



October 25, 2017

To whom it may concern:

This past field season Krohns Lake in Kewaunee County was part of the DNR Directed Lakes Monitoring Program. Through this program, Krohns Lake was sampled three times to help determine overall lake health. This report details the 2017 water chemistry monitoring results.

Water Chemistry

The following information is taken from the West Alaska Lake webpage provided by the DNR.

<http://dnr.wi.gov/lakes/lakepages/LakeDetail.aspx?wbic=94700>

Krohns Lake - Middle was sampled 15 different days during the 2017 season. Parameters sampled included:

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

The average summer (July-Aug) secchi disk reading for Krohns Lake - Middle (Kewaunee County, WBIC: 94700) was 5.25 feet. The average for the Southeast Georegion was 6.5 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 µg/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 Krohns Lake - Middle. The average summer Chlorophyll was 2.9 µg/l (compared to a Southeast Georegion summer average of 25.3 µg/l). The summer Total Phosphorus average was 14.2 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.

The overall Trophic State Index (based on chlorophyll) for Krohns Lake - Middle was 43. The TSI suggests that Krohns Lake - Middle was mesotrophic. Mesotrophic lakes are characterized by moderately clear water, but have an increasing chance of low dissolved oxygen in deep water during the summer.

Lake Water Quality 2017 Annual Report

Krohns Lake
Kewaunee County
Waterbody Number: 94700

Lake Type: SPRING
DNR Region: NE
GEO Region: SE

Site Name	Storet #
Krohns Lake - Middle	313030

Date	SD (ft)	SD (m)	Hit Bottom	CHL	TP	TSI (SD)	TSI (CHL)	TSI (TP)	Lake Level	Clarity	Color	Perception
06/27/2017	6.3	1.9	NO			51			HIGH	MURKY	BROWN	3-Enjoyment somewhat impaired (algae) 4-Would not swim but boating OK (algae)
07/05/2017	4.5	1.4	NO			55			HIGH	MURKY	GREEN	
07/17/2017				2.02	15.2	40	49					
07/17/2017	6.2	1.9	NO	2.02	15.2	51	40	49	NORMAL	CLEAR	GREEN	
07/29/2017	7	2.1	NO			49			HIGH	MURKY	GREEN	3-Enjoyment somewhat impaired (algae) 4-Would not swim but boating OK (algae)
08/13/2017	4.5	1.4	NO			55			NORMAL	MURKY	GREEN	
08/14/2017	3.3	1		3.43	12.1	60	44	47				
08/14/2017	3.3	1	NO			60			NORMAL	CLEAR	GREEN	3-Enjoyment somewhat impaired (algae) 4-Would not swim but boating OK (algae)
08/22/2017	5.3	1.6	NO			53			HIGH	MURKY	GREEN	3-Enjoyment somewhat impaired (algae) 4-Would not swim but boating OK (algae)
08/30/2017	7.9	2.4	NO			47			HIGH	MURKY	GREEN	3-Enjoyment somewhat impaired (algae)
09/07/2017	9	2.7	N	3.73	15.1	45	45	49	NORMAL	CLEAR	GREEN	3-Enjoyment somewhat impaired (algae)
09/23/2017	6.2	1.9	NO			51			NORMAL	MURKY	GREEN	4-Would not swim but boating OK (algae)

07/17/2017		
Depth METERS	Temp. DEGREES C	D.O. MG/L
1	24	8.9
2	23.7	8.8
3	21	13.2
4	15.4	6.7
5	11.2	2.6
6	8.9	.2
7	7.4	.2
8	6.8	.1
9	6.3	.1

08/14/2017		
Depth METERS	Temp. DEGREES C	D.O. MG/L
1	23.8	8.9
2	22.9	8.9
3	21.8	9.2
4	16.2	5.3
5	11.7	.4
6	9.2	.3
7	7.7	.2
8	7	.1
9	6.5	.1
10	6.1	.1

09/07/2017		
Depth METERS	Temp. DEGREES C	D.O. MG/L
1	19	8.77
2	18.97	8.58
3	18.95	8.61
4	16.36	2.88
5	11.25	.45
6	9.34	.35
7	7.84	.25
8	7.28	.21
9	6.57	.17
10	19.0	8.8

SD = Secchi depth measured in feet converted to meters; Chl = Chlorophyll a in micrograms per liter(ug/l); TP = Total phosphorus in ug/l, surface sample only; TSI(SD), TSI(CHL), TSI(TP) = Trophic state index based on SD, CHL, TP respectively; Depth measured in feet.

This report summarizes the 2017 monitoring results. This data was collected to add to the data that was collected in Krohns Lake during the summer of 2016 as part of the Directed Lakes Program.

If you have any questions regarding the survey results from West Alaska Lake, please feel free to contact me at 920-662-5497 or at holly.stegemann@wisconsin.gov.

Sincerely,

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