



Spring 2023 Newsletter \_\_\_\_\_ ○

# Happy Twentieth Anniversary!



# Dear Friends of the Lake...

Though some among us would have liked a bit more snow this season, nobody can complain of a long, harsh winter! Right around the corner will be April showers, May flowers and then Lake time! We are pleased to present our Twentieth Anniversary 2023 Spring newsletter, summarizing activity from 2022 plus ongoing projects, areas of focus and upcoming events. As always, please send all questions, comments,

and suggestions to [info@friendsofthelake.org](mailto:info@friendsofthelake.org).

Thank you for another great year,

Your Executive Board

## 20<sup>th</sup> Anniversary Celebration: August 10!

It is hard to believe that this summer we will be celebrating Friends of the Lake's 20th year. During the past two decades, our lake community has grown closer as our collective voice has grown stronger. We have become one of the leading grassroots organizations in the State of Connecticut. Alongside the Lake Lillinonah Authority, we have accomplished much to improve and protect our lake.

On August 10, 2023, our members, along with local and state politicians, will gather at the Sunny Meadows Farm in Bridgewater to celebrate the 20th Anniversary of Friends of the Lake. The evening will include a potluck dinner with music and a look back on our first 20 years. If you want to join the Anniversary committee, please email us at [info@friendsofthelake.org](mailto:info@friendsofthelake.org). More details will be sent via email as we get closer.

## Other Events

### Save the Lake Day, June 3

Gather at 8AM at the Bridgewater Boat Ramp! Volunteers will be shuttled by pontoon boats, circling Lake Lillinonah's shorelines to collect man-made trash and debris. Coffee, water, donuts, gloves, and garbage bags will be provided to all volunteers. Don't forget sunscreen, hats, and waterproof shoes! The day will end around 12:30PM with Pizza and refreshments.



## Lake Family BBQ, July 29th

Our lake community this summer will come together at Newtown's Lake Lillinonah Town Park at 194 Hanover Road, for a good old-fashioned BBQ of burgers, hot dogs, and chicken with all the fixings and sides. Please join us for a great opportunity to reconnect with some old friends and meet new ones. More details will be forthcoming via email as we get closer.



## Volunteers needed!

Over the course of the summer, volunteers and pontoon boats are always needed. We are a 100% volunteer driven non-profit organization. Your time goes a long way in helping us focus our membership dues on water quality and research work that enables us to continue to protect and improve Lake Lillinonah. If you can volunteer your time and/or your pontoon boat for events this summer, please email us at [info@friendsofthelake.org](mailto:info@friendsofthelake.org).

## Membership

We have 286 active members as we head into 2023! This is an all-time high, and something we are incredibly proud of. In the weeks ahead, we will be sending out some reminders to renew your membership. We have two easy ways to do it, either by check or online. We would also like to encourage every member to mention FOTL to new neighbors & friends who may have moved in over the past year!

Thank you, everyone, for your continued support

## Website update

We're excited to announce that the Friends of the Lake website has been updated and is fully live! The new site makes it easier to navigate to the information you are looking for. It features updated content & imagery, a stronger section around our community membership and volunteer efforts, and a larger portion around the popular 'Live Lake Data.'

## Water Quality

Lake Lillinonah enjoyed one of its best summers for water clarity since the formation of Friends of the Lake. Many factors could have contributed; here are some events that certainly helped:

- Several drawdowns / flushings in 2021
- Reductions in effluent discharges at the Pittsfield and Danbury Wastewater Treatment Facilities
- Low rainfall in 2022



We are very pleased to report that, after years of effort by many groups including FOTL, the city of Danbury completed a \$102.6 million upgrade to their wastewater treatment plant, operational in April of 2022. This upgrade significantly reduced the amount of phosphorus entering our lake while bringing Danbury into compliance with EPA regulations.

The following are several areas of FOTL water quality focus to bring you up to date on our continuing efforts.

## Algae Blooms

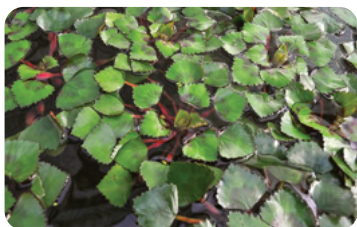
There were almost no cyanobacteria blooms in 2022 until September. There was a change in the dominant species of cyanobacteria. This same trend was found in many lakes across CT. We normally find *Microcystis* as our dominant species. This cyanobacterium produces the cyanotoxin microcystin, which is the toxin tested for by Western CT State University (WCSU). We are pleased to report that all samples submitted were well within the safe limit threshold. The highest sample submitted was approximately half of the currently advised threshold as determined by the CT Department of Public Health. The change in species also meant a change in the predominant cyanotoxin. The cyanotoxin of concern last season would have been Saxitoxin.

We are currently working with WCSU and CT DEEP to obtain the ability to test for this cyanotoxin in 2023. You can help by informing the CT DEEP when you see a bloom. Please download the Environmental Protection Agency BloomWatch app onto your phone. If you see a potential bloom, open the BloomWatch app, take some pictures and submit them. Your information will go to the Environmental Protection Agency and the CT DEEP.

