

2015		Green Lake, Green Lake County, Wisconsin, USA								Page 1	Table 1
WEST BASIN		HIGHWAY A, Inlet Rd.				CUSTER COLOR PUBLIC (1-5)			TEMPERATURES (F)		
DAY/DATE	TIME	SECCHI (FT)	LAKE LEVEL (FT)	COLOR (EYE)	DEEP-WATER	1/2 SECCHI	1/2 M (2 FT)	PERCEPTION	AIR	LAKE SURFACE	
Fri May 22	1:25	6.5	6.47	green-brown	murky	2	2	3	63	58	
Sun Jn 14	12:00	32.0	6.74	green-brown	clear	4	1	1	74	68	
Wed Jn 24	11:00	27.5	6.57	green-brown	clear	4	1.5	2	80	73	
Mon Jn 29	11:10	25.0	6.52	green-brown	murky	4	1.5	3	70	74	
Thu Jul 9	1:26	20.0	6.52	green-brown	murky	4	1.5	3	*	74	
Wed Jul 15	10:20	18.0	6.61	green-brown	murky	4	2	3	64	74	
Thu Jul 23	1:25	17.5	6.54	green-brown	murky	4	1.5	3	88	78	
Mon Jul 27	10:10	16.0	6.50	green-brown	murky	4	1.5	3	78	78	
Wed Aug 5	1:48	13.5	6.34	green-brown	murky	3	2	3	80	76	
Wed Aug 1	10:45	8.0	6.40	green-brown	murky	2	2	4	80	76	
Mon Aug 17	10:20	10.0	6.36	green-brown	murky	3	2	4	80	77	
Thu Aug 27	11:20	12.0	6.31	green-brown	murky	3.5	1.5	3	69	70	
Fri Sep 4	1:05	9.5	6.39	green-brown	murky	2.5	2	3	77	74	
Sun Oct 18	11:55	10.0	6.36	green-brown	murky	3	1.5	3	51	57	
AVERAGE		16.1	96.36 FT. above			3.5	1.7	2.9	74	73	
			sea level								
2015											
EAST BASIN		AT MONITORING DATES				CUSTER COLOR PUBLIC (1-5)			TEMPERATURES (F)		
DAY/DATE	TIME	SECCHI (FT)	GLSD RAINFALL (IN.)	COLOR (EYE)	DEEP-WATER	1/2 SECCHI	1/2 M (2 FT)	PERCEPTION	AIR	LAKE SURFACE	
Fri May 22	1:50	6.5	0.3	green	murky	2	2	3	80	60	
Sun Jn 14	12:35	38.0	5.3	green-brown	clear	4	1	2	78	70	
Wed Jn 24	11:30	29.0	2.4	green-brown	clear	4	1.5	2	80	72	
Mon Ju 29	11:35	23.5	0.6	green-brown	murky	4	1.5	3	78	72	
Thu Jul 9	1:50	14.0	0.2	green-brown	murky	4	1.5	4	76	76	
Wed Jul 15	10:50	12.0	1.8	green-brown	murky	4	2	4	68	75	
Thu Jul 23	1:55	14.0	0.6	green-brown	murky	3	1.5	3	89	80	
Mon Jul 27	10:40	12.0		green-brown	murky	3	2	4	79	78	
Wed Aug 5	2:10	7.5		green-brown	murky	2	2	3	82	79	
Wed Aug 1	11:15	8.0	1.1	green-brown	murky	2	2	4	84	76	
Mon Aug 17	11:15	10.0		green-brown	murky	3	2	4	84	79	
Thu Aug 27	11:50	9.5	1.1	green-brown	murky	3	2	4	72	70	
Fri Sep 4	1:35	10.0	1.2	green-brown	murky	2	1.5	3	80	76	
Sun Oct 18	12:50	11.0	4.6	green	murky	3	2	5	58	65	
AVERAGE		14.6	=19.2 TOTAL " rain			3.1	1.8	3.4	78	73	
			between dates.								
Winter before 2015 summer records: Ice on lake is 83 days.											
Freeze date is 1/11/15; Thaw date is 4/4/1. (Records from 1939 at GLDS).											

