



Three Lakes Development Association

Water Sampling Results

August 3rd, 2026

We resampled our lakes for **Chlorophyll** and **Phosphorus** on July 16th and 19th, 2026. Thanks again to Bill Lowry (Elora), Elizabeth Simonson (Rose), Jim Burho (Strand), John Barrett (Winkle), Chris Peterson (Schisler), and Peter Jongewaard (Dodo) for doing the collecting and/or allowing the use of their pontoons/boats/canoes.

Pace Analytical Laboratories, at 4730 Oneota Street in West Duluth, is the lab we contract to both analyze the samples *and* report results directly to the Minnesota Pollution Control Agency (MPCA). Our Pace contact person is Karenzha Schemmer, karenzha.schemmer@pacelabs.com, 218-241-4011.

We have good data going back to 1995. Some of those sampling campaigns were done in cooperation with the North St Louis County Soil and Water Conservation District office in Virginia. We sample the **top-2-meters-depth** for nutrient levels (phosphorus and chlorophyll) today. There were several years prior to 2011 where sampling was done monthly on all the lakes. The data displayed on the graphs below are using average values for those years where multiple samples were taken per lake. Since 2011, **one sample** has been taken **per lake, per year**.

The MPCA is the keeper of these data, and their complete information that they have accumulated can be accessed thru the Minnesota Department of Natural Resources (MNDNR) **LakeFinder** webpage. Links to these pages for our lakes can be found on our **Three Lakes website**, under the Government Links tab - MNDNR page, then click on the water quality tab in the left margin of that page.

All our lakes have unique identifier numbers that are used by the MPCA and the MNDNR (and everyone else who collects information from these lakes). They are listed below, in numerical order, for handy reference in case you want to look for lake data elsewhere:

69-0521 – Lake Elora – sample location number is **69-0521-00-201**

69-0522 – Winkle Lake – sample location number is **69-0522-00-201**

69-0523 – Dodo Lake – sample location number is **69-0523-00-202**

69-0525 – Rose Lake – sample location number is **69-0525-00-201**

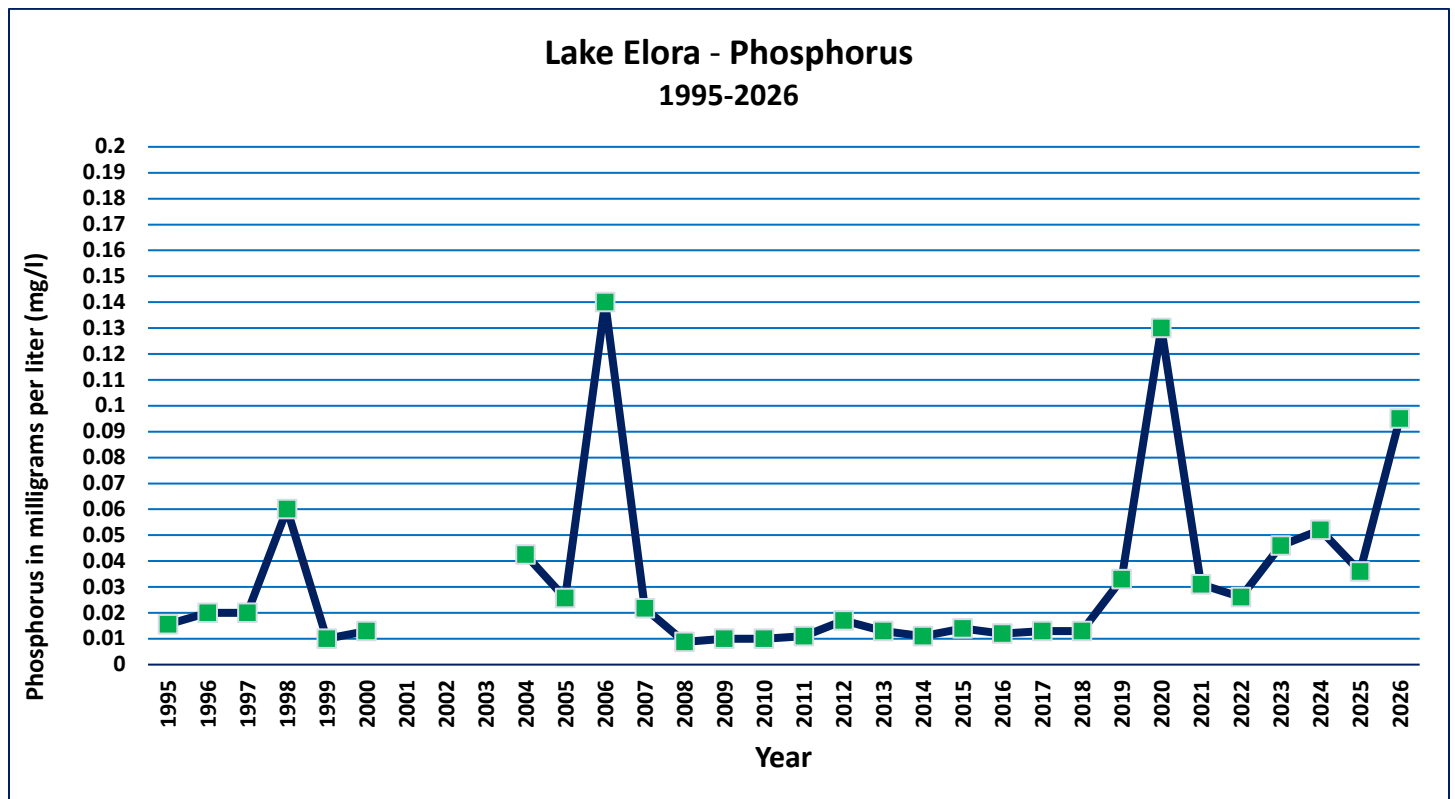
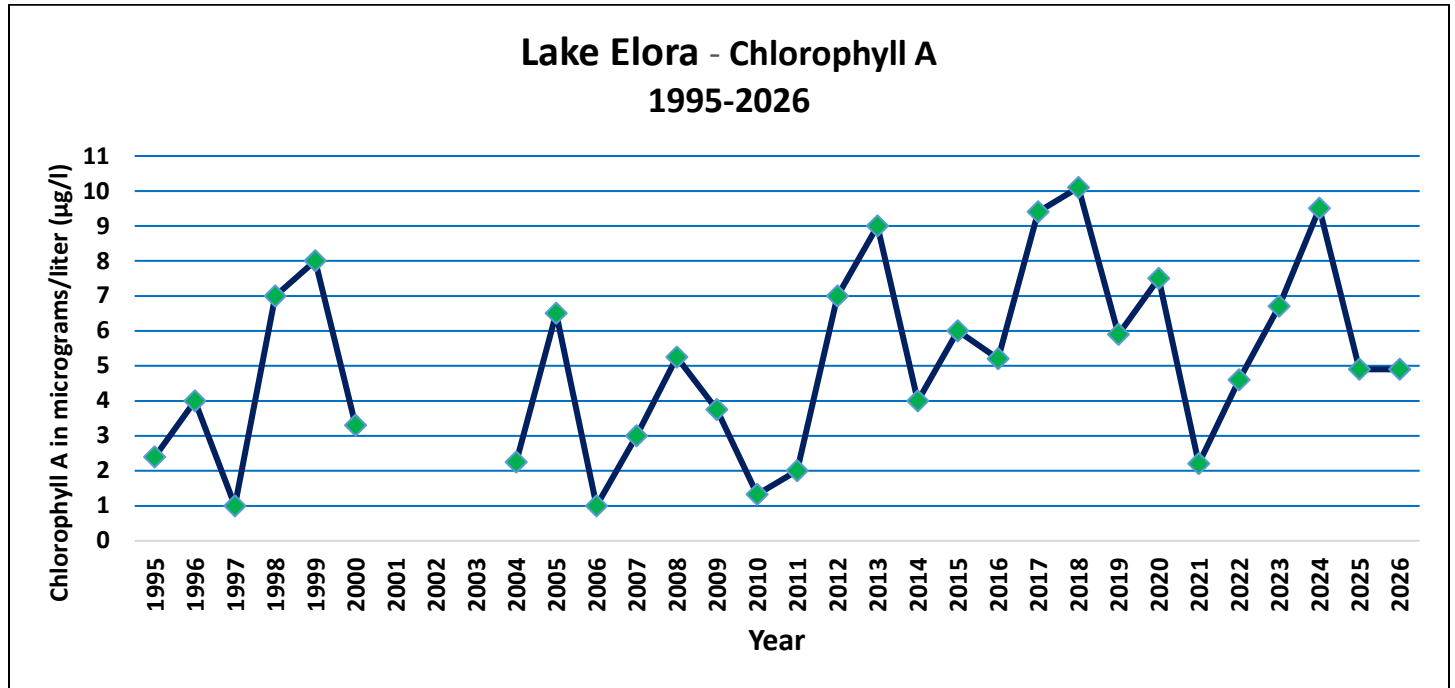
69-0529 – Strand Lake – sample location number is **69-0529-00-201**

