

Report to White Lake Town Board October 2023

Diane Lauritsen, Ph.D.
LIMNOSCIENCES

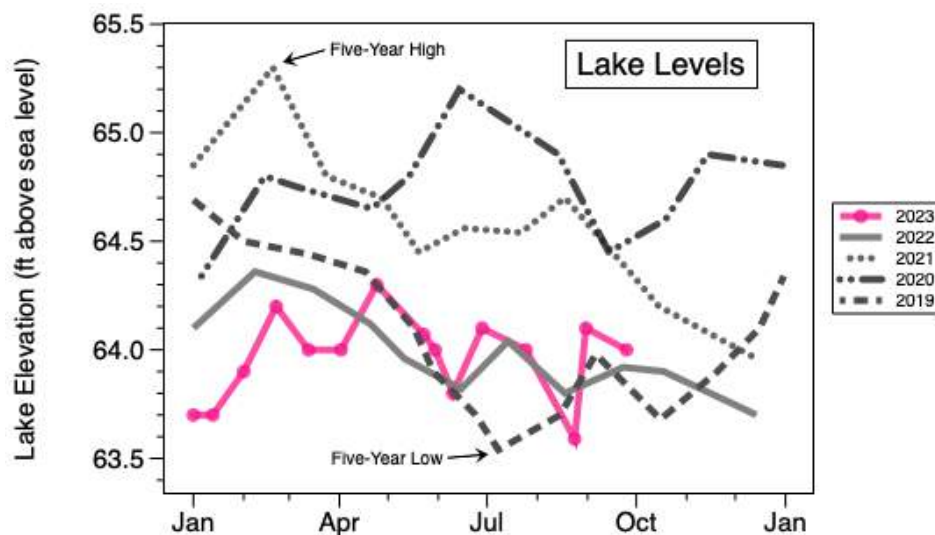
1. Rainfall and Lake Levels

The latest tropical storm to hit the area, Ophelia, did not contribute much rain to White Lake (1 inch), and the lake level remained consistent through September ranging from 64.1 to 64 feet NAVD 88, which is slightly above the September 2022 and 2021 levels. Water temperatures, however, have changed considerably in a month, dropping 6° C, or 11° F.

Monthly rainfall measured at the Town of White Lake wastewater treatment plant, with the long-term monthly average for Elizabethtown (right column).

Monthly Rainfall (inches) for White Lake 2012-2023

Month	2023	2022	2021	2020	2019	2018	2017	2016	2015	2013	2012	Monthly Average for Region
January	4.3	5.75	8.25	4.5	2.75	4.20	7.0	3.0	2.5	1.75	2.75	3.81
February	3.6	1.0	9.2	6.7	2.25	2.00	1.5	10.7	5.5	2.5	4.0	3.44
March	2.5	2.45	2.7	3.7	3.25	3.95	3.7	1.55	4.15	1.0	7.0	3.91
April	8.5	3.75	1.75	5.1	7.25	6.75	6.75	6.75	4.55	1.75	2.25	3.12
May	1.5	2.2	3.0	12.25	1.20	7.70	2.7	4.5	4.20	2.25	9.25	3.67
June	6.3	6.2	7.9	7.15	5.25	10.00	4.5	3.65	8.70	17.0	2.0	4.70
July	3.8	10.5	7.5	6.85	6.00	4.75	6.75	3.75	3.0	11.25	8.6	5.75
August	7.5	5.5	6.5	7.55	5.35	6.25	5.6	4.12	9.4	8.25	9.75	5.95
September	3.05	6.5	3.2	5.95	5.00	29.45	5.2	15.0	4.7	1.0	5.0	5.29
October		0.6	0.6	3.35	3.60	2.25	2.95	14.25	9.75	1.75	2.25	3.38
November		1.55	0.4	7.5	4.90	4.25	1.0	0.50	7.25	0	2.25	3.16
December		1.2	3.4	4.25	6.00	7.5	5.45	5.1	6.5	5.75	4.25	3.14
Total		47.2	54.4	74.85	52.80	89.05	53.1	72.67	70.20	54.25	59.35	49.32
% of Lake Volume		61.8	71	97	69	116	69	95	91	70	77	64



2. White Lake Thursday Night Bass Tournament

This tournament is over for the year, although there are still plenty of folks fishing at the lake. There is an abundance of small fish, including small bass, which can be seen feeding in shallow areas.

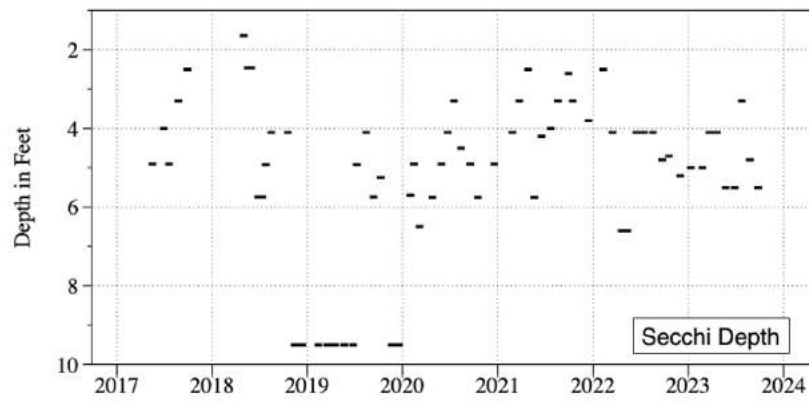
White Lake 2023 Thursday Night Bass Tournaments

