CFL News

Volume 19, Issue 2 – Fall 2014

An Overview of the 2014 New England Lakes/ NECNALMS Conferences

By Sabina Perkins

In June of this year CFL was instrumental in hosting the New England Chapter of the North American Lake Management Society (NECNALMS) conference at UCONN. There was a big focus on community involvement and empowering lake stewards. Attendees participated in informational workshops to learn about lake science. One workshop, run by Lori Benoit of the UCONN Department of Ecology and Evolutionary Biology, taught people to identify both native and invasive aquatic plants. The UCONN cooperative extension and Center for Land Use Education and Research (CLEAR) personnel also showed attendees how to use a smartphone GPS to collect data on your lake. Bob Kirchner, of the Chicago Botanical Garden, and Deborah Lee, of the Woodland Trails Native Plant Nursery, inspired us to turn those lawns abutting the lake into an ecologically friendly buffer zone, blooming with attractive native plants.

At the evening dinner, Robert Thorson discussed his new book, *Walden's Shore*, and the sounds of ice shifting that Henry David Thoreau himself likened to "flatulence beneath the blankets" while living on Walden Pond. The various presentations told stories of community successes, unveiled new tools and technologies for managing lake shorelines, and discussed the causes of cyanobacteria (HAB) blooms and management strategies. We came away motivated to make a difference in our community and empowered with a few more skills to use along the way.

Thank you to all CFL members who were instrumental in helping us make this conference a reality, and special thanks to the CFLers who shared their lake management experiences as part of the concurrent sessions. For those of you who couldn't make it this year, hope to see you there next year!

East Haddam Understands the Value of Its Lakes

By Randy Miller

East Haddam was well represented at the June 14, 2014 Conference of the New England Chapter of the North American Lake Management Society held at UCONN in Storrs, CT, at which First Selectman Mark Walter and East Haddam Lakes Association (EHLA) member Randy Miller made presentations. Mark's topic was "Successful

Amos Lake (Preston, CT)

In this Issue

Collaboration Between a CT Lake Association and a Municipality" and Randy's topic was "Keeping Lakes (Financially) Afloat." Both talks brought focus to the ongoing partnership between the Town and lake groups to maintain and improve the quality of Bashan Lake, Lake Hayward, and Moodus Reservoir by mitigating invasive weeds and ensuring that water quality remains high. The Town recognizes that invasive weeds can quickly overwhelm its lakes and if not checked, limit swimming, fishing and boating, which will drive down property values and the Town's Grand list. Both Mark and Randy noted that property taxes generated by the lake communities compose a significant portion of the Town's revenue stream, and that spending by both full-time and part-time lake residents are an important economic engine to the area. Mark also touched on the Town's collaboration with the Chatham Health District and EHLA to support stronger septic pump-out requirements, which is important to maintaining clean lakes. East Haddam's support of its lake is a win-win stewardship partnership of the lakes, all of East Haddam's property owners and businesses in Town. Both presentations were well received at the conference, generated much discussion by attendees, and put East Haddam on the map as a responsible lakes community.

Randy's presentation can be viewed at:
http://www.lakehaywardct.com/ehla.pdf

CALL FOR DESIGNS!

The CFL is inviting you to design a logo for a Connecticut Lakes Special Interest License Plate. The logo can have up to four colors and should be 2" wide and 3.5" high. If your design is chosen you will be recognized in an upcoming newsletter and your logo could be seen on lake lovers' license plates around the state!

PREVENTING THE PANIC: BEING IN THE KNOW ABOUT BLUE-GREEN ALGAE

By Hillary Kenyon

The phrase "Harmful Algae Bloom" (HAB) has recently come to the forefront of lake management. Even before the Toledo water crisis made national news this summer, blue-green algae and cyanotoxins were gracing headlines across the Northeastern United States. In the summer of 2013, the Connecticut Department of Public Health (DPH) and Department of Energy and Environmental Protection (DEEP) issued new guidelines to address HABs as a human health concern. The development of state recommendations was expedited by widespread media coverage of a particular blue-green algae bloom in 2012. News of '*toxic* lake water' is never well-received by lake users, particularly when limited information is coming from local media sources, instead of directly from the municipality or health department. Complicated science is easily botched. Then, all of a sudden, a billowing cloud of distorted details transforms into a public panic: the fear of the unknown. By referencing scientific publications and credible web-sources, this article hopes to dissipate any accumulated haze.

