

Waterworks

New York State Federation of Lake Associations, Inc.

June 2022

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39th Annual NYSFOLA Conference Focuses on "Maximizing Your Lake Data"

Over 200 lake-minded people came together to participate in the ongoing dialogue focused on New York State lakes at the 39th Annual NYSFOLA Conference held at the Fort William Henry Hotel and Conference Center in Lake George on April 29-30th. The conference was oriented around the theme: *Maximizing Your Lake Data*. Presenters highlighted the usefulness of long-term water quality monitoring and detailed how datasets gathered through these types of monitoring programs are essential to both gaining understanding of the complex dynamics of lake ecosystems and in informing lake management decisions.



Attendees were able to attend sessions on topics such as aquatic invasive species, harmful algal bloom management, long term monitoring, and making use of lake data. Many attendees enjoyed the always popular session — Diet for A Small Lake: Lake Ecology 101 led by Dr. Willard Harman and his knowledgeable team from SUNY Oneonta.

The annual banquet was highlighted by a presentation by Mr. Stuart Gruskin, Chief Conservation

and External Affairs Officer at the New York office of The Nature Conservancy. He offered insightful remarks on land conservation as a tool to protect water quality.

As always, the Silent Auction was a fun way to raise funds for NYSFOLA, and the second annual Lake Trivia Contest provided fun and facts while stumping a few lake experts.

Thank you to all of the volunteers, attendees, exhibitors, and sponsors for making our return to an in-person conference a safe and informative one. We hope to see you all next year at our 40th Annual Conference in Lake George next spring!



NYSFOLA's mission is to protect the water resources of New York State by assisting local organizations and individuals through public dialogue, education, information exchange and collaborative efforts.

Published by:

New York State Federation
of Lake Associations, Inc.

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A Voice for New York Lakes



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the viewpoints of the author and
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Board of Directors.*

President's Letter - Tarki Heath

Following in the footsteps of 2020 and 2021, the first half of 2022 continues to bring numerous challenges, but also surprising opportunities, including the opportunity to reassess our needs and reaffirm our core philosophies. We love our lakes, and they are at the heart of all we do. Here is a review of some of that work.

Conferences:

COVID and its variants keep us on edge, but we continue to navigate the ways we keep ourselves and our members safe. With that in mind, we held a safe and well attended annual conference and membership meeting in Lake George in April. Throughout the days, it was an inspiration to see presenters and exhibitors share knowledge with, and gain knowledge from, our members.

The Fort William Henry Conference Center, overlooking gorgeous Lake George, could not have been more inviting. It was a valuable time to share, and certainly reinvigorated many of us. Nancy Mueller, our Executive Director and Owen Zaengle, our Assistant Director, worked overtime to make this, our first conference in two years, a success.

Several regional conferences are also planned for 2022. Some of these conferences are hosted and organized by NYSFOLA. Others are the work of regional groups who share NYSFOLA's mission. In all cases, these conferences are supported by NYSFOLA's staff and Board of Directors (see page 14).

These smaller conferences are ideal

ways to network with other lake associations in our immediate region and bring others into the organization. It was through the Western NY Regional Conference several years ago that I was first

introduced to NYSFOLA. As such, I understand how important these regional events are for our members and those wanting to learn more about their lakes.

CSLAP:

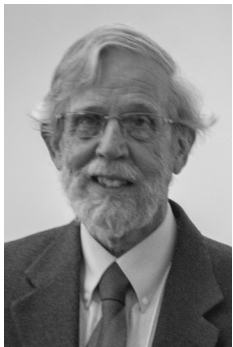
The 2022 Citizens Statewide Lake Assessment Program is on track to be one of the largest in our history. Our staff has traveled the state for trainings, and work closely with Upstate Freshwater Institute and the NYSDEC to make certain all is running as smoothly as possible. Year after year, this program has grown to provide an increasing number of lakes the information they need for successful lake management planning. We cannot thank our volunteers enough for all their valuable time and effort.

As most of you know, NYSFOLA and the NYSDEC have worked together to maintain a strong and successful program for over three decades. After an extension on the contract to run through 2022, our current contract is up for renewal in June 2023. I am pleased to share that we have reached an agreement which runs through June 2028. We look forward to continuing CSLAP with the possibilities of expanding our reach to diverse communities across the state.



NYSFOLA Board of Directors:

Our board is a strong and committed group. Some members have been with us since the inception of NYSFOLA, and others are new.



We want to welcome Dr. Eric Randall from the Conesus Lake Association. Dr. Randall has participated with the Finger Lakes Regional Watershed Alliance, the Finger Lakes PRISM, NY iMapInvasives program and is well known for his work on watershed issues. As a plant taxonomist focusing on forested watersheds, he has done extensive monitoring for invasive plants occupying upland

and aquatic habitats. His academic record includes a 25-year tenure with the Department of Biology at SUNY Buffalo and 14 years as Dean of Science, Management and Technology at Edinboro University of Pennsylvania. Dr. Randall also spends a good deal of time in the woods or sugarhouse. We are fortunate to have Dr. Randall on our board.

