



Friends of the Lake

NEWSLETTER

2021



Dear Friends of the Lake:

We have now faced over a year of living with the Covid-19 pandemic together. There is light at the end of this long dark tunnel - thanks to the rollout of vaccines and all the hard work and dedication of our health care providers, first responders and front-line workers. This has been a world-changing event which will bring new challenges to our lives as we work our way forward.

We are grateful that you, the members of Friends of the Lake, were so supportive last year, even though our events had to be cancelled or altered and our anniversary party delivered via Zoom. With any luck, we will soon be able to gather again to strengthen our friendships and together, help this beautiful lake.

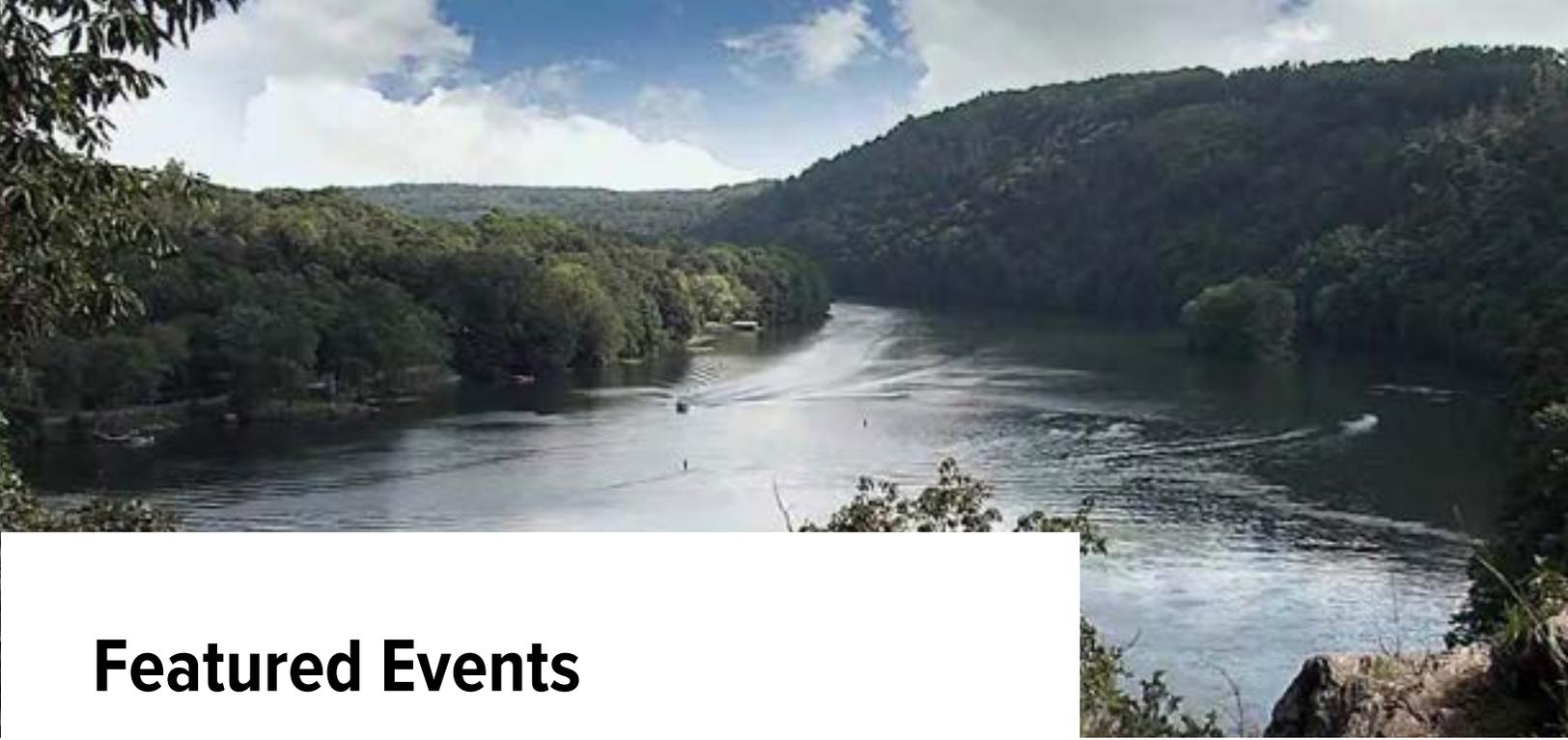
An unanticipated side effect of the pandemic was a large increase in boat traffic of all kinds on the lake last summer. Where we once saw a small group or two of kayakers, it seemed like herds of them went by daily... weather permitting. The number of pontoon and other pleasure boats also seemed to increase dramatically. We believe that this trend will continue; it was only a matter of time before the beauty and fun of Lake Lillinonah was to be discovered. We must all continue to be considerate of each other out there – please be aware of your wakes, your noise, and the safety and enjoyment of others.