Confirmed Blue-green Algae Blooms (Photos from CT)

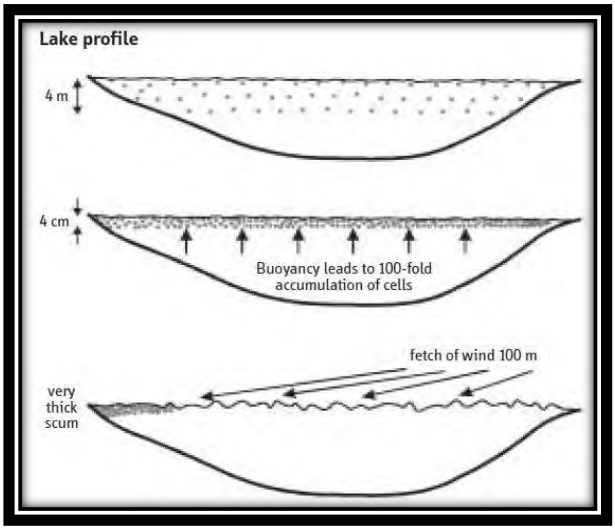
Blue-green algae basics…

Algae and phytoplankton are terms that describe a large group of microscopic photosynthetic organisms that inhabit both fresh and salt water environments. Blue-green algae, now known as **cyanobacteria**, make up one group of phytoplankton that typically occur in varying numbers throughout water bodies in Connecticut. Blue-green algae utilize the sun's energy, carbon dioxide, and water to produce their own food. The end-product of this process is oxygen, the life-sustaining compound that jumpstarted evolution and made way for an explosion of life on Earth. We can thank oceanic cyanobacteria for much of the oxygen we breathe today, and it is common knowledge among the scientific community that the oldest

cyanobacteria fossils date back to 3.5 billion years! It's no wonder that these amazing colonies of cells are equipped with highly evolved adaptations enabling them to survive in almost every environment on the planet [3].

In addition to light, cyanobacteria also require naturally occurring nutrients (i.e. nitrogen and phosphorus) in order to carry out cellular processes required for growth and replication. Humans accelerate algae and cyanobacteria growth in lakes by increasing nutrients, a process called *eutrophication* [3]. Anthropogenic, or human-related, sources of nutrients to lakes include domestic and agricultural waste, septic leachate, road run-off, and lawn fertilizers. It is because of this heightened availability of nutrients in lakes that blue-green algae are able to reach extremely high cell densities, referred to as a 'bloom' [4,6].

Many cyanobacteria species can form gas vesicles within their cells that allow them to regulate their vertical position in the water column. This adaptation may enable cyanobacteria to out-compete other species of algae that do not have this adaptive advantage. When cyanobacteria cells float to the surface, they are subjected to wind movement, which can then concentrate cells into thick scums along the shoreline. Though a scum does not necessarily mean that there are cyanotoxins present, it is usually a good indicator that cell densities are high enough that potential toxins may pose a significant health threat. The World Health Organization (WHO) published a diagram to illustrate the accumulation of cyanobacterial cells [7].



The complicated nature of toxin-producing cyanobacteria and what it means for you!

There are over one-hundred species of known toxin producing cyanobacteria. Understanding species dynamics in lakes, along with toxicological effects relevant to humans, is a daunting task that employs life-long researchers around the world.

Microcystin should not be a novel word to lake residents, but the associated technical language may be off-putting to those less scientifically inclined. Microcystin is one type of toxin produced by numerous cyanobacterial species at varying levels. To further complicate things, microcystin is not the only type of cyanotoxin that affects human activity in lakes [3]. There are numerous other cyanotoxins.

Brace yourself for the slew of consonants that are sure to tie anyone's tongue: anatoxins, cylindrospermopsins, saxitoxins, nodularins (a select few relevant to Connecticut lakes, courtesy of GreenWater Laboratories, FL). Like microcystin, each type of toxin listed poses a unique health risk to humans and pets, largely through contact and drinking water. Exposure to cyanotoxins may result in skin irritation, vomiting, diarrhea, or in severe instances, damage to the liver and nervous system. There is an extensive amount of research in the area of cyanotoxins, and our knowledge of this field is continually expanding with new scientific discovery.