Date	# Boats	# People	BF (lbs)	Comments
April 13	13	23	4.83	
April 20	19	36	5.45	2 fish > 5
April 27	22	41	4.85	
May 4	20	35	4.95	
May 11	26	46	5.65	5 fish >5
May 18	33	62	5.85	2 fish >5
May 25	31	59	5.2	
June 1	38	72	5.5	28 fish in weigh in; "a lot of new people"
June 8	47	89	5.55	
June 15	46	86	5.25	23 fish in weigh in
June 22	36	64	5.4	25 fish in weigh in
June 29	50	90	6.35	17 fish in weigh in
July 6	46	84	5.45	
July 13	36	66	4.95	
July 20	26	53	5.85	
July 27	31	55	4.60	
August 3	37	59	4.60	
August 10	18	30	4.30	
August 17	24	39	5.15	
August 24	21	34	3.30	
August 31	Cancelled			Hurricane/Tropical Storm Idalia, 7" rain
September 7	12	20	5.25	
September 14	21	37	4.50	

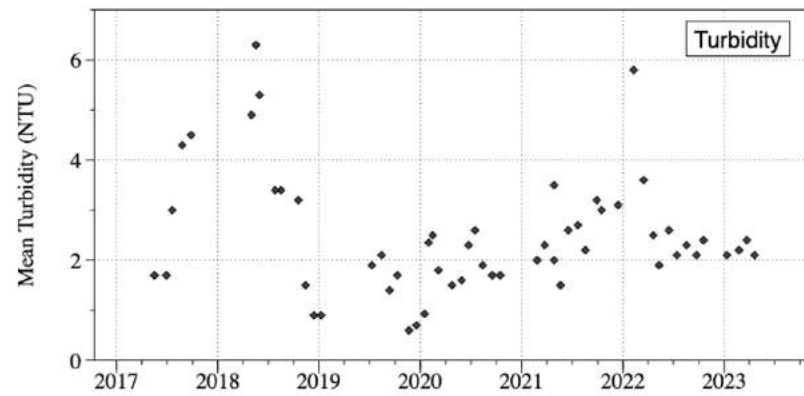
3. Clarity Improved, Also Improved Nearshore Conditions

There was a reduction in phytoplankton/algal biomass, and a reduction in pH, while clarity returned to levels seen earlier in the year. Also, the winds associated with the tropical storms helped to flush out sediment and decomposing material in nearshore areas, much as happened last September.

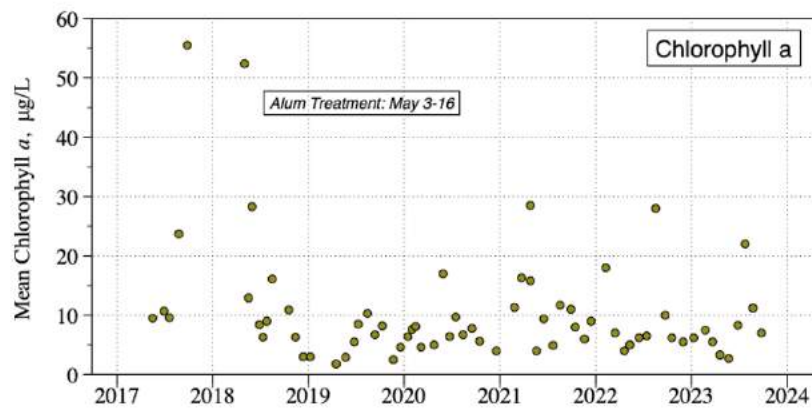
The stagnant water in the Turtle Cove outlet is unsightly and serves as a breeding ground for mosquitoes.



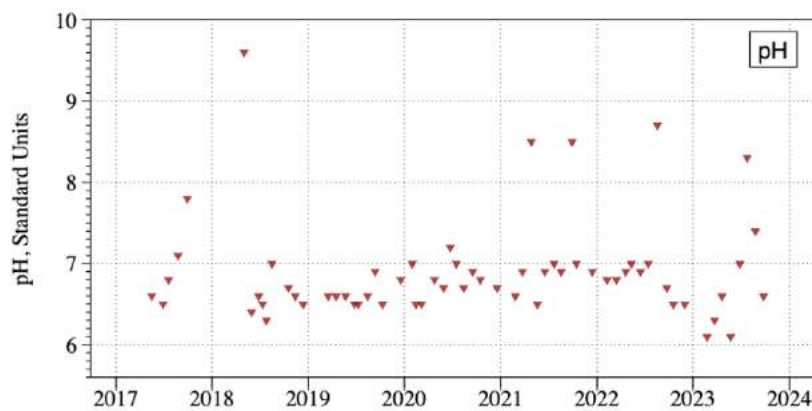
A field measure of clarity—max depth Secchi disk is visible



A lab measure of clarity—amount of suspended material in lake water



An indirect measure of the amount of suspended algae (chlorophyll is a photosynthetic pigment)



pH levels are higher when algal photosynthesis is higher, and lower when there is little algal biomass