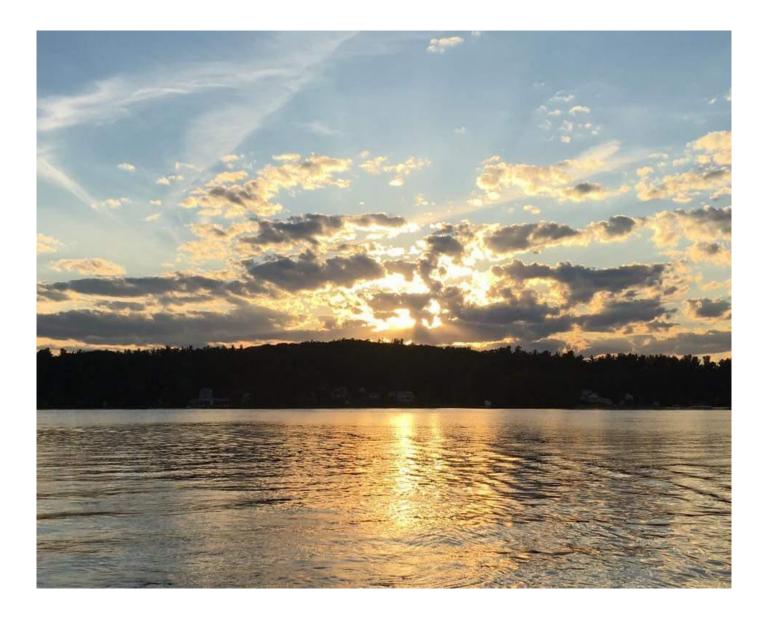


Lake Shirley Association "The Eagle Newsletter" Spring 2023



Visit us at <u>www.lakeshirley.com</u>

Hello Lake Shirley Neighbors, the 2023 summer season is upon us!!!!

As Lake Shirley Residents, we are so proud of the role we have played over many years in securing the well-being of this magnificent resource. The Lake Shirley Improvement Corporation (LSIC) has assumed the role of dedicated stewards to ensure the safe and enjoyable use of the Lake Shirley while protecting its water quality. This is a vital undertaking, but one that requires increasing commitment and resources.

The most significant benefit of membership in the LSIC is knowing that you are making a positive impact on the health of the Lake. Your annual dues support new and existing projects necessary to protect the Lake. Meanwhile, the most important work of the LSIC continues:

- Continue to work with and recruit the top consultants to teach the Association proper and latest trending techniques. Continue to test lake water quality and closely monitor environment trends and ongoing research.
- Continue the yearly Lake Management Planned approved through the Order of Conditions
- Maintain the water level of Lake Shirley by managing the Dam approved by the Order of Conditions
- Install, Monitor, Replace navigation buoys on the Lake
- Work with the Town of Lunenburg and Shirley Conservation Commissions to promote and preserve the health and beauty of Lake Shirley
- Educate the public by disseminating educational, resources and historical information provided on the Lake Shirley Website: www.lakeshirley.com/
- Publish the newsletters and maintain the Lake Shirley website <u>www.lakeshirley.com/</u> to keep Lake Owners apprised of issues of importance on the Lake
- Host the Annual Meeting and monthly Director Meetings (2nd Wednesday of every month)
- Manage and raise funds for the Lake Management Plan, thank you to all who have contributed.
- Continue to research and apply for State Grant Applications.

Please join us by renewing your membership in the LSIC. We need your support to continue the important work we do. The 2023 annual dues per household is \$300. By paying your dues, online or by mail, you will signal your commitment to this important community and the work we are doing.

I want to thank all of our terrific volunteers. Your time and support is what makes this Association work and helps keep our lake healthy and safe. Many of you have become good friends and part of our lake family.

Stay safe and healthy in the months ahead. As always, be kind to each other, my favorite quote, "Unless someone like you cares a whole awful lot, nothing is going to get better. It's not. The yearly newsletter will be added to the website <u>www.lakeshirley.com/</u> for all to review. If you do not have access to a computer, please call me and I will provide you a paper copy.

I look forward to seeing you at this year's annual meeting, May 17, 2023, 6:00PM, at Shady Point!

Joanna Bilotta-Simeone, Lake Shirley Improvement Corporation, President

Lake Shirley Improvement Corporation P.O. Box 567 Shirley, MA 01464

Annual Meeting Agenda

Date: Wednesday, May 17, 2023, (Rain date: May 18, 2023)

Time: 6:00 p.m.