INFORMATION AND COMMENTS ON MONITORING BOTH EAST & WEST DEEP-WATER STATIONS, GREEN LAKE, GREEN LAKE COUNTY, WI. U.S.A.

2015 DATES		Page 2	Table 2	
Fri May 22	Very unusual to see school of 36 carp at north shore pier. Lake very calm and water murky and green-brown. No blue-green (BG) algae observed. East end only HYDROLAB showed both excellent DO's but Turbidity definitely not working as 0.0 from surface to 25 m.			
Sun June 14	Even though CLEAR recorded in deep-water stations & Secchi at its deepest for this season at 32 & 38 ft., at ladders of many piers are very muddy. Harvestor was in north shore area & hardly picked up any weeds. A previous lake survey by another boat would be helpful to find locations of abundant weeds. Still no BG algae observed. Plenty of zooplankton, green algae, <i>Ceratium</i> , a few diatoms, golden & protozoa.			
Wed June 24	Floating filamentous algae (greens); <i>Spirogyra</i> , <i>Mougeotia</i> , <i>Ulothrix</i> , <i>Zygnema</i> . Flowering macrophytes are in Pondweed group: Claspingleaf, Sago & invader Curly-leaf. Deep-water & shallow areas are clear. Taxa are: BG's #4, greens #8, diatoms #4, & <i>Daphnia</i> very active with <i>Ephippium</i> (resting stage of <i>D.</i>). Many other plankton observed.			
Mon June 29	<i>Ranunculus</i> in bloom. Same four filamentous algae (see above) floating and attached to plants. Blue-greens; <i>Gloeotrichia</i> , <i>Microcystis</i> , <i>Anabaena flos aqua</i> , <i>Coelastrum</i> , <i>Chroococcus</i> & <i>Gleocapsa</i> are floating at & below water surface. <i>Ceratium</i> most abundant, very active & broken.			
Thur July 9	East end (4) worse than west end (3) according to My Perception. First time I observed <i>ZM Velligers</i> (immature zebra mussels). <i>Ceratium</i> still most abundant. 7 BGs, 8 greens & many others listed in 5th report.			
Wed July 15	East is still worse than west in My Perception. Abundant plankton is suspended under surface of water & down to 17 ft.			
Thur July 23	Molted gull feathers floating & plankton are visible and are distributed high and low in the upper lake water. <i>Ceratium</i> most abundant of all. <i>ZM Velligers</i> abundant. Many fibers observed. Unknown filamentous green algae conjugating with zygospores. Marl appearing on weeds.			
Mon July 27	Many floating molted gull feathers, foam, pulled out & cut up weeds, especially wild celery. Floating duckweed is at east end coming from Silver Creek inlet. Some empty filamentous algae. <i>Ceratium</i> Most Abundant, also <i>Vorticella</i> & <i>Dinobryon</i> are abundant. Many plankton taxa!			
Wed Aug 5	BG <i>Anabaena spp.</i> & <i>Microcystis spp.</i> are Very Abundant. <i>Ceratium</i> and <i>Vorticella</i> are abundant. <i>ZM Velligers</i> infrequent today. East end (4) is worse than the west end (3) in My Perception & Secchi shows this, too. Duckweed & watermeal into lake from Silver Creek via east winds.			
Thur Aug 6	Mud & debris at n.shore pier. Many pieces of plants & animals, debris, fibers & terrestrial seeds in tows			
Wed Aug 12	Lake water very green but not a bloom (wind?). Many gulls & floating molted feathers. Both West & East poor (4) in My Perception & Secchi depth is 8.0 ft at both. Many plankton but <i>Cyclops</i> and <i>Daphnia</i> are infrequent. No <i>ZM Velligers</i> observed today.			
Mon Aug 17	Surface foam from motor boat activity, molted feathers from gulls, and many cut macrophytes floating as growing close to surface now. Wild celery female flowers on their spiral stems visible above their thick mats of leaves. No <i>Daphnia</i> observed at and above plankton tow.			
Thur Aug 27	Female flowers of wild celery are nearing surface & masses of weeds with large amount of filamentous algae visible. Two carp: one natural and one Koi-like. No <i>Daphnia</i> observed. Infrequent <i>Cyclops</i> and <i>ZM Velligers</i> . Lake is green in color.			
Fri Sep 4	Slight surface skim of light green color is BG <i>Anabaena</i> . Many pulled out and chopped up weeds & attached aquatic weeds still heavy with filamentous algae. No <i>Daphnia</i> but abundant <i>ZM Velligers</i> .			
Sun Oct 18	<i>Anabaena flos aqua</i> is thick showing down below surface several feet at east end resulting in terrible <i>Anabaena bloom</i> . No <i>Daphnia</i> & infrequent (<i>dead</i>) <i>Cyclops</i> . Previous large quantities of filamentous algae found on bottom and weeds seem reduced to me. Near pier are school of minnow feeding on the surface and 8 nice-sized fish with dark tails. Dissolved Oxygen is very good from 2-25 M (high winds for days). Very Abundant beside BG above (see June 29) are <i>Vorticella</i> , <i>Golenkinia (in clusters)</i> , <i>Dinobryon</i> & <i>Polyarthra</i> .			