Management based on what we know so far…

In a previous issue of the newsletter, CFLer Dr. George Knoecklein, spelled out the HAB guidelines provided by the US Environmental Protection Agency (EPA) based on the WHO's findings. The following table was taken from the WHO and is displayed on the EPA website: http://www2.epa.gov/nutrient-policy-data/policies-and-guidelines

Relative Probability of Acute Health Effects	Cyanobacteria (cell/mL)	Microcystin-LR (µg/L)	Chlorophyll-a (µg/L)
Low	<20,000	<10	<10
Moderate	20,000-100,000	10-20	10-50
High	100,000-10,000,000	20-2,000	50-5,000
Very High	>10,000,000	>2,000	>5,000

Referring to the EPA "Acute Health Effects" table, it seems as though a cyanobacteria count of 20,000-100,000 cells/mL would be consistent with 10-20µg/L of microcystin. However, based on field experience and testing of CT lake water, these two do not always match up. Numerous blue-green algae bloom samples from CT have yielded <1µg/L of microcystin, despite cell numbers vastly greater than 20,000 cell/mL. Similarly, a series of scum samples taken just a few feet apart

measured 7.8µg/L and 29.0µg/L microcystin – while no toxins were detected about fifty feet away (Greenwater Lab results, FL). If you sit scratching your head at these differences, think back to the way wind can concentrate cells into coves and along shorelines.

While much of the off-shore lake water may pose a low probability of acute health effects, it is likely that a lake experiencing a bloom will have areas where cyanobacteria cells conglomerate, and where toxins may be present at dangerous levels [6,7]. Then, you may recall how there are numerous species of cyanobacteria that produce varying levels of the toxin microcystin. It is important for a professional with cyanobacteria taxonomy expertise to determine which species make up the particular bloom at the time of sample collection. Observation under a microscope will determine if there are toxin-producing species present. It is important to note, however, that because cyanobacteria replicate so quickly, a bloom may consist of relatively benign species one day, and could be dominated by harmful species just days later.

At the time of the 2012 CFL newsletter, Connecticut had not yet developed state guidelines. Since then, the CT DPH and DEEP have put together their guidance on HABs, based largely on the WHO findings and Vermont's existing recommendations. Because counting cyanobacteria cells and waiting for toxin testing takes time and money, Connecticut has adopted a visual rank category system that can be used to post a beach during a cyanobacteria bloom. For a better understanding of the CT DPH/DEEP guidelines, the recommendations are interpreted and broken down into a chronological sequence below.

Step 1. Make initial visual surveillance and determine Category based on the provided table [1].

Visual Rank Category	Observations
Category 1	Visible material is not likely cyanobacteria or the water is generally clear.
Category 2	Cyanobacteria present in low numbers. There are visible small accumulations, but water is generally clear.
Category 3	Cyanobacteria present in high numbers. Scums may or may not be present. Water is discolored throughout. Large areas affected. Color assists to rule out sediment and other algae.

"The initial method for surveillance is visual and based on a Categorization scheme developed and implemented by the State of Vermont [5]." *"Reports or complaints from the public or staff require confirmation. Confirmation can be facilitated by consulting someone with prior field experience…a professional Limnologist,"* [1]. Validation is important because, to an unfamiliar eye, filamentous algae and surface-growing aquatic plants, like duckweed and watermeal, could all be mistaken for blue-green algae.

Step 2. Once a visual assessment has been made, the local health department is responsible for following up with cell counts and/or toxin testing to make a determination on the course of action based on the table below [1].

Observations	Notifications	Further Monitoring	Public Posting
Visual Rank Category 1	Not needed	No change	Not needed
Visual Rank Category 2, or blue-green algae cells >20,000/mL - <100,000/mL	Notify CT DPH, CT DEEP	Increase regular visual surveillance until conditions change.	Not needed
Visual Rank Category 3, or blue-green algae cells >100,000/mL	Update/inform CT DPH & CT DEEP and expand risk communication efforts.	Collect samples for analysis and/or increase frequency of visual assessment.	POSTED BEACH CLOSURE: If public has beach access, alert water users that a blue-green algae bloom is present. POST ADVISORY: At other impacted access points.

(http://www.ct.gov/deep/lib/deep/water/water_quality_standards/guidance_lhd__bga_blooms_7_2013.pdf) [1]

Step 3. Monitor algae conditions weekly to determine change in Category.

Step 4. End advisory when conditions are favorable for at least two successive and representative observational rounds one week apart.

To end an advisory and lift a beach posting, the DPH states that, *"The recommended protocol for termination may be based on visual observations over time, or a combination of this taken in concert with laboratory data."* Lifting a posting may be justified if either, *"Visual assessment remains at the Category 1 condition for at least two successive and representative observational rounds one week apart,"* or *"Cell count results of the water column indicate that blue-green algal cell abundance has markedly decreased over at least two successive and representative sampling rounds one week apart and is below 70,000 cells per ml."* [1].

