



CFL News

Volume 18, Issue 3—Fall 2013

This is Your Last Print Newsletter!

In an effort to more effectively utilize our limited funds, CFL will be transitioning to electronic distribution of our newsletter beginning later in 2013. **This will be our last print newsletter.** To ensure that you continue to receive our newsletter and bulletins, please provide us with your e-mail address. We do not have e-mails for the majority of those who receive our newsletter. Please send an e-mail to Penny@CTLakes.org to be added to our list. We will not sell or share your address. We have sent this newsletter to those e-mail addresses that we have. If you did not receive it check your spam folder and if it is not there, please send us your e-mail address. If you do not have e-mail and would like to receive a print copy please send a note to CFL, PO Box 216, Windsor, CT 06095.

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This and That...

Larry Marsicano, CFL President

CT Volunteer Secchi Disk Monitoring

CFL Board member Chris Mayne heads up the CFL's Volunteer Secchi Disk Monitoring and has released his report on 2011-2012 data which is attached to the newsletter. This is an important program in that it helps all of us understand changes at our own lake in the context of what is happening at the state level based on nearly 30 participating lakes. The report will be posted on our website at www.ctlakes.org. We encourage you to continue submitting your Secchi disk data and help us gather more by encouraging other lakes to participate. For more information, contact Chris at goodworkspmc@sbcglobal.net.

CFL Membership Grows

Since changing our membership format, we have seen a dramatic growth in our numbers, increasing by 91 members. There are greater than 40 CT lakes now represented by members on the CFL. Remember the old saying – Strength in numbers! Just a reminder that we don't send out an annual dues notice but instead do annual appeals so please continue to support the work we do.

Save the Dates

The CFL is the host organization for the next New England Chapter of the North American Lakes Management Society conference, scheduled for Friday, June 13th and Saturday, June 14th. We are working with UCONN Conference Services now and should have more information for you early in 2014. Mark your calendar for the opportunity to hear from and learn from those involved in lake management throughout New England.

Our CT DEEP Advisor Chuck Lee and I will be speaking at the 36th Annual Meeting and Environmental Conference of the Connecticut Association of Conservation & Inland Wetlands Commissions. There we will discuss lake monitoring and management issues with Commissioners from our important local commissions. That meeting is scheduled for Saturday, November 16th at Courtyard Hartford Cromwell. For more information:

<http://www.caciwc.org/pages/annualMtg/index.html>



Hazard Analysis and Critical Control Point Planning (HACCP) to prevent the Spread of Aquatic Invasive Species

By Maura Robie, Aquatic Nuisance Species Coordinator, CT Sea Grant

HACCP is a risk management tool originally developed for the food industry in the early 1960's as a way to help keep contaminants out of food supplied for the U.S. space program. Because HACCP is an international standard (ASTM E2590 - 09), it is used successfully by industries around the world.

The Federal Government's Executive Order 13112 (1999) directs agencies to prevent the spread of invasive species in their work. Unfortunately, there are very few management tools available to implement this Directive. HACCP was first adapted as one of those tools by the National Sea Grant Program to reduce the risk of spreading aquatic invasive species via the bait-fish industry. This method has been broadly adopted by the U.S. Fish & Wildlife Service for use in natural resource management activities, as well as, by agencies in many states.

In adapting HACCP to natural resources work, the contaminants are invasive species. First, comprehensive planning is done to identify these species and the risk of contamination. Then, best management practices for prevention and removal are researched and documented. The plan defines two categories: target or specific organisms being moved and non-target or the plants, animals, diseases, pathogens and parasites that could be moved unintentionally. The backbone of HACCP planning focuses attention on critical control

points, that is, the best point at which non-targets can be prevented, reduced, or controlled at tolerable levels to minimize the risk of spread.

HACCP generally consists of five steps. Step 1 is a description of the activity taking place including who, what, when, where, why, and how. Step 2 is an activity flowchart outlining the sequential tasks of the activity. Step 3 is the identification of non-targets that may potentially be moved or introduced including vertebrates, invertebrates, plants, diseases, pathogens, and parasites. This step may also include any state listed species. Step 4 is a worksheet listing tasks from Step 2: identifying non-targets having significant risks, control measures that can be applied to reduce the risks, and if the task and non-target are a critical control point. Step 5 is a more detailed plan of control measures for any critical control points including prescribed ranges, limits, or criteria; monitoring, evaluation and corrective action if control measures fail, and supporting documentation of best management practices.

