

2021 WATER QUALITY REPORT

In 2021 we participated in the Citizen Lake Monitoring Network, CLMN, program for the fifth straight year. This program combines Secchi readings, Temperature readings and water samples gathered by us with Phosphorus and Chlorophyll analysis performed by the State Labs in Madison, WI. The following is a summary of this program.

2021 Results

Compared to 2020, the summer of 2021 was slightly cooler but longer. During Q2 and Q3, there were 11 weeks with temperatures above normal compared to 13 weeks in 2020. There were only 5 weeks with below normal temperatures compared to 8 weeks in 2020, 11 weeks in 2019, and 11 weeks in 2018. Lake water temperature readings were not as warm as 2020 but were warmer for a longer period of time. The highest recorded water temperature in 2021 was 80 degrees compared to a 2020 high of 82 degrees. The last temperature reading in October of 2021 was 67 degrees compared to the last water temperature reading in 2020 of 57 degrees.

In 2021-2022 the lake had 160 days of ice over. In 2020-2021 the lake had 127 days of ice over. In fact the Ice Out date of 03/30/2021 was only the fifth time in 25 years that Ice Out occurred in March.

The lake level dropped 4.2 inches from spring to fall. This was significantly more than in 2020 when the lake dropped .9 inches and in 2019 when the lake dropped 1.0 inch.

Secchi readings tend to vary inversely to water temperature. Therefore, the warmer the water the smaller the Secchi readings. In 2021 the lowest Secchi reading was 8.5 feet while in 2020 the lowest Secchi reading was 8.0 feet. Therefore, you should have noticed that the water was slightly clearer and cooler in 2021. Overall, the Secchi readings were consistent with past years.

The Phosphorus Readings and Chlorophyll readings in 2021 continued to be in the standard range for our type of lake and better than the average for lakes in the Northeast Georegion of Wisconsin.

CLMN Official Results

The CLMN official results were as follows:

Cochran Lake - Deep Hole was sampled 25 different days during the 2021 season. Parameters sampled included:

- water clarity
- temperature
- dissolved oxygen
- total phosphorus
- chlorophyll

The overall Trophic State Index (based on the chlorophyll) for Cochran Lake - Deep Hole was 40.

The TSI suggests that Cochran Lake - Deep Hole was oligotrophic. This TSI suggests deeper lakes still oligotrophic, but bottom water of some shallower lakes will become oxygen-depleted during the summer.

Cochran Lake - Deep Hole 2021 Results



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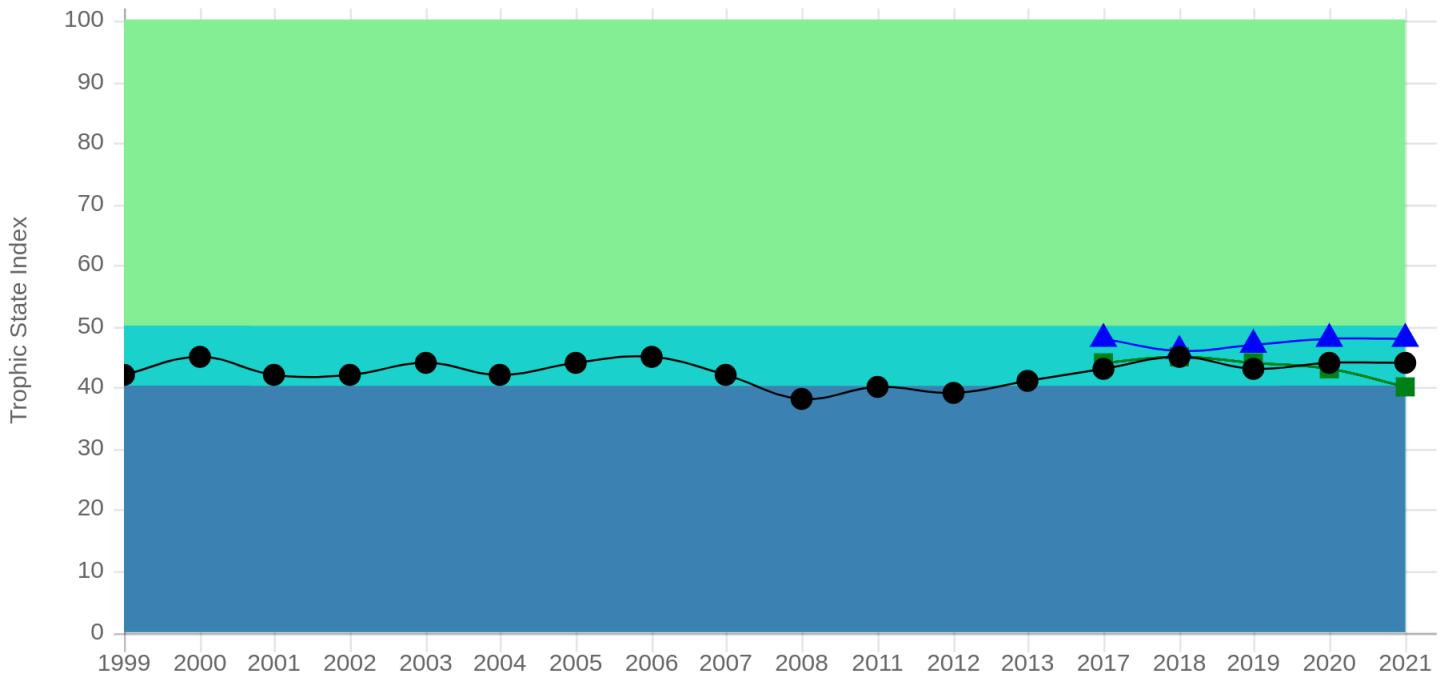
The average summer (July-Aug) secchi disk reading for Cochran Lake - Deep Hole (Price County, WBIC: 2264000) was 9.94 feet. The average for the Northwest Georegion was 8.9 feet. Typically the summer (July-Aug) water was reported as **CLEAR** and **GREEN**. The green normally suggests a lake impacted by algae. However, since recent summer chlorophyll readings average less than 9 ug/l, this lake may have been impacted by another factor, such as suspended marl. An example of this is Clark Lake in Door County.