Also joining our board is Dr. Mark Teece, an Associate Professor in the Chemistry Department at the SUNY College of Environmental Science and Forestry in Syracuse. Dr. Teece's work focuses on water quality and food webs in lakes and oceans. He holds a Bachelor of Science degree

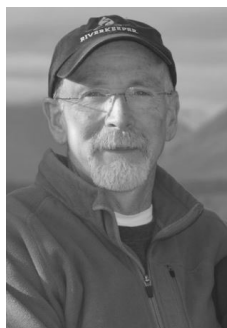


in Chemistry and a Ph.D. in organic geochemistry, both from the University of Bristol, in the United Kingdom. Mark is highly active in providing outreach to the public on science activities through the Jamesville Preservation Association and as science advisor out-

reach provider at Green Lakes State Park. He is a CSLAP volunteer at Jamesville Reservoir and works with his students on issues including HABs and invasive species. NYSFOLA welcomes Dr. Teece to our board.

As we welcome new members, we also thank our returning members and officers. Three NYSFOLA Board members have graciously agreed to a renewal of their three-year terms: Matthew Albright, SUNY Oneonta Biological Field Station; Kristin Wilde, Lake George Association and Laurel Wolfe, Sleepy Hollow Lake Association of Property Owners. All your officers have agreed to stay on as well,

intending to provide consistency as we move into the next two years.



And finally, we want to thank former NYSFOLA President and long time Board member Jim Cunningham who submitted his resignation from the board after the conference. Jim is a widely recognized wastewater expert and currently serves as the Town of Nelson Supervisor in Madison County where he is able to serve the needs of many lake associations. We thank Jim for sharing

his vast knowledge, and many years of service to NYSFOLA. We expect to hear more from him in the future.

Challenges:

While we are pleased to share our successes, we are not naïve to the pressures on our lakes. The challenges to support water quality and lake management have only increased with the growing pressures from climate change, cyano-HABs, aquatic invasive species, contaminants of emerging concern, and many other issues. We cannot expect to solve all these issues, but we will continue to work with our lake associations, agencies, and organizations to support stewardship efforts across the state.

Our capacity to reach across the state is limited by the number of volunteers we recruit. We are a volunteer board, and our core program, CSLAP, is an all-volunteer program. While this work is crucial to preserving water quality in our state, our capacity to do so is always limited by the workforce. If you are reading this, you have obviously shared concerns for the future of our lakes. There are many ways to support the work, whether volunteering in CSLAP, participating in a NYSFOLA committee, maintaining membership, sharing your interests, conveying your concerns, or simply sending us your success stories involving the use of the CSLAP data. Whatever you may choose, please know your support is appreciated. We genuinely want to hear from you. Let us know the kinds of programs you would like to see from our organization.

If you have questions, please contact me at: tarkiheath@gmail.com. Wishing you a safe and happy open water season!

Tarki L. Heath

NYSFOLA Recognizes Lake Stewards



Colleen Zawadzki accepts her Lake Steward Award from NYSFOLA Executive Director Nancy Mueller.

Each year, NYSFOLA recognizes individuals who have gone “above and beyond the call of duty” to make outstanding contributions to their lake associations. NYSFOLA Lake Stewards are nominated by their lake associations and are recognized at the annual conference. The 2022 NYSFOLA Lake Steward Award recipients are listed below.

Wendy Thompson, Lime Lake Cottage Association

“Over the ten years that Wendy has served on the Lime Lake Cottage Association Board, she has dedicated countless hours of time and energy to projects, events, and tasks that benefit and enhance our Lime Lake community... Wendy is the type of person you can count on to come on board for any LLCOA job that needs to be completed, and she will graciously do it with a smile!”

Colleen Zawadzki, Cortland-Onondaga Federation of Kettle Lake Associations & Tully Lake Property Owners Association

“[Colleen] worked as a significant contributor with COFOKLA and Tully Lake to develop Watershed Implementation Plans for all four kettle lakes, including Tully Lake. Using those WIPs, she has worked over 4 years with Onondaga County Soil and Water District and Upper Susquehanna Coalition to bring riparian plantings to properties around the northern regions of Tully Lake as well as riparian buffers to Cummings Park in Tully... For 5 years, Colleen has been a key educator for the “Stop the Invasion: Clean, Drain, and Dry” initiative in Cortland County.

Maria Hudson, Keuka Lake Association

Maria has been a member of the Keuka Lake Association Board of Directors since 2017. She currently serves as Vice President of the Keuka Lake Association, and has served on numerous committees throughout her time on the board. Maria has taken leadership role overseeing the long-term water quality monitoring programs. In 2018, Maria worked to initiate stream water sampling programs and has led the KLA’s participation in monitoring of benthic invertebrates in streams as part of the DEC’s WAVE program on Keuka Lake. In addition to these monitoring efforts, Maria has organized a group of volunteers that monitor the shoreline of Keuka Lake for Harmful Algal Blooms. Maria has also been influential in leading the effort to manage Starry Stonewort in the west branch of Keuka Lake.

Bob Manning, Garnet Lake Conservation Association

Bob has been an active member of the Garnet Lake Conservation Association since 1978. He has served the GLCA in numerous roles throughout his time, including chair, vice-chair, and secretary. As a member of the Dam Committee, Bob has attended numerous meetings with state and local government on dam related issues and has taken on the responsibility of submitting required reports to the DEC Dam Safety Section. He is an active participant in the Adirondack Lake Assessment Program and has supported efforts to monitor/inspect for aquatic invasive plants. In addition to all of this, Bob is also the GLCA’s unofficial photographer.