Additional advisories may be necessary to effectively contact all recreational lake users. For instance, although it is against local health codes, many homeowners draw water from their lake for washing dishes and showering. If there is a Visual Rank Category 2 or 3 at the town beach, there may be areas around the lake with much higher concentrations of cyanobacteria cells, including personal intake pump locations. Homeowners need to 'be in the know' to make their own visual assessments when deciding to use lake water for an evening shower. Even more importantly, there are people who draw lake water in CT to filter and drink (**WHO recommends <1µg/L microcystin for treated drinking water**). Most water purification systems do not affect cyanotoxins and it may be necessary for residents to bring in bottled drinking water at certain times of the year. Education and awareness are the tools to combat blue-green algae blooms!

If there is a Visual Rank Category 2 or 3 at the town beach, there may be areas around the lake with much higher concentrations of cyanobacteria cells, including personal intake pump locations.

The CT DPH/DEEP states that their toxin threshold suggestion is <15µg/L, which may or may not correspond to the cell numbers in the guidance tables. There is currently no way to definitively explain when, or if, the cells will be producing toxins [4]. Overall, the WHO, EPA, and CT DPH/DEEP have all provided their guidance on dealing with blue-green algae blooms. Cell numbers and toxin thresholds are set as recommendations based on previous years of research. These recommendations could change in the future as new science unveils more detail into the nature of *'why and when'* specific cyanobacteria produce toxins. For now, it is best for residents to become active stewards for lake health by taking responsibility for lowering nutrient inputs to stymie algae and cyanobacteria growth. As the going HAB slogan says, **"When in doubt, stay out!"**

"A lake is a landscape's most beautiful and expressive feature. It is Earth's eye; looking into which the beholder measures the depth of his own nature."

-Henry David Thoreau, *Walden*

Citations:

[1]Connecticut Department of Health and Department of Energy and Environmental Protection (CT DPH/DEEP) 2013. Guidance to Local Health Departments for Blue-green Algae Blooms in Recreational Freshwaters.

[2]Fogg, G.E., Stewart, W.P., and Walsby, A.E. 1973. *The Blue-Green Algae*. Academic Press, London and New York.

[3]Paerl, H.W. and Fulton, R.S. 2006. *Ecology of Harmful Cyanobacteria.* Ecological Studies, Vol. 189. Springer- Verlag Berlin Heidelberg.

[4]Paerl, H.W. and Otten, T.G. 2013. Harmful Cyanbacterial Blooms: Causes, Consequences, and Controls. Environmental Microbiology. Springer, New York.

[5]Vermont Department of Health. 2008. Cyanobacteria (Blue-green Algae) Guidance for Vermont Communities.

[6]World Health Organization (WHO). 1999. Toxic Cyanobacteria in Water: A guide to their public health consequences, monitoring and management. Geneva: E & FN Spon.

[7]World Health Organization, 2003. *Guidelines for Save Recreational Water Environments.* Vol. 1 Coastal and Freshwaters, Chapter 8. Geneva.

CANDLEWOOD LAKE VOLUNTEER SECCHI DISK MONITORING

By Larry Marsicano

The recent awareness of how lake water quality conditions, particularly blue-green algae or cyanobacteria levels, can impact the health of those coming in contact with the water has generated concerns by those charged with public health at town beaches. The State guidance (see Preventing the Panic on pg. 2) relies on visual inspection which can be a bit discerning if those doing the inspections are not familiar with the wide range of conditions that could be observed.

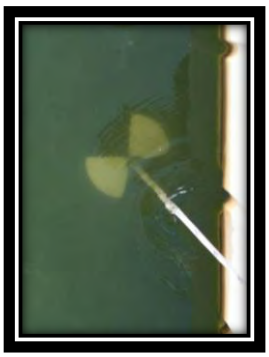
Most of us involved in the protection of a lake, regardless of whether you are a professional or volunteer, understand the general principal of Secchi disk transparency. Secchi transparency is a relatively simple measurement often made in the middle or at a deep-water site in the lake and is one of the parameters used to diagnose a lake's trophic level or productivity. Secchi transparency is inversely correlated with algae growth in the water. Greater

CLA Board Vice President Mark Toussaint and his son Gil prepare to take a Secchi disk transparency measurement from their dock along the shoreline of Candlewood Lake.

transparency usually means less productivity by algae. Lower transparency is often associated with greater algal or cyanobacteria productivity.