HACCP can be used by researchers, contractors, government agencies - anyone who performs natural resource management activities. The planning helps managers weigh the risk of invasive species spread against the benefits of management actions.

If you are interested in developing or using HACCP documents, the U.S. Fish & Wildlife Service has a helpful website with a manual, forms, and plans developed by many states and agencies (haccp-nrm.org). There are also plans developed for Suction & Mechanical Harvesting of Invasive Species and General Biological Sampling/Monitoring on the Connecticut Sea Grant website.

(seagrant.uconn.edu/whatwedo/ais/ctmgmtplan.php).



Project CLEAR Celebrates 10 Years *Grant Helps Program Go Wireless*

This past June after school was out for the year, over 100 high school students and teachers converged onto Candlewood Lake for a four day long Project CLEAR program. The acronym CLEAR stands for Candlewood Lake Environmental Awareness and Responsi-

bility and this year marked the tenth for the program with total funding exceeding over one million dollars.

About twelve years ago, the Candlewood Lake Authority (CLA) reached out to one of the school districts surrounding the largest lake in Connecticut and shared with their Superintendent an unsettling observation – there was an enormous education resource in their backyard and absolutely nobody was taking advantage of it. That resource was Candlewood Lake.

Within a year, the New Fairfield School District had successfully applied for EPA funds and started a program that has grown ever since. Now with the help of agencies like Education Connection, the CT DEEP and the State Department of Education, Project CLEAR provides an extracurricular, environmental education, research experience for approximately 125 high school students from five different high schools each year.

Although the CLA initiated the efforts to create the program, it was Education Connection (EC) that grew it into the multidistrict achievement that it is. EC is a regional education service center and has been very successful at obtaining funding for the program from the CT Department of Education. They also provide their administrative, program development, and coordination expertise that has been so instrumental to CLEAR's success.

Also key to the program's success is the Candlewood Lake community, coordinated by the CLA, who provide on-the-water transportation during the summer research activities for many of the student research teams. Students and teachers are divided into one of eight different teams, each focusing on different aspects of the lake ecosystem, e.g. water chemistry, plankton, fisheries, aquatic plants, etc. After several days during the school year getting prepared for the summer research, the students and several teachers from the participating school districts reunite after school is out for the summer, work in their summer research teams and are transported around the lake by volunteers in their private boats or in boats provided by local marinas.

"It's quite the community effort," exclaimed Larry Maricano, Executive Director of the Candlewood Lake Authority. "We had the perfect storm for creating CLEAR starting with the interest of the first school district, then EC making this a bigger and better program, the great support from the CT DEEP, the CT Agricultural Station, our community and others, and finally

getting an award winning environmental educator to develop a curriculum which resonates with the students and teachers."

Last year the CLA successfully applied for a grant for Project CLEAR from the Albert Wadsworth and Helen Clark Meserve Memorial Fund in Danbury. The grant allowed many of the student research groups to utilize wireless technology, e.g. iPads and tablets, and several content management and data organization websites (e.g. Evernote and Dropbox) as part of their field research experience. The devices provided research teams a way of collecting data, pictures, study site waypoints and other information in the field in an interesting manner which they are likely to see again in their college and professional careers.

For more information on Project CLEAR, go to the CLA's webpage at www.candlewoodlakeauthority.org/cla-guide#!__cla-guide (look under ENVIRONMENT) or EC's webpage www.educationconnection.org/student-services/student-enrichment-programs/project-clear/.

Toxic Algae: Another Reason to Worry About Global Warming

By Gregory B. Hladky/Hartford Advocate

Reprinted with permission by the Hartford Advocate

It can produce liver and nerve toxins, asthma-like symptoms, severe vomiting and diarrhea; it frequently kills pets; and in rare cases it triggers temporary blindness and even death for humans.

The potentially deadly villain is called "toxic blue-green algae" and can occasionally be found in your favorite lake or pond, as it was last year in Bolton Lake. A new report warns dangerous freshwater "blooms" may be happening more frequently due to global warming.

Yet there is no national system for monitoring these outbreaks. Environmental officials in Connecticut say they really don't know how common toxic algae is in this state because (until just recently) they weren't keeping track.

"We haven't been keeping records or doing monitoring," says Chuck Lee, an environmental analyst with the state's lake management unit for nearly 30 years. He says Connecticut only began checking on toxic al-

gae blooms this past summer, and was the last state in New England to start up a monitoring program.

