

Report to White Lake Town Board June 2023

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LIMNOSCIENCES

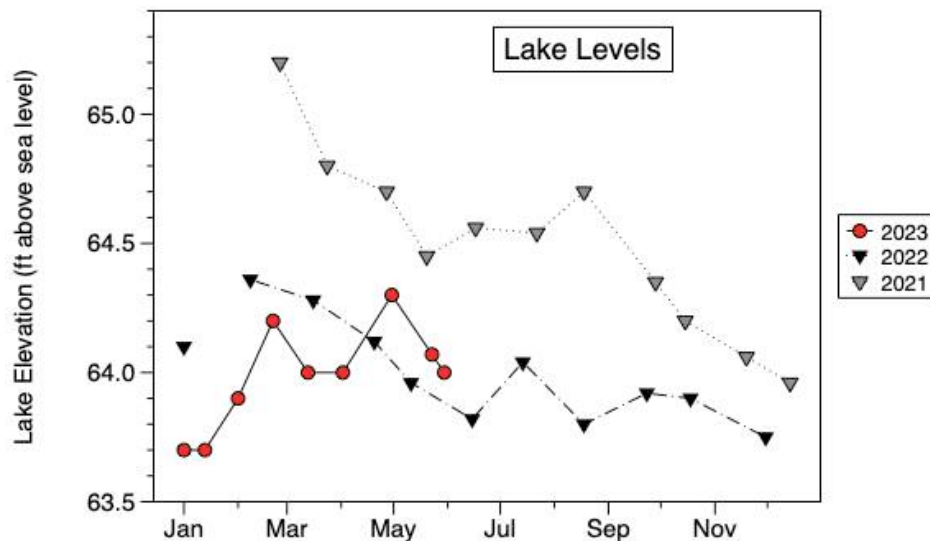
1. Rainfall and Lake Levels

There was little rain in May (1.5 inches total), and the lake level dropped 3.6 inches by the end of the month, bringing the lake level back to 64 feet NAVD 88.

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		6.2	7.9	7.15	5.25	10.00	4.5	3.65	8.70	17.0	2.0	4.70
July		10.5	7.5	6.85	6.00	4.75	6.75	3.75	3.0	11.25	8.6	5.75
August		5.5	6.5	7.55	5.35	6.25	5.6	4.12	9.4	8.25	9.75	5.95
September		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	72.87	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 attracting more interest over time due to size of the bass in the lake, the relative ease of lake access, and the popular food offerings provided by the marina. The largest fish caught to date in White Lake was slightly heavier than the largest bass caught in an April 15, 2023, tournament at Lake Waccamaw.

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"

3. Why is the Bass Fishing so Good?

Nutrients + **Shallowness** + **Sunlight**

Nitrogen levels higher

Very long growing season

Reaches lake bottom

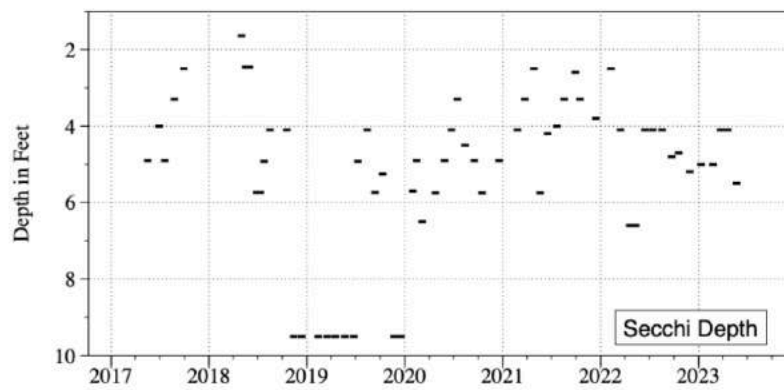
Plant life (including algae) does well in the lake due to these factors, producing food for small animals, that in turn become food for small fish, which the bass prey upon.