69-0533 – Schisler Lake – sample location number is **69-0533-00-201**

Below find the graphs per lake with the data we have collected, since 1995, for the two principal nutrient variables, **Chlorophyll A** and **Phosphorus**. Sampling takes place in the same location each year above the deepest point known in each lake. Also see the sample submittal forms for each lake.

Lake Elora – 69-0521

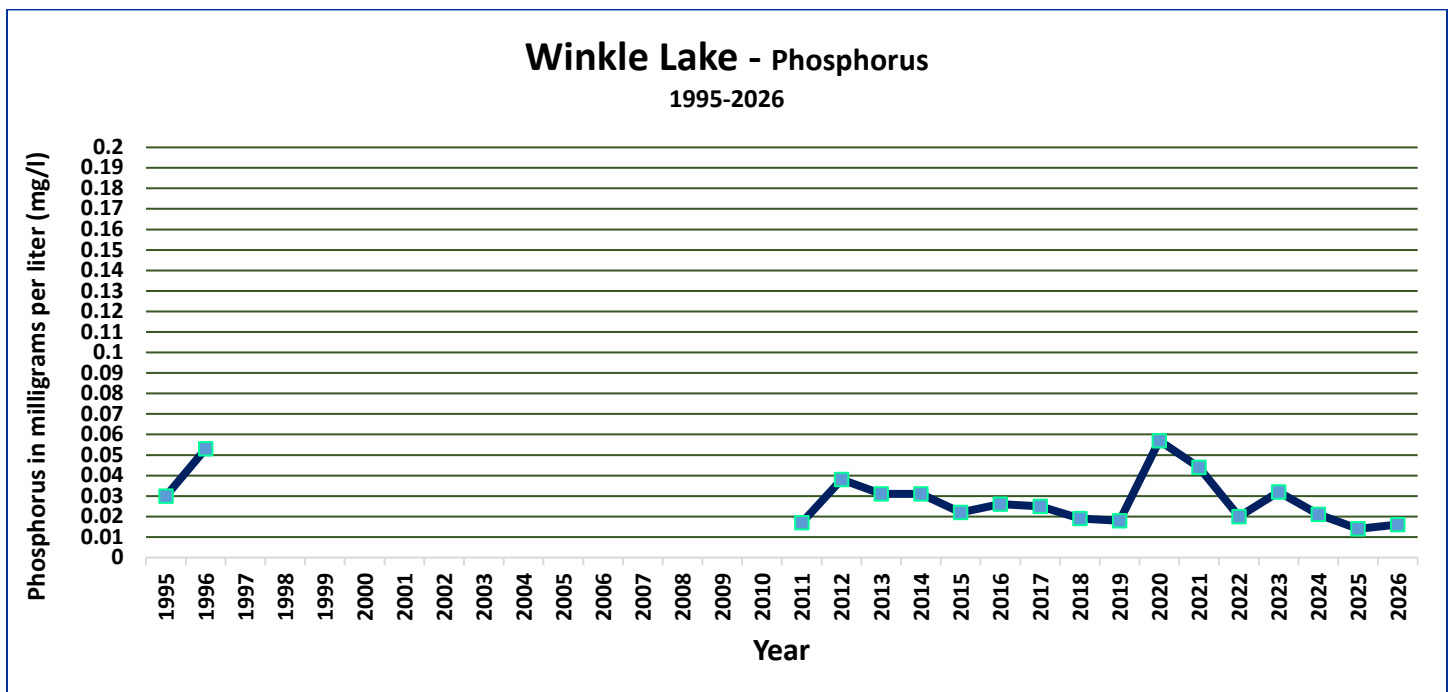
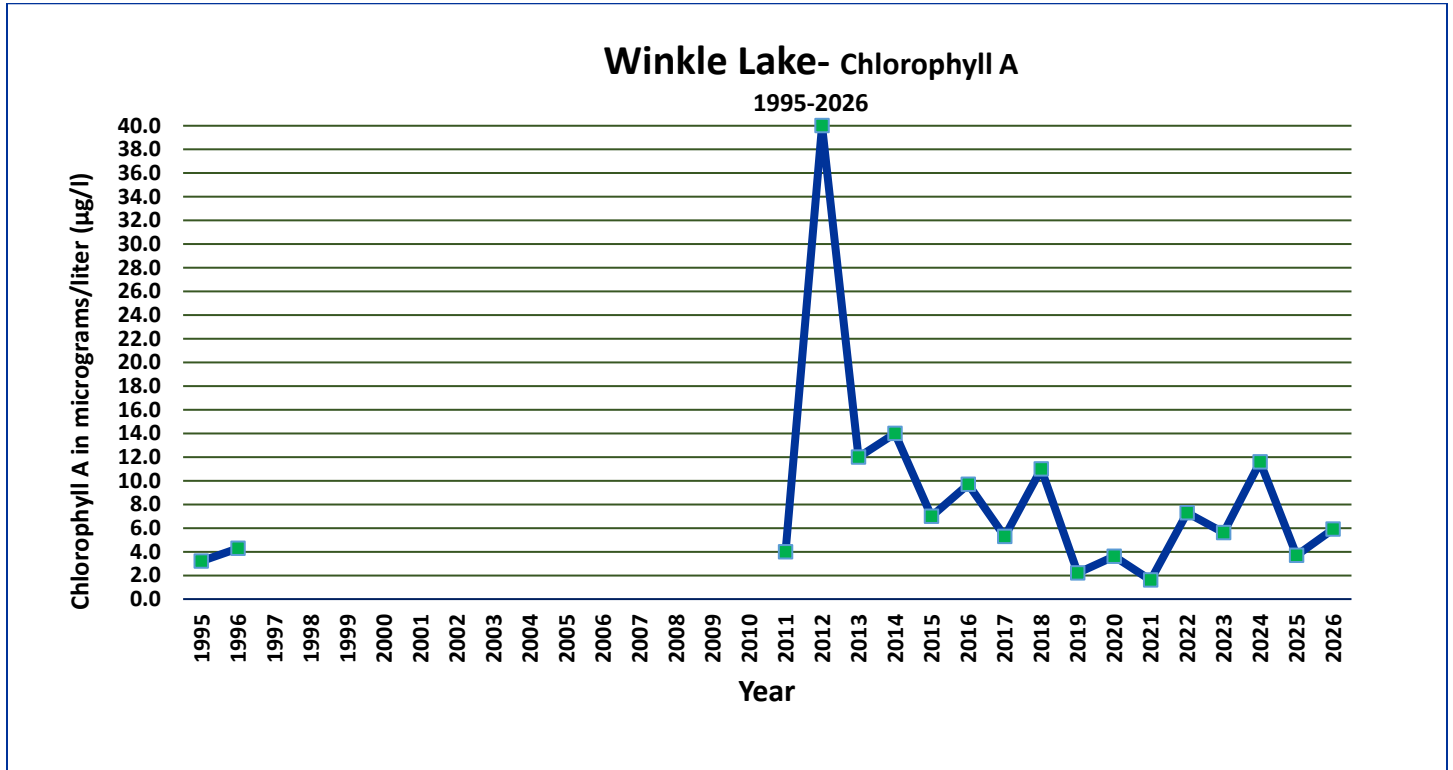
Sampling takes place about where the ice-fishing houses appear every winter, where maximum depth is ~35'. Surface area is 276 acres. Lake Elora is within the Cloquet River watershed. This year 2026 the Chlorophyll value was same as last year, and the Phosphorus level showed an increase.