Location: Shady Point, 701 Reservoir Road, Lunenburg, MA 01462

- 1. Roll of Officers and Directors. (T. Lovewell, Secretary)
- 2. Determination of a quorum of 21 paid members. (Susan Jewell, Membership)
- 3. Proof of meeting notice ~ spring 2023 Newsletter. (Joanna Bilotta-Simeone, President)
- 4. Reading of minutes of the May 18, 2022, Annual Meeting. (T Lovewell 2021 Secretary)
- 5. Reports of Officers and Committees
 - I. Treasurer/Secretary
 - II. Vegetation and Algae Management (Joanna Bilotta)
 - III. Water Quality (Steve Vitone)
 - IV. Dam & Safety (Richie Patry & Ron Wilson)
 - V. Website/Facebook (Jay Ellowitz, Deb Yawlor, Caitlin Katisch, & Jay Simeone)
 - VI. Membership (Susan Jewell)
- 6. Unfinished business.
- 7. New business.
- 8. Report of nominating committee and nominations from the floor for the election of Directors and other officers
- 9. Vote for Secretary and Treasurer
- 10. Nomination and Vote for Board of Directors
- 11. Adjournment

*Immediately following the Annual Meeting, the 2023 newly elected Board of Directors will elect the President, Vice President.

SOLitude Lake Management Submitted by Dominic Meringolo

Lake Shirley - Survey and Treatment Plan

In accordance with the aquatic plant management contract between SŌLitude Lake Management (SOLitude) and the Lake Shirley Improvement Corporation (LSIC) for Lake Shirley, the following document serves to provide this year's treatment and survey results, as well as management recommendations for next season. The continued objective of the program is to manage non-native and nuisance aquatic vegetation as well as potentially harmful cyanobacteria (blue-green algae) blooms. Multiple monitoring events, herbicide/algaecide treatments and reporting are key tasks of the project.

All management activities were consistent with the Order of Conditions [DEP File #284-0474 (Shirley), DEP File #208-1168 (Lunenburg)] and the License to Apply Chemicals issued by MA DEP (#WM04-0001042).

2022 Management Program Summary: Early Season Survey/Sample Collection July 6, 2022 Received Approved License to Apply Chemicals July 25, 2022 Herbicide Treatment July 27, 2022 Follow-up Herbicide Treatment August 23, 2022

Pre-Treatment Survey

The survey incorporated a combination of SLM's historical qualitative assessment and Geosyntec's quantitative procedures, similar to surveys of prior years. Data on species composition, plant growth density, and plant biomass was collected at 66 different points throughout the lake. These points are identical to the point #'s associated with Geosyntec data in the past. A pre-treatment survey is conducted to determine the growth of all target species, such as fanwort (Cabomba caroliniana), curly-leaf pondweed (Potamogeton crispus), Eurasian milfoil (Myriophyllum spicatum) and variable milfoil (Myriophyllum heterophyllum). The survey also identifies any potential nuisance species based on native plant density.

There was some variation in the populations of the seed producing pondweed species. Variable (grassy) pondweed (Potamogeton gramineus) and leafy pondweed (Potamogeton foliosus) were not observed at all throughout the lake. Clasping leaf pondweed (Potamogeton perfoliatus) was observed at points 16, 39, 43, and 54, and was not the dominant species in any of these locations. Snailseed pondweed was the most dominant of the pondweed species seen last year. The plant was found at 35 of the 66 points and dominant at 21 of those locations. This means that Snailseed pondweed (Potamogeton bicupulatus) was found at 53% of all locations in the pond. Another pondweed species that has become more prominent is Small (lesser) pondweed (Potamogeton pusillus) which was found at 23 of the 66 points. Fanwort (Cabomba caroliniana) was found at 31 out of the 66 stations and was the dominant species in 9 of those locations. Curly-leaf pondweed was found at 45 of the 66 stations, representing 68% of the surveyed area. Similar to last year, no milfoil was observed in Lake Shirley this year.

Per the Lake Management Plan, areas of the lake that exhibit either density or biomass factors of 3 or greater (>50%) are candidates for management. Additionally, any growth of non-native species, in this case curlyleaf pondweed and fanwort can also be treated. Some candidate areas were not designated for treatment due to their proximity to undeveloped shorelines and/or the presence of non-nuisance species (ex. Stonewort/Chara, Coontail, Robbins pondweed) or species such as fanwort (Cabomba caroliniana) of which management is limited.