Mary Jane Bumby, Volunteer Monitor, Green Lake, WI							Report: August 17, 2015				
							Page 3	HYDROLAB: Table 3			
Depth	M	IBV	TEMP	DO %	DO mg/l	SPC	TDS	pH	PCY	CHL	TURB
WEST	2	7.2	25	126.4	8.6	484	31	9.0	1140	0.0393	1.7
ssy!	5	7.1	25	122.3	8.4	484	31	8.9	1727	0.0729	2.4
	10	7.1	23	98.7	6.7	489	31	8.7	1247	0.0531	2.3
	15	7	15	45.1	3.2	504	32	7.9	1002	0.0400	0.6
	20	7	5.9	44.8	5.6	498	32	8.1	232	0.0135	0.0
a present	25	7	5.4	84.6	8.9	497	32	8.3	670	0.0227	0.0
a											
Depth	M	IBV	TEMP	DO %	DO mg/l	SPC	TDS	pH	PCY	CHL	TURB
EAST	2	7.1	26	136.5	9.15	480	31	9.1	1072	0.0259	2.0
	5	7	26	131.6	8.9	479	31	9.1	2186	0.0831	2.6
	10	7	25	116.7	8.0	481	31	8.9	1443	0.0659	3.0
	15	7	11	62.5	5.4	502	32	8.2	650	0.032	0.1
	20	6.9	9.0	54.7	5.3	203	32	8.4	902	0.0352	0.0
	25	6.9	7.5	65.8	6.7	500	32	8.5	495	0.0178	0.0
Mary Jane Bumby, Volunteer Monitor, Green Lake, WI							Report: August 27, 2015				
Depth	M	IBV	TEMP	DO %	DO mg/l	SPC	TDS	pH	PCY	CHL	TURB
WEST	2	7.3	24.5	124.3	8.8	485	31	8.8	1256	0.0241	0.0
sk	5	7.2	20.5	109.6	8.2	486	31	8.7	2225	0.0653	0.2
	10	7.2	20.3	103.5	7.7	486	31	8.6	1904	0.048	0.2
	15	7.2	13.3	29.6	2.3	504	32	7.8	561	0.0252	0.0
	17.5	7.0	9.3	46.0	4.7	502	32	8.1	953	0.0252	0.0
	20	7.0	8.0	59.3	6	501	32	8.1	553	0.0179	0.0
	25	6.9	6.7	68.7	7	500	32	8.1	375	0.0152	0.0
Depth	M	IBV	TEMP	DO %	DO mg/l	SPC	TDS	pH	PCY	CHL	TURB
EAST	2	7.0	21.7	122.2	8.9	489	31	8.8	1651	0.0353	0.0
	5	7.1	20.8	120.8	9.0	482	31	8.9	2689	0.0697	0.5
	10	7.0	20.6	111.2	8.2	484	31	8.8	2432	0.0721	0.3
	12.5	7.0	20.4	100.6	7.4	486	31	8.7	1615	0.0448	0.0
	15	7.0	12.4	51.8	4.4	503	32	7.9	827	0.0055	0.0
	17.5	6.9	9.9	38.1	3.7	303	32	8.2	823	0.0351	0.0
	20	6.9	7.6	54.8	5.5	501	32	8.4	453	0.0274	0.0
	25	6.9	6.1	64.2	6.7	502	32	8.4	823	0.0134	0.0

