



PHOTO COURTESY OF ELIZABETH CHANDLER

## Lake Waramaug Task Force, Inc.

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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.

Fall 2021

Dear Friends of Lake Waramaug,

There's no getting around it — 2021 was a tough year for water clarity in Lake Waramaug. Intense summer storms produced a double-whammy effect of large amounts of rain running off the land carrying sediments and nutrients into the Lake as well as heavy winds that created a problematic mixing wave action at the surface. Together, these factors forced the cyanobacteria layer higher in the Lake — though not, fortunately, to a dangerous point — and clouded the water for extended periods. Importantly, our aerators were able to fight back, and conditions were significantly better than they might have been as a result. And on a very positive note, invasive weed populations were at their lowest levels in recent memory.

We know that weather events have been getting more intense and predictions are that trend will continue. While we are doing everything we can with our in-lake strategies — the aerators, zooplankton farm and trout stocking are all being pushed to their limits — we now need to redouble our efforts on the watershed. In the coming months and years, you'll be hearing a lot about our work to mitigate runoff from catch basins, remediate the eroding banks of Sucker Brook and other watershed efforts.

You won't be hearing these things from me, however. Due to term limits, I'll be handing over the direction of the Task Force to the very capable hands of Mike Guadagno. It's been a true joy working with the staff, board and our supporters and I know that together we'll be able to keep the Lake in the pristine condition it's enjoyed for the past few years.

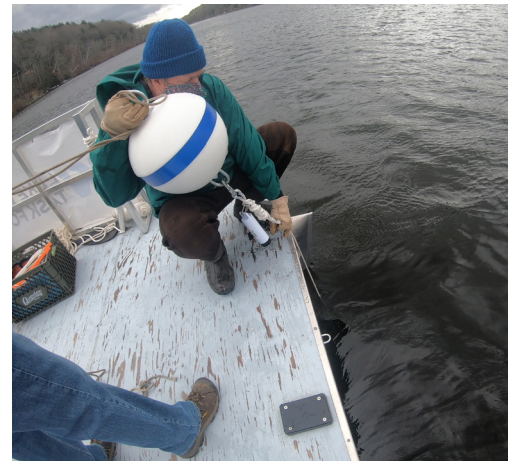
**Peary Stafford**

Outgoing Chair, Lake Waramaug Task Force

## HOW DOES THE TASK FORCE WORK UNDERWATER?

Late last fall, we deployed a string of water quality data loggers before ice covered the Lake. We retrieved them this summer to download the data they collected. Covered with sediments and algae, the mooring buoy and data loggers were tough to find. However, once we downloaded their data, we could see that they worked flawlessly to collect water temperature and water oxygen levels every hour for over seven months. Fresh batteries were installed and they were put back in the Lake, ready to collect data throughout this fall and winter. Once interpreted, the data collected will help improve our ability to prepare for and combat the negative impacts of climate change — bigger storms, drought conditions, shorter winters and increased weather variability — impacts that we have already seen affect the Lake. In other words, early detection of negative water quality impacts will increase our chances of implementing lake management strategies that blunt the negative water quality trends caused by climate change.

Collecting hourly Lake temperature and oxygen levels is so useful that we purchased eight additional in-lake data loggers that will be deployed this fall. I want to thank the Mullen family for their very generous support, which enabled us to purchase these new loggers. We are all grateful for their long family tradition of helping the Task Force protect and improve Lake Waramaug.



*Data Logger Deployment*



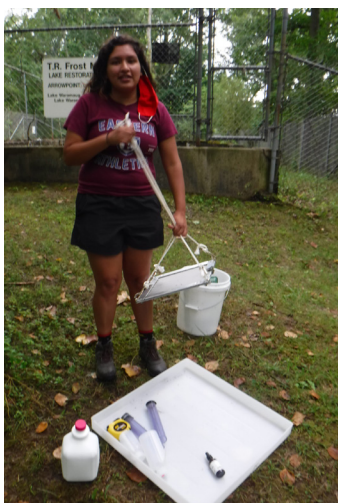
*Data Logger Retrieval*

## A NEW PARTNERSHIP FOR CLEAN WATER

The Task Force is partnering with Western Connecticut State University's (WCSU) MS Program in Integrated Biological Diversity which provides stewardship opportunities for their graduate students. We feel lucky to be part of a collaborative program that is fostering the next generation of environmental managers, and we look forward to implementing new clean water projects that build on the results of graduate student research. We would also like to introduce you to the newest member of our clean water team, Maria Rodriguez-Hernandez. Maria is enrolled in WCSU Integrated Biological Diversity

and will be assisting us with evaluating and improving our Zooplankton Farm.