"I think we need to do more monitoring," Lee says. "I wouldn't want to say [toxic algae outbreaks in Connecticut] are rare... We do have lakes with pretty intense algae blooms that we're concerned about."

This concern isn't something isolated to one body of water in Connecticut. State Department of Energy & Environmental Protection experts say they've been looking at big algae blooms in ponds and lakes that include Lake Lillinonah and Lake Zoar (in the Housatonic River Valley); Candlewood Lake; and Beseck Lake (in Middlefield).

Not all algae blooms are toxic. And those that are don't necessarily make it easy to tell.

A warning on the DEEP's web page explains that blue-green algae occurs naturally in Connecticut freshwater lakes and ponds and most often causes no problems.

The ones that do create toxins that include "microcystin," "anatoxin-a," "cylindrospermopsin," "saxitoxins," and "lipopolysaccharides."

The agency's warning (put up this past July) goes on to list those potentially nasty health effects from swimming in or drinking water from a toxic bloom. And these outbreaks can create an unholy stench for people living nearby.

The toxins can also accumulate in fish that swim through the algae, and get into the people who catch and eat those fish. "Dogs are especially at risk from exposure to blue-green algae blooms," DEEP officials added, because water-loving pups will drink the toxic stuff or lick it off after going splashing around.

"Assessing the potential health effects from blue-green algae blooms is complicated because...the bloom may not be producing toxins. Therefore, chemical analysis of the water is needed to verify if a blue-green algae bloom is releasing toxins," DEEP's web-page warning states.

And therein lies a big part of the problem.

A report titled "Toxic Algae: Coming Soon to a Lake Near You?" was released last month by the National Wildlife Federation and Resource Media.

In it, experts said it's tough to determine the extent or danger of toxic freshwater blooms because there's no federal agency assigned to track them; few studies have been done on the economic impact of these blue-green baddies; and lots of states have no formal monitoring program.

(The only federal freshwater monitoring program is happening in Lake Erie. The feds do fund toxic outbreak research and testing for marine and coastal areas.)

A list put out by the U.S. Environmental Protection Agency shows only 23 states currently have monitoring and testing programs for toxic algae.

This past summer (between May and mid-September), 20 states across the nation reported 147 toxic freshwater blooms.

New York topped the list with 50 toxic algae occurrences, but the report's experts noted that was probably because New York has one of the best monitoring systems in the nation. Massachusetts reported three outbreaks; New Hampshire, two; and Rhode Island, one.

Lee and Brian Toal, an epidemiologist with the Connecticut Public Health Department, say they saw no reports of toxic blooms in this state this summer. But again, state officials here have only just begun to create a monitoring program, and Connecticut leaves the responsibility for dealing with toxic blooms up to municipal and local health officials.

"We realize there are lakes and ponds that are blooming; we just haven't gotten called about it," says Toal.

The most recent documented toxic bloom in this state happened in Lower Bolton Lake in August 2012. The Eastern Highlands Health District, which covers that portion of northeastern Connecticut, issued a public warning advising people to avoid contact with the lake's water and prevent pets from drinking or playing in the lake.

Robert Miller, health director for the district, says the public advisory was in effect for 7-8 weeks, and wasn't taken down until after the Labor Day weekend. He says the toxic bloom "just naturally waned and expired on its own," which experts say isn't unusual.

As far as can be determined, the Lower Bolton Lake bloom didn't make any person or animal sick, accord-

ing to Miller. He says it was the first time he knows about that local and state health officials attempted to cooperate to create a "structured response" to a toxic bloom in Connecticut.

It was that outbreak that prompted Connecticut state officials to put out a detailed 14-page "guideline" for local officials and citizens on how to recognize and deal with toxic algae blooms. Miller says he believes those are "interim guidelines" and that state officials are hoping to create a better monitoring and response system down the line when they have more data.

According to the National Wildlife Federation report, the most serious triggers for these toxic outbreaks is the fertilizer being flushed into streams, rivers, lakes and ponds from farms and suburban lawns. All those excess nutrients create a perfect diet for hungry toxic algae.

All this pollution is being made worse by climate change, according to the report's authors. "Global warming and intensification of major storms and droughts play major roles in the spread of toxic blue-green algae blooms worldwide," said Hans Paerl, a professor of marine and environmental sciences at the University of North Carolina.

"The interesting thing I kind of discovered," Miller says about his first exposure to these hazardous blooms, "is that there's a lot we don't know about toxic algae... about how it exists, and the implications for health and recreation."