Minnesota Pollution Control Agency		MPCA Chain-of-Custody Form		Work Order Number:		COC Type:		Page: 1 of			
Facility Code:*		PROJECT/CLIENT INFO		Turnaround Time:		COC ID:		FOR LAB USE ONLY			
Project Name:*		Program Code (MDH Lab Only):		Lab Name:		LABORATORY		Lab Work Order Sticker			
Project Manager:		Project Task Code:*		Address:							
Potential Hazard?		If yes, add information to Sampler Comments field		EPA Lab ID:*							
SAMPLE TYPES Sample - Routine Sample QC-FB - Field Blank Sample QC-FR - Field Replicate Sample QC-TB - Trip Blank Sample QC-EB - Equipment Blank Treated-Mid - Treatment system sample Treated-Post - Treatment system sample		SAMPLE METHODS G - Grab sample CT - Composite, time-paced w/AS CF - Composite w/AS D-T - Discrete, time-paced w/AS D-F - Discrete, flow-paced w/AS SW-GAS - Gas Sampling Unknown - Unknown		LAB MATRICES DW - Drinking Water NW - Nonpotable Water SD - Soil/Solid AR - Air		FIELD MATRICES BG - Biological Material OT - Other TS - Tissue		ANALYSIS REQUESTED ANALYSIS* PRESERV*		ANALYSIS REQUESTED ANALYSIS* PRESERV*	
MIN Location Identifier* 6A-0521-00-201		Field Name ELORA		Sample Type* RS		Start Date* 7/19/2006		Start Time* 13:45			
		Depth 1.5 m		Sampling Method* M G		End Date (mm/dd/yyyy)		End Time (hh:mm)			
		Units (m or ft.) M G		Lab Matrix* NW		Field Matrix* NW		Sampler Comments (filter volume, special handling, etc.)			
								# of Cont 2			
								Lab Sample No. 1			
								Lab Sample No. 2			
								Lab Sample No. 3			
								Lab Sample No. 4			
								Lab Sample No. 5			
								Lab Sample No. 6			
								Lab Sample No. 7			
								Lab Sample No. 8			
								Lab Sample No. 9			
								Lab Sample No. 10			
Sampler's Name:* William E. Lowry		Phone#: 218-969-7219		Billing Organization: TLDA		Address: P.O. Box 174 Cotton MN 55724		Tracking#: 218-3414014			
Sampler's Signature:* [Signature]											
Sampler's Organization: Three Lakes Development Assoc											
Receiving Comments: Please log the sample under one workorder. There should be a total of six samples in separate coolers.		Date/Time 7/20/06 09:35		Accepted By/Affiliation [Signature]		Date/Time 7/20/06 09:35		2.1			
Relinquished By/Affiliation [Signature]											