<u>Continue Reading at:</u>

https://www.lakeshirley.com/resources.html



Aquatic Restoration Consultants, LLC. Submitted by Wendy Gendron

The Lake Shirley Improvement Corporation (LSIC) contracted Aquatic Restoration Consulting, LLC (ARC) to perform the fall aquatic plant survey and summarize the lake management activities that occurred during the prior year (October 15, 2021 through October 14, 2022) in accordance with the Order of Conditions (Mass DEP File No. 208–1168 for the Town of Lunenburg and 284-0474 for the Town of Shirley). This report summarizes the LSIC management activities, data evaluation and recommendations. The report is organized in a semi-chronological order of activities for the 2021-2022 year:

- winter water level drawdown,
- water quality monitoring,
- herbicide/algaecide treatment,
- fall aquatic plant survey and prior year data comparison,
- education and outreach activities; and
- recommended changes (if appropriate) from the management program.

WINTER WATER LEVEL DRAWDOWN

Winter water level drawdowns in combination with targeted herbicide treatments have shown combined success as a nuisance weed management strategy in Lake Shirley. The primary mechanism through which water level drawdown controls aquatic plants is exposure to dry and freezing conditions for an extended period. Ice movement and scour also have an effect. Not every year is a "good" drawdown year as frequent rainfall, fluctuating water levels, early insulating snowfall, groundwater seepage and other factors can limit freezing and drying. Bottom substrates can also affect how well the drawdown works, as mucky and peaty soils (as are often seen in cove areas) are more resistant to drying.

Winter water level drawdown of Lake Shirley has been used for many years mainly to manage the growth of nuisance aquatic plant growth. The Metcalf & Eddy Diagnostic Feasibility study prescribed an optimal drawdown of up to nine feet, but due to impacts on shallow private wells, the drawdown is limited to six feet. The drawdown has worked well to control nuisance growth of milfoil (Myriophyllum heterophyllum and M. spicatum) and fanwort (Cabomba caroliniana) in the shallow margins of the lake, but the effectiveness is variable year-to-year as the technique requires sustained lowered water level and freezing temperatures absent of insulating snowfall. Some plant species, particularly those that produce seed or winter turions, are often less impacted (e.g., tapegrass/wild celery, pondweeds and naiads) and can show increased growth following a drawdown. Plants in areas deeper than the drawdown zone (>6 feet) are generally not impacted by this technique. The current drawdown practice in Lake Shirley reduces nuisance plant growth within the drawdown zone lessening the need for additional herbicide use.

The goal of LSIC is to achieve a seasonal drawdown, up to six feet, on an annual basis. The drawdown is accomplished by opening the two gates at the Lake Shirley dam in the fall (on or after October 15). The drawdown rate is monitored and maintained at approximately two to three inches per day. The desired depth is typically achieved by December 1, but weather conditions (precipitation) can prohibit achievement of the target level. Additionally, ice and debris can clog the gates limiting the depth of the drawdown. The gates are adjusted to balance desired water level and downstream river flow once the target depth is achieved. LSIC provides notification to the Conservation Commissions and lake residents prior to initiating lowering.

Continuing reading at: https://www.lakeshirley.com/assets/2020-plant-analysis.pdf

P. PERFOLIATUS



EUROPEAN NAIAD



VARIABLE MILFOIL



PURPLE LOOSESTRIFE



P. GRAMINEUS



EURASION MILFOIL



FANWORT



CURLY-LEAVE PONDWEED



Lake Shirley Dam and Water Level Information

The Dam Keepers, Richie Patry & Ron Wilson, are appointed by the Town of Lunenburg and are responsible for maintaining the lake water levels through monitoring weather conditions and adjusting the dam vales. On October 15, 2022 both dam valves were opened to start the annual drawdown, the LSIC Order of Conditions require we **achieve the target drawdown depth by or before December 1**st. In October and November we were able to bring the lake level down quickly, in December and January with more than double precipitation (16 days in January) we were able to maintain the lake level. The water level continued to rise which was beyond our control. Per the Conservation Commission, we were not able to restart the draw down process again. On a positive note, we reached our refill date on March 12, 2023.

As a reminder we start the drawdown on October 15th 2023

The water level, per the LSIC Notice of Intent, with Lunenburg and Shirley Conservation Commission, see below.

Drawdown.

- 1. The target drawdowns are to be up to 6 feet and the achieved depth will naturally vary based on variations in precipitation during the drawdown period.
- 2. The data collection on lake levels and stream flows are to be gathered no less than weekly between October 1 and April 15 and submitted with the Annual Report
- 3. Commence drawdown on or after October 15th.
- 4. Achieve the target drawdown depth by or before December 1st
- 5. Achieve full lake level by April 1st.
- 6. Keep outflow during drawdown below a discharge equivalent to 57.2 cs unless the water is flowing over the spillway. Once the target water level is achieved, match outflow to inflow to the greatest extent possible, maintaining a stable water level.
- 7. Keep outflow during refill above a discharge equivalent to 7.15 cfs.
- 8. Any resident concerns with wells should be reported to the LCC who will take appropriate action. The LSIC shall refer all residents to the LCC for issues concerning wells.
- 9. The Tests shall take place between January 15 and March 1 as allowed by ice safety. A dissolved oxygen profile should be performed at the one of the deepest locations on the lake and graphed from surface to the bottom showing dissolved O₂ level and temperature.