We are also aware that we have many neighbors who are new to the lake; welcome! For those who have become members, thank you. If you have new neighbors who may be unaware of FOTL, please pass along our newsletter to let them know what we are up to. They can sign up easily online at www.friendsofthelake.org/support-us.

We are pleased to present this year's newsletter; thanks to your membership, much work continues in support of this great resource. As always, let us know if you have any questions or comments, or would like us to tackle any issues you find to be important and helpful to our lake.

Sincerely,

Your Executive Team



Featured Events

Annual Save the Lake Day - Weed pull

We are planning a weed pull near the Still River, like last years 'Save the Lake Day.' This is scheduled for the morning of Saturday, June 26th. We will need kayaks, canoes, Johnboats and pontoon boats! Please email us at info@friendsofthelake.org if you are interested in participating. Depending on the status of state and local Covid guidance, social distancing and mask wearing rules may be observed.

Dine Around / Community Event

Friends of the Lake is planning our summer event for Saturday, July 24, 2021! We will make the fourth Saturday in July our fixed date for our annual summer events. So, feel free to pencil it in for years to come! We are working hard to bring a safe, fun event to our members this summer...More details to follow...

Annual Anniversary party

Date and details to be determined.

Debris Survey

Due to the pandemic, Friends of the Lake changed the debris survey in 2020 from volunteer-based and instead hired ConnWood Foresters to provide both the survey labor and reporting (see below). Special thanks to executive member George Walker for implementing this change, coordinating ConnWood's efforts, and making sure that the important collection of woody-debris data continued without interruption. Because of last year's successful survey, coupled with a desire to gather data in as consistent a manner as possible, Friends of the Lake intends to continue using ConnWood's services for the debris survey going forward. Thank you all, for those who participated in prior debris surveys!

Membership Updates

FOTL has updated our communication capability to tailor our notifications to you and your family's needs. We understand that not all members want every update, so we can now accept family name, email, and cell numbers for up to four family members. You can then decide if you wish to be contacted by email, text alerts, both or neither. You should have received that form with your renewal letter earlier in the year. If you would like another copy of this form, please email us at info@friendsofthelake.org.

Water Quality

Eurasian Milfoil

Friends of the Lake has received two letters from Mr. Matthew Goclowski, Fisheries Biologist, Habitat Conversation and Enhancement Program of the CT-DEEP Fisheries Division, stating that Lake Lillinonah would not be a good candidate for our proposed research program to study movement of Triploid Grass Carp in and around Barkwood Falls cove. We responded to his first letter with a request for a second review based on our multi-faceted approach to controlling the invasive Eurasian Watermilfoil. We received a second letter with a resounding 'no.'

Water Chestnut

Thanks to the efforts of Rebekah White, Friends of the Lake received a grant to remove water chestnut near the mouth of the Still River in New Milford. Volunteers in kayaks and Johnboats gathered last June to remove as many young and established plants as possible. More pulling was performed during three weeks in August, and again in September. Efforts will continue in 2021 to keep this invasive plant from our waters. Thank you to Rebekah and all the volunteers who provided this amazing effort!

Rebekah provided the following description of this coming season's efforts:

This season we will aggressively attack a heavy water chestnut population located in a cove on the Housatonic River, just prior to the spillway to Lake Lillinonah. We are planning a pulling event in mid-June to address this section. We want to address this area early to remove as many plants as possible when the plant size is most manageable. The early harvesting also allows more of the germinating nuts to be removed from the silt, reducing growth later in the season. This area is not easily accessible, so we are considering hiring New England Aquatic Services to assist us. We will still welcome volunteers in the water but feel professional assistance would be the most efficient. We will need volunteers on shore to load the water chestnut into a dump truck for disposal. For the Still River section, we plan to organize an event like last years 'Save the Lake Day' scheduled for June 26th. We will need kayaks, canoes, Johnboats, pontoons, and volunteers!



June 23, 2020: Cove A, before



June 27, 2020: Cove A, after



August 28, 2020: Cove B, before



September 3, 2020: Cove B, after

Zebra Mussels

It has been reported in the Danbury News-Times that 39 Zebra Mussels have been found in Candlewood Lake. Based on our experience, we believe that it will not be long before they establish themselves there. They have certainly established in Lake Lillinonah and of course many other waterways in the United States. We are currently unaware of any means of their eradication. Boaters with outboard boats should obtain a boat lift, or at least be sure to raise their motors when not in use. Consider using a propeller lock to avoid theft of your prop. Boaters with inboard boats should invest in a boat lift to prevent the mussels from clogging the water intake, and to prevent their attachment to the hull. Pontoon boats can also be placed on a boat lift or can be painted below the waterline with anti-fouling paint to discourage the mussels from attaching.

