Otter Tail Coalition of Lake Associations
otccola2@gmail.com

Water Quality Analysis Reports 2021

North Lida 56-0747-01

10-Year Trend Analysis

Lake / Site	Year	Phosphorus Ave	Chlorophyll a Ave	Secchi Ft	TSI Ave
North Lida 56-0747-01 208	2012	19.2	4.8	14.1	43.6
	2013	18.4	6.4	13.1	44.2
	2014	16.8	5.8	13.2	43.8
	2015	12.4	2.2	21.1	37.0
	2016	13.0	2.6	24.5	37.0
	2017	13.6	2.8	22.9	37.2
	2018	19.0	5.6	14.8	43.4
	2019	19.0	4.9	15.3	42.8
	2020	23.6	3.2	17.9	40.8
	2021	12.8	1.4	17.7	36.8
North Lida 56-0747-01 208 Total		**16.9**	**4.0**	**17.3**	**40.7**

OTC COLA compiled available **North Lida** Lake data for years from 2012. Samples were taken for **Phosphorus**, **Chlorophyll-a** and water **Clarity** (Secchi). The results were averaged by site and year along with the **TSI Index**. The mini-graphs at the bottom of each analysis represent the trend line for the years included. See **Water Quality Analysis Reports.**

The classic model will indicate an inverse relationship between the nutrient elements (phosphorus, chlorophyll-a) and secchi (water clarity) measure. If phosphorus and chlorophyll-a trend to rise, water clarity will trend to decrease. If phosphorus and chlorophyll-a trend to increase, water clarity will trend to decrease.

Water Quality Parameter Relationships

Congratulations to Lake Lida Property Owners Association and the dedicated volunteers who participated in the **OTC COLA Water Monitoring Program.** Water quality monitoring and testing is crucial to successful lake stewardship. See **The Case for Water Quality Monitoring**

The samples were analyzed by **RMB Laboratories** in Detroit Lakes, MN. Learn about collecting water samples on the **RMB Training** website**.** See the RMB **Trophic State Index** page for an in-depth explanation of analysis results.

Detailed analysis results and general information on **North Lida** Lake is available from a number of sources:

DNR Lake Finder for North Lida Lake

MPCA Lake Dashboard for North Lida Lake- See Water Quality Summary tab

UMN LakeBrowser for North Lida Lake See- UMN LakeBrowser

RMB Lakes Database Interactive access to data for all lakes in the RMB program

Ecoregion Comparison

Another approach to evaluating health of lakes is test data compared to Ecoregions. An Ecoregion is a geographical area where the land use (agriculture, forest, prairie, etc.), underlying geology, potential native plant community, and soils are relatively

similar. The lakes in Otter Tail County are in the Northern Central Hardwood Forest Ecoregion (NCHF). Click **HERE t**o learn more about Ecoregions.

Compare the **North Lida Lake Total** to the Northern Central Hardwood Forest Ecoregion ranges of averages shown here:

Phosphorus: 23–50, Chlorophyll: 5–22, Secchi (ft): 5–10.5

What Is A Healthy Lake?

A healthy lake is most often described as one whose physical, biological and chemical properties are in equilibrium. This balance provides stability that allows native aquatic organisms to flourish. Because each lake is different, it is difficult to compare lakes to each other. It is best to compare your own lake to itself over time. See **The Case For Water Quality Monitoring.**

It is widely accepted that the amount of phosphorus in a lake often determines the ultimate disposition of health for a lake. Phosphorus in a lake is the primary nutrient feeding the growth of algae and aquatic plant life. Control of infusion to North Lida Lake of phosphorus from animal waste, human waste and fertilizers is the most probable objective to pursue to nurture lake health.

Concerned About Phosphorus?

What to do

- Investigate and control property owner septic system efficiency
- Identify and pursue adverse land run off from lake property owners, farms and feed lots
- Educate lake property owners on detrimental use of phosphate lawn fertilizers

Why Does Our Lake Continue To Get More Weeds?

Lake Organizations and Resources

OTC COLA

- COLA sponsored water quality testing
- Monthly **NEWSLETTERS** **SUBSCRIBE**
- OTC COLA **WEBSITE**

- Attend summer monthly meetings
- Participate in COLA events
- Network with fellow COLA members
- OTC COLA **BROCHURE**

WWW.lakeadmin.org

Everything Lake Organization Administration

- **AIS**
- **WATER QUALITY**
- **ADMINISTRATION**
- **REGULATION**
- **GENERAL INTEREST**
- **SUBSCRIBE to the lakeadmin.org Bulletin**

Minnesota Pollution Control Agency MPCA

- The MPCA provides technical and financial assistance and enforces environmental regulations in the State of Minnesota.

East Otter Tail Soil & Water Conservation District EOT SWCD

- **Shore & Water**
- **Financial Assistance**

West Otter Tail Soil & Water Conservation District WOT SWCD

Otter Tail County Land & Resource Management

- The Department of Land and Resource Management is designed to enforce county and state ordinances / rules.

West Central Initiative

- **Mission:** Serving to improve west central Minnesota through funding, programs and technical assistance.

Minnesota Department of Natural Resources MN DNR

OTC COLA Board of Directors
David Helgerson · Jeff Stabnow · Jeff Vansteenburg ·
Roger Neitzke · Ronald Christensen · Scott Gaudette · Sylvia Soeth

John Kruse, OTC COLA Administrative Assistant
otccola2@gmail.com