Ron Wilson & Riche Patry Lake Shirley Dam Keeper

The Lake Shirley Website: <u>www.Lakeshirley.Com</u>

The Lake Shirley Website: https://www.lakeshirley.com

Members of the LSIC website committee have been working on revising the website to make it more user friendly, interactive and informative. We have a draft in review and are working towards an update for this summer.

The top priority of the committee is to keep our website informative and active with our up-to-date news, events, contact info, bylaws, minutes, and photos.

Email: Click on the Mailing List page to register your email to receive informational LSIC emails. Emailing our members is the most convenient communication tool that allows us to distribute the most up-to-date information on what's happening on Lake Shirley. Such as weed and algae treatments, drawdown, lake events, and general news. You can also update and confirm your email with LSIC to receive newsletters by email instead of postal mail. This helps reduce our operating costs and saves on paper and postage, not to mention saving time as all paper mailings are done by volunteers. PayPal: A convenient time saving way to submit your donations online, anytime, day or night. Using PayPal also helps reduce costs by reducing the number of donation requests that need to be mailed out. Please consider using PayPal, located on the membership page. Jay Simeone, Website Manager

https://www.lakeshirley.com



FACEBOOK

Managed by Caitlin Katisch:

Be sure to follow us on Facebook for the latest Lake Shirley news and events! We post regularly about events, updates on weed and algae treatments, local news, photos, and much more! Do you have an idea for a community event or fundraiser for Lake Shirley? Please contact us! Our Facebook page can be found here: <u>https://www.facebook.com/LakeShirleyMA/</u>



4th of July Parade

Congratulations to the 2022 Winners! The 2022 Lake Shirley Boat Parade took place on Sunday, July 3rd and we couldn't have asked for better weather. It was so fun to see the creativity and enthusiasm of all the participants! Monica Farley and Joe Fortin did an outstanding job, the 50/50 raffle donated \$1,285 to the LSIC. THANK YOU!!

The 2023 Annual 4th of July Boat Parade will be held on the Sunday, July 2nd (with a rain date of July 4th). Please decorate your boat and meet us at 3:00 pm at the Eagle's Nest and make sure you return to the Eagle's Nest at the end of the parade for the awards. More information to follow!!!

Light up Lake Shirley Boat Parade

Saturday, August 12, 2023, Parade Starts at 8:00 pm

Gate opens at Shady Point Beach at 6:00 pm! Join in the fun, light up your lake front!

Fourth-Annual Lake Shirley Benefit Golf Tournament

Lake Shirley Held the annual Golf Tournament on August 27, 2022 at the Westminster Golf and Country Club. A special thank you to Jessica and Joel Swenson for Chairing the event. They raised and donated \$5,600.00 to Lake Shirley. Phenomenal, we are so grateful to Jessica, Joel and their team for spearheading our largest fund raiser. Thankfully they have volunteered again this year!

Hope to see everyone this year for the Fifth-Annual Golf Tournament on August 26, 2023.

THANK YOU, FROM THE LSIC BOARD OF DIRECTORS!

