



CFL New

Volume 18, Issue 2—June 2013

Future Newsletters

In an effort to more effectively utilize our limited funds, CFL will be transitioning to electronic distribution of our newsletter beginning later in 2013.

To ensure that you continue to receive our newsletter and other bulletins, please provide us with your e-mail address. While we have some e-mail addresses, we do not have them for the majority of those who receive our print newsletter. Please send an e-mail to Pen-ny@CTLakes.org so that we may add you 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.

We appreciate your support of the Connecticut Federation of Lakes.

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2013 CFL Annual Meeting a Success

Presentation on Cyanotoxins by Dr. Jen Klug Highlights Event

By Larry Marsicano, CFL President

On April 17th the CFL held its 18th Annual Meeting where members were invited to attend to elect or reelect members of the board. Approximately twenty CFL members joined the nine board members present as well as the organization's CT DEEP advisor, Chuck Lee. Many of those attending were looking forward to Dr. Jen Klug's presentation on cyanobacteria and cyanotoxins in lakes.

The meeting started with some highlights of the CFL's year including discussion on the new membership format, board retreat, and other initiatives. A motion was made to accept the resignation of Ms. Connie Trollie of Morris, CT. Connie was a valued CFL board member and remains very involved in the Bantam Lake Protective Association as well as in the Town of Morris government, currently serving on their Board of Finance. The motion carried with regrets and thanks for her service with the CFL.

After accepting the Secretary's and Treasurer's Reports, names of nominees for board members were read into the minutes to serve either a one-year or two year terms. A motion was made by Valerie Muszynski of Staffordville Lake and seconded by Brian Chapman of Lake Garda to accept the nominations and a motion casting one ballot for the slate of nominees was carried.

Following the election of board members, Dr. Jen Klug from Fairfield University provided attendees a slide presentation entitled An Overview of Harmful Algae Blooms (HABs). Dr. Klug explained that harmful algal

blooms are one of a number of adverse effects of eutrophication, which is caused by excess nutrients increasing the growth of photosynthetic organisms in the water. When these organisms die and sink to the bottom, their decomposition can result in reduced or depleted oxygen levels in the lower reaches of the lake. Both point and nonpoint sources of nutrients were discussed.

Cyanobacteria (formerly known as blue-green algae) were the toxin-producing organisms focused on by Dr. Klug. These photosynthetic organisms are typical bloom forming species that are favored by high temperature, high nutrients, and high light levels. Many of them have unique adaptations including being able to regulate their buoyancy, fix nitrogen, and produce toxins.

In a research collaboration with the Friends of the Lake on Lake Lillinonah, Dr. Klug has identified a number of genera of cyanobacteria that produce toxins including *Anabaena*, *Aphanizomenon*, *Lyngbya*, and *Microcystis*. In her presentation she provided tables identifying the toxins each can produce, the primary target organs in mammals, and the effects the toxins can have on short and long-term health.

Another important section of Dr. Klug's presentation focused on how the threats from problems associated with cyanotoxins are monitored. The toxins themselves can be used as can the cyanobacteria (e.g. bloom observations, cell counts, chlorophyll concentrations). The guidelines from the World Health Organization for monitoring for safe recreational water environments were presented and discussed.

Some newer methods of monitoring were also discussed including measurement of phycocyanin levels in lake water. Phycocyanin is a photosynthetic pigment contained within cyanobacteria and can be measured using some of the new water quality technology.

Dr. Klug noted that harmful algal blooms will only increase due to changing climate and as long as nutrient loading in lakes is an issue. She also provided a number of online resources. Her entire presentation can be viewed and downloaded from the CFL website.



Lake Smart Home Award

The CFL and the citizenry of Connecticut cherish its lakes and ponds. Pristine lake waters add beauty, increase property values, and provide recreational opportunities throughout the four seasons. These beautiful jewels within our environment are fragile and need our constant attention and help.

In its recent national assessment of US lakes and ponds, the EPA in 2009 reported that the majority of lakes are in worse shape now. Because of this, "the nation must commit itself to slowing, if not reversing, the creeping damage to our lakes."¹ Studies have shown that as water quality declines the value of shorefront property also decreases. It affects human health, fishing, town property tax income and the local economy that serves lake users throughout the year.

The future health of ponds and lakes depends on folks who visit and live on the shoreline and within the watershed. Besides following many other protective guidelines to keep lake water clean, people must also "stabilize eroding areas, reduce the use of chemicals, divert rainwater into vegetated areas and minimize lawns and impervious areas."² If people understand how their day-to-day activities affect their waterbody, and if they make a commitment to partner in ideal lake stewardship, the future of these waters will be healthier and safer. Everyone needs to "pitch in with the small things we do every day as good watershed citizens."³

Join in by taking the CFL LakeSmart Pledge available at CTLakes.org and earn a sign that reads "LakeSmart Home" for display on your property. Put one on your dock or raft and another roadside so that boaters and drivers both will take notice. "The sign tells the world that you care and that you're doing your share."⁴ This award is available to CFL members and prospective members. The CFL hopes to grow a larger membership and, more importantly, better lake stewardship statewide. Log on today to the CFL website (ctlakes.org), review the best lake management practices, make the LakeSmart Home Pledge and indicate that you'd like to receive one or two "LakeSmart Home" awards from the CFL. Encourage your neighbors. Congratulations and thank you.

¹ Robert Thorson

² Maine DEP

³ Eight Mile River

⁴ Eight Mile River

Zebra Mussels are in CT Lakes

What can lake residents and lake users do?