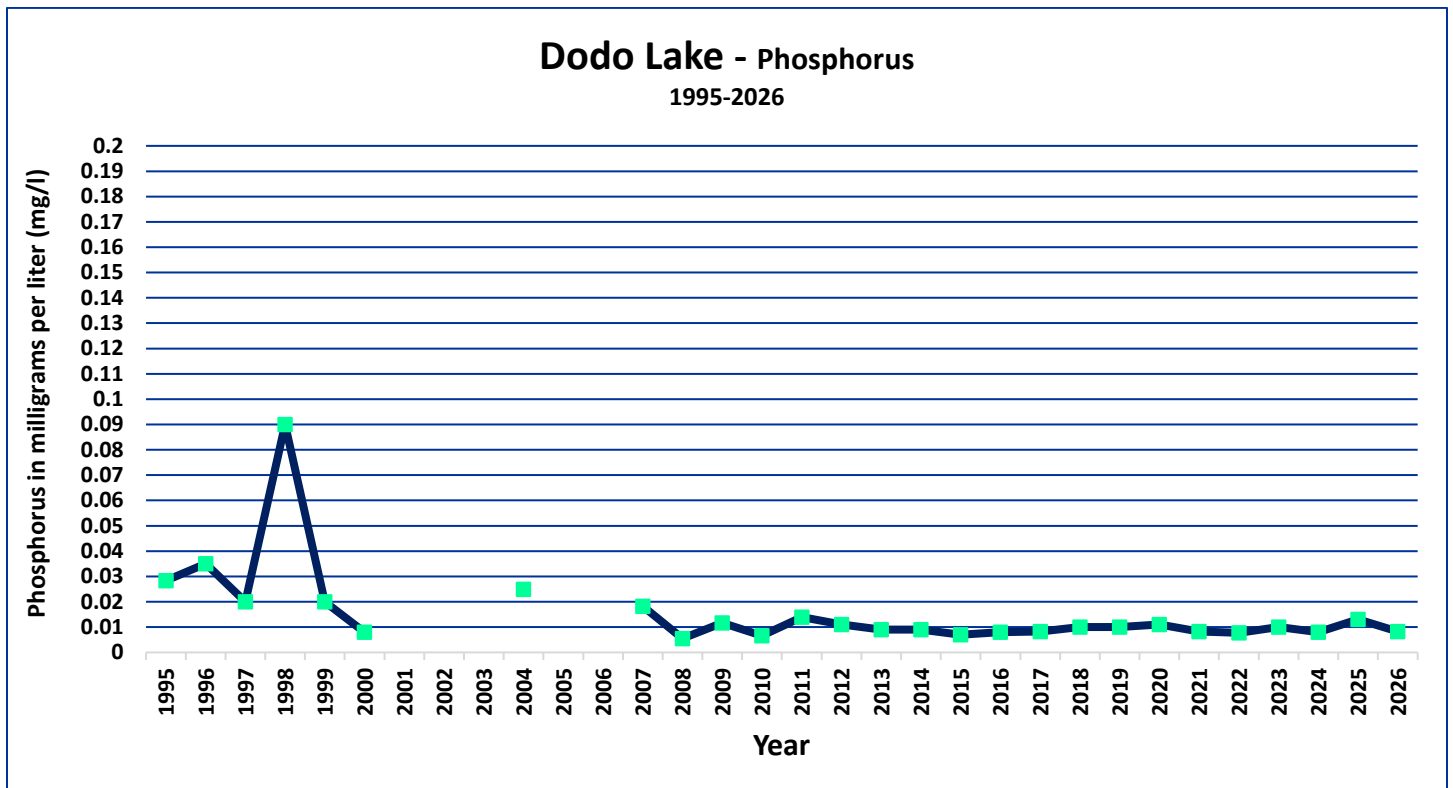
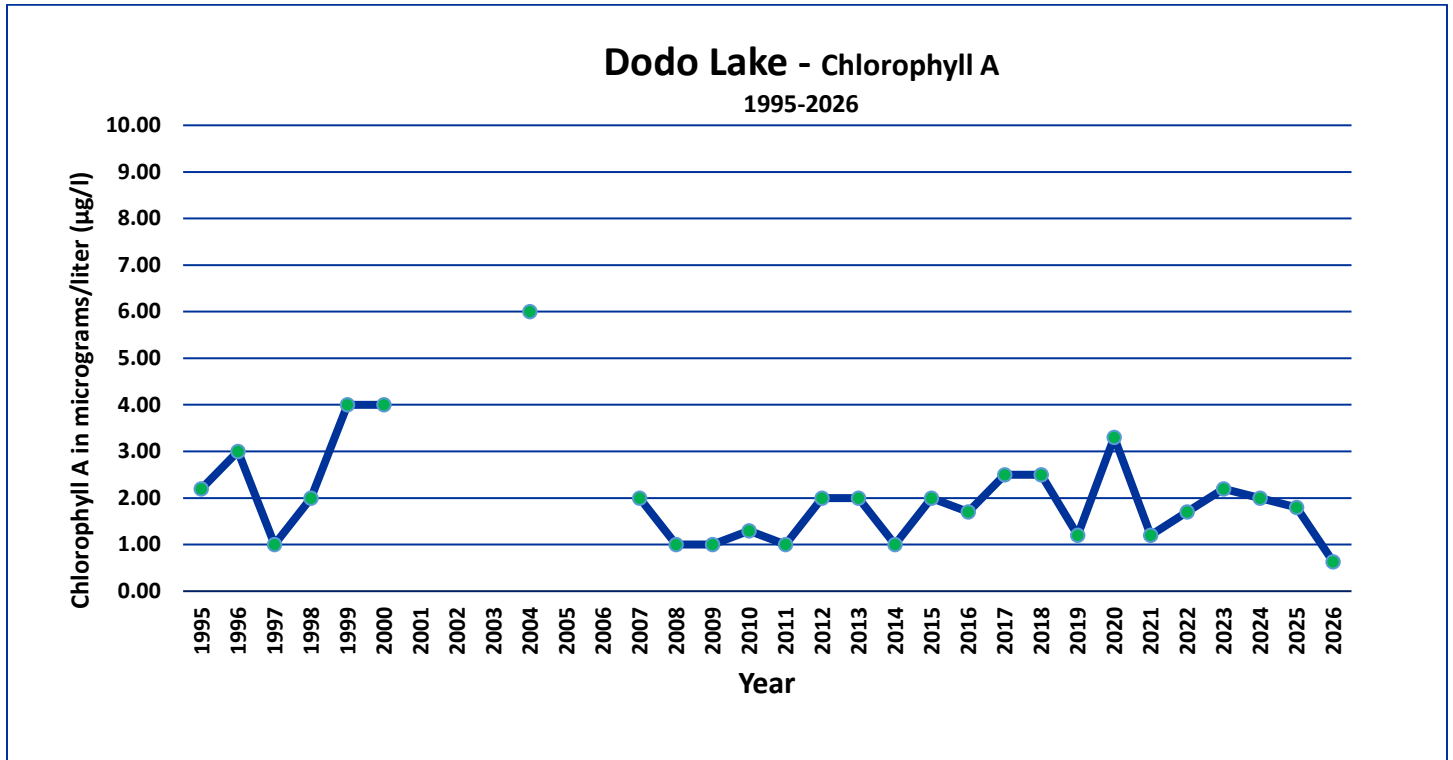
Winkle Lake – 69-0522

Winkle Lake – 2026 - chlorophyll was low, and phosphorus remained very low. Winkle Lake is the shallowest lake we sample, maximum depth is ~14 feet, with smallest surface area of 27+ acres. Winkle is within the Cloquet River watershed.



