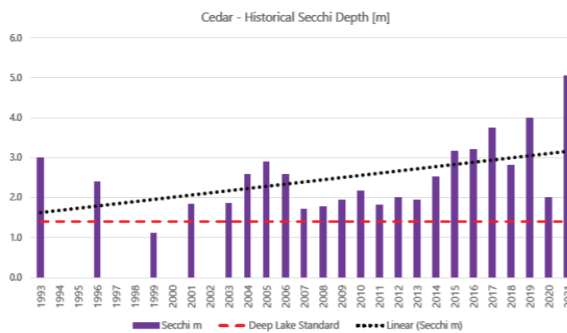
Here is a summary of our 2021 values:

- The gold standard for monitoring lake water quality is the phosphorus level. **A good lake is considered to have a level less than 40ug/l. The average 2021 phosphorus level in Cedar was 17ug/l.** The goal of our CRWD project implemented in 2006 was 20ug/l.
- The average secchi depth (clarity) reading was **5.0 meters (15 feet).** The very dry year and the presence of zebra mussels more than likely contributed to this exceptional clarity—the best since monitoring started in the early 1990’s.
- The chlorophyll average was 3ug/l, again, the lowest value since monitoring started, representative of limited algae blooms.

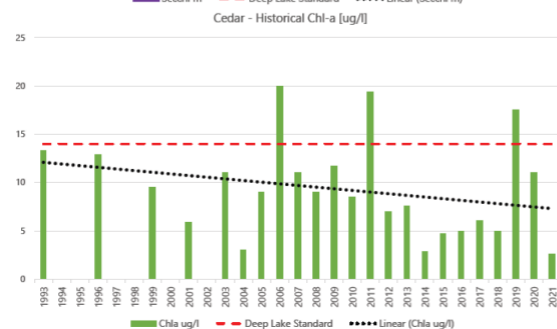
We should take delight that all our stewardship has manifested in a positive trend for improvement in water quality. Each of our individual actions is important, from financial support for projects to mindful enjoyment of beautiful Cedar lake.



Phosphorus Level
The lower the phosphorus level, the cleaner our lake is. The primary phosphorus source for our lake is the south inlet. Clearwater River Watershed projects (fish barrier, buffer management, and retention ponds) reduce the amount of phosphorus into our lake.



Secchi (Clarity) Depth
A measurement that we all can identify with is the clarity of the water. A secchi disk is a disk with alternating black and white areas that is lowered into the water until it can no longer be seen from the surface.



Chlorophyll-a
Chlorophyll-a usually goes hand in hand with the phosphorus level—the lower the better. In general, the chlorophyll-a level rises with the presence of algae blooms.

Watercraft Cleaning Station (CD3) / Great Uptake

In a cooperative effort with Wright County Parks, a watercraft cleaning station is available at Schroeder Park. Schroeder Park is a premier campground and day-use park on the north shore of Cedar Lake. CLCC and Wright County Parks and Recreation shared the initial purchase cost 50/50—each contributing about \$16,000. CLCC will also be providing 5 years of annual maintenance funding estimated at \$1,500 per year. The station was installed spring of 2020 at Schroeder Park.

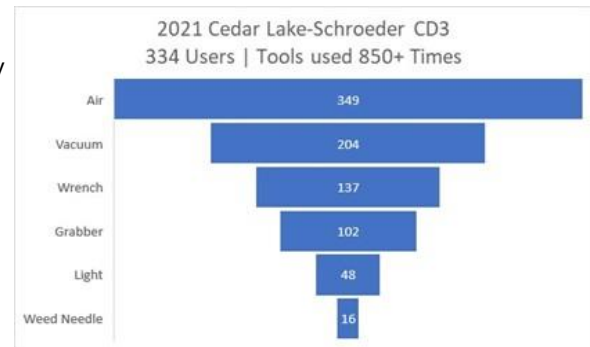


The cleaning station is called CD3 (stands for clean, drain, dry, dispose) and is **free to use**. The station is designed to be a self-serve, easy-to-use system that reduces the spread of aquatic invasive species. The lighted station at Schroeder is solar powered and the tools available for watercraft cleaning include: wet/dry vacuum, air blower, brush, grabber, and wrench. The station is “smart” and includes telemetry to provide detailed reporting about the use of the station.