Lee agrees. He says that's a major reason why the state has finally begun an initial program to start monitoring some of these inland bodies of water.

"We want to have a better understanding about where we need to be concerned," says Lee.



Funding Invasive Weed Control

By Bruce Fletcher

Aquatic invasive species have severely diminished the recreational and scenic quality of many Connecticut water bodies, and as a consequence have lowered the abutting property values and property tax income for towns with these affected lakes. Unfortunately, this is happening just about everywhere in Connecticut. As

the many different invasives, such as zebra mussels, milfoil, fanwort and water chestnut, advance and become established, the costs to control them will escalate exorbitantly for the State, towns and lake associations. While states like Maine and Wisconsin have million dollar funds to deal with invasives, Connecticut's investment in this battle pales by comparison.

Connecticut has many experts developing and running many excellent programs to address this aquatic nuisance species problem, but not enough money to fund what they know needs to be done. We are grateful that Logan Senack's position as Coordinator of the State Invasive Plant Council continues to be funded. There is a small fund set aside for rapid response to new infestations. There is the Connecticut Agricultural Experiment Station that is thoroughly mapping the spread of invasives and providing valuable weed treatments. The State encourages towns, lake associations, and citizens to implement the well publicized best management practices and the Department of Public Health directives for code compliant septic systems, decentralized wastewater management districts and central sewer systems so that non-point source pollution, cultural eutrophication and nutrient loading into our lakes and ponds (all of which support weed growth) might be reduced. There are approximately 15-20 paid seasonal Boating Educational Assistants to visit state boat launches and do inspections for invasives. On a regular basis volunteer Invasive Investigators are being trained to offer boat and trailer inspections and hand out educational literature. There are laws that ban the sale and transport of invasive species. So...it is apparent that Connecticut is not neglecting this serious aquatic invasive species problem, but that there is a serious shortage of funds to enforce, expand and implement the measures needed. How in Connecticut can funds be raised or found to battle these invasive species? It appears there are at least three ways.

One way is for the State to restore the PILOT monies. It seems logical that some of the annual boat registration revenue should be returned to towns to support and enhance boating in Connecticut. Since the early 1970's this was, in fact, the practice here. Approximately 50% of this boat registration revenue called PILOT monies would go back to towns in amounts commensurate with the number of boats registered there for uses determined by the towns. However, since 2009 all this boat registration revenue was swept into the General Fund pursuant "to the 2009 budget

mitigation plan.” Since the need to better fund the Aquatic Invasive Species (AIS) initiative is so great, the DEEP should convince the Governor and legislature to restore the PILOT monies and mandate to municipalities that at least some of these PILOT monies be spent on the AIS problem before our water bodies are totally overwhelmed.

If the DEEP can't internally bring back the PILOT funds, there may be a way legislatively to nudge the state to secure some money from the General Fund. In this past session that ended on 6/5/13, Proposed Bill #560 (SB560) “to reinstate the fifty-fifty boat registration revenue sharing program” was introduced by Senator Gayle S. Slossberg D-14th district. This bill never benefitted from any public hearings in the Environment Committee and it “died” in the Committee on Finance, Revenue and Bonding. It called for the “reinstatement of the implementing statute (CGS Section 15-155)” that allowed the PILOT monies program to exist since the 1970's, but was repealed on 5/4/11. Senator Gayle Slossberg will re-introduce this bill for the next session starting in February 2014. If the CFL, citizen stakeholders and towns with many registered boat owners can rally behind this bill, something positive could happen despite the state budget woes. If the wording in this bill suggested to these independent minded towns that some of its allocation must be used in the battle against AIS, this would be a victory for lakes and ponds. So hopefully passage of this bill will force some boat registration revenue out of the General Fund to towns.

Another approach to generate funds to fight these invasive species would be to start a Boat Sticker Program, which would annually require boaters using non-tidal waters in CT to pay an extra fee for an AIS sticker. In Maine such fees grow a special fund to control existing infestations, to provide rapid response to new infestations and to conduct boat and trailer inspections. Maine, which started their exemplary program in 2002, now collects more than a million dollars a year from Maine residents (\$10) and non-residents (\$20). Other states such as Wyoming, Idaho, Oregon, California, Nevada and Arizona have adopted similar boat sticker programs. Vermont tried a voluntary sticker program at \$10 each, but has had disappointing levels of participation. Such programs are under discussion in Rhode Island, New Hampshire and Connecticut. While no one likes more fees, many think that Connecticut boaters would gladly pay extra towards a dedicated fund to protect and improve their recreational

playground. How much extra would you pay to build a tamper proof fund like Maine's? Many would not blink at a 20 to 50 dollar invasive species sticker fee.