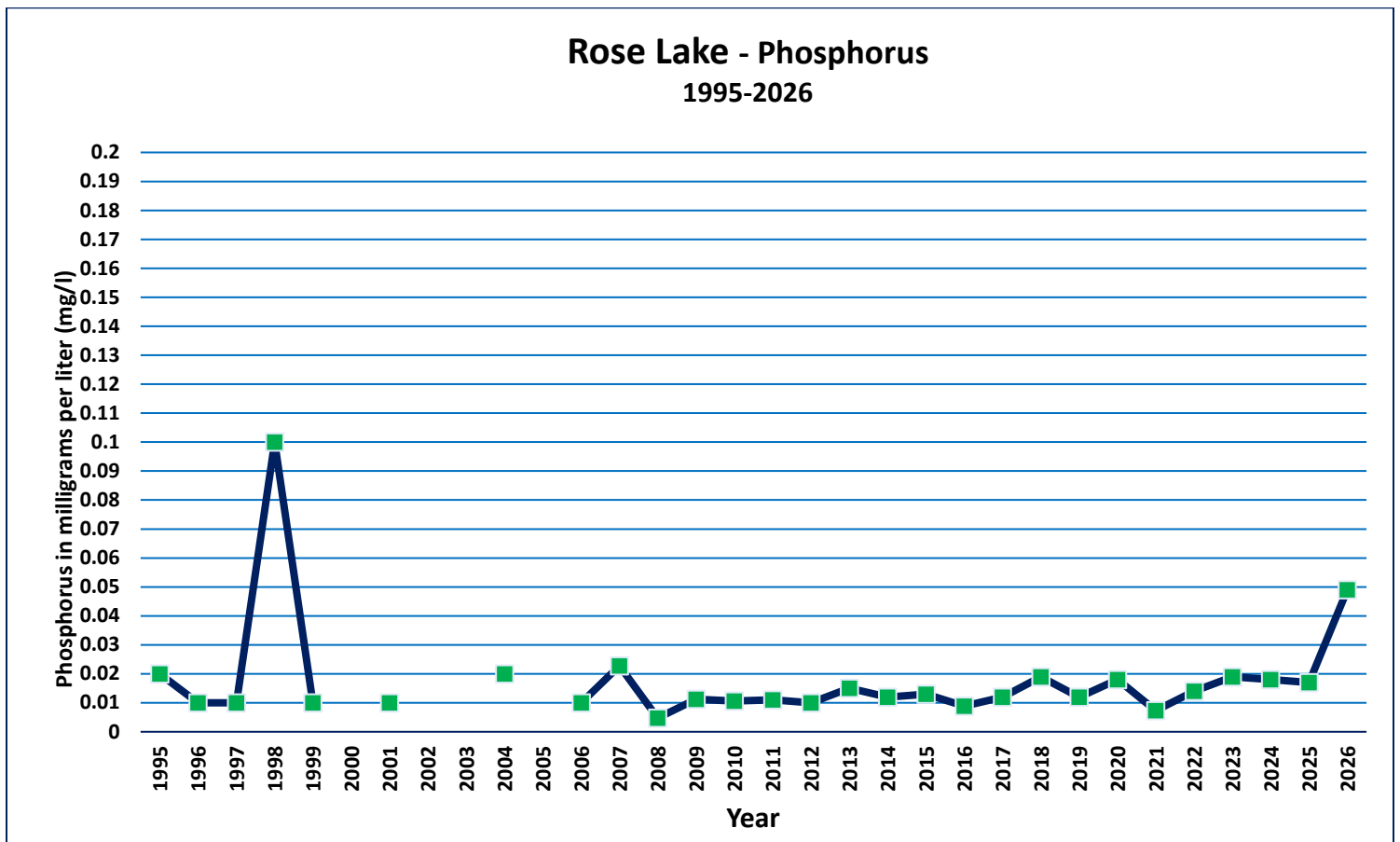
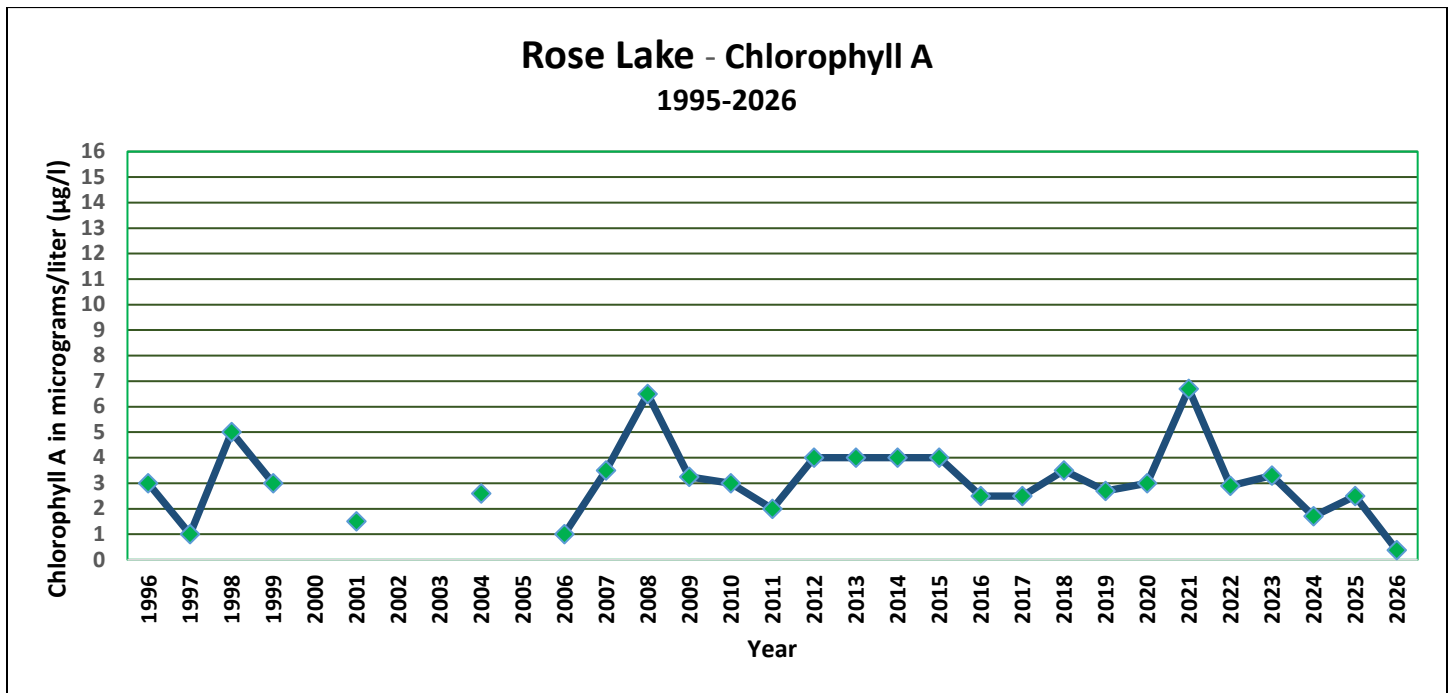
Dodo Lake – 69-0523

Dodo Lake is the deepest lake we sample, listed at 53' on the DNR lake-bottom-contour map. Surface area is approx. 90 acres. Dodo is within the Cloquet River watershed. Very low levels of chlorophyll and phosphorus levels continue in 2026.



Rose Lake – 69-0525

Rose Lake's deepest spot is between 35'-40', with a total surface area of about 60 acres. Rose Lake is within the Cloquet River watershed. Chlorophyll was **below detection limit** (very low!) and Phosphorus showed an increase for 2026.



