



Fall 2020

Lake Waramaug Task Force, Inc.

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Lake Benefits from the Work of Many

We often talk about all the work we do to care for the Lake. This work includes water quality sampling, invasive weed eradication, aerator maintenance, stormwater infrastructure mapping and the promotion of sound environmental management practices when land use changes are being proposed in the watershed. Phew! What we rarely discuss is the deep bench of environmental professionals, both staff and consultants, who spend a lot of time working to solve problems on the Lake and its watershed.

Dr. Robert Kortmann, Principal Limnologist at Ecosystem Consulting Services, has worked on the Lake since the founding of the Task Force. He installed the first prototype of our in-lake aeration system in the early 1990s, which started the Lake's incredible turnaround and continues to play an important role in water quality improvement today. Lakes are extraordinarily complicated organisms, and Dr. Kortmann is nationally recognized for his ability to understand, interpret, and predict how lakes behave. Currently, Dr. Kortmann is taking his successful ideas and management methods developed at Lake Waramaug and applying them to drinking water reservoirs across the Northeast.

Dr. George Knoecklein, Principal Limnologist at Northeast Aquatic Research, actually used Lake Waramaug data that he collected in the 1980s as part of his PhD thesis. His decades of experience helping to improve water quality here in Connecticut has helped us improve the Lake. Dr. Knoecklein leads our efforts to eradicate invasive aquatic weeds. His expertise in their identification and broad understanding of their life cycle and habits has enabled us to virtually eradicate invasive weeds from the Lake.

Matt Vogt of New England Aquatic has been suction-harvesting invasive weeds on the Lake for over a decade, helping us achieve our current invasive weed-free state without the use of chemicals. We are so grateful to Matt and his team of divers.

Kelsey Sudol, our Research Assistant, received her B.S. in Biology and Environmental Science from Rensselaer Polytechnic Institute, and contributed to research on the human impacts on lake ecosystems. Her experience has been valuable to our efforts to improve Lake water quality.

I am a Certified Soil Scientist with an educational background in Natural Resource Management. Over the past four decades I have worked in the US and abroad on many environmental restoration and sustainable resource management projects. I have truly enjoyed the opportunity the Task Force has given me to bring everything I have learned and apply it to improving the Lake and its watershed.

As you can see, we have an extremely talented team of experts. All that brain power draws on a significant portion of our budget. Your generous support, combined with our awesome team, helps to preserve and protect our clean, clear and swimmable Lake.

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.

STUDENTS VISIT ARROW POINT

On two recent beautiful, breezy fall mornings, sixth and seventh graders from Washington Montessori School visited our Arrow Point Water Quality Management Facility to learn about the science behind a clean lake. During these two outdoor classroom events, students learned about the Lake's ecosystem, our Zooplankton Farm, water sampling techniques, and how our Aeration System works. They even collected a sample from our Zooplankton Farm to bring back to their classroom laboratory! They will report back to us on the aquatic organisms they find. Nora Hulton, a Montessori School science teacher said, "The program fit perfectly with our Life Sciences curriculum, where the students have been studying microorganisms and their place in the five kingdoms of life. The cyanobacteria's (prokaryote) and the zooplankton's (protist) role in Lake Waramaug's 'story' gave them a place-based application of their studies." Not only did these future environmental stewards ask great questions, but we also truly enjoyed their visit.



THANK YOU!

We recently celebrated the years of work accomplished by several of our board members who are stepping down. We want to thank them for their unwavering dedication to improving Lake Waramaug. You guys are incredible!

In the photo, from left to right is Jay Combs, Jim Hicks, Tom Yamin and David Robinson. David Lindley was absent. Also missing is Richard Loughney, a true Lake hero who we lost this year.

NEW SET OF EYES ON THE LAKE

This fall, the Task Force is installing four submersible mini-Dot® temperature/dissolved oxygen data loggers into the Lake. Strung together in a line, each logger will be placed at a different depth and will collect hourly water temperatures and dissolved oxygen concentrations year-round. The data collected will help the LWTF forecast favorable conditions for cyanobacteria blooms as well as give us a better understanding of how the Lake gains and loses heat. It will also improve our ability to prepare for and combat the negative impacts of climate change on water quality from the bigger storms, more frequent drought, shorter winters and increased variability in recent years. Collecting this long-term data hourly will enable us to fine-tune our Lake Management Plan. The Task Force would like to extend our thanks to the Lake Waramaug Inter-Local Commission, whose funding made this project possible.



