



October 25, 2017

To whom it may concern:

This past field season West Alaska Lake in Kewaunee County was part of the DNR Directed Lakes Monitoring Program. Through this program, West Alaska 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=94300>

West Alaska Lake - Deep Hole was sampled **3** different days during the 2016 season. Parameters sampled included:

- water clarity (SD)
- temperature
- dissolved oxygen (D.O.)
- total phosphorus (TP)
- chlorophyll (CHL)

The average summer (July-Aug) secchi disk reading for West Alaska Lake - Deep Hole (Kewaunee County, WBIC: 94300) was 11.3 feet. The average for the Southeast Georegion was 6.5 feet. Chemistry data was collected on West Alaska Lake - Deep Hole. The average summer Chlorophyll was 4 $\mu\text{g/l}$ (compared to a Southeast Georegion summer average of 25.3 $\mu\text{g/l}$). The summer Total Phosphorus average was 17.6 $\mu\text{g/l}$. Lakes that have more than 20 $\mu\text{g/l}$ and impoundments that have more than 30 $\mu\text{g/l}$ of total phosphorus may experience noticeable algae blooms.

The overall Trophic State Index (based on chlorophyll) for West Alaska Lake - Deep Hole was 45. The TSI suggests that West Alaska Lake - Deep Hole was mesotrophic. Mesotrophic lakes are characterized by moderately clear water, but have a increasing chance of low dissolved oxygen in deep water during the summer.

Lake Water Quality 2017 Annual Report

West Alaska Lake
Kewaunee County
Waterbody Number: 94300

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

Site Name	Storet #
West Alaska Lake - Deep Hole	313170

Date	SD (ft)	SD (m)	Hit Bottom	CHL	TP	TSI (SD)	TSI (CHL)	TSI (TP)	Lake Level	Clarity	Color	Perception
07/17/2017				4.18	19.5		46	51				
07/17/2017										CLEAR	BLUE	
08/14/2017	11.3	3.4		3.9	15.6	42	45	49				
08/14/2017										CLEAR	BROWN	
09/07/2017	11	3.4	N	5.49	17.1	43	48	50		CLEAR	BROWN	

07/17/2017		
Depth METERS	Temp. DEGREES C	D.O. MG/L
1	24.13	9.77
2	23.93	9.24
3	23.17	11.32
4	18.05	13.3
5	12.95	.99
6	10.3	.61
7	8.6	.29
8	7.83	.18
9	7.49	.16
10	7.27	.15

08/14/2017		
Depth METERS	Temp. DEGREES C	D.O. MG/L
1	23.18	8.97
2	23.01	8.07
3	22.27	7.42
4	19.63	5.77
5	14.93	.52
6	10.92	.22
7	8.95	.16
8	8.04	.15
9	7.65	.15
10	7.48	.15

09/07/2017		
Depth METERS	Temp. DEGREES C	D.O. MG/L
1	19.23	6.75
2	19.21	6.92
3	19.15	6.71
4	19.11	5.88
5	17.39	.41
6	12.3	.21
7	10.5	.25
8	9.03	.2
	19.2	6.8

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 West Alaska 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,

Holly Stegemann

Holly Stegemann
Water Resources Management Specialist
Wisconsin Department of Natural Resources