Water Quality Monitoring / GLEON Buoy

This season we will continue the GLEON (Global Lake Ecological Observatory Network) buoy monitoring program, CLEO (Citizen Led Environmental Observatory) water quality monitoring program, EPA monitoring, water chestnut removal efforts, and weevil culturing. All these programs will be overseen by our Director of Water Quality, Rebekah White, and can be improved with the assistance of volunteers. Volunteers can gain an increased understanding of lake studies, ecology, and conservation. No prior training is needed. FOTL will always help students document time volunteered for community service or educational hours. Please consider joining us or sharing with a student any of these programs. Anybody regardless of age, knowledge or background can learn and enjoy by contacting us at info@friendsofthelake.org and telling us which programs interest you.

The buoy that is located east of the Rt. 133 bridge collects data every 15 minutes. The data collected is offered to a global network of scientists to utilize in studies of their choice. Additionally, we offer all the data collected to the State of CT Department of Environmental Protection (DEEP). CT DEEP chose Lake Lillinonah as one of two reservoirs in CT to utilize our data in a modeling project they are conducting to develop a TMDL (Total Maximum Daily Allowance) of nutrients the lake can handle before tipping the scales, leading to excess nutrients that cause an ecological imbalance, most often resulting in algal blooms. To assure we are supplying high quality data to all interested groups we need to maintain the buoy through documented calibration and maintenance practices. Monthly trips are conducted for calibration and anyone interested is welcome to join us.

Our CLEO water quality monitoring program from docks has been conducted for over a decade. We share data from this successful program with CT DEEP too. The volunteer program requires one morning of training in early May and less than 15 minutes of monitoring 3 times a week between Memorial and Labor Day. Our current volunteers may look forward to taking a holiday this season so volunteer substitutes are also welcome. Anyone, regardless of age can assist with this program. If you would like to join us in volunteering or simply learning more about this program, please email us. We are looking to do the training virtually, but all participants will need to meet the Director of Water Quality in person to conduct a sampling.

The Environmental Protection Agency (EPA) has conducted a "CyanoMonitoring," "CyanoScope," and bloom watch program to track cyanobacteria (algae blooms) across the nation. FOTL collects samples weekly to bi-weekly to contribute to this study. The water samples for the CyanoMonitoring are analyzed for the predominate pigments present. This quantitative analysis helps us determine the relative amount of cyanobacteria present vs. harmless green algae. The CyanoScope program examines samples under a microscope to determine which species of cyanobacteria are present. FOTL has a microscope that can be loaned out to assist and participate in this portion if desired. An easy way for all members to get involved is to download the EPA's BloomWatch app to your phone and report anytime you see a cyanobacteria bloom. The information you provide is sent directly to the EPA and CT DEEP. This coming season, sample water collected for this program will also be shared with Western CT State University's Dr. Wong for genetic testing to determine toxin productivity probability. By offering these samples to WCSU, we will receive near real-time toxin level results we can share with you. Following the water collection weeks, we will post the results of the test and include some educational material on the significance of those results. For more information on Dr. Wong's studies, please visit his web page at WCSU: <https://www.wcsu.edu/biology/surf/faculty-mentors/wong>

If you would like to join us on a collection day or view samples under the microscope, let us know. Water collection is usually performed during the week in the morning hours when there is less traffic on the lake. The microscope is portable and can be utilized outside or in the privacy of your home. It includes a camera, so we can discuss your findings remotely.



Eurasian Watermilfoil

We are in the process of ramping up our weevil culturing as a natural way to reduce milfoil in the lake. We will have a total of 18 tanks breeding weevils this season. If successful, this will provide enough weevils to treat 4 acres of milfoil. We will be conducting a milfoil weevil culturing training session in early June. Interested homeowners can utilize a tank or two to culture weevils on their property to treat their lakefront. Remaining tanks will be cultured by FOTL, volunteers, and interns to treat near the Bridgewater town launch and Southbury town launch. For the weevils cultured this season to be successful in surviving the winter, they need a shoreline with enough detritus, or leaf litter and low growth plants to protect them from the elements. If you wish to culture this year and have grass to the shoreline you would need to commit to providing a 15' no mow zone, besides a path to your dock, to increase their chances of survival. Culturing is time-consuming and the returns are not instant. This can be a successful program, but we need to give our weevil friends the best chance for survival to assist in the following seasons. Additionally, an increased no mow zone benefits the reduction of nutrients entering the lake, which will help reduce our algal blooms.

