



# Lake Waramaug Task Force, Inc.

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**EXECUTIVE DIRECTOR**

The Lake Waramaug Task Force is a non-profit scientific and educational organization dedicated to maintaining and preserving the ecology and water quality of Lake Waramaug and its watershed.

## Dear Friends of Lake Waramaug:

Fall 2018

We're well into Fall and with that comes change; not just in the leaves and seasons, but this year in the leadership of the Lake Waramaug Task Force as well. As we reluctantly relinquish our hold on Molly Hart as Chair of our organization, it's worthwhile remembering all that's been accomplished under her aegis. We found a wonderful replacement in Sean Hayden for the estimable Tom McGowan as Executive Director; facilitated the reduction of the cattle herd causing runoff of pollutants into the lake; restructured the organization; and developed an achievable, yet focused, strategic plan. Our hats are off to Molly and her incredible energy for all she accomplished in three short years.

2018 was a challenging year for the lake. It started out with pristine conditions that saw clarity, dissolved oxygen and pollutant levels in ranges that had not been achieved in many years. As the summer wore on, however, torrential downpours followed by bouts of very hot, sun-drenched weather created prime conditions for algae blooms and the lake was severely tested. Clarity depths (the best measure of algae content) declined from almost 11 feet in late July to under 7 feet in early August, but then amazingly rebounded within a few weeks to a remarkable 10+ feet. It's worth noting that our preeminent limnologist, Bob Kortmann, deadpanned of our efforts: "This seems to be working." Indeed, subsequent measurements have confirmed that the resiliency of the lake is at unprecedented strength.

And that's a result of the cumulative effect of the efforts of the Task Force during the last 40 years. While the results are evident in the swimmability and clarity of the lake, we're constantly being assailed by new threats, and it is our job to counter them. Development poses a constant risk; but the availability of our Executive Director Sean to consult on new building projects has proven to be a wonderful and welcome resource to property owners who care to create properties that are responsive to the lake's needs. Invasive plants are making new inroads; but we've underwritten additional efforts on the part of our limnologists and divers to identify and remove them. The elements have taken their toll on our aeration systems; but we've repaired and enhanced them. We're starting new projects as well, like mapping all the storm drains on the lake roads to monitor their condition and remind the State when it's time to clean them. We've organized our dedicated Directors in teams to address these issues: committees focusing on lake health, protecting the watershed, promoting lake science, and communicating with all our constituencies have been formed and are at work addressing the issues.

Implementing the recommendations from these efforts, in addition to our constant measuring, monitoring, bubbling, and zooplankton farming requires the help of all our supporters. We're doing more than ever and have still more on our radar. We hope you all will support us in that effort.

With best regards,

**Peary Stafford**

Chair, Lake Waramaug Task Force

## WHEN CONSTRUCTION SITES GO BAD: A Soil Scientist Perspective

Sediment plumes are a major cause of water quality degrading pollution. Plumes that originate from construction activities and flow into the lake are loaded with nutrients. These include phosphorus and nitrogen attached to soil particles, and they are released as soon as a sediment plume hits the lake. The nutrients that make soil so effective at growing trees, shrubs and ground cover vegetation are washed into the lake and are made available to nourish cyanobacteria that cause toxic blooms.

Sediment plumes reaching the lake also promote the growth of non-native invasive aquatic weeds. Soil washing into the lake immediately settles to the bottom, burying beneficial native aquatic plants. The soil deposited on the lake bottom is the ideal growth medium for invasive aquatic weeds because they all are very aggressive pioneer species. Curley-leaf pondweed (*Potamogeton crispus*) is especially well adapted to propagating itself into areas where fresh sediments have been deposited, and there are several colonies thriving around Lake Waramaug. Eliminating sediment plumes from reaching the lake is important in preventing the spread and growth of invasive weeds.



The good news is that it is very easy to keep soil in place, even on active construction sites. It just requires the site contractor to practice good housekeeping. Specifically, the contractor needs to implement the right combination of techniques that make up an effective soil erosion and sediment control plan (E+S plan). The goal of E+S plans is to keep soil on the land, growing terrestrial plants, rather than entering the lake and promoting toxic blooms and invasive weed growth.

The Lake Waramaug Task Force is offering a new free on-site municipal consultation service to town land use departments. At the request of a land use official, Task Force staff will accompany them into the field to assist with routine construction site visits within the lake's watershed. We had several heavy rain events this

summer, and unfortunately the lake was hit with a few severe sediment plumes. The goal of providing this free service is to support the process of verifying that all the simple practices and structures associated with an effective E+S plan are in place and functioning properly before these severe storms happen. If you would like to learn more or have questions, do not hesitate to call or send us an email (contact information can be found on back of this newsletter).

## TASK FORCE TEACHES LAKE SCIENCE



Throughout the summer, the Task Force presented multiple educational programs for local students. Our focus was on lake health and the protection and preservation of water quality.

On Saturday, August 25, a group of kids ages 6-12 along with their parents/ guardians created a flotilla and kayaked and canoed from the Lake Waramaug Country Club Beach to the tip of Arrow Point, where the LWTF Zooplankton Farm is located. Here, everyone learned about what a zooplankton is, how they reduce lake cyanobacteria blooms, the human health connection, and basic lake ecology. The children then kayaked back to the beach for a BBQ.