Tarki Heath Receives 2022 Lake Tear of The Clouds Award

The Lake Tear of the Clouds Award is NYSFOLA's highest honor. This award, named for the highest elevation lake in the state, is awarded to a person who has shown the highest dedication to lakes and watersheds, assisted NYSFOLA in its mission and produced exceptional performance in his or her field of endeavor. This year's recipient recently retired from a long career as a Learning Specialist, and so it is only natural that she herself is a life-long learner. Specifically, she has delved into the world of lakes and watersheds and other efforts to protect the environment. Her volunteer activities with lake associations, and other environmental causes, have focused on educational outreach to both adults and children as well as collaboration with a wide-range of organizations and government agencies.

Our 2022 Lake Tear of the Clouds recipient, Tarki Heath, currently serves as the Secretary for the Song Lake Association in Cortland County and was its President from 2010-2104. Since 2009, Tarki has led the Cortland County Federation of Kettle Lake Associations (aka COFOKLA), a coalition of lake associations in northern Cortland and southern Onondaga Counties that share both geographic and watershed boundaries. Through her efforts, the associations of COFOKLA have worked together on a wide variety of lake and watershed projects, and have collaborated with groups such as the Upper Susquehanna Coalition, the SUNY College of Environmental Science

and Forestry, Earth Justice, and NYSFOLA, as well as Cortland and Onondaga Town and County government officials.

In May of 2012, our honoree was elected to the NYSFOLA Board of Directors, and over the last decade, she has served on multiple committees and provided thoughtful insight on the future of NYSFOLA. When she took over the Presidency

in 2020, she could not possibly have predicted what was to come. For well over a year, she has taken on the enormous challenge of negotiating a new 5 year CSLAP workplan and contract with DEC. And while there are still many details yet to be finalized, it is clear that CSLAP has a bright future thanks in part to Tarki's extraordinary efforts and diplomacy.

For her highest dedication to lakes, watersheds, and NYSFOLA, we honor Tarki Heath as this year's recipient of the Lake Tear of the Clouds Award.



Thank you to our 2022 Sponsors and Exhibitors!

Note: Those products and services offered by commercial exhibitors at the NYSFOLA conference are not necessarily endorsed by the NYSFOLA Board of Directors or staff. Always seek references and check with permitting agencies before purchasing products or entering into a service contract.

Aqualogic Inc.

Aquarius Systems, Div. of D&D Corporation – <https://aquarius-systems.com/>

CD3, General Benefit Corporation – <https://cd3systems.com/>

Clean Waters Consulting, LLC

Emmons Metro – <https://emmonspump.com/>

In-Situ – <https://in-situ.com/us/>

Lake Champlain Basin Program – <https://www.lcbp.org/>

LG Sonic LLC – <https://www.lgsonic.com/>

North American Lake Management Society – <https://www.nalms.org/> – Nicole White, Region 2 Director

Northeast Aquatic Research, LLC – <https://northeastaquaticresearch.net/>

NYS DEC Invasive Species Coordination Section and NYS Natural Heritage Program/ iMAP

Pond and Lake Connection – <https://thepondconnection.com/>

Princeton Hydro – <https://princetonhydro.com>

SOLitude Lake Management – <https://www.solitudelakemanagement.com/>

Walter Dutcher recognized as Outstanding Volunteer

The Martha Keppel Outstanding Volunteer Service Award honors a NYSFOLA volunteer who has contributed time and effort to the organization in a way that could never truly be repaid. The award is named after Marty Keppel, the wife of former NYSFOLA Treasurer Donald Keppel. Don and Marty ran the NYSFOLA office out in Findley Lake in the 1990s when the organization was still growing and had limited financial resources. Our organization continues today, in part, because of their volunteer efforts.

It is fitting, therefore, that the 2022 Outstanding Volunteer Service Award is being presented to NYSFOLA's Treasurer, Walter Dutcher from the Butterfield Lake Cottage Owners Association. Walter took over the position of Treasurer from Don in May 2010. Since that time, the organization has grown considerably, and the Treasurer's job has become



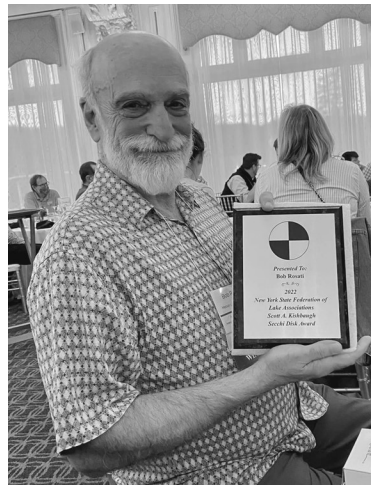
increasingly time consuming. Walter has overseen the growth of our financial resources, prepared and submitted large state vouchers to DEC for CSLAP reimbursement, initiated the use of PayPal for the conference, worked with others to ensure that our financial statements are prepared for the IRS, the NYS Charities Bureau, and that they are audited by Certified Public Accountants each year in compliance with state requirements. Walter is also the primary CSLAP volunteer at Butterfield Lake where, in his spare time, he also listens to music, spends time with friends and canine companions, and even plays Santa Claus.

For the countless hours he has spent ensuring our organization's financial security, when he would rather be enjoying lovely Butterfield Lake, we say thank you to Walter and recognize his dedication to NYSFOLA.