Maria's work is going to be extremely important because we believe that a thriving in-lake Zooplankton population is vital to improving water quality. We have witnessed what happens to the Lake when there are no Zooplankton. In the late 1960's, Lake Waramaug was stocked with a small fish called Alewife to promote the Bass population. Unfortunately, instead of promoting Bass, the Alewife decimated the Lake's Zooplankton population, which is a predator of cyanobacteria. This was one of the main reasons the Lake turned green throughout the 1970's and 80's. Without its main predator, cyanobacteria thrived and caused massive, toxic blooms. In 2016, the Task Force installed the Zooplankton Farm, which we estimate releases a million Zooplankton into the Lake on a weekly basis in order to restore the population to healthy pre-Alewife levels. This is a new lake management strategy that can be a model for other Lakes that experienced the same devastating effects of a ruinous Alewife introduction. However, we need to better understand the dynamics in the farm and how it is affecting the Lake. This is why we are so happy to be partnering with WCSU. With Maria on board, we can continue to figure out how to best repair mistakes of the past by boosting Zooplankton populations and restoring the delicate in-lake food web.



*Maria Sampling Zooplankton Farm*



## EDUCATING THE NEXT GENERATION OF LAKE STEWARDS



*Lake Food Web Demonstration*

Every year, the Task Force sets out to educate the next generation of lake stewards, the kids who will one day take up the mantle of protecting our great Lake. This summer, we continued this tradition through two Lake Explorer Days at the Lake Waramaug Country Club and the Washington Club beach.

During these events, kids visited two stations. The first offered live specimens such as a green frog, crayfish, zooplankton, and an array of aquatic insects and plants. Kids were also able to test their fishing skills catching and identifying native fish of Connecticut. Students learned how organisms in the Lake are connected in a visual display of the food web. They also explored how the Lake is linked to the surrounding land, as organisms such as dragonflies begin their life in our freshwater resources and many land-dwelling creatures such as birds get their food from our Lake. In this way, the youngsters learned that how we treat our land can affect the Lake and the various aquatic and terrestrial friends that rely on it.

At the second station, kids tried their hands at various sampling techniques that monitor the aquatic friends

they learned about - from the plankton tow that measures the zooplankton in the water, to the lake rake that helps uncover aquatic plants. By the end of the hour-long program, students developed a deep appreciation for the vast array of life that lives and balances the Lake, as well as all of the work the Task Force needs to do to keep the Lake healthy.



*Lake Sampling Equipment Demonstration*



### WE LOST A TRUE LAKE HERO THIS SUMMER

Cecilia "Billie" Mullen loved Lake Waramaug and always wanted to do what was needed most to protect it and her entire family shares this goal. Over the decades, the Lake has only benefited from all their efforts. While the Lake community will miss her, the Task Force will continue to celebrate and honor her memory by serving as stewards and guardians of the Lake she loved.

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- Join our mailing list on our website or email us at [info@lakewaramaug.org](mailto:info@lakewaramaug.org)
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## CLEAN WATER CORNER

### THANK YOU

We want to thank Peary Stafford for operating the helm of the Task Force for the past three years. His initiatives have greatly increased the capacity of the Task Force. Thankfully, he will be staying on board to help keep the Task Force on a clean-water course. Thank you, Peary, for all the time you have put into the Task Force to make us a better, more effective organization.

The Task Force Board welcomes a new chairman. I have known Mike Guadagno since before I got to the Task Force in 2017, and his sharp focus on making sure that everything occurring in the Lake and watershed is protective of water quality will serve him well in his new role. As an Arrow Point resident, Mike has a front row seat to the resource the Task Force is dedicated to protect. Welcome Mike - we all look forward to working with you.

*Peary getting the research boat ready for a sampling run*