So, it appears that there are three (3) viable ways that money can be raised or redirected: 1) the DEEP resurrecting the PILOT Program, 2) the legislative passage of Senator Slossberg's bill SB560 and 3) the implementation of a CT boat sticker program. Advocacy action by all lake and pond stakeholders should be initiated and sustained so that all three might produce the desperately needed funds to battle these dreaded aquatic invasive species. Would you volunteer to help? Your feedback is desired!



10/31 Meeting: Update to CT Statewide Nonpoint Source Management Plan

The Connecticut Department of Energy and Environmental Protection has begun the process of updating the Statewide Nonpoint Source Management Plan (“NPS Plan”). The goal to update our NPS Plan has been discussed at focused partner meetings, regional conferences and public meetings. The current Statewide NPS Plan can be found at: http://www.ct.gov/deep/lib/deep/water/nps/nps_mgt_program.pdf.

DEEP has created and will continue to provide timely updates to an informational web page for this NPS Plan Update project as details become available. http://www.ct.gov/deep/cwp/view.asp?a=2719&q=526576&deepNav_GID=1654.

The process to update the statewide NPS plan will open with a public stakeholder meeting on October 31, 2013 at 9:30 a.m. in DEEP's 5th floor Phoenix Auditorium. Stakeholders will have the opportunity to review the update process and provide comment on an outline for the draft statewide NPS Plan. An additional Public Meeting will be held in January with an opportunity to comment on the draft Plan.

DEEP invites you to attend this stakeholder meeting on October 31. DEEP also encourages your further comments as we draft this statewide NPS Plan which will include future strategies and goals for CT's NPS Program. Feel free to forward this information to other stakeholders you believe would be interested.

A Statewide NPS Plan update is required under the

USEPA/DEEP Performance Partnership Agreement. A final revised NPS Plan is expected by spring of 2014. An updated EPA approved statewide NPS Plan will allow the State to continue to receive EPA Clean Water Act Section 319 Nonpoint Source funding for NPS planning and implementation, such as watershed based plans and implementation of priority NPS projects identified in those plans.

If you have any questions concerning the coordination of these efforts, please contact Chris Malik or Rob Hust.

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About the Connecticut Federation of Lakes

Everyone agrees that healthy lakes are highly valued natural assets whose beauty and recreational offerings make them irresistible to so many each season of the year. Towns with attractive lakes annually collect higher property tax revenues and benefit each year from months of “trickle down economics”. These precious resources are fragile, and need constant monitoring and preventive and corrective programs. So it is no wonder that individuals, families, lake associations, towns and states proactively work to help their lakes and recognize that unprotected lakes may become damaged beyond repair.

The Connecticut Federation of Lakes (CFL) was formed in 1995 to help individuals, steering committees and established lake associations with needed guidance, advice and support. In addition, the CFL fosters

an alliance of Connecticut’s many pond and lake protective organizations so that Connecticut lakes can speak with a unified voice.

The CFL board members are dedicated volunteers who have first hand experience in dealing with lake and association issues. Since some board members are professional lake managers and others have masters & doctorate credentials in the science of limnology, the CFL can and does help. Recently the CFL helped pass legislation geared to curb the establishment of invasive aquatic plants in Connecticut. Boat launch monitoring, on site waste water management guidelines, and model municipal regulations and ordinances for watershed protection are current initiatives.

The CFL publishes newsletters for members full of technical information, lake profiles, management tips and news from the DEEP. Chuck Lee of the DEEP, an environmental analyst in the Bureau of Water Protection and Land Reuse, 860-424-3716, attends all the CFL Board meetings. The CFL works with the Governor to designate the annual Lakes Awareness Week and hosts educational conferences for CFL members and friends. In addition the CFL is an active full participant in NEC-NALMS (the New England Chapter of the North American Lake Management Society). We participate in their programs annually and host the 3 day conference on a rotating basis.