Please send an email to info@friendsofthelake.org if you are interested in attending the training and learning more about the weevils. All training for this program will be conducted outdoors.

If you have a milfoil issue in front of your property and weevils are not a solution for you, we have another non-chemical option. DASH, Diver Assisted Suction Harvesting, is a process where a diver pulls the milfoil out by the root from the silt and sends it up to a boat through a vacuum tube. This method is selective for milfoil since the diver can see and exclude native, beneficial aquatic plants. FOTL has an agreement with New England Aquatic Services to offer our lake residents a discount for their service. FOTL members interested in hiring New England Aquatic Services for DASH services on Lake Lillinonah can receive a 15% discount if booked before May 1, 2021. Their website is <https://newenglandaquatic.com>. You can reach them via email at info@newenglandaquatic.com, or call/text the owner Matt Vogt directly at 203-885-2318.

Let us know which programs you are interested in by emailing info@friendsofthelake.org. Once we know which programs you are interested in, we will contact you with further details. The training sessions are open to everyone, even if you just want information.

Lake Lillinonah Authority

FOTL executive board member Angela Macchiarulo attended a recent LLA meeting via Zoom, and reported the following, including very appropriate emoticons: 😊

The LLA has submitted a permit to allow stocking the lake with 900 Northern Pike during the third week in April. 🐟🐟🐟

DEEP has approved a change to the fishing regulations in the lake for Northern Pike and Muskie. Awaiting final approval is a new limit: one fish, 38 inches long, per fisherman per day. 🐟

The LLA has been made aware of several issues concerning First Light. Homeowners are complaining of attempts to communicate with First Light concerning dock permits, with no response. 😞

The LLA submitted an AIS (Aquatic Invasive Species) grant application. Money is expected to be distributed during the first week in May 🎉

DEEP will not allow grass carp in the lake. The LLA believes all future applications or project proposals for carp will be rejected by DEEP. LLA Chairman Shannon Young suspects this is due to an issue that occurred at Squantz Pond, where the introduction of grass carp severely reduced ALL vegetation to where it is now almost nonexistent. Shannon suspects this was due to a miscalculation of the number of carp needed for the pond. 🌱

Friends of the Lake continues to support the Lake Lillinonah Authority and their efforts to patrol and protect our lake. The following was submitted by LLA member Bryan Piepho; we thank him and the LLA for their continuing efforts!

Update on Municipal Wastewater Treatment Plant Upgrades

The Danbury Wastewater Treatment Plant nears completion of upgrades to meet the lower phosphorus discharge levels mandated by its new discharge permit. The Danbury Wastewater treatment plant upgrades are on schedule to be completed and operational in time to meet the April 2022 DEEP deadline. The lower phosphorus discharge levels will be equivalent to reducing phosphorus discharges by approximately 40 pounds per day. A larger plant upstream in Pittsfield, MA is ahead of Danbury on the track and will remove even more phosphorous. The Pittsfield plant upgrades will begin operation in May or June 2021 and must be fully operational by August 2021. They will reduce phosphorus discharges by the equivalent of 100 pounds per day. The Pittsfield upgrades will benefit Lake Lillinonah by reducing phosphorus levels in the water traveling down the Housatonic River into Connecticut. The combined effect of the phosphorus discharge reductions from both plants should be reflected in less algae, clearer water in general, and fewer summer algal blooms.

Fish Stocking

The Lake Lillinonah Authority has been stocking Northern Pike for about 15 years. Tiger Musky stocking began 5 years ago. Large Mouth Bass also are stocked. The Northern Pike and Tiger Musky population goal is 2 adults per acre (currently at about 1.6 per acre). Northern Pike and Tiger Musky life span is about 8 years. The Northern Pike and Tiger Musky species are valuable to Lake Lillinonah, as not many lakes have significant populations of these popular sports fish, which grow to significant sizes. Projections are that there are about 150 state record Northern Pike (29 pounds/ 48 inches) swimming in Lake Lillinonah every year. The Tiger Musky will be even bigger (up to 40 pounds/ 52 inches) and will receive substantial publicity when they are caught. Fishermen know where the Musky lakes are and often book fishing lodge trips to Canada in search of Musky. Fishing for these species also is great recreation for families. CPR (catch photo release) turns a successful catch into a proud moment with bragging rights. Northern Pike and Tiger Musky also keep the population of White Perch lower. This is good for Bass populations, since White Perch eat small bass. We are awaiting a potential State of Connecticut fish regulation change (ruling should be by mid-March) that makes keeping Tiger Musky, and potentially Northern Pike, more difficult.