At Candlewood Lake, a pilot program was implemented by the Candlewood Lake Authority (CLA) to use Secchi disks to monitor conditions along the shoreline, including at the town beaches. Last year, five Secchi disks were purchased and with the permissions of the Directors of Park and Recreation Departments bordering the towns, town beach staff were trained on the use of the Secchi disk and tasked with regularly taking measurements for the month of August. Student Secchi disks, meter sticks, and monitoring forms were provided at relatively little costs. Lifeguards and other beach staff were found to be very capable of taking and recording the measurements, albeit gaps in data collections did occur.

This past summer, the CLA once again provided the tools and empowered town beach staff to collect Secchi disk measurements. In addition, volunteer monitors living along the shoreline were solicited to also collect data. The response was immediate and within a week of looking for volunteers, the number of sites where shoreline Secchi data was being collected grew to over ten. These volunteers were provided the training and tools and also proved to be quite capable of collecting Secchi disk transparency and conveying it to the CLA on a regular basis.



For next year, the CLA hopes to refine a way of entering data collected by beach staff and volunteers on personal wireless devices (iPhones, iPad, Android phones and tablets, etc.) that it started work on this summer and having the data tracked in graphic form for Directors of Park and Recreation and Departments of Health to use as another way to check conditions along the shoreline. It is believed this will aid in more regular data collections by the town staff or at least the ability of administrators to remind their staff to collect the data.

Candlewood Lake is not the first place to implement such a program. At Candlewood's neighbor to the east, Lake Lillinonah, there has been a similar program in existence for a number of years. Give it some thought for your lake. We will keep you posted on our progress.

PROTECTION OF STATE LAKES GETS LITTLE ATTENTION

By Robert M. Thorson (Reprinted from the Hartford Courant with permission)

Connecticut has more than 3,000 officially named lakes, ponds and reservoirs. A few are the fountainheads from which cities draw potable water. Many are becoming real estate refuges for those retreating from hurricane-hit saltwater shores. Many more are cash cows for rural towns, given their relatively high property tax assessments. All provide state residents with aesthetic, recreational and educational benefits.

Yet sadly, the state's lake program is the runt of the litter with respect to water resource protection. Stronger siblings include the Connecticut River; the storm-threatened beaches and marshes of Long Island Sound; the babbling brooks of woodsy watersheds; major aquifers, from which nearly all rural residents draw their water; and inland wetlands protected by federal law. These programs garner most of the mother's milk of money from public financing, leaving the lake program to suckle the hind teat.

Connecticut is clearly not Minnesota, Michigan or Wisconsin, where lakes are the star attractions for environmental protection. Nor is it Maine, New Hampshire or Vermont, where large, rock-lined lakes are major tourist destinations. Our lake programs fly below the radar of public concern because they are typically small, widely distributed and we take their benefits for granted. Fortunately, we've got Chuck, Larry and Mark, along with a handful of professional lake scientists and dozens of private, nonprofit lake associations working hard to improve our lakes. This is my thank-you for their efforts. []

Chuck Lee is the state's sole employee devoted to lake protection within the sprawling Department of Energy and Environmental Protection. In terms of public profile, he's a minnow working in the back office of an agency dominated by bigger fish such as former commissioners Gina McCarthy and Daniel Esty. They headlined more politically charged issues such as climate change and green economics, respectively. In fact, information about lakes doesn't appear on the DEEP's website until you navigate down three levels from the home page. (Continued on page 8…)

Connecticut Federation of Lakes

CFL
c/o Connecticut College
P.O. Box 5604
270 Mohegan Ave.
New London, CT
06320

Dear CFL Members and Stewards of CT Lakes,

Fall is a wonderful time to enjoy changing colors and more tranquil conditions at our lakes. For me it is also a time to reflect on what the Connecticut Federation of Lakes accomplished in the past year.

We know many of you took advantage of the New England Lakes Conference held last June at UCONN. CFL volunteers worked hard to make the event a success by developing an informative program with presentations that were practical and useful for those involved at their own lake. We put together the conference dinner program that included Dr. Robert Thorson who was his usual engaging, entertaining but highly informative self as he provided the presentation on lake science from the perspective of Henry David Thoreau. Our plenary speaker from the Chicago Botanical Gardens, Bob Kirchner, also provided an excellent and important talk on how to build support for shoreline protection. Bob also provided one of the great workshops CFL worked to make available at the conference.