WO#: 10780613



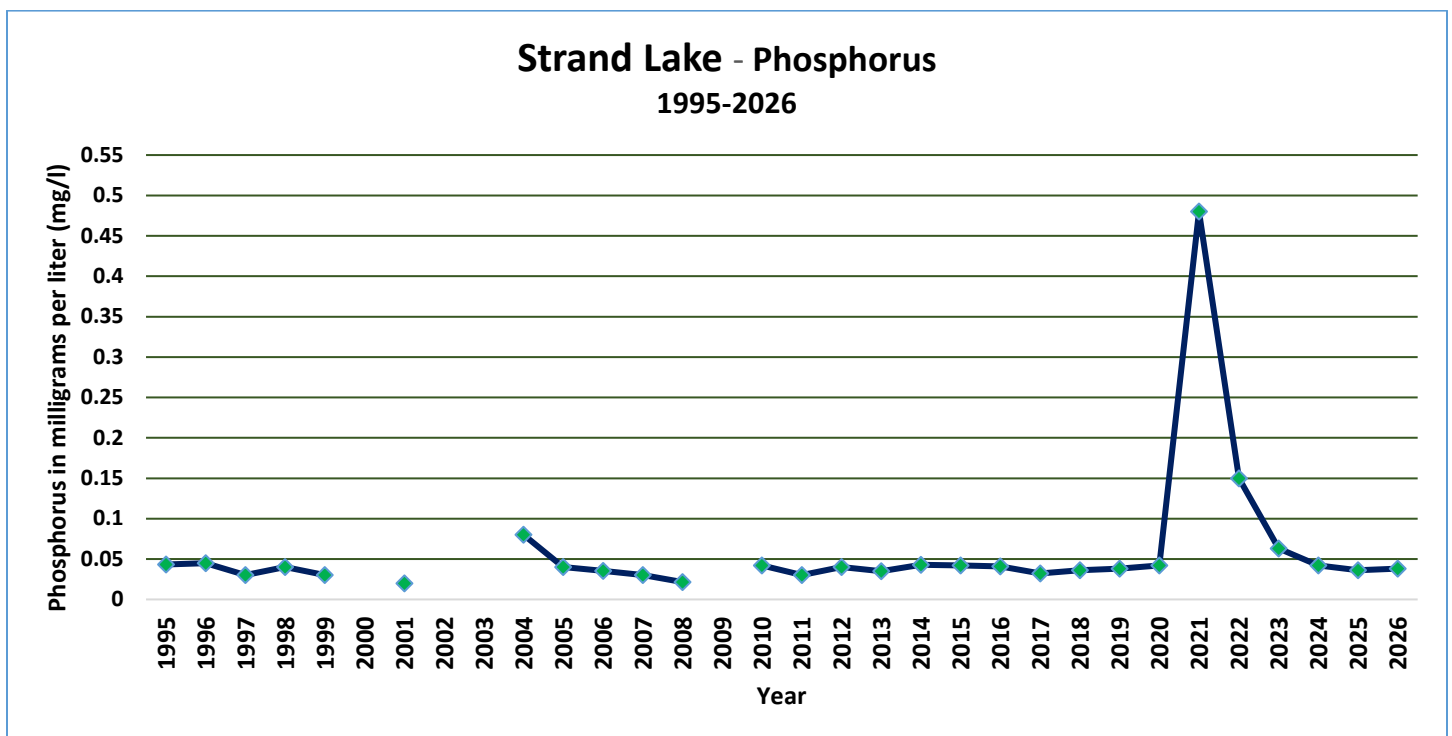
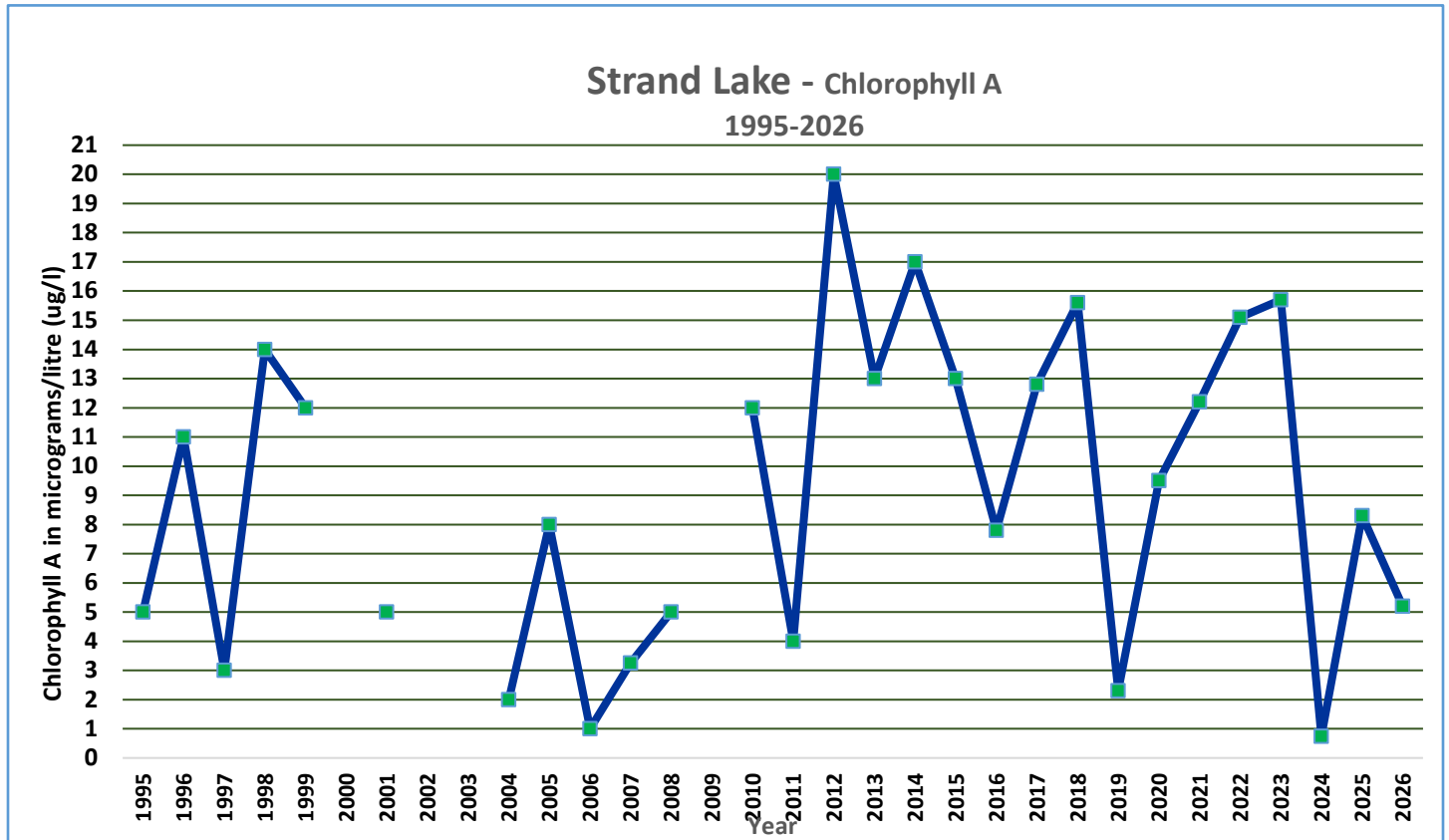
10780613