Bob Rosati receives Scott A. Kishbaugh Secchi Disk Award

In 2019, the NYSFOLA Board of Directors instituted the Scott A. Kishbaugh Secchi Disk Award to be presented annually to an outstanding Citizens Statewide Lake Assessment Program (CSLAP) volunteer who has shown unwavering dedication to the program, his or her lake association, and NYSFOLA. This year, it is our great pleasure to recognize a CSLAP volunteer who first started sampling his beloved Melody Lake in 1987. He is still the primary CSLAP volunteer there, and only took a couple of years off along the way.

Bob Rosati is a Past-President of NYSFOLA, but he has long been a champion for Melody Lake--taking on issues ranging from dues collection and Chinese Mystery Snails to the repair, inspection, and maintenance of a Class C high hazard dam--and everything else in between. In 2009, Bob notified NYSFOLA about



DEC's new Dam Safety regulations and became our Dam Safety Committee Chairperson. Through his efforts, many NYSFOLA members became aware of the regulations, and Bob assisted many of them through the process of finding engineers, government assistance, and additional information. For his efforts, Bob was the 2011 recipient of NYSFOLA's Lake Tear of the Clouds Award. Bob is also the editor of the "Melody Lake News" for which he has received many newsletter contest awards. Because of his long time dedication to the Melody Lake Association,

NYSFOLA, and the Citizens Statewide Lake Assessment Program, we are happy to present Bob Rosati with the Scott A. Kishbaugh Secchi Disk Award, and this makes Bob the most "decorated" member of our organization. We cannot thank him enough for his longtime service.

What is an Aquatic Pesticide - and What Isn't?

NYSFOLA thanks Martin Williams with NYS DEC's Pesticide Enforcement and Compliance Assurance Section for providing guidance and for sharing the United States Environmental Protection Agency's April 1999 "Enforcement Alert" (EPA 300-N-99-006, Vol 2, Number 4) which is summarized below.

Making Indirect Pesticidal Claims May Mislead Public

Under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), pesticide products must be registered with the Environmental Protection Agency (EPA) and bear EPA-approved labeling before they can be lawfully sold or distributed in the United States. These requirements reduce risk of misuse and screen out products that may present an unreasonable risk to public health and the environment. Products claiming to prevent, destroy, or repel pests, including bacteria and viruses, are considered pesticides.

What are pesticides and why are they regulated?

Regardless of its toxicity or effectiveness, a pesticide is any chemical or biological substance intended to control or kill living organisms (pests). For more than 60 years, pesticide products have been required to be registered with the federal government before they can be sold or distributed in the United States. Once a product is determined to be a pesticide, potential exposure to the product and its toxicity are key factors in EPA's determination of whether the pesticide can be registered and under what safeguards.

Pesticides are generally toxic to pests and, if misused, may harm people and the environment. In addition to registration, the law requires that pesticide labels bear, among other things, ingredient statements to that users and others know exactly what is in a product (as in case of accidental contact or ingestion of the concentrate), adequate precautions to advise people of potential hazards, and directions for use to ensure the safe handling, application, and disposal of the product. Some pesticides for use around the home are also required to be in child-resistant packaging.

What identifies a product as a pesticide?

Products that make claims for the prevention, removal, control, or elimination of algae or bacteria are considered pesticides. Indirect claims such as: *"Eliminates green water," "Producing conditions that prevent algae or bacteria," "Removes nutrients that promote the growth of algae and bacteria,"* or *"Precipitates phosphate, a nutrient for algae,"* also are considered to be pesticidal claims. Re-

gardless of claims, naming a known pesticide as an ingredient may also identify a product as a pesticide.

In addition, EPA states a substance is likely to be a pesticide if the labeling or advertising: draws a comparison of the product to a pesticide or pictures a pest on the label. EPA is generally only concerned with the pesticide label. States, however, regulate the use of the product and are additionally concerned with how the product is being marketed and the intent with which it is being used.

When are products not considered pesticides?

Products that do not make direct or indirect claims for preventing, removing, controlling or eliminating living organisms such as bacteria or algae are not pesticides.

Claims regarding the reduction of nutrients and organic matter would not identify a product as a pesticide unless the claim also states or implies that there will also be a reduction in pest populations such as bacteria, algae, or weeds.

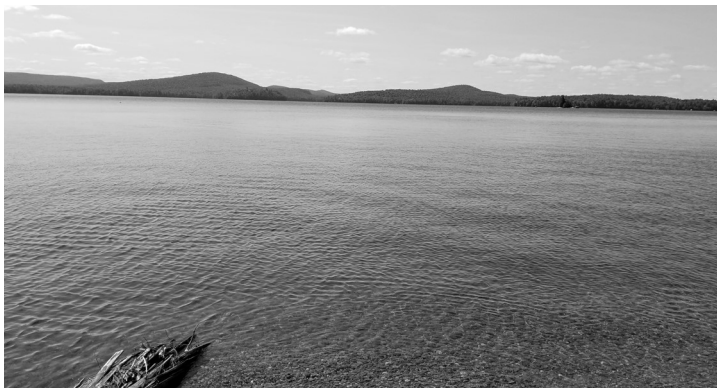
If a vendor is making a pesticidal claim, about a product that is not registered as a pesticide, then it is a violation of New York's pesticide regulations and should be reported.

When in doubt, contact your regional DEC office. Information about DEC's Aquatic Pesticide Permit Program can be found at: <https://www.dec.ny.gov/chemical/8530.html>.