2022 PAID MEMBERS

ZUZZ paid members					
Eric	Griffis	Caroline	Patterson	Scott	
Ben & Sara	Harbor Classic	Home	Payne	Tom	
Theresa	Harrison	John	Pearson	Richard	
Paul & Janet	Hart	David & Maureen	Pelletier	Dave	
Susan & Peter	Helstowski	Constance	Perkins	Mary	
Steve	Hitzenbuhler	Sean	Perkins	Kevin	
Marsha	Holman	Irene	Perko	Sandra	
Nanci	Howard	John	Pirro	Nicholas	
Raymond	Huse	Storm	Planitzer	Kerry & Sheila	
Jane	Iadeluca	Matthew & Justine	Polcari	Anthony & Janice	
Simeone, Jay	Jacoby	Douglas	Rahaim	Nancy	
Judith & Bob	Jalbert	John	Ramondelli	Jackie	
Thelma	Jewell	Perry & Sue	Reinhart	Scott	
Brian & Liz	Johns	Debbie	Reinhart	Glen & Kathleen	
Kenneth	Jordan	Derek	Reyno	Donna	
Paul	Katisch	Nathan & Caitlin	Rhee	Yun J.	
Daniel & Joanne	Keating	J. Olson	Ritchie	Brian & Cynthia	
Nuri	King	Dave & Linda	Rivard	Steven & Debbie	
Kenneth	Kodzis	Ray & Sally	Roux	Jason	
Cheryl	Kohlstrom	Cassavechi	Salamone	Connoly	
Gloria	Koronis	Peter & Lilian	Ryder	Brian & Kelly	
Braun	Kroll	Gary & Tina	Serra	Fernando	
Brian & Victoria	Kuehl	Troy	Spindt	Gary & Maureen	
Plankey	Kullberg	Alan & Christine	Sprague	Marc & Christine	
Glenn	LaBranche	Dennis & Carol	Sullivan	Paul & Brenda	
George & Linda	Langenbacher	Kathleen	Swenson	Joel & Jessica	
Thomas	Lastella	Cote	Tata	John & Louise	
Ralph & Matthew	Lavoie	James	Tessier	Comsana	
Christopher & Suzann	Lawless	Bart	Тоссі	George	
Deborah	Leger	Roland	Tousignant	Justin	
Carl & Joy	LeVeille	Dan & Julie	Tower	Brian & Karen	
Jim & Susan	Lovewell	Mike & Tammy	Tremblay	Teresa & Richard	
John	Mount	Julie	Tufts	Mike & Denise	
Draleu	Marchetti	Robert	Vaillancourt	Sheila	
Jay	Martin	Jason	Vaillette	Lawrence	
R&J	Mayotte	Mike & Kelly	Valente	Paula	
Monica & Adam	McAllister	Robert & Diane	Vitone	Tom & Joan	
Shawn & Danielle	McCaffrey	Kelly	Viviano	Robert & Judy	
Tom & Cece	McCarthy	Melissa	Watt	David	
Anne Marie	Magurn, Butch	Hamburg, Joanne	White	Steve	
Delollis	McNiff	Virginia	Whitten	Mark	
J & F	Melanson	Gerry & Kim	Widdowson	Janice & Martin	
John & Annette	Monaco	Family	Williams	Gary	
Cindylee & Mike		Justine	Wilson	Ron & Robin	
				Thomas	
Walter	Nazarenki	Matthew & Tara	Wysk	Joe & Diane	
	Noke			Wilcox	
				A&D	
Shannon & Jamie	Patry	Richie & Kathy			
	Ben & SaraTheresaPaul & JanetSusan & PeterSteveMarshaNanciRaymondJaneSimeone, JayJudith & BobThelmaBrian & LizKennethPaulDaniel & JoanneNuriKennethCherylGloriaBraunBrian & VictoriaPlankeyGlennGeorge & LindaThomasRalph & MatthewChristopher & SuzannDeborahCarl & JoyJim & SusanJohnDraleuJayR & JMonica & AdamShawn & DanielleTom & CeceAnne MarieDelollisJ & FJohn & AnnetteCindylee & MikeCynthiaWalterPaulDenise	EricGriffisBen & SaraHarbor ClassicTheresaHartSusan & PeterHelstowskiSteveHitzenbuhlerMarshaHolmanNanciHowardRaymondHuseJaneIadelucaSimeone, JayJacobyJudith & BobJalbertThelmaJewellBrian & LizJohnsKennethJordanPaulKatischDaniel & JoanneKeatingNuriKingKennethKodzisCherylKohlstromGloriaKoronisBraunKrollBrian & VictoriaKuehlPlankeyKullbergGlennLastellaRalph & MatthewLavoieChristopher & SuzannLawlessDeborahLegerCarl & JoyLeVeilleJim & SusanLovewellJohnMountDraleuMarchettiJayMartinR & JMayotteMonica & AdamMcAllisterShawn & DanielleMcCaffreyTom & CeceMcCarthyAnne MarieMagurn, ButchDelollisMorganCynthiaNaparstekWalterNazarenkiPaulNokeDeniseNuthman	EricGriffisCarolineBen & SaraHarbor ClassicHomeTheresaHarrisonJohnPaul & JanetHartDavid & MaureenSusan & PeterHelstowskiConstanceSteveHitzenbuhlerSeanMarshaHolmanIreneNanciHowardJohnRaymondHuseStormJaneIadelucaMatthew & JustineSimeone, JayJacobyDouglasJudith & BobJalbertJohnThelmaJewellPerry & SueBrian & LizJohnsDebbieKennethJordanDerekPaulKatischNathan & CaitlinDaniel & JoanneKeatingJ. OlsonNuriKingDave & LindaBrian & VictoriaKuehlTroyPlankeyKulbergAlan & ChristineGlennLaBrancheDennis & CarolGeorge & LindaLangenbacherKatheenThomasLastellaCoteRalph & MatthewLavoieJamesChristopher & SuzannLovewellMike & TammyJohnMountJulieJim & SusanLovewellMike & KellyMonica & AdamMcAtlisterRobertJayMartinJasonR & JMayotteMike & KellyMonica & AdamMcAtlisterRobertJayMartinJasonDeborahLegerRolandCarl & JoyLeVeilleDan & Julie </td <td>Éric Griffis Caroline Patterson Ben & Sara Harbor Classic Home Payne Theresa Harrison John Pearson Paul & Janet Hart David & Maureen Pelletier Susan & Peter Helstowski Constance Perkins Steve Hitzenbuhler Sean Perkins Marsha Holman Irene Perko Nanci Howard John Pirro Raymond Huse Storm Planitzer Jane Iadeluca Matthew & Justine Polcari Simeone, Jay Jacoby Douglas Rahaim Judit & Bob Jalbert John Ramodelli Thelma Jeweil Perry & Sue Reinhart Kenneth Jordan Derek Reyno Paul Katisch Nathan & Catilin Rhee Daniel & Joanne Keating J. Olson Ritchie Nuri King Dave & Linda Rivard</td>	Éric Griffis Caroline Patterson Ben & Sara Harbor Classic Home Payne Theresa Harrison John Pearson Paul & Janet Hart David & Maureen Pelletier Susan & Peter Helstowski Constance Perkins Steve Hitzenbuhler Sean Perkins Marsha Holman Irene Perko Nanci Howard John Pirro Raymond Huse Storm Planitzer Jane Iadeluca Matthew & Justine Polcari Simeone, Jay Jacoby Douglas Rahaim Judit & Bob Jalbert John Ramodelli Thelma Jeweil Perry & Sue Reinhart Kenneth Jordan Derek Reyno Paul Katisch Nathan & Catilin Rhee Daniel & Joanne Keating J. Olson Ritchie Nuri King Dave & Linda Rivard	