Contact the CFL

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

CFL Board

Larry Marsicano, President – Candlewood Lake
Richard Canavan, Vice President – Limnologist
Penny Hermann, Secretary, – Lake Williams
George Walker, Treasurer - Lake Lillinonah
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George Knoecklein. – Limnologist
George Benson, - Limnologist
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Mary Ellen Diluzio, - Bashan Lake
Bruce Fletcher, – Bashan Lake
Bruce Lockhart, - Certified Lake Manager
Chris Mayne, - Certified Lake Manager
Tom McGowan, - Lake Waramaug

Newsletter Committee

The Newsletter Committee welcomes your input and your articles. Please send suggestions or articles to CFL, P.O. Box 216, Windsor, CT 06095 or e-mail to Penny@Ctlakes.org. The newsletter committee includes: Bruce Fletcher, Penny Hermann, George Knoecklein.

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

NECNALMS Conference in Connecticut- June 2014
Watch our website for additional details

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.

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

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 education and awareness about stewardship and the vulnerability of lake environments!
 - ✓ Assist in the fight against invasive species and pollution!
- | | | | | | | | | |
|---|--|--|---|---|--|--|--|--|
| <input type="checkbox"/> Lakes Friend \$40+ | <input type="checkbox"/> Lakes Sponsor \$75+ | <input type="checkbox"/> Lakes Advocate \$100+ | <input type="checkbox"/> Lakes Conservator \$250+ | <input type="checkbox"/> Lakes Steward \$500+ | <input type="checkbox"/> Lakes Patron \$1,000+ | <input type="checkbox"/> Lakes Guardian \$2,500+ | <input type="checkbox"/> Lakes Leader \$5,000+ | <input type="checkbox"/> Other \$_____ |
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Please make checks payable to CFL. We may periodically list our supporters, check here if you want to remain anonymous ____.

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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!

Volunteer Secchi Disk Monitoring Program 2011-2012 Report Connecticut Federation of Lakes

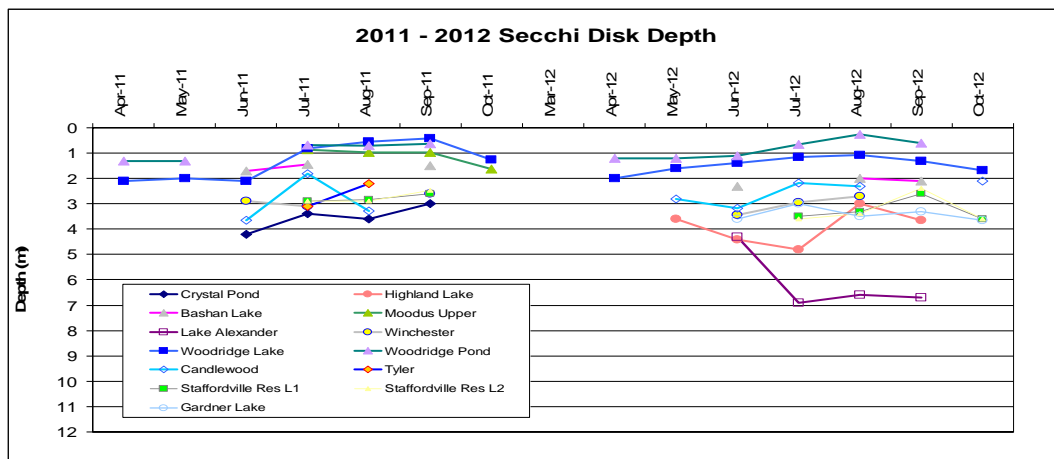
The eighth and ninth year of the Volunteers Secchi Disk Monitoring Program occurred in 2011 and 2012. Thirteen lakes provided data between 2011 and 2012. Over the nine year period, 51 Secchi disks have been handed out and twenty-four(24) lakes have reported data. The CFL and I would like to thank all of those volunteers who provided data. The program could not succeed without your participation and your support.

2011-2012 Data

The Secchi disk depths for the lakes reporting data between 2011-2012 ranged between 0.27 – 6.9 meters. Lake Alexander reported the greatest Secchi depth at 6.9 meters in July of 2012 and Woodridge Pond, a shallow pond, reported the least Secchi disk depth at 0.27 meters also in August of 2012. Overall, the lakes have stayed the course and have not varied much over the past two years. There have not been any wide swings in Secchi depth readings.