Lake “browning” and its implications for lake management

by Owen Zaengle, Assistant Program Manager



Throughout the past several decades many lakes in the northeastern U.S have been experiencing a phenomena that is referred to as “browning”. This phenomena is visible in the darkening of lake water, transitioning from clear-water state to a state of tea-colored water. Researchers identified this widespread trend occurring in the Adirondacks through an analysis of long-term datasets. Browning is the result of increased Dissolved Organic Matter (DOM); it is also sometimes discussed as an increase in Dissolved Organic Carbon (DOC). Browning can have widespread impacts on the plants and animals within the lake, as well as the physical characteristics of the water column such as stratification. This article gives a brief overview of our current understanding of the underlying causes and potential impacts that browning may have on lakes within New York State.

Causes of Browning

The causes of browning are complex and interconnected. They are often not the result of localized issues, but exist in a diffuse manner at the global scale. Scientists suggest several driving mechanisms that lead to the increases in Dissolved Organic Matter (DOM) that is indicative of “browning” lakes. Highlighting the interconnectedness and complexity of human impacts on the environment, researchers suggest that the successes of the Clean Air Act Amendments in the 1990’s have played a role in the trends of increasing DOM. These policies worked to drastically reduce emissions of sulfur dioxide and nitrogen oxide, two substances that contribute to acid rain. As soils and lakes impacted by acid deposition begin to recover from acidification, there is increased mobilization of DOM that can make its way into lakes. Increased precipitation and

changing weather patterns caused by climate change also contribute to increased DOM in lakes. This may occur through an increase in high discharge events that saturate soils and lead to increased mobilization of DOM within those soils, as well as increased input into lakes, and decreased output due to increased evaporation of water related to increased temperatures ^{1,5}.

Additionally, DOM selectively absorbs short wavelength ultraviolet radiation. This has direct implications for nutrient cycling. It reduces potential light induced breakdown (AKA photodegradation) of chemical compounds and the disinfection of water-borne pathogens and parasites (including the human intestinal parasite *Cryptosporidium*). It can impact the life cycles of aquatic invertebrates, such as zooplankton or mosquito larvae. Increased DOM may also increase the spawning potential for warm-water fish by protecting vulnerable larvae from damage from ultraviolet radiation. Additionally, browning may have additional consequences for lakes that are used as drinking water sources, particularly if they are treated with chlorine. The addition of chlorine to waters that have elevated levels of DOM can produce carcinogenic byproducts.

Impacts of Browning on Lake Ecology

Increased DOM in lakes has direct impacts on the availability of light that macrophytes and algae utilize for photosynthesis. It had previously been thought that increased DOM in lakes would also coincide with increasing nutrient loads to lakes, however recent research led by scientists at Rensselaer Polytechnic Institute suggest that this is not always the case¹. These researchers suggest browning may lead to less biologically productive lakes. While the impacts of browning throughout the food web are somewhat understudied, our current understanding of the aquatic food webs suggest there could be widespread impacts. While eutrophication (addition of nutrients) and browning may impact plant and algal growth in very different ways, they may have similar effects when it comes to water clarity, stratification and loss of oxygen in the bottom waters. Some research has suggested that because increased DOM in lakes means that light penetration is decreased in the water column, lake

in turn, may lead to greater (or more rapid) depletion of oxygen within bottom waters.^{1,4}

Is our lake browning?

While browning is related to the increase in DOM/DOC within a lake, water color is often used as a surrogate for measuring these variables. Water color, often referred to as True Color, is measured in Platinum Cobalt units. True Color and DOC are often closely correlated with each other, however there are certain circumstances in which they may not - such as lakes with high iron content. The Citizen Statewide Lake Assessment Program (CSLAP) routinely monitors True Color in participating lakes. Lake associations with long-term datasets may inquire of the data collected through the CSLAP program as to whether lakes have experienced browning over the past decades.

Looking Forward:

It is problematic to discuss browning as either a good thing or a bad thing. It is more complex than that. Many lakes, particularly those in the Adirondacks, naturally have more DOC due to the composition of their watersheds. The acidification of these lakes, due to human caused acid rain, altered many of these systems; the browning that is occurring within these lakes now is a recovery. These lakes are in the process of returning to a state resembling a pre-acidification state. However, this is not the case for all lakes, as DOM input into lakes is dependent on soils, land cover, and regional climate. The mechanisms related to climate change mentioned above increase the potential for many lakes to experience browning to some extent.

Attempts at localized mitigation of the browning process are not likely to be effective, as the causes are global and dispersed. Perhaps lake associations and lake management should focus on the implications of browning to their current and future relationship with lake ecosystems.

NYSFOLA will be collaborating with researchers at Syracuse University to investigate the impacts of lake browning in relation to organic micro-pollutants. This research, led by Dr. Teng Zeng, was recently awarded over \$500,000 by the National Science Foundation and will utilize the network of CSLAP volunteers to further understand lake browning and its relevance for informing watershed management and wastewater treatment. As the project progresses outreach programs and information for lake community members will be made available. Stay tuned!