LSIC DUES PAYMENT

- LSIC offers an online payment through PayPal. All you need to do is go to the membership page at www.lakeshirley.com and click on PayPal to make your payment.
- The LSIC is willing to work with people for partial payments or monthly payments, as long as you are paid in full by the annual meeting where you will be a member with voting rights.
- You may also continue to pay by check. Make sure to enclose the tear-off slip below with your payment.
- The LSIC needs to receive your payment by the time of the annual meeting to enable you to vote at the annual meeting. Please try to pay as soon as possible as we are putting together the budget for this year's work and we need to know what we can afford to take on to continue to manage the quality of our Lake for the summer season.
- LSIC is a non-profitable organization (501(c)(3), all contributions are tax deductible. A year-end statement will be mailed to you.

LSIC 2023 ANNUAL DUES

Please check the appropriate category and payment amount:

- Single-family home \$300
- Multiple homes \$450
- Business \$600

Name:					
Lake Address					
Street:					
Town:	State:	Zip:			
<u>Mailing Address (If different than Lake Address)</u>					
Street:					
Town:	State:	Zip:			
EMAIL:					

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH | BUREAU OF ENVIRONMENTAL HEALTH

Harmful Algal Blooms in Freshwater Bodies



ARE ALGAL BLOOMS HARMFUL?

Algal blooms can be harmful to people and animals. Cyanobacteria (sometimes called blue-green algae) occur naturally in freshwater. Under certain conditions, they can multiply quickly, creating a highly concentrated area known as a cyanobacterial harmful algal bloom, or cyanoHAB. Some HABs produce toxins (known as cyanotoxins). In the US, from 2007-2011, HABs were reported to have caused:

- 183 cases of human illness
- 38 dog fatalities

HABs in Massachusetts are most common in summer and early fall. They can last from several days to several months.

HOW DO I KNOW IF THERE IS A HARMFUL ALGAL BLOOM IN THE WATER?

Cyanobacteria can cause the water to appear slightly discolored, cloudy, or resemble pea soup or paint. They are usually blue or green but can also be brown or red. They can also give the water a bad odor. The cyanobacteria in some blooms are dispersed throughout the water, while in other blooms they are concentrated in a scum or mat, either on the surface of the water or in sediment along the shoreline.

WHAT CAUSES CYANOBACTERIA TO GROW?

Certain environmental conditions, such as warm weather, sunlight, excess nutrients, and stagnant/slow-moving waters help cyanobacteria grow faster. Specific factors behind each bloom vary because every waterbody is different. However, two of the most common factors are phosphorus and nitrogen, which are found in fertilizers and human/animal waste.

HOW ARE HUMANS AND ANIMALS EXPOSED TO CYANOBACTERIA?