## Invasive Plants

Invasive aquatic plants appeared to be reduced in 2022, except for water chestnut in the Housatonic River. We did not have an official survey performed last season but will welcome the invasive aquatic plant survey, to be conducted by FirstLight Power, in 2023. Our observation was that milfoil, the dominant invasive plant species in the lake, still occupied the same areas and covered the same acreage, yet the patches did not appear to be as dense as in prior years. We believe that the midsummer drawdowns of 2021 reduced the population, then the lack of nutrients in 2022 did not allow the plants to repopulate as strongly. Similar sparseness was also observed in Lake Zoar and Lake Housatonic this past season during formal surveys. We continue to monitor and investigate sources of nutrient loading to help limit milfoil growth.

The water chestnut population in the Housatonic Cove thrived during the 2022 season due to a lack of removal efforts. We have fixed a roadblock to these efforts and have a plan to attack the population in June of 2023 as the plant emerges for the season. Thanks to the three-year effort by FOTL members to remove the water chestnuts in the Still River, we are glad to see a significant reduction in that population. This past season only required three trips with five five-gallon buckets of water chestnuts removed to render the entire area clean. Helping us in our efforts were our good friends from the Lake Lillinonah Authority, who removed a significant number of plants from the lake also. With these combined efforts to remove water chestnuts, we are hopeful that within a few years we will have control of the population of water chestnuts in Lake Lillinonah.



## Monitoring Program

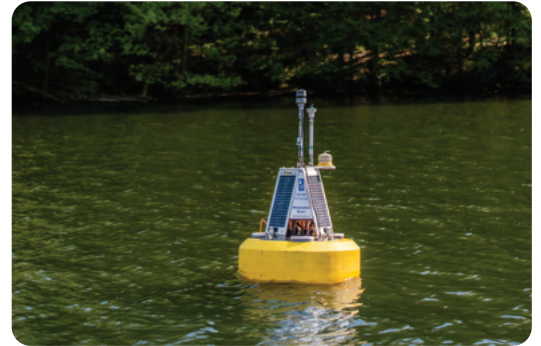
We have scheduled a conservative yet still comprehensive water testing schedule for this upcoming season. We will also continue our Citizen Led Environmental Observatory (CLEO) dock monitoring program. We have modified the program to include only data collection. This modification will allow us to include more monitoring sites. The requirement to collect water samples will no longer be needed, reducing the cost per site, while still offering valuable data.

We encourage anyone with access to a dock on the lake to collect simple observations for us. We can accommodate a maximum of ten sites. If you are interested in making observations for us, please let us know via email at [info@friendsofthelake.org](mailto:info@friendsofthelake.org).

We will include you in our brief training session and supply the necessary equipment. If CLEO does not fit your schedule, please consider adding BloomWatch to the apps on your phone and using it so CT DEEP is notified. We live on the second largest manmade lake in CT and we need members to volunteer to help monitor our beautiful lake!

## GLEON buoy

FOTL continues the operation and maintenance of a Global Lake Ecological Observatory Network buoy near the route 133 bridge. Data automatically collected by the buoy is shared globally for use in lake studies. Dr. Jennifer Klug of Fairfield University helps oversee this ongoing project. Live (during the warmer months) and historical data are available on our website. Data collected by the buoy includes temperature at each meter of depth, dissolved oxygen at the surface and at 15 meters, pH, conductivity, Phycocyanin Pigments and Chlorophyll Pigments to help measure clarity.



## Debris

First Light Power Resources (FLP), the owner of the lake, updated their collection methods last summer. They spent more time collecting large logs and gave more attention to the many coves that tend to be packed with woody debris. They also added two collection sites upriver to reduce the travel time involved in transporting debris for removal. As you can see in the table below, there was a roughly 6% reduction in the 'Lake Cubic Feet' in 2022 vs. 2021.

We thank FLP for their efforts, and appreciate the new methods introduced to combat the problem. The following report is issued by Conwood Foresters, a private forestry company retained by FOTL to provide debris survey services.

Summary of Lake Lillinonah Shoreline 2022 Woody Debris Survey Data Collection:

In October 2022, wood debris data was collected for 41 sample plots along the shore of Lake Lillinonah. Sample plots were randomly located in the past along the shore of the lake at approximately 4600' spacing and mapped with GIS software. These same plots are the ones located in 2021. The 41 plots are a 2% sample of the total length of the shore (39.5 miles). Each plot consists of 100' of shoreline from the water's edge to the high-water mark. At each plot the following was recorded: average plot width, adjacent land use, the dimensions of all woody debris whose large end falls within the plot, dimensions of all woody piles whose center fall within the plot, and the decay class of each piece or pile. Pieces must have a small end diameter of more than 1" and have over a half foot of length to be recorded. Forks off a main tree stem are recorded as separate pieces. Methods are based on USDA Forest Service Guidelines: Sampling Protocol, Estimation, and Analysis Procedures for the Down Woody Materials Indicator of the FIA Program Report NRS-22. Results:

- Adjacent Land Use: 6 residential plots (15%) and 35 forested plots (85%) – assumed the same use as 2021
- Plot Size: Plots average 7' wide and a total sampled plot area of 28,300 sq. ft. - assumed the same as 2021
- Plot Debris: 285 pieces having 1,053 cubic feet of material, with an average of 3.7 cubic feet/piece
- Piles: 45 piles having 4,581 cubic feet of material with an average of 102 cubic feet/pile
- Entire Lake: 286,720 cubic feet of material in 14,505 pieces and 2,290 piles.