Usage of the unit continued to be strong in 2021, and from May to October, 334 boaters used the station. The tools at the station were used over 850 times this year. The most popular tool was the air blower.

This station is a first in Wright County. CLCC continues collaboration with Wright County staff to maximize use and leverage the data.

CLCC is working with Wright Soil and Water Conservation District, the MN DNR, and other government agencies to install another CD3 unit at the CTY RD 6 access (west side). Installation is targeted for 2022.



2021 Aquatic Invasive Species Control / Limited Treatment Required on Cedar Lake

The Water Quality Committee is delighted to report that limited aquatic invasive species (AIS) control was required on Cedar in 2021.

The only AIS requiring treatment was curly leaf pondweed (CLP), with 4 acres treated in May. The treatment expense was paid for by grants from Wright County Soil and Water and from the Clearwater River Watershed District Cedar Albion Swartout Henshaw Project (formerly referred to as PO6 Project).



We anticipated there would be limited eurasian water milfoil (EWM) to treat this year. After two inspections to determine the amount of EWM to treat, our vendors reported that there were no patches of EWM requiring treatment. To provide perspective, in 2014 and 2015, over 35 acres needed treatment, at a cost of over \$20,000 each year. Our aggressive strategy to monitor and control EWM has truly paid off!

Another bright spot for the 2021 season was the grants that were received:

- DNR: \$950
- Wright Soil and Water: \$3,050

The Committee will continue to work with the DNR and a variety of other lake management experts to develop thoughtful, comprehensive, and cost effective AIS management strategy.

AIS	2021 Financials	
Curly Leaf Pondweed (CLP) 4 acres treated 5/11/2021	Treatment Cost (diquat)	\$ 740
	Pre-treatment survey	\$ 950
	Wright Soil and Water Grant	(\$500)
	CRWD Cedar, Albion, Swartout, Henshaw (CASH) (previously known as PO6) Project Expense	\$1,190
Eurasian Water Milfoil (EWM)	Treatment Cost	N/A
	Pre-treatment survey	\$ 950
	Point Intercept	\$2,550
	Wright Soil and Water Grant	(\$2,550)
No areas identified for treatment	DNR Grant	(\$950)
	CRWD AIS Project Expense	\$0
Starry Stonewort Search	Diver assisted search	\$800
	CRWD AIS Project Expense	\$800
None detected		

No Starry Stonewort Found on Cedar



Starry stonewort is one of the newest aquatic invaders and is particularly problematic with thick matting and exceptionally invasive characteristics. As part of our on-going Cedar monitoring, a formal search was conducted with Blue Water Science in September of 2021. No starry stonewort was found on Cedar.



MN Lakes with Starry Stonewort
As of November 2021

Beltrami	Beltrami
Carnelian	Stearns
Cass	Beltrami
Grand	Stearns
Koronis (includes Mud)	Stearns
Leech	Cass
Medicine	Hennepin
Minnewaska	Pope
Mississippi River between Wolf Lake (04-0079) and Andrusia Lake (04-0038)	Beltrami
Moose	Beltrami
Pimusha	Beltrami
Pleasant	Wright
Rice	Stearns
Turtle (Big Turtle)	Beltrami
Upper Red	Beltrami
West Sylvia	Wright
Winnibigoshish	Multiple (Cass and Itasca)
Wolf (Big Wolf)	Beltrami

Zebra Mussels on Cedar

Zebra mussels were discovered at multiple locations on the lake in 2018. Given the lake wide infestation, with current chemical treatment strategies, we are not a candidate for treatment.

WHAT TO EXPECT

The zebra mussel infestation on Cedar will continue to grow. How fast? Only time will tell. In the fall of 2021, 99% of the residents completing a survey reported the evidence of zebra mussels on docks and lifts when removed for the season.

Zebra mussels disrupt the ecological food chain and the long-term impact to lakes is difficult to predict. Given Cedar's lower phosphorus level (food for zebra mussels) the infestation will more than likely take three to five years to fully understand. Thereafter, the infestation may move into an ebb and flow pattern.