People and animals can be exposed to cyanobacteria through direct skin contact, ingestion, or inhalation. Those using the water for active recreation (like swimmers or jetskiers) or for drinking are most likely to be exposed. Children and pets, who are more likely to get these bacteria in their mouths, are of special concern. Dogs can become very ill and even die from licking cyanobacteria off their fur.

Cyanotoxins (if present) are usually contained within the cyanobacteria cell. When the cells die, the toxins are released into the water where they can be ingested. Cyanotoxins are not absorbed through the skin.

WHAT SHOULD I DO IF I SUSPECT A HARMFUL ALGAL BLOOM?

If you see a possible HAB, avoid contact with the water.



Contact your local health department if

the bloom is at a recreational waterbody. If the suspected bloom is at a drinking water reservoir, contact the local water department

and the Massachusetts Department of Environmental Protection.

WHAT ARE THE POSSIBLE HEALTH EFFECTS ASSOCIATED WITH CYANOBACTERIA?

Health effects associated with blooms vary depending on the type of cyanobacteria, the route of exposure, and the amount of toxins present.

- Ingestion is the primary concern. Ingesting small amounts of cyanobacteria or toxin can cause gastrointestinal symptoms. Ingesting large amounts of toxins may cause liver or neurological damage.
- Contact with cyanobacteria can cause skin or eye irritation.
- Inhaling water spray containing cyanobacteria can cause asthma-like symptoms.
- Small children and pets are more susceptible to the effects of toxins than adults.

WHAT SHOULD I DO IF I AM EXPOSED TO CYANOBACTERIA?

During a bloom, DPH recommends avoiding contact with the water.

If contact occurs, wash yourself and your pet with tap or bottled water. If you or your pet swallows water, call your doctor or veterinarian. If you believe you or your pet is experiencing adverse health effects, contact your doctor or veterinarian immediately.

WHAT ASSISTANCE CAN DPH PROVIDE?

DPH can provide guidance and technical assistance regarding reported blooms and health effects. DPH recommends that the managing entity (typically local health, or a local or state parks department) issue an advisory if any of the following criteria is met:

- A visible scum is present.
- The algal cell count exceeds 70,000 cells/milliliter of water.
- The level of the toxin, microcystin, is 14 parts per billion (ppb) or higher.

WHAT CAN BE DONE TO ELIMINATE AN ALGAL BLOOM?

Unfortunately, once a bloom appears there are few options besides letting it run its natural course. Blooms depend on available nutrients and optimal weather conditions. Chemical treatment methods (such as algaecides) are not recommended during a bloom.

WHAT CAN BE DONE TO PREVENT HARMFUL ALGAL BLOOMS?

There are a number of best management practices that can reduce bloom-promoting nutrients:

- Maintain septic systems and storm drains
- Reduce application of fertilizer
- Pick up pet waste
- Do not feed ducks or geese
- Plant or maintain native vegetation around the water's edge

For more information contact:

Massachusetts Department of Public Health Bureau of Environmental Health | Environmental Toxicology Program 250 Washington Street, 7th Floor Boston, MA 02108 Phone: 617-624-5757 | Fax: 617-624-5183 | TTY: 617-624-5286 www.mass.gov/dph/algae



Additional Resources:

MA Dept. of Env. Protection: <u>https://www.mass.gov/guides/cyanobacterial-harmful-algal-blooms-cyanohabs-water</u> U.S. Centers for U.S. Centers for Disease Control and Prevention: <u>www.cdc.gov/nceh/hsb/cwh/taer</u> U.S. Environmental Protection Agency: <u>www.epa.gov/cyanohabs</u>

Revised October 2019

Massachusetts Boating Law Summary

A summary of Massachusetts boating law including: Minimum age; safety education; required safety equipment and a listing of types of operation that are prohibited or considered unsafe.

Minimum Age Restrictions

No person under 12 years of age may operate a motorboat, unless accompanied on-board and directly supervised by a competent person 18 years of age or older. Personal watercraft (PWC) users must still be at least 16 years of age in order to operate, with no exceptions.

Safety Education Certification

Youth who are between 12 and 15 years of age must complete an approved basic boating course in order to operate a motorboat without adult supervision. Upon successful completion of such a course, students are issued a state "boating safety certificate" which must be in the possession of the certified operator when underway. Personal watercraft users who are 16 or 17 years of age must also complete such a boating course. Youth less than 16 years of age are not allowed to operate personal watercraft.