For more information on lake browning - check out the Spring 2020 issue of *LAKELINE*, a publication by our affiliate organization the North American Lake Management Society. It can be accessed on their website at: <https://www.nalms.org/product/lakeline-40-1-lake-browning/>

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2. Williamson, C.E. (2020) Lake Management in a Browning World: Beyond the Holy Grail of Nutrients. *LAKELINE*, Spring 2020. North American Lake Management Society. 6-1
3. Rose, K.C. and Stetler, J.T. (2020) The Causes & Food Web Consequences of Lake Browning: How are They Linked? *LAKELINE*, Spring 2020. North American Lake Management Society. 11-13
4. Solomon, C.T. and Jones, S.E. (2020) Terrestrially Derived Dissolved Organic Matter – Its Influence on Lake Food Webs. *LAKELINE*, Spring 2020. North American Lake Management Society. 14-16

Video: Learn to Identify Cyanobacteria Blooms

A recently produced video by the Interstate Technology and Regulatory Council (ITRC) is now available to help people identify cyanobacteria blooms (aka harmful algal blooms). The ITRC is a state-led coalition working to reduce barriers to the use of innovative air, water, waste, and remediation environmental technologies and processes.

The video can be found at: <https://www.youtube.com/watch?v=1Aknc7dZHMg>. You can also link to it through the NYSFOLA website under Algae Identification Links: <https://nysfola.org/algae-identification-links/>.



Ask Dr. Lake

Dear Dr. Lake,

I hope that you can provide an answer to an issue that our lake association has been discussing for quite some time. There is a small dam on the outlet of our lake that allows us to remove some water during the winter so that our docks don't get damaged by the ice. There are many opinions of how much and when we should lower the lake level. My good friend Dawn is concerned for the wellbeing of frogs, turtles, and other critters and suggests we maintain our current water-level year round. My neighbor Phil advocates for adding water to the lake. He al-

ways says, "more water equals more fish." As for me, I prefer a more extensive drawdown earlier in the year, as the rope on my anchor will not reach the bottom of the lake at its current depth. We cannot seem to reach a win-win solution. Could you let us know what the correct lake level is?

Sincerely,

Dan Chorsaway, Lake Levelle

Dear Dan,

Thank you for reaching out with your question. Discussions around water level can get a bit heated. In answering your question there are two things I'd like to touch on.

First, I'd like to mention that as a scientist I can offer some general knowledge on what we (as a scientific community) know about the impacts of altering lake water levels on infrastructure, plants, and animals. I can also share about what we do not know about this topic. Science cannot tell us what the "correct" water level is. That is a question of values. Science can only tell us about the potential impacts of altering the water level in your lake.

As such, I will offer a brief overview of water-level drawdown and its possible impacts. Water level drawdown is a lake management practice that consists of a temporary reduction in water level. As you mentioned, water-level drawdown is typically done during winter months with the intention of reducing ice damage to infrastructure, managing aquatic plants, and/or stimulating fish spawning in spring. When discussing how-much and when to start a water-level drawdown project, it should be noted that there will likely be some undesirable side-effects. There are many factors that influence what parts of the system are impacted. Watershed characteristics, lake shape, and climate as well as the timing, magnitude, and rate of drawdown all complexly interact to affect the surrounding environment.

Watershed characteristics such as land-use, slope, and

drainage patterns impact how quickly water-levels can be altered (lowered and refilled) and have major implications for water quality within the lake. Lakes with steeper sides respond very differently to water-level alteration than those with more gradual slopes. For instance, a one foot drop in water level will expose much more of the lake bottom in a lake with a more gradual drop off than a lake with a steep dropoff. This has major implications for the aquatic life that inhabits the lake. Climate and weather patterns are also important considerations when discussing drawdown. You don't want to take more water out of the lake than you'll get in the spring, or you won't be able to refill the lake to the previous level in a timely manner. Additionally, changing climatic patterns adds another layer of complexity to this issue.

The timing of drawdown can impact plants and animals in different ways. For instance, drawing the water level down earlier in the season may support plant management objectives and benefit frogs and turtles by allowing them to find appropriate overwintering locations prior to freezing temperatures. A later drawdown date may allow recreational uses to be continued later into the season and may prevent fish-kills, both in lake and downstream, resulting from warm oxygen depleted waters. Similarly, the rate of drawdown can impact plants, animals, and infrastructure in different ways. Studies have documented how rapid drawdown can trap fish in shallow pools and strand slow-moving invertebrates above water. Slow drawdown may minimize these impacts, but may, depending on the timing,

restrict recreational uses for an extended time period and impact the effectiveness of plant management.

It should also be noted that different plant species react differently to water level drawdown. Some species typically decrease after drawdown, some are not significantly impacted, and others tend to increase after drawdown. Studies have shown that species such as Coontail (*Ceratophyllum demersum*), Yellow waterlily (*Nuphar* sp.), and many of the Milfoils (*Myriophyllum* sp.) populations are typically reduced after drawdown. Species such as Eelgrass (*Vallisneria americanum*), Common waterweed (*Elodea canadensis*), and Muskgrass (*Chara vulgaris*) are not significantly impacted, while species such as Duckweed (*Lemna minor*), Naiads (*Najas* sp.), and many pondweeds (*Potamogeton* sp.) increase following drawdown. For a



DeRuyter Reservoir in Madison County was drastically lowered to enable repairs to its Class C High Hazard dam. Photo by Nancy Mueller

larger list of observed changes to plant species after drawdown, please reference your copy of *Diet For A Small Lake* (page 141). This is particularly important when the goal of water-level drawdown is the management of aquatic plants.