Debris Survey Results

The following information and report were provided by ConnWood Foresters in conjunction with Friends of the Lake's annual debris survey which provides continuing data to help us assess the efficacy of FirstLight Power Resources (Lake Lillinonah's owner) Recreational Management plan.

Summary of Lake Lillinonah Shoreline 2020 Woody Debris Survey Data Collection

On 9/9/2020 and 9/11/2020 woody 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 ArcView GIS. These same plots are the ones located in 2018. 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%)

Plot Size: Plots average 7' wide and a total sampled plot area of 28,300 sq. ft.

Plot Debris: 655 pieces having 1,364 cubic feet of material, with an average of 2.1 cubic feet/piece.

Piles: 31 piles having 1,270 cubic feet of material with an average of 41 cubic feet/pile

Entire Lake: 134,068 cubic feet of material in 33,336 pieces and 1,578 piles

	2016	2017	2018	2019	2020
Shore feet	208,666	208,666	208,666	208,666	208,666
Plots	41	41	41	41	41
Sample Feet	4,100	4,100	4,100	4,100	4,100
Lake Cu. Ft.	167,982	246,320	95,321	73,025	134,068
Lake Pieces	47,077	36,338	48,960	33,743	33,336
Lake Piles	1,934	2,545	1,323	1,272	1,578

FirstLight Power

On February 23, FirstLight Power Resources, the owner of Lake Lillinonah held a series of meetings. Our thanks to Rebekah White for attending and for providing the following summary of the meetings.

Shoreline Management Plan:

FLP is working towards an online permit system. The registration of existing uses for properties on Lake Lillinonah will begin next month. This was delayed from last spring. Residents of Lake Lillinonah will be mailed a letter with instructions on how to register their property for a Permit of Permission, essentially “grandfathering” their existing uses. LLA, Municipalities, and FOTL will receive a copy of that that letter in early March to prepare us for any questions. This process will be free of charge unless the resident misses the window of opportunity. After the window closes the minimum charge will be \$150 to report existing uses. The letter will include the best contact for FLP, lake.permits@firstlightpower.com. They are in the process of updating the Shoreline Management Plan (SMP) to answer questions about permitting, including the Appendices to include forms that can be pulled out and utilized. The timeline is mid-year to Fall.

Recreational Management Plan

Changes are being made to the monitoring FLP will be conducting. Instead of trying to calculate all uses around their property, they will only monitor the areas they own. The only area on Lillinonah is the park near the dam which is controlled by parking. This area now has ADA compliant picnic tables as an update.

They are willing to assist with signage if we feel there is a need. The areas that came to mind for me are the two area on the east shore heading towards the dam, where we find a lot of garbage.

Shannon raised a concern about the camping and John from LLA was concerned about the wakeboard boats. Brian commented that some lakes use a reference buoy to help boats perceive distance from shore.

I commented that I was most concerned about the steep shoreline near the border between Little York and Waldo Park. I feel my comment was not well structured during the call and should be reiterated in a comment recommending that area be utilized as a demonstrative shoreline for bank stabilization.

Nuisance Species Monitoring Meeting

Lillinonah was not surveyed last year but will be this season. The survey will not be conducted until August, so it is imperative that all areas being treated prior to the survey be reported to NEAR to be included in the report. Matt Vogt does track and report already. I will be utilizing GPS to report the areas we treat. We will need to be sure that Solitude also reports. Brian will be sending out a contact email to facilitate easy reporting. I recommended that the Still River area be included in the survey.

We also received word from Brian Wood, Manager, Land & Recreation of FLP who let us know that permit application notices will be mailed out shortly. You may have received them by the time you read this. The letter you'll receive contains background information, a unique code that you'll need to register, instructions for registration and a 'frequently asked questions' section.

Mr. Wood asked us to ask you to place your lakeside address in the subject line when submitting your application or when asking questions about it to help them manage and organize requests. Here are some of the links and an email address he passed along:

Contact FLP regarding permits or permit submissions: lake.permits@firstlightpower.com

FirstLight Shoreline Management and Permits Website:

<https://firstlightportal.myadep.com/ShorelineManagement.html>

Shoreline Management Plan, Guidelines, and Information:

<https://firstlightportal.myadep.com/ShorelineGuidelines.html>

Project Boundary and Operation Information:

<https://firstlightportal.myadep.com/ShorelineProject.html>

Registration of Historic Shoreline and Land Uses:

<https://firstlightportal.myadep.com/ExistingUseRegistration.aspx>