Accident Reporting:

The operator of any motorboat involved in an accident which results in personal injury, death, or property damage (over \$500) shall immediately notify the MA Environmental Police and file the appropriate accident report within the required time frame. (2 days-fatality; 5 days - all other accidents)

Safety Equipment

Most of the state equipment carriage requirements are similar to federal laws. This primary list includes life preservers, fire extinguishers, signaling devices, visual distress signals, and navigation lights. In Massachusetts, life preservers are required to be worn by: (1) youth less than 12 years of age (2) personal watercraft users (3) waterskiers (4) canoeists/kayakers from September 15 - May 15. A boat owner or a boat's operator is responsible to ensure that passengers on-board wear life preservers as required. Additionally, the state requires that all motorboats (with the exception of personal watercraft) be equipped with an anchor, manual bailer, and line. A paddle or an oar is required on boats less than 16 feet in length. Motorboats towing skiers must also be equipped with a boarding ladder. Registration and numbering of all boats powered by machinery is required.

Prohibited Operation

The following types of operation are extremely unsafe and are prohibited:

- Operating any vessel under the influence of alcohol or drugs. A blood alcohol concentration of .08 BAC is the current standard of intoxication in Massachusetts. Penalties have increased substantially and may include the loss of a motor vehicle driver's license.
- Operating a motorboat within 150 feet of a swimming area, whether public or private.
- Operating at an excessive speed considering weather conditions, boat traffic, and other hazards. For inland waters, operating at a speed greater than 45 mph is considered negligent operation.
- Operating a motorboat without properly working lights.
- Operating a motorboat during the nighttime while towing waterskiers, tubers, etc.
- Operating at greater than headway speed (6 mph or less) within 150 feet of a swimmer, waterskier, mooring area, marina, boat launch, or when the operator's vision is obscured in any way.
- Operating in an overloaded condition (carrying total weight that exceeds capacity plate recommendations or is excessive considering water conditions)
- Operating with passengers on the bow, gunwales, or any other place where there may be a chance of falling overboard.

Personal Watercraft Operation

Personal watercraft (PWC) are considered motorboats by law and must comply with all boating laws and navigation rules, including the speed and operation provisions above. Additionally, PWC users must adhere to state regulations specific to personal watercraft operation:

- Wear an approved life jacket (PFD) at all times (operator and passengers).
- Attach the safety lanyard to the operator and the cutoff/kill switch.
- Always operate at slow, no-wake speed (6 mph or less) within 150 feet of a swimmer, the shoreline, a water-skier, a boat launch, a raft or float or a moored or docked boat

You must not operate a PWC:

- If less than 16 years old
- Under the influence of alcohol
- Between sunset and sunrise
- At high speed in congested areas
- On waters under 75 acres
- While towing persons on skis, tubes, etc.

Please note

This is only a summary of boating laws. All boaters must know and observe all local, state, and federal laws. For further information on boating laws, boating education, or to obtain accident report forms contact the Massachusetts Environmental Police at (508) 564-4961

DATES AND HAPPENINGS IN LUNENBURG

- Lake Shirley Annual Meeting, Wednesday, May 17, 2023, 6:00 pm, at Shady Point
- Lunenburg Annual Town Meeting May 6, 2023, 9:00 am, at Lunenburg Middle/High School
- Lunenburg Town Election May 20, 2023, 7:00 am 5:00 pm, at TC Passios School
- Devens Regional Household Hazardous Products Collection Center: Open to Lunenburg 9:00 am to 1:00 pmhttps://devenshhw.com/,

2023				
March 1 & 4	Aug. 2 & 5			
April 5 & 8	Sept. 6 & 9			
May 3 & 6	Oct. 4 & 7			
June 7 & 10	Nov. 1 & 4			
July 5 & 8	Dec. 6 & 9			

- The Lunenburg Landfill, off of Young's Road will be open Saturday's from 8 am to 4 pm Spring 2023 ~ April 15, 22, 29th & May 6, 13, 20
- Acceptable material: grass clippings, bark mulch, wood chips, leaves, brush, (with a diameter not to exceed 3 inches ... unlimited length). Shrubbery and plantings; with the same restrictions. Any container; bags, boxes, barrels, trashcans, tarps, flower pots, etc., must be removed and taken by the resident. ***No household garbage, trash, building materials/waste or rubbish of any kind will be accepted. No materials within the Landfill area; sand, stone, gravel, etc. are to be given away or sold. Access will be restricted to the disposal area. Commercial landscapers will not be allowed to dump.
- Open to Lunenburg residents only. Travel permitted only on town easement. No trespassing on tri-town landing development.

https://www.lunenburgma.gov/departments/public-works/yard-waste-days

SERVE YOUR COMMUNITY Lunenburg Town government needs citizens who are willing to give time to the service of their community. Fill out a Talent Bank form on the Town of Lunenburg homepage.



LAKE SHIRLEY IMPROVEMENT CORPORATION P.O BOX 567 SHIRLEY, MA 01464

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