In addition to the successful conference, the CFL's best efforts last year helped to make grant money available to lake communities for aquatic invasive species work via the CT DEEP's *Grants for Municipalities for AIS Projects*. This grant program was the result of much hard work, starting with meetings with Sen. Clark Chapin, a Ranking Member of the CT General Assembly's Environment Committee, participating in AIS forum for Environment Committee sponsored by Sen. Chapin, and then engaging and evoking the collective CT lake community conscious resulting in many of you making known to your legislators your feelings about a State AIS program. And so for the first time in many years, lake communities had an opportunity to apply for funding for AIS projects last month!!

The CFL's work on the AIS grant program can't and will not stop there. At our September CFL board meeting last month, the CFL committed to working to see that the State budget line for the program continues to be funded.

But here is the thing… for the CFL to continue to provide these kinds of values to the CT lake community we need your financial support. A year or so ago, the CFL opted not to require from our membership annual dues in order to grow our numbers and influence. We advised members that instead of annual dues we would use an annual appeal to raise money to offset our costs. The CFL has clearly grown its numbers and influence, but our first annual appeal last year was only moderately successful.

So I am appealing to you now to support us with a tax deductible donation. *Your response will reflect your belief that a state-wide lake advocacy group is necessary to ensure the future of our CT lakes. It will also indicate to us that the work CFL does is important and that we should continue it into the future.* Include your lake with your donation so we can continue to show that we are supported by a state-wide coalition.

Your tax-deductible donation can be sent to:

Connecticut Federation of Lakes
c/o Connecticut College
P.O. Box 5604
270 Mohegan Ave.
New London, CT 06320

Thank you for your support and for your efforts at your lake. Visit ctlakes.org for the latest information about the CFL.

Kind regards,

Larry Marsicano
CFL President

(…Continued from page 6) Larry Marsicano is president of the Connecticut Federation of Lakes, an all-volunteer, no-dues, nonprofit organization. His day job is being a professional lake manager, the longtime executive director of the Candlewood Lake Authority, which manages the state's largest lake. Located in western Connecticut, it is chronically besieged by a variety of environmental and fiscal threats.

Mark Urban is an aquatic ecologist in the Department of Ecology & Evolutionary Biology at the University of Connecticut. He regularly teaches lake science (limnology) to the state's future lake managers. Though he is only one of many academics teaching this course in the state, I single him out because he does so at the state's land-grant university.

To this list of named individuals, I leave a longer list of unnamed lake scientists who've devoted their careers to improving the quality of Connecticut's lakes. They are either employees of environmental service corporations or work as independent contractors and consultants helping to maintain lake quality.

Last on my thank-you list are the many members of the state's lake associations. These nonprofit, community organizations are devoted to protecting the practical and intrinsic values of specific lakes, for example, Andover, Chaffee, Crystal, Hayward, Hidden, Lillinonah, Quaddick, Waramaug and Woodridge. Many border on several towns.

This year's lake management conference [featured] four big issues. First is the use of smartphone technology to facilitate lake management and to strengthen the social life of lake associations. Shoreline management is being steered away from hardscape protection and chemically fertilized lawn monoculture toward more naturally vegetated buffers. Blooms of blue-green algae (cyanobacteria) are posing toxic threats that can be abated by bringing nutrient pollution under control. New solutions to the chronic problems of non-native invasive species are being rolled out.

In spite of these threats, the runt of Connecticut's water resource litter is alive and well, thanks to those named and unnamed above.

CFL LAKESMART HOME AWARD AND PLEDGE

By Bruce Fletcher

Lakes can't cleanse themselves like rivers; they are the settling basins of the watersheds and therefore reflect the conditions of their watersheds. Without a doubt what happens around lakes is critical to the health, beauty and recreational value of lakes. This is why Connecticut, Maine and other States have LakeSmart programs. Maine considers "LakeSmart" to be their signature program. They claim it "to be the most effective lake protection program available to homeowners today."

Doolittle Lake (Norfolk, CT)

By following the LakeSmart best management practice outlined in the CFL pledge statement, homeowners can restore the land's ability to minimize the amount of phosphorus entering the lake. Maine says "scientific data shows that LakeSmart has a big impact on lake habitat and health. The water quality and wildlife in front of LakeSmart properties are statistically the same as undeveloped properties!"

Families who love the LakeSmart life styles and follow these property best management practices deserve these CFL LakeSmart signs for display on their dock, house or driveway entrance. These responsible lake stewards have "yards which meet the highest standards."

In order to have the CFL's attractive plaque mailed to you, Connecticut homeowners on lakes can simply take the homeowners pledge and make a $25 donation to the CFL. Thank you for becoming a LakeSmart Home recipient!