Minnesota Pollution Control Agency		MPCA Chain-of-Custody Form		Work Order Number:			
Facility Code:*		PROJECT/CLIENT INFO		Turnaround Time:			
Project Name:*		Program Code (MDH Lab Only):		Lab Name:			
Project Manager:		Project Task Code:*		Address:			
Potential Hazard?		If yes, add information to Sampler Comments field		EPA Lab ID:*			
SAMPLE TYPES Sample - Routine Sample QC-FB - Field Blank Sample QC-FR - Field Replicate Sample QC-TB - Trip Blank Sample QC-EB - Equipment Blank Treated-Mid - Treatment system sample Treated-Post - Treatment system sample		SAMPLE METHODS G - Grab sample CT - Composite, time-paced w/AS CF - Composite w/AS D-I - Discrete, time-paced w/AS SW-GAS - Gas Sampling Unknown - Unknown		LAB MATRICES DW - Drinking Water NW - Nonpotable Water SD - Soil/Solid AR - Air		FIELD MATRICES Wt - Ground - Groundwater Wt - Surf - Surface Water Wt - Drink - Drinking Water QC - Lab - Artificial Blank Water Loc - Loc - Locatable Sample Air - Indoor - Indoor Air Gas - Soil - Soil Gas	
SAMPLE DETAILS Depth Start End Units (m or ft.)		Sampling Method* End Date (mm/dd/yyyy) End Time (hh:mm)		Lab Matrix* Field Matrix* AIS			
Sample Start Date* (mm/dd/yyyy) Sample Type*		Complete ONLY if Method is C-I, CF, D-I, or D-F End Date (mm/dd/yyyy) End Time (hh:mm)		Sampler Comments (filter volume, special handling, etc.) # of Cont			
MN Location Identifier* Field Name		Units (m or ft.) Start End Units (m or ft.)		ANALYSIS* ANALYSIS* ANALYSIS*			
09-0525-00-201 Rose		RS 7.19.24 6:30-6:40 2 m 6 7/11 6:40		1 - Phosphorus 1 - Chlorophyll			
Sampler's Name: Elizabeth Smunson Sampler's Signature: [Signature] Sampler's Organization: Three Lakes Development Assoc.		Phone: 591.4772 Address: Contact Peter Jorgensen Courier Name:		Billing Organization: Three Lakes Development Assoc. Acct#: 174 Cotton NW 55724 Address: Contact Peter Jorgensen Tracking#:			
Receiving Comments: Please log the sample under one workorder. There should be a total of 6x samples in separate coolers.		Date/Time: 7/20/26 0933 Accepted By/Affiliation: [Signature]		Date/Time: 7/20/26 0933			

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Strand Lake – 69-0529

Strand Lake is the largest in surface area (334 acres) and has a max depth of 16'. Strand Lake is in the Whiteface River watershed (the other four lakes we sample are within the Cloquet River watershed). The large surface area and shallow depth allow for storm disturbance of sediments, reflected in high variability in the results (normal). Chlorophyll and Phosphorus both sampled low in 2026.





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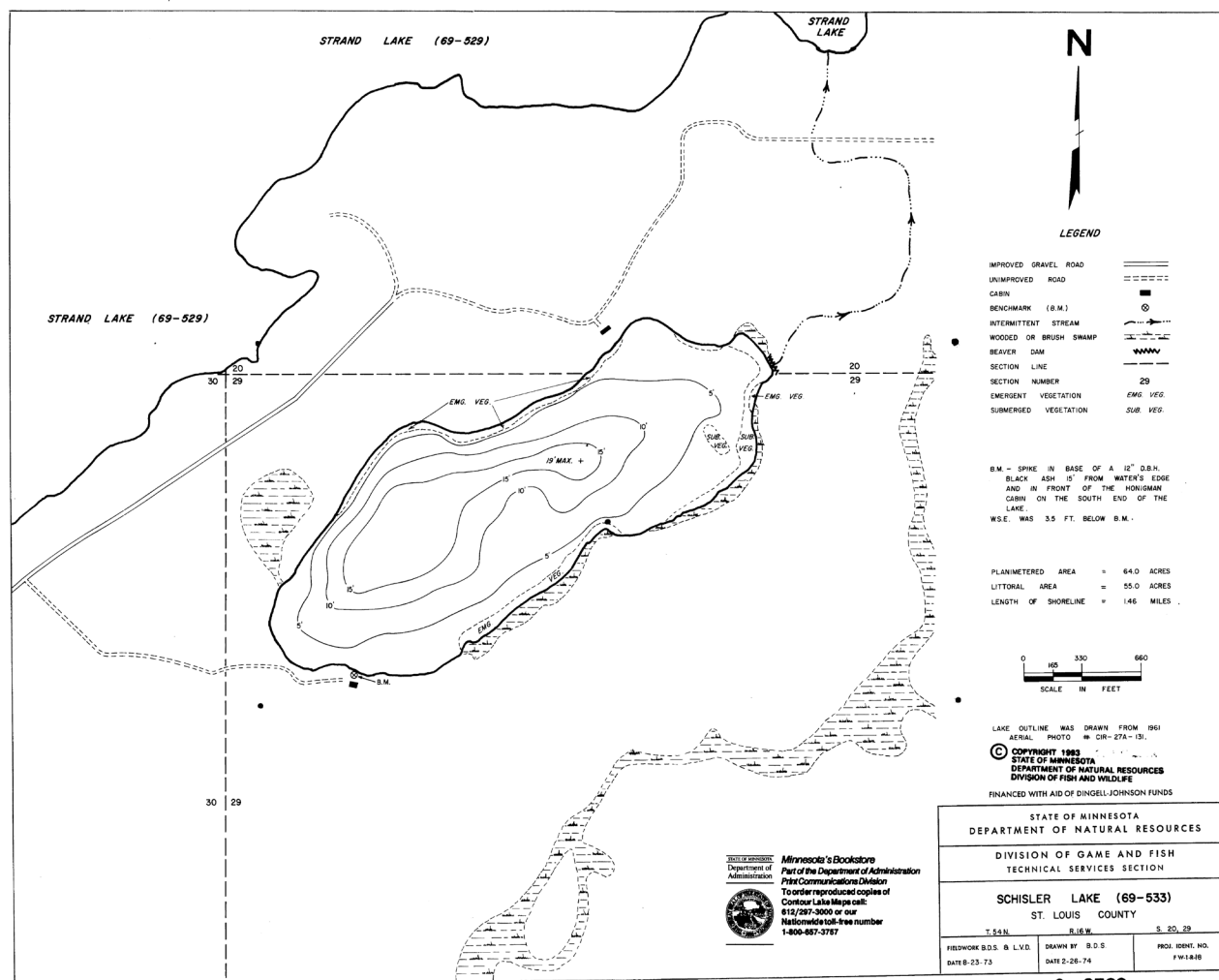
MPCA Chain-of-Custody Form						Work Order Number:	
* Indicates a required field						Turnaround Time:	
PROJECT/CLIENT INFO							
Facility Code:**		Program Code (MDH Lab Only)		Lab Name:			
Project Name:**		Project Task Code:**		Address:			
Project Manager:							
Potential Hazard?		If yes, add information to Sampler Comments field		EPA Lab ID:*			
SAMPLE TYPES		SAMPLING METHODS		LAB MATRICES		FIELD MATRICES	
Sample - Routine Sample	G - Grab sample	DW - Drinking Water	B1 - Biological Material	WU-Grndw- Groundwater			
QC-FB-Field Blank Sample	CT - Composite time-paced w/AS	NW - Nonsalable Water	O1 - Other	WU-Surf- Surface Water			
QC-FR-Field Replicate Sample	CF - Composite w/AS	SD - Soil/Solid	TS - Tissue	WU-Drink- Drinking Water			
QC-TB-Trip Blank Sample	D-I - Discrete time-paced w/AS	AR-Air		QC-BLANK - Artificial Blank Water			
QC-EB-Equipment Blank	D-I - Discrete flow-paced w/AS			Lecidate- Leachate Sample			
Treated-Mid - Treatment system sample	SW-GAS - Gas Sampling			Air-House- Indoor Air			
Treated-Post - Treatment system sample	Unknown- Unknown			Gas-Soil- Soil Gas			
MN Location Identifier*	Field Name	Depth	Start Time* 24 hr (hh:mm)	End Date (mm/dd/yyyy)	Lab Matrix* or D-F	Field Matrix* AIS	# of Cont
69-0558-001	STRAND	End	RS 07-16-2009	0 2 M	NW	WU Surf	2
ANALYSIS*		Sampler Comments (filter volume, special handling, etc.)					
EF PRESERV							
Sampler's Name:* James F. Johnson HP Phone#: 850-867-1837 Sampler's Signature:* [Signature] Address: contact person Peter Sampler's Organization: Three Lakes Development Assoc. Receiving Comments: Please log the sample under one workorder. There should be a total of six samples in separate coolers. Relinquished by/Affiliation TLDA [Signature] Kim Buckho (Sampler)							