On September 25th, the LWTF staff designed and presented a classroom lake food web program at the Washington Montessori School with a focus on cyanobacteria blooms – what are they, why they are dangerous, and what the Task Force is doing to prevent them in the lake. The students then viewed samples taken directly from the Zooplankton Farm through microscopes. This introduction served as a primer for students who were going on a field trip the following week to the Zooplankton Farm. On October 1st, the students visited the Zooplankton Farm to see its operations, and the mechanics behind our in-lake aeration system. Students were also given a hands-on opportunity to cast a zooplankton collection net, which demonstrated how samples are collected for analysis, and how they were collected for the classroom.

## BOARD MEMBER NEWS UPDATE

We want to thank Kristen Browne for her seven years of dedicated service to the Task Force as a director. Her confident energy and her dedication to managing our development efforts will certainly be missed. We wish her and her family all the best as they settle into their new Montana home.

When one door closes another one opens. The LWTF welcome three board members: Tom McGowan, Michael Guadagno and Reese Owens. They are all looking forward to sharing their many talents in an effort to improve and protect Lake Waramaug. Thank you for joining us, and welcome to the clean water team!

## CANADA GEESE: Our new year-round neighbors

The Canada Geese population around Lake Waramaug is an increasing problem for lake residents and water quality. The decreasing severity of winters is making migration obsolete, and we now have a growing "resident" population of geese. Traditional methods of geese deterrence are not as effective because this year-round population behaves differently from the migrating population; however, there are still some tips and tricks that can be used to deter geese. If done consistently and used in combination, these management strategies can be effective against this highly adaptable resident geese population.



The first tip, while basic, is very important – **DO NOT FEED THE GEESE**. Geese will imprint this easy food source and return regularly to the same location. This not only causes increased bird density, but it is also detrimental to the health of the birds. Low quality foods such as bread are actually harmful and increase the risk of diseases. Do not dump grass or other vegetative cuttings into the lake, as this provides a consistent food source that trains birds to come back to your home and provides nutrients that encourage cyanobacteria blooms.

Other preventative measures include creating visual deterrents along your property such as mylar tape, balloons and flags to attempt to scare the geese from landing in those open areas. While this can aesthetically degrade an area, it can be helpful in deterring a population.

Another important component is creating vegetated buffers to deter geese from landing on your property. Geese like wide-open spaces right up to the lake, which allows them straight access to the water. Creating vegetated buffers up to the waterline with small trees and shrubs decreases visibility so geese won't feel comfortable in the area, and it breaks up their perfectly straight runway to the water. Even letting the grass grow to at least a foot high, when a taller planted buffer is not desirable, has been shown to deter geese. An additional alternative strategy to a tall planted buffer is planting a ground-cover such as ground juniper (*Juniperus horizontalis*). The sharp unstable texture of this plant deters geese from walking across planted areas. Fencing along the water can also be helpful, but not by itself. A combination of the various techniques is required for successful geese deterrence.

If geese are established in your yard, consistent harassing or hazing is effective. This involves regularly scaring the geese from your yard or an area using a variety of methods including remote control toys, horns, whistles or even lawn sprinklers. Having a dog in your yard that is able to harass geese once or twice a day has been proven to be highly effective. Again, the goal is to consistently scare them away, as they dislike expending energy to take off, which diminishes their urge to return to a location.

A great resource that summarizes resident geese population deterrent strategies is available on the CT DEEP website. Just type "CT DEEP Problems with Geese" into your favorite web search engine for more information.

## LWTF RESEARCH VESSEL UPDATE

Construction of LWTF's pontoon boat is about half complete and should be on the lake in Spring 2019. Thank you to everyone who generously helped us make the purchase of this important science tool possible.



# **W** Lake Waramaug Task Force, Inc.

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- Visit our website at [www.lakewaramaug.org](http://www.lakewaramaug.org)
- Join our mailing list on our website or email us at [info@lakewaramaug.org](mailto:info@lakewaramaug.org)
- Follow us on Facebook (LakeWaramaugTaskForce) or Instagram (lwtaskforce)



## CLEAN WATER CORNER

### FROM GREEN TO CLEAN

The Lake Waramaug Task Force has created a presentation titled "From Green to Clean" illustrating the four decades of projects that have improved lake water quality. Recently this presentation was delivered at the Annual Conference of the Connecticut Federation of Lakes in Danbury and at the Gunnery Library in Washington. The presentation is packed with pictures to help the audience understand all the work we have done to improve water quality, and future efforts that will be required to preserve and protect the lake. Please feel free to contact us if you have a venue for our presentation, or to find out the when-and-where of our next appearance.



### LAKE ENEMY #1: STORMWATER RUNOFF

The number one cause of decreasing water quality is stormwater runoff carrying pollutants into the lake. The Task Force is offering a new service to property owners in the watershed, in an effort to minimize the impacts of polluted stormwater runoff. We call it a "Stormwater Consultation." Simply contact our office at (860) 868-0331 to make an appointment with our staff soil scientist to visit your property and review possible methods and practices that you can do to protect the lake.