East Haddam Funds Part-time Launch Monitoring

By Bruce Fletcher

East Haddam Lakes Association, an organized group of volunteers, has found a way to fund part-time inspecting at its boat launches. Currently only Rogers Lake, Lake Waramaug and Lake Wonoscopomic have similar arrangements in Connecticut.

Since the DEEP's corps of Boating Education Assistants and trained Invasives Investigators cannot frequently visit all State boat ramps, these lakes are constantly at risk. Knowing the terribly expensive consequences of introduced species, East Haddam, led by First Selectman Mark Walter, has trained their animal control officer to be an Invasives Investigator. This town employee greeted boaters, handed out invasive species information and did weed checks of boats and trailers as allowed by the boaters.

Although this proactive approach is still a new initiative, it is anticipated that East Haddam will resume this project next boating season, lest more invasives degrade the recreational feasibility of the lakes which in turn greatly helps the town economically.

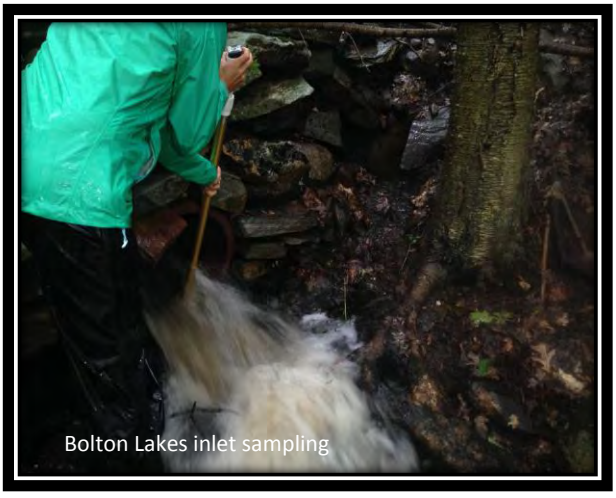
Bantam Lake (Morris, CT)

Bantam Lake Day

By Sabina Perkins

On August 16th, over 200 people showed up to the Morris town beach, lured by the promises of free food and a concert by the wonderful four-piece bluegrass band Switch Factory. But once they were there, in amongst the sun and hotdogs, we snuck in a little bit of education!

The goal of Bantam Lake Day was to educate the lake users and residents of Litchfield and Morris not only about the many management efforts made by the Bantam Lake Protective Association but also about the unique windows into the past that are readily accessible at Bantam Lake. As an aspiring limnologist, I already knew quite a bit about the natural history of Bantam Lake (it's the largest natural lake in CT, formed by a glacier scouring a river bed ages ago) as well as the current management of the lake (curly-leaf, algae, and fanwort oh my!). In the planning stages, Bantam Lake Protective Association, a volunteer nonprofit that has been working to preserve the lake since 1925, teamed up with White Memorial Conservation Center and I was pleasantly surprised to learn how much history there is surrounding Bantam Lake from the Native American history of the Peantam Band to the industrial history of Bantam Lake's provision of ice to New York City in the early 1900s. We started off the day with a walk to the ruins of the ice house for a splash of history then Sean Hayden the Executive Director of the Northwest Conservation District gave a talk about Low Impact Development best practices, Ed Machowski from DEEP Fisheries to talk about the fish community in Bantam Lake including the thriving Pike fishery. Northeast Aquatic Research was there, talking about the recent history of weed treatments in the lake and some of the invasive species threatening Bantam Lake at this time. We hope it will be the first of many such educational events centered on the cultural and natural history of the lake!


Bolton Lakes inlet sampling

Everyone lives in a watershed!

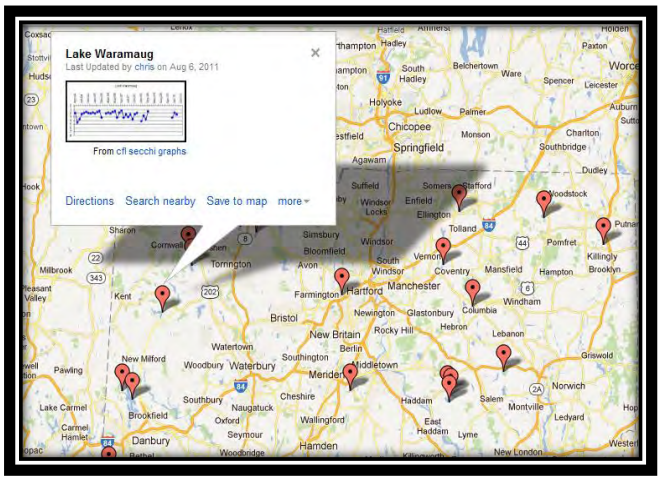
A Quick Update on the Volunteer Secchi Disk Monitoring Program

By Chris Mayne

The year 2013 marked the tenth year of the Volunteer Secchi Disk Monitoring Program. Thirteen lakes provided data last season. Over the past decade, 51 Secchi disks have been handed out and thirty-five (35) lakes have reported data. The CFL and I would like to thank all of those volunteers who provided data. The program could not succeed without your participation and your support.