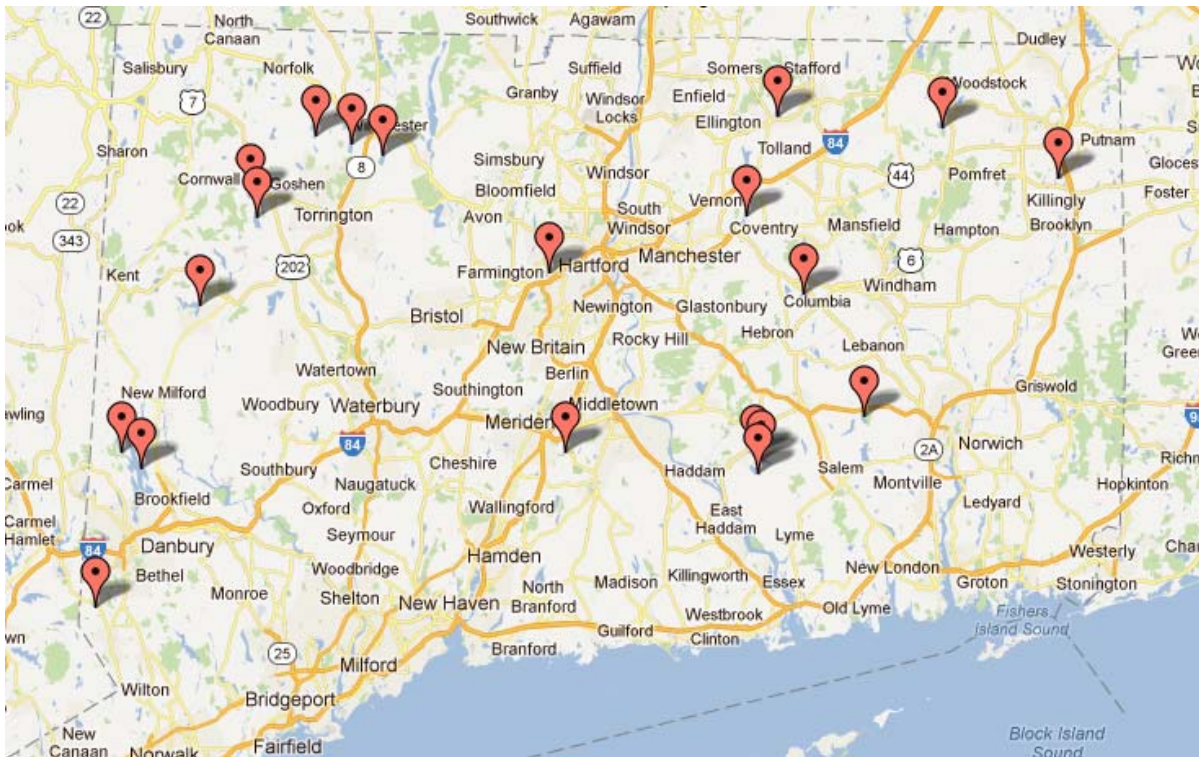
2011 – 2012 Secchi Disk Data (m)