Chemistry data was collected on Cochran Lake - Deep Hole. The average summer Chlorophyll was 1.9 µg/l (compared to a Northwest Georegion summer average of 13.2 µg/l). The summer Total Phosphorus average was 13.8 µg/l. Lakes that have more than 20 µg/l and impoundments that have more than 30 µg/l of total phosphorus may experience noticeable algae blooms.

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Trophic State Index Graph Cochran Lake Deep Hole

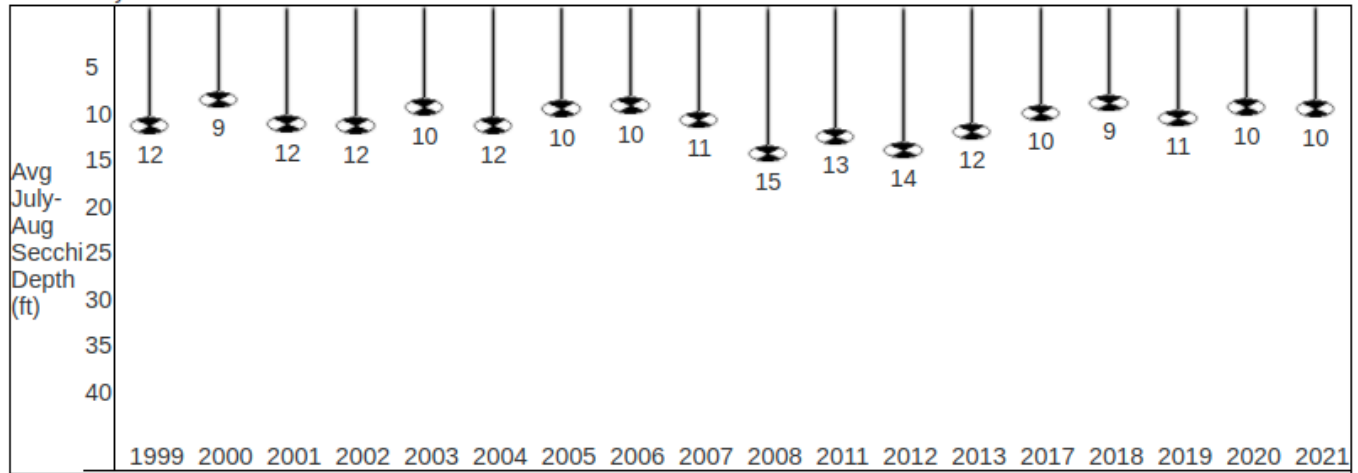
Trophic State Index Graph: Cochran Lake - Deep Hole - Price County



Cochran Lake

Price County

Waterbody Number: 2264000



Past secchi averages in feet (July and August only).

Year	Secchi Mean	Secchi Min	Secchi Max	Secchi Count
1999	11.7	9.5	13	5
2000	9	7.5	12.5	4
2001	11.67	11	12	3
2002	11.75	11.5	12	2
2003	9.83	9	10.5	3
2004	11.75	11	12.5	2
2005	10	9	11	2
2006	9.5	8	11.5	3
2007	11.25	10	12.5	2
2008	14.75	14.5	15	2
2011	13	11	15	2
2012	14.33	14	15	3
2013	12.33	10	14	3
2017	10.41	7.5	13	8
2018	9.46	7.75	11.25	6
2019	11.03	9.25	13.5	8
2020	9.88	8	11.25	8
2021	9.94	9	11.5	8