2004 – 2013 Data

The data collected over the past decade from the various lakes are displayed on an online map. Currently you can access historical data for each lake over the first seven years. I will be updating the online map to include a decade worth of data in the coming weeks (the data is compiled, the graphs are made, I just need to upload and link them to the map). Thank you for your patience! As mentioned in previous reports, the map has two main functions. The first is to provide an easily viewable distribution of the lakes participating in the program across the State of Connecticut. The second function of the map is to present the Secchi data submitted from



each lake. By clicking on a balloon on the map, the name of the lake is presented along with a graph of that lake's submitted Secchi data. By clicking on the graph, a new window appears showing a larger view of the data. The data is presented in meters. Interested parties can quickly view data from across the state. The link to the online map can be found on the CFL website and is the following:

http://maps.google.com/maps/ms?hl=en&vpsrc=1&ctz=240&ie=UTF8&msa=0&msid=215236816681667448966.0004a9cb6c08d9c7547d0&t=m&z=9>


Riga Lake (Salisbury, CT)

Information is just a few clicks away!
www.ctlakes.org

Join the club! Be a Lake Smart Home! Purchase a plaque for $25 and take the LakeSmart pledge.

Please "Like" us on Facebook to receive news and updates.

Contact the CFL

For more information regarding the Connecticut Federation of Lakes, visit our web site at www.ctlakes.org, contact Aliz@conncoll.edu or write to P.O. Box 216, Windsor, CT 06095.

CFL Board

Larry Marsicano, President – Candlewood Lake
Richard Canavan, Vice President – Limnologist
Anne Lizarralde, Secretary, – Conn College
Rebekah White, Treasurer - Lake Lillinonah
Mark June-Wells – Limnologist
George Knoecklein – Limnologist
George Benson - Limnologist
John Burrell - Columbia Lake
Mary Ellen Diluzio - Bashan Lake
Bruce Fletcher – Bashan Lake
Bruce Lockhart - Certified Lake Manager
Chris Mayne - Certified Lake Manager
John Moore - Lake Pocotopaug
Joe Carbonell - Lake Pocotopaug
Chuck Lee - DEEP Advisor

Newsletter Committee

Do you have an idea for a story that you think lake community members should hear? The Newsletter Committee welcomes your input and your articles. Please send suggestions or articles via e-mail to either sabinaperkins@gmail.com or hillary.kenyon@gmail.com.

Calendar

Board Meetings – 3rd Wednesday of January, March, April, May, June, September, and October 7PM at Northeast Utilities, Newington, CT

Check CTlakes.org for meeting updates

Join the CFL

Membership is Free! Simply fill out and mail the form below or go to our website and fill out a brief form there. Lakes in Connecticut need to receive more preventive medicine. In other New England states, the citizenry and legislators have pushed through bigger and better programs for lakes. If you treasure your lake, please join the CFL. With your help the CFL will continue to make a difference locally and statewide.

Support the Connecticut Federation of Lakes

YES! I want to help the CFL continue to advocate for CT Lakes!

Please accept my donation to:

- ✓ Help protect Connecticut Lakes!
- ✓ Promote awareness about stewardship and the vulnerability of lake environments through education!
- ✓ Assist in the fight against invasive species and pollution!

Lakes Friend $40+	Lakes Conservator $250+	Lakes Guardian $2,500+
Lakes Sponsor $75+	Lakes Steward $500+	Lakes Leader $5,000+
Lakes Advocate $100+	Lakes Patron $1,000+	Other $_____

Please make checks payable to CFL. We may periodically list our supporters, check here if you want to remain anonymous ____.
Name
_____
Address
_____
City _____
State _____
Zip _____
Lake Affiliation
_____
E-mail address
_____
We will not share your address and will use it to send newsletters and important bulletins.

We appreciate your support. We greatly appreciate you passing on this newsletter to a friend.

Please mail to CFL, PO Box 216, Windsor, CT 06095.

Thank you!