New York State requires that a permit be obtained before a water-level drawdown project is initiated. The State has regulations in place that provide a framework for implementing these projects. These regulations take into account the magnitude, timing and rate of the drawdown project. The regulations also lay out requirements for monitoring, inspection, and record-keeping throughout the drawdown process. If the drawdown impacts the navigability of the lake, affects adjacent wetlands, or the lake lies within the Adirondack Park additional regulations may apply and ad-

ditional permits may be necessary. When considering a water level drawdown project it is important to include the NYSDEC within the conversation in order to assure regulatory compliance and to get started on the permitting process.

As you can tell from my response, understanding the potential impacts of altering water level within a lake requires a deep understanding of the individual lake and watershed. Thus, without an in depth study of Lake Levelle, I could not tell you the exact water level that would minimize all negative impacts. In fact, there would likely not be a water level that would reduce all negative impacts, and we may not even agree upon what a negative impact might be. The decision to alter the water level to a certain point then becomes a discussion of the values that the community holds and navigating the complex trade-offs that come with water-level alteration.

In closing, my advice for your situation would be the following:

Learn about your lake. Learn as much as you can about the lake you live on/near.

Understand that values may differ. The things you value may be different than what your neighbor values and that's ok.

Approach discussions with humility. Have an understanding of the complexity of the system and the limits of your own knowledge. Make room for others' knowledge and perspectives.

If need be, **Consult a professional.** There are many qualified individuals and organizations that can help you gain a deeper scientific understanding of the lake, as well as those who are adept at facilitating the decision making process.

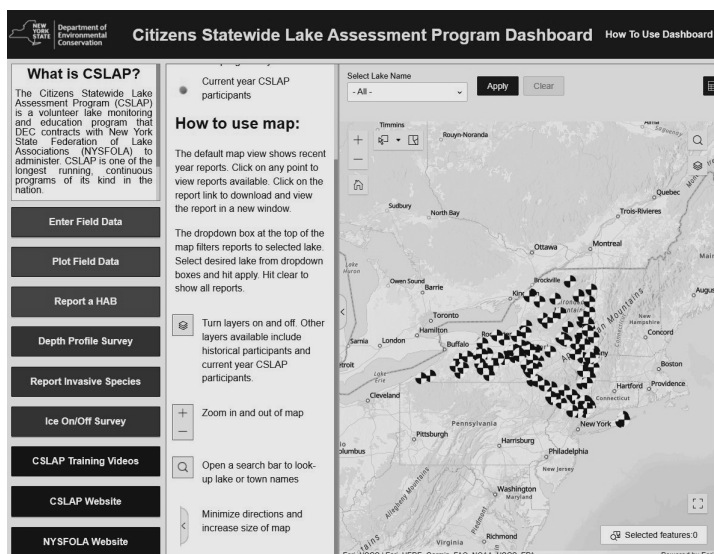
I hope my answer was helpful and informative. Also, perhaps an easier solution to the dilemma of your anchor not reaching the bottom of the lake might be to invest in a longer rope.

All the best.

Dr. Lake

New CSLAP Dashboard - Find Your Reports and Data! 2021 Reports are now available.

Greetings to our CSLAP participants. It has been a busy start to the season, and we have conducted numerous training sessions in many parts of the state. It's always great to meet our new volunteers and say hello again to our veteran crews.



New CSLAP Dashboard- As many of you know, DEC has developed a new online data entry system to replace the one developed by NYSFOLA and CSLAP Volunteer Lou Feeney from the Three Lakes Council in Westchester County. We all owe a debt of gratitude for the incredible amount of time, talent and energy Lou put into the system. We have previously honored him with our Outstanding Volunteer Service Award, and we thank him for his continued service to NYSFOLA and CSLAP.

The new CSLAP Dashboard can be found at: on.ny.gov/cslap_dashboard, and you can enter your field data, report harmful algal blooms and find your reports. Directions for using the dashboard can be found in the upper right hand corner by clicking on: "How to Use Dashboard." The 2021 reports are now available, and if you look at the report carefully, you will see a "download data"

in blue. This links you to previous CSLAP data that is now available to download.

Welcome Rebecca Gorney - We also want to officially welcome Dr. Rebecca Gorney, NYS DEC Research Scientist to CSLAP. She will be familiar to many of you as the DEC HABs Program Coordinator, and she is now taking on the CSLAP Coordinator position, replacing Stephanie June.

CSLAP Trainings - An expanded program means that there are over 600 volunteers this year, and nearly 180 who are new to the program and need to be trained. We have been conducting training sessions across the state as time, weather and the budget, allow. All new volunteers are required to attend a formal training session in accordance with DEC's Quality Assurance and Management Plan for the program.

New Sampling Protocol and Other Information - Looking for more information? Head to: <https://nysfola.org/cslap-protocol-forms/>.

Thinking About 2023? - If your lake is not currently in CSLAP, but your association would like to participate in 2023, please contact Nancy Mueller at foia@nysfola.org as soon as possible. We already have several lakes on the list. Lakes will be accepted as the budget allows, and the 2023 list will be finalized by October of this year. Forms for the 2023 season will be sent out shortly thereafter. CSLAP applications, program participation fees, 2023 NYSFOLA membership dues, and all volunteer waiver forms will be due back at NYSFOLA by February 1, 2023.

In the meantime, we thank our dedicated volunteer and wish you all a safe and enjoyable sampling season.

Questions?