## Historical Debris Survey Results:

	2017	2018	2019	2020	2021	2022
Shore Feet:	208,666	208,666	208,666	208,666	208,666	208,666
Plots:	41	41	41	41	41	41
Sample Feet:	4,100	4,100	4,100	4,100	4,100	4100
Lake Cu. Ft.:	246,320	95,321	73,025	134,068	306,015	286,720
Lake Pieces:	36,338	48,960	33,743	33,336	24,227	14,505
Lake Piles:	2,545	1,323	1,272	1,578	2,596	2,290

## Jeff Tinley Memorial Scholarship

This scholarship was established in loving memory of our dear friend and neighbor, founding member and board member Jeffrey Tinley, Esq. As a key member of Friends of the Lake, Jeff put his legal expertise to work on our behalf to help clean up the lake and to keep it clean for future generations.

Jeff was a member of the Connecticut Bar Association; he served on the Professional Discipline Executive Committee. He was generous with his time and talents and enjoyed taking on pro bono cases, serving as town attorney for Southbury and advocating for environmental preservation.

In one of his more notable battles, Jeff worked to get the discharge of phosphorus and nitrogen at the Danbury Wastewater Treatment Plant reduced. Jeff's efforts led Danbury to pay a \$100,000 fine and take measures to ensure that the city properly operates and maintains its sewage collection and treatment system to prevent further discharges of untreated wastewater into the Limekiln Brook and the Still River. As a result of these efforts CT DEEP subsequently designated these areas as "priority waterbodies" resulting in extra effort and focus on cleaning them up.

A \$1,500.00 scholarship will be awarded to a high school senior/college/grad student studying at a two- to four-year accredited institution. The student must demonstrate an interest in a field of study related to law or environmental sciences.

Students must be a child or dependent of a current member of Friends of the Lake. Applicants must apply by June 1. An application form is available online at [Friendsofthelake.org](https://friendsofthelake.org). Here is the link:

<https://friendsofthelake.org/jeff-tinley-scholarship-application> The scholarship winner will be announced during the Friends of the Lake anniversary meeting each August.

## Welcome To Our New Executive Board Members

To rejuvenate the gracefully aging executive board, FOTL has added three board members since our last newsletter. Please welcome

Mike Schimenti, Southbury

Bart Conant, Newtown

Jeffrey Bradshaw, Southbury

Each member was selected based on our knowledge of their experience, skills, and ties to Lake Lillinonah. We are excited to have new energy and capabilities added to our executive board!



## Editor's Corner

Out of curiosity, I asked the cold but willing and able ChatGTP (an artificial intelligence website) to 'write a paragraph about beautiful Lake Lillinonah and its history,' and here is what it returned:

"Lake Lillinonah is a large and scenic freshwater lake located in southwestern Connecticut, USA. The lake was formed in 1955 when the Shepaug Dam was built across the Housatonic River. Prior to its formation, the area was home to several small towns, and evidence of their existence can still be seen today in the form of submerged structures and artifacts. Today, Lake Lillinonah is an important recreational resource for the surrounding communities, with activities such as fishing, boating, and hiking being popular among visitors. The lake is home to several species of fish, including bass, trout, and pike, and is considered a prime destination for anglers. Additionally, the lake is surrounded by several parks and nature preserves, making it a great place to explore the natural beauty of Connecticut."

Impressed, I also asked it to write a poem about beautiful Lake Lillinonah and its environment:

"Lake Lillinonah, a jewel of the land,  
Reflects the beauty of nature's grand,  
A haven for all who seek to explore,  
A place where the heart and soul restore.  
With rolling hills and verdant shores,  
And crystal waters that nature adores,  
This tranquil spot has so much to give,  
A gift of life that all must preserve.  
From fishing boats to kayaks so fine,  
The waters of Lillinonah glisten and shine,  
With fish so abundant and birds on high,  
Nature's splendor is always nigh.  
But the lake's diversity is not just in fun,  
It's home to creatures both big and small,  
From turtles and otters to herons so tall,  
The ecosystem here is a treasure for all.  
To preserve this beauty and all that it holds,  
We must work together, young and old,  
To protect the waters and the land,  
And honor the gifts that nature has planned.  
For Lake Lillinonah's environmental beauty,  
And recreational diversity so true,  
Is a precious gem that we must cherish,  
A wondrous place for me and you."



Not Robert Frost but certainly better than I could do.... Would you like to try? Send your poems to [info@friendsofthelake.org](mailto:info@friendsofthelake.org) Thanks everyone.... Scott Conant, ed.