Mary Jane Bumby, Volunteer Monitor, Green Lake, WI

Report: October 18, 2015

HYDROLAB: Table 3 (cont.)

<u>Depth</u>	<u>M</u>	<u>IBV</u>	<u>TEMP</u>	<u>DO %</u>	<u>DO mg/l</u>	<u>SPC</u>	<u>TDS</u>	<u>pH</u>	<u>PCY</u>	<u>CHL</u>	<u>TURB</u>
WEST	2	7.1	14.2	115.8	9.7	485	31	9.1	1368	0.0271	0.0
	5	7.0	13.9	99.0	8.5	486	31	9.1	2139	0.0771	0.0
	10	7.0	13.9	97.3	8.3	486	31	9.1	2112	0.0907	0.0
	15	6.9	13.9	94.6	8.1	486	31	9.1	1830	0.0793	0.0
	20	6.9	10.4	73.5	6.4	500	32	8.8	962	0.0304	0.0
	25	6.8	7.1	58.0	6.0	500	32	8.8	372	0.0124	0.0

<u>Depth</u>	<u>M</u>	<u>IBV</u>	<u>TEMP</u>	<u>DO %</u>	<u>DO mg/l</u>	<u>SPC</u>	<u>TDS</u>	<u>pH</u>	<u>PCY</u>	<u>CHL</u>	<u>TURB</u>
EAST	2	6.9	14.4	120.8	10.0	487	31	9.4	1669	0.0361	0.0
	5	7.0	14.1	165.2	9.0	487	31	9.4	3051	0.0973	0.0
	10	7.0	14.0	102.7	8.7	487	31	9.4	3772	0.1043	0.0
	15	7.0	14.0	99.4	8.5	487	32	9.4	2055	0.0880	0.0
	20	6.9	9.0	84.5	7.3	501	32	9.2	776	0.0237	0.0
	25	6.9	6.6	63.0	6.4	500	32	9.4	891	0.0243	0.0

HYDROLAB'S

TURB: TURBIDITY OBVIOUSLY IS NOT FUNCTIONING AS IT SHOULD THIS SEASON...

Table 4 (see Table 1)

DNR'S RANKED "PUBLIC PERCEPTION TABLE" (1-5)

1. Beautiful, could not be nicer.
2. Very minor aesthetic problems, great for swimming/boating.
3. Swimming and aesthetic enjoyment slightly impaired (algae).
4. Desire to swim and lake enjoyment very much reduced (algae).
5. Swimming and aesthetic enjoyment nearly impossible (algae).

ZM v's : microscopic view of Zebra Mussel (ZM) veligers identified as most like "15-day ZM veligers" based on colored photos from Ontario Ministry of Natural Resources.

Monitoring by Mary Jane Bumby
Green Lake, Green Lake County,
Report completed February 11, 2016