Nancy Mueller:
(315)677-9987 or
foia@nysfola.org

Rebecca Gorney:
(518)402-8258 or
cslapinfo@dec.ny.gov



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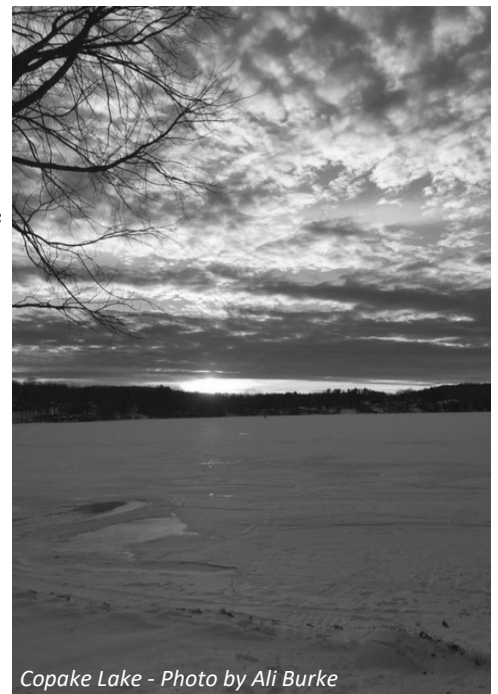
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Copake Lake - Photo by Ali Burke

Upcoming Lake Conferences

August

Adirondack Lakes Alliance Meeting

August 5, 2022 at Paul Smiths College

The Adirondack Lake Alliance will meet at Paul Smiths College to discuss lake related topics, particularly those of importance to the Adirondack region

Columbia/Greene Regional Lakes Coalition Meeting

August 12, 2022 at Sleepy Hollow Lake

Join NYSFOLA at the Sleepy Hollow Lake Lodge in Athens for regional meeting. NYSFOLA Board members Terri Mayhew and Laurel Wolfe are organizing a Please contact Laurel Wolfe for more information.

CNY Regional Meeting

August 19, 2022 at Little York Lake

Join lake-minded folks from around Central New York at the Little York Pavilion on Little York Lake in Cortland County on August 19th. Details coming soon! Check for updates on our website www.nysfola.org.

October

NYSFOLA Western Regional Conference

October 22, 2022 at Moonwinks Restaurant, Cuba, NY. Check the NYSFOLA website for updates.

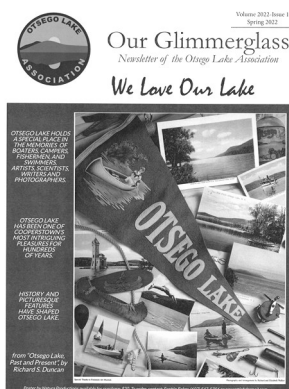
November

November 14 - 17, 2022 Minneapolis, MN

North American Lake Management Society International Symposium: "Leveraging Experience to Manage Diverse Lakes, Landscapes and People" www.nalms.org



Lake Association Newsletters Recognized for Excellence



The NYSFOLA Board of Directors would like to thank all of our member lake associations who participated in the 2022 Lake Association Newsletter Contest. Awards are given to outstanding newsletters for small, medium, and large lake associations. Awards are also given for the best digital newsletter. A big thank you to NYSFOLA Board Member

Theresa "Terri" Mayhew and her team of judges for their work in facilitating these awards. The awards were presented in Lake George at the NYSFOLA annual conference.

Small Lake Association Category

1st Place: *Melody Lake News* - Melody Lake Association

Medium Lake Association Category

1st Place: *Our Glimmerglass* - Otsego Lake Association

Large Lake Association

1st Place: *Lake Pleasant/Sacandaga Newsletter* - Lake Pleasant-Sacandaga Association

2nd Place: *Laker News* - Conesus Lake Association

Digital Newsletter:

1st Place: *Oneida Lake Bulletin* - Oneida Lake Association

2nd Place: *The Mini Pearl* - East Shore Schroon Lake Association

2022 Membership Form

New York State Federation of Lake Associations, Inc.

Lake, Watershed and other Associations:

Small Association (10-74 members)	\$ 50.00
Medium Association (75-149 members)	\$ 100.00
Large Association (150 or more members)	\$ 175.00
Foundation (affiliated with NYSFOLA member)	\$ 100.00

Individual Memberships:

Individual Membership (not a member of a NYSFOLA lake association)	\$ 25.00
Individual Member of a NYSFOLA member lake association in good standing	\$ 15.00
Student Membership	\$ 15.00

Corporate Membership: \$ 250.00

Name of Lake Association or Individual _____

Location (County) _____

(important if your lake is one of many in the state with the same name)

Contact Name _____

Address _____

City, State, Zip _____

Telephone _____

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Web site _____



Amount Remitted _____ Check # _____ Date _____

Any Additional Donation? _____

The New York State Federation of Lake Associations, Inc. is a 501(c)(3) not-for-profit corporation registered with the NYS Office of the Attorney General Charities Bureau 28 Liberty Street 15th Floor New York, NY 10005 phone: (212)416-8401. A copy of our latest annual financial report is available from the Charities Bureau or by contacting NYSFOLA at P.O. Box 84 LaFayette, NY 13084. It can also be found online at www.charitiesnys.com. (Enter NYS Federation of Lake Associations in the search space.)

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Jenny Lake, Saratoga County—Photo by Nancy Mueller