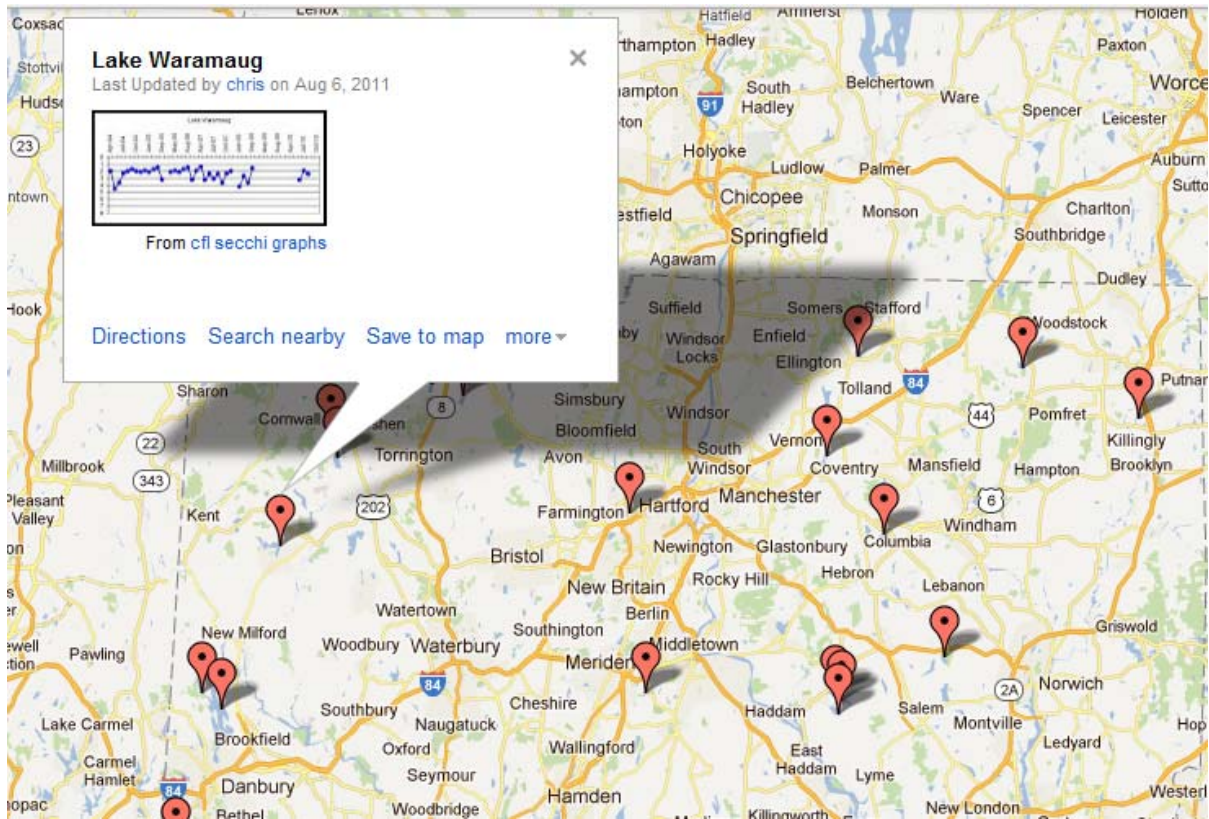
	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12
Crystal Pond			4.2	3.4	3.6	3								
Highland Lake									3.6	4.4	4.8	3	3.65	
Bashan Lake			1.7	1.45		1.5				2.3		2	2.1	
Moodus Upper				0.86	0.97	0.96	1.62							
Lake Alexander										4.3	6.9	6.6	6.7	
Winchester			2.9	3.1		2.6				3.45	2.95	2.7		
Woodridge Lake	2.1	2	2.1	0.82	0.54	0.41	1.25	2	1.6	1.4	1.16	1.08	1.3	1.68
Woodridge Pond	1.3	1.3		0.675	0.72	0.64		1.2	1.2	1.11	0.66	0.27	0.6	
Candlewood			3.64	1.81	3.27				2.81	3.17	2.18	2.32		2.1
Tyler				3.1	2.2									
Staffordville Res L1				2.9	2.83	2.6					3.5	3.3	2.6	3.6
Staffordville Res L2				2.9	2.9	2.46					3.6	3.4	2.4	3.6
Gardner Lake										3.6	3	3.5	3.3	3.65



2004 – 2012 Data

The data collected over the past nine years has become more challenging to present in a concise graph and table. The table has become too large and the graph is too busy to be meaningful. Instead, I have decided to use a bit of technology to help display the Secchi disk data collected from the various lakes. I have created an online map showing the data submitted from each lake over the first seven years. I will be updating the online map to represent the past two years of data in the coming weeks. Thank you for your patience! As I collect data from the 2013 season, I will update the map to incorporate the 2013 data. 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: [Link:<http://maps.google.com/maps/ms?hl=en&vpsrc=1&ctz=240&ie=UTF8&msa=0&msid=215236816681667448966.0004a9cb6c08d9c7547d0&t=m&z=9>](http://maps.google.com/maps/ms?hl=en&vpsrc=1&ctz=240&ie=UTF8&msa=0&msid=215236816681667448966.0004a9cb6c08d9c7547d0&t=m&z=9)





Participating Lakes

Bashan Lake	Lake Williams	Moodus Res Upper
Crystal Lake _ Ellington	Lake Housatonic	Moodus Res Lower
Columbia Lake	Lower Bolton	Lake Alexander
Crystal Pond	Middle Bolton	Lake Winchester
Highland Lake	Moosup Pond	Woodridge Lake
Lake Besek	Pachaug Pond	Woodridge Pond
Lake Mamasasco	Red Cedar Lake	Tyler Lake
Lake Waramaug	West Hill Pond	Staffordville Reservoir 1
Candlewood Lake	Squantz Pond	Staffordville Reservoir 2
Gardner Lake	Lake Alexander	

Please encourage other lake associations to participate in this program. I am interested in any comments or suggestions that you might have to improve this monitoring program.

Remember to send in your Secchi disk measurements for 2013. Thank you again for all of your efforts. Without your help, this program would not succeed. Know that your data is important and your efforts have been amazing.

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