Schisler Lake – 69-0533

Schisler Lake has a maximum depth of 19 feet, and is about 64 acres in area. It drains into the east end of Strand Lake and is also in the Whiteface River watershed. For 2026, Chlorophyll and phosphorus values returned values very close to those from Strand Lake again this year. Not enough data yet to make a graph...

Schisler Lake Water sampling results

Lake	Year	Chlorophyll A	Phosphorus
Schisler	2025	8.3	0.032
Schisler	2026	6.9	0.043



C-2399

WO#: 10780613



Minnesota Pollution Control Agency		MPCA Chain-of-Custody Form		Work Order Number:			
Facility Code:*		PROJECT/CLIENT INFO		Turnaround Time:			
Project Name:*		Program Code (MDH Lab Only):		LAB			
Project Manager:		Project Task Code:*		Lab Name:			
Potential Hazard?		If yes, add information to Sampler Comments field		Address:			
EPA Lab ID:*							
SAMPLE TYPES Sample - Routine Sample QC-FB - Field Blank Sample QC-FB - Trip Blank Sample QC-FB - Equipment Blank Treated-Mtd - Treatment system sample Treated-Post - Treatment system sample		SAMPLE METHODS Lab sample CF - Composite, time-based w/AS CF - Composite, flow-based w/AS D-F - Discrete flow-based w/AS D-F - Discrete flow-based w/AS SW-GAS - Gas Sampling Unknown - Unknown		SAMPLE DETAILS BI - Biological Material OT - Other TS - Tissue		ANALYSIS REQUESTED FIELD MATRICES Wt-Ground - Groundwater Wt-Surf - Surface Water Wt-Drnk - Drinking Water QC-BLANK - Artificial Blank Water Leachate - Leachate Sample Air-Indoor - Indoor Air Gas-Soil - Soil Gas	
SAMPLING METHOD DW - Drinking Water NW - Nonpotable Water SD - Soil/Solid ALC - Air		LAB MATRICES DW - Drinking Water NW - Nonpotable Water SD - Soil/Solid ALC - Air		ANALYSIS* ANALYSIS* EF - PRESERV.		Lab Sample No. 1 2 3 4 5 6 7 8 9 10	
Depth Start (ft) End (ft)		Sampling Method* Units (m or ft) Start (hr:mm) End (hr:mm)		Field Matrix* Matrix* AIS		Sampler Comments (filter volume, special handling, etc.)	
Start Date* (mm/dd/yyyy) Start Time* (mm/dd/yyyy)		End Date (mm/dd/yyyy) End Time (mm/dd/yyyy)		Lab Matrix* Matrix* AIS		Complete ONLY if Method is CI, CT, D-F, or D-F Method is CI, CT, D-F, or D-F	
Field Name 61-0533-00 WISLA-AS 07/06/2016 11:00		Sample Type* Type* (mm/dd/yyyy)		Units (m or ft) 2 m G		Field Matrix* Matrix* AIS	
Sampler's Name:* CHRISTIAN M. PETERSON		Phone#: 318-761-2618		Billing Organization: THREE LAKES DEVELOPMENT ASSOC.		Address: P.O. Box 174 Cotton MN 55724	
Sampler's Signature:* 		Address: P.K. Jongeward 218 341 Ave 17 PKJongeward@gmail.com		Courier Name: Tracking#:		Accepted By: Date/Time	
Sampler's Organization: THREE LAKES DEVELOPMENT ASSOC.		Receiving Comments: Please log the sample under one workorder. There should be a total of six samples in separate coolers.		Relinquished By: Affiliation		Date/Time 7-16-26 13:09	
Relinquished By: Affiliation		Relinquished By: Affiliation		Date/Time 7-16-26 13:09		Date/Time 7/16/24 13:04 4.5.0	

Our annual water sampling campaigns have been providing water quality data to the MPCA since 1995, a very good record for lakes in our region of the state. We report directly to the MPCA under MPCA **PRJ # 07135**, and our MPCA contact person in St Paul is:

Mary Knight
Environmental Analysis & Outcomes Division
Minnesota Pollution Control Agency
(651) 757-2424
mary.knight@state.mn.us

The analytical laboratory we deal with is Pace Analytical Services located in West Duluth, they are very familiar with what we need. Each year we pick up from them the prepared sample containers a week or two before the decided sampling date. Our Pace contact person this year (2026) has been very helpful.

Karenzha Schemmer
Project Manager, MN
Pace Analytical Services
4730 Oneota St, Duluth, MN 55807
218-241-4011 | www.pacelabs.com
karenzha.schemmer@pacelabs.com

If there are any questions in the community about this report, please feel free to contact your local lake director or TLDA board member, or me (PKJ) personally.

Peter Jongewaard
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Canyon MN 55717
218-341-4017
pkjongewaard@gmail.com

Please keep doing the good work of keeping our lakes clean!