Photo Courtesy of PME

USING SCIENCE TO PRESERVE WATER LEVELS

Back in 2017, the Lake Waramaug dam underwent major repairs at considerable expense to the Town of Washington. The main goal of the project was to replace the failing gate at the base of the dam so that the mechanism that adjusts the flow of water into the East Aspetuck River functioned properly. It was a highly successful mission, with the work coming to a close shortly before winter set in.

In 2018 and 2019, the flow of the Aspetuck was regulated largely by sight. The Town and the Task Force adjusted the opening in the gate based solely on visual observation of the water level, rather than physically measuring the volume of water coming through the dam. Even though there was plenty of rain in 2019, the level of the Lake dropped significantly. In some cases, docks settled on the Lake bed and the Sucker Brook delta expanded beyond what had been seen in recent years.

In late 2019, the Task Force installed a staff gauge on the bridge abutment and purchased an instream flowmeter that measures the volume of water in the river. With these measurements in hand, we were able to work with the town to fine-tune the amount of water passing through the gate so the Aspetuck remained at a level safely above the state-mandated 2.86 cubic feet per second while not over-draining the Lake.

The result? In a year with 12 inches less rainfall than the prior year, on October 1st, the Lake was a solid foot above where it had been at the same time last year. This success, a result that works for everyone, is a testament to the cooperation between the Town and the Task Force.



Dam construction (gate valve replacement)



Water level September 24, 2019



Water level October 12, 2020 during the peak of the 2020 drought

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KEEP IN-THE-KNOW. IT'S EASY TO LEARN MORE ABOUT LWTF ACTIVITIES:

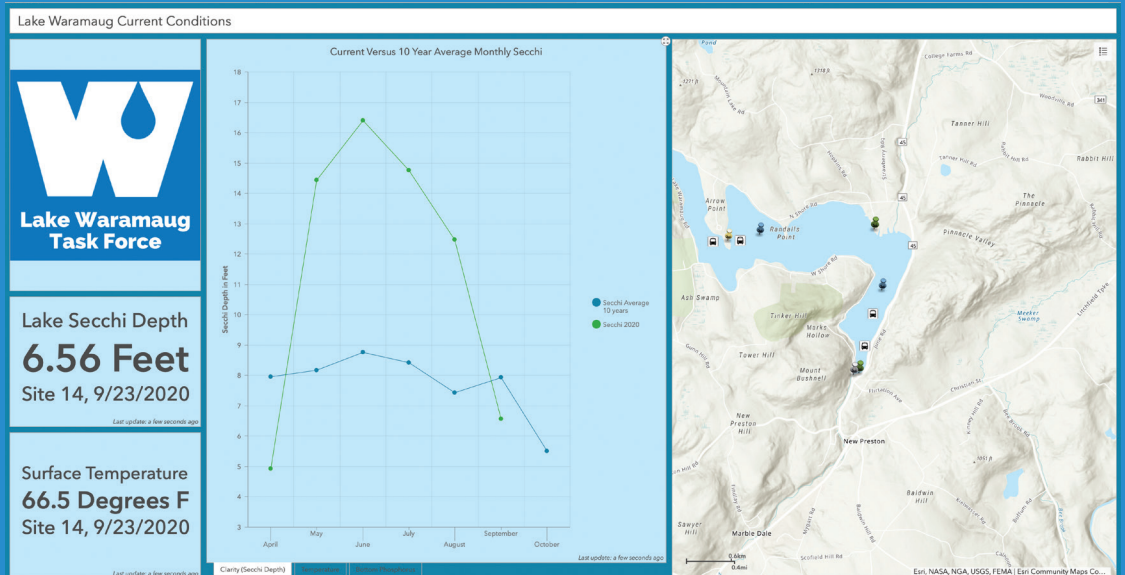
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CLEAN WATER CORNER

LAKE DASHBOARD GOES LIVE.

Have you ever wondered what the current conditions of Lake Waramaug are? The Task Force has created an interactive dashboard on the front page of our website lakewaramaug.org, which posts weekly data on the Lake. The chart on the left shows you current Lake data, as well as past conditions. The map on the right provides information on the various in-lake LWTF projects and sampling locations that help keep the lake clean and clear.



This is a Beta version of the dashboard, so feel free to provide feedback by emailing us at info@lakewaramaug.org — and look for additional data and information in the future.