Plant beds found on the lake bottom are good fish habitat. The plants can be uprooted and wash ashore—two common small plants (dwarf milfoil and spikerush) were seen along the shore in May

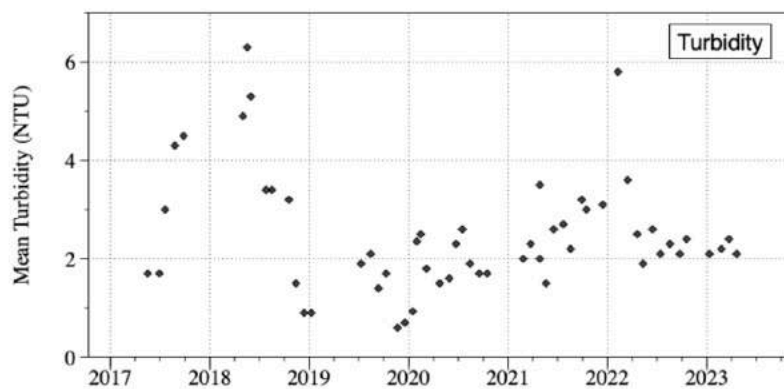


NC Wildlife Resources studied the aquatic plants of White Lake in 1976 and found most of the same plants that are presently found in the lake. They found an abundance of small animals associated with the plant/algae beds and noted that the vegetation would provide good fish habitat/food and stressed that no herbicide treatments were needed.

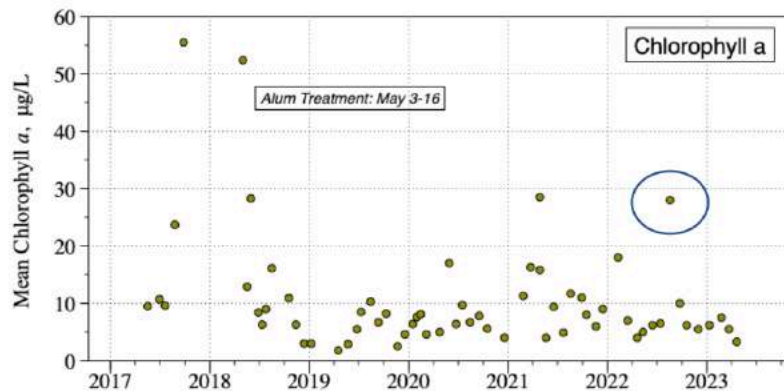
4. May Clarity Trends Similar in 2021, 2022, 2023



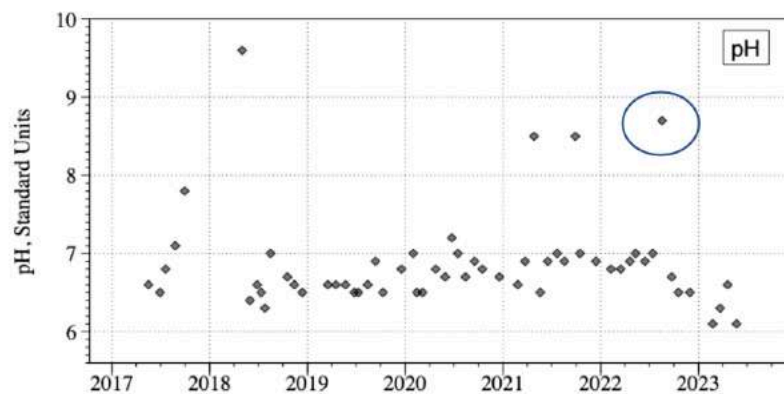
A field measure of clarity—how deep Secchi disk is visible



A lab measure of the amount of suspended particles in the 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

5. Turtle Cove Outlet Needs Work to Maintain the Channel for Flood Mitigation

As June marks the beginning of hurricane season, it bears repeating that the Turtle Cove outlet was initially developed in response to flooding concerns by lakeshore property owners, and it needs routine maintenance to ensure that when the time comes, it can help channel floodwaters away from the lake.



The outlet is not in the Town limits but should be so that it can be monitored and maintained, in partnership with State Parks and the property owner.