We can expect the phosphorus level in our lake to decrease, and water clarity will more than likely increase, because of the zebra mussel disruption of the lake's food chain. The increasing water clarity can promote vegetation, particularly that of invasive vegetation. Invasive aquatic vegetation seems to take particularly quick advantage of increased water clarity, so our management practices of curly leaf pondweed and eurasian water milfoil must remain vigilant.

STEWARDSHIP PRACTICES AND HOPE

Now that we face this infestation, here are some important stewardship practices we all must do and remain eyes-forward for new science.

- Zebra mussels are attracted to darker, quiet areas; docks, lifts, and sea-legs tend to be favorite spots. **If you sell your equipment, seriously consider doing so only after it has over-wintered. The one sure method for killing zebra mussels is freezing.** If you need to sell equipment in the summer months, it must (by Minnesota law) be out of the water for 21 days before installing in a new lake. Plan to do a high-pressure hot water decontamination at the free service at 1300 Business Blvd, Annandale, MN (April to October).
- If your watercraft is "resident" to Cedar Lake (e.g., in the lake all summer) there is a good chance it will have zebra mussels. Given this knowledge, and the difficulty and time for a complete decontamination, **consider not visiting other lakes with your watercraft.**
- New zebra mussel management strategies are emerging from the Minnesota Aquatic Invasive Research Center (www.maisrc.umn.edu). New studies of "spot" treatment for heavily infested zebra mussel areas are being researched.

Manned AIS Inspections on Cedar

As serious lake people know, there is not a magic bullet to prevent aquatic invasive species from entering our lake. Education is the key! **Cedar has consistently purchased extra monitoring hours to supplement the base (standard) county program.** This past summer, we purchased \$26,200 of extra access monitoring. This was an increase from 2019 when we purchased \$25,000. Below is a summary of the 2021 Cedar access monitoring statistics:

- 1,313 inspections.
- 1,651 hours of inspections for a total cost (includes inspections provided by Wright County) of \$32,600.
- Inspections per hour were 0.79.
- Fishing boats were the most common watercraft inspected.
- 104 entrance inspection violations were detected.

Wright County AIS Prevention Aid

The Minnesota Legislature allocates \$10 million per year directly to Minnesota counties to help fight the spread of aquatic invasive species. Wright County received \$230,000 in 2021. Wright Soil & Water Conservation District (WSWCD) is charged with leading this local effort. Areas of focus for the AIS Prevention Aid in Wright County included:

- AIS treatment assistance to lake associations. Cedar received \$3,050 in grant monies from Wright County in 2021.
- Manned inspections at lake accesses.
- Decontamination program.
- Rapid response support for new AIS infestations.

Water Quality Committee Responsibilities and Members

The Water Quality Committee (WQC) is a very active CLCC committee. The committee is responsible for:

- managing aquatic invasive species treatment.
- monitoring water quality.
- engaging with government entities to preserve improve water quality.
- providing water quality education.

The CLCC WQC is a formal committee of 20+ committed volunteers who have regular meetings and manage numerous complex issues—including DNR permits, vendor relationships, and grant applications.

To the right is the 2021-2022 WQC—please take a moment to give them your thanks the next time you see them!

Core Team

- Chair: Kathy Jonsrud
- AIS Operations: TBD
- AIS Financials: Chuck Vinar
- Long Term Strategy: Greg Duppler
- Youth Engagement: Christa Lane-Larsen
- Member Engagement: Sue Nash
- Advisor: Karl Leslie

Rapid Response Team

- CLCC President: David Glass
- CLCC President Elect: Greg Duppler
- CLCC Treasurer: Chuck Vinar
- CLCC Representative: Renee Bianchi
- CLCC Representative: Karl Leslie
- CLCC WQC Chair: Kathy Jonsrud
- CLCC WQC AIS Operations: TBD
- Clearwater River Watershed District: Dawn Cole

Other Committee Members

- CLCC Board of Directors
- Bill Arendt
- Bill Westhoff
- Dwight and Lori Geisler
- Scott and Chris Nelson
- Glenn Baird
- Karen Lohn
- Orv Jonsrud
- Sue Wolf
- Gary and Kathy Miron
- Larry Christen
- Bobby Ebert