The presence of Zebra Mussels in Lake Lillinonah and Lake Zoar was first reported in October of 2010 by Ethan Nadeau as part of FirstLight Power's (FLP) nuisance species survey.

Since that first confirmation, there has been an abundance of scientific work and research along with many different hypotheses about what should be done. Friends of the Lake (FOTL), an advocacy group for Lake Lillinonah, has been an active member in the Zebra Mussel Task Force organized by the Candlewood Lake Authority. Research was quickly done to discover what other lake communities have done to help prevent zebra mussel introductions, and how to best manage lakes after zebra mussels colonize within the water body.

FOTL has partnered with the Lake Lillinonah Authority (LLA) and continues to support monitoring efforts with Dr. Mitch Wagner from Western Connecticut State University (WestConn). They will be expanding the monitoring of underwater dock substrates (zebra mussel hotels) to help identify where, and at what rate, the population is colonizing. They are also working with Dr. Jen Klug, Ethan Nadeau and others at FLP, and the CT Department of Energy and Environmental Protection to develop a monitoring program during draw downs to help determine population growth, while measuring any affect in water clarity and cyanobacteria levels.

What can other the lake user and residents do?

- Raise your awareness of these invasive non-native species. Know what they look like, and look for them.
- Accept the responsibility that comes with operating your water craft within a lake that has a colonized population. Prevent the spread into other lakes by following simple decontamination practices, Clean, Drain and Dry.
- When removing any equipment from the water, be it pumps, docks, floats etc. Clean, Drain and Dry.
- If adults are found, please scrape them into a plastic bag, note the date and location found. Contact FOTL and they will take them to WestConn for further study.

Please see:

http://www.candlewoodlakeauthority.org/#!__zebra-mussels for more information on Zebra mussels, and stay tuned for opportunities to help with a monitoring program during drawdowns.

Friends of the Lake, Inc. • PO Box 403 • Bridgewater, CT 06752 • T (860) 210-8064 • F (860) 210-9894
www.friendsofthelake.org • A Non Profit Organization



"There are two primary choices in life: to accept conditions as they exist, or accept the responsibility for changing them."

Denis Wartley



2013 Eastern CT Healthy Soils Conference

By Rick Canavan

"We don't have a runoff problem; we have an infiltration problem!" That was one of the messages from Ray Archuleta from the NRCS East National Technology-Support Center recently at a two day conference titled "The Economics of Healthy Soils and Cover Crops". The conference was put on by the Natural Resource Conservation Service (NRCS, formerly Soil Conservation Service) in Hampton, CT on April 22 & 23. The talks were well attended by agricultural producers who were the target audience for the discussions; however, the land management ideas were also transferable to lakeshore homeowners who want to protect their lake resource.

The presentations discussed how maintaining healthy plant cover on the soil at all times helps the soil microorganisms thrive. Healthy soil microbiology helps maintain soil aggregates that keep pores open that allow for water and air to penetrate the soil which helps plant growth and provides for better stormwater infiltration. Actions like tilling or cutting your grass short may provide a short term growth burst but overtime lead to decreasing organic matter in the soil and a loss of infiltra-

tion. In land areas draining to lakes that loss of infiltration can lead to increases in pollutant laden stormwater runoff entering our waterbodies.

The workshop included a field demonstration of a rain-fall simulator that was the “seeing is believing” moment. Soils were collected from land with different agricultural practices and placed in trays below a rainfall-simulating sprinkler. Two buckets were placed at the trays - one that would collect runoff from the surface and one that collected the water that infiltrates through the soil. The differences in responses from the different treatments were remarkable. Two trays had soil with grass: one from an orchard with long grass and one mowed and compacted soil from a farm where tractors are often parked. With the long grass, nearly all the water found its way into the soil with very little water in the runoff bucket, while the compacted lawn was exactly the opposite with almost all of the water in the runoff bucket and no infiltration. Other agricultural treatments showed that bare soil not only has a high amount of runoff but also soil erosion.

Ray Archuleta is a dynamic speaker and presenter, and many of his presentations are on You Tube. This link is to a relatively short video the dramatically shows how important keeping healthy soils is for soil and surface waters.
http://www.youtube.com/watch?v=CEOyC_tGH64&feature=youtube_gdata_player

For agricultural producers to get the most production out of their land, developing healthy soils is an important economic concern. Lakeshore landowners can try to minimize the transport of nutrients from their land to protect their resource, which also has economic implications. Steps you can take can range from something simple like letting your lawn grow a little longer to steps that require more significant commitment such as removing hard surfaces, adding rain gardens, and converting lawn and patio space to naturalized landscaping.



GOOD NEWS FOR CONNECTICUT LAKES - INVASIVE PLANT COUNCIL COORDINATOR POSITION RETAINED

by Tom McGowan

In a last minute action the State legislature retained the budget line item for the Coordinator for the State Invasive Plant Council. As a result the current coordinator, Logan Senack, will be on board for another year.

This is good news for the Council which is made up of State officials, plant scientists, educators and land and water conservation organizations. Without a Coordinator the Invasive Plant Council would be severely limited in moving on its agenda to prevent the sale and transport of invasive plants in Connecticut. The Coordinator carries out the action recommendations of the Council, assists towns and non-profit organizations with invasive plant educational material, workshops and training sessions and helps coordinate invasive plant initiatives among State agencies.

The Council also tracks the movement of land and water invasive plants and updates the official State list of these species. CFL board member Tom McGowan, Executive Director of the Lake Waramaug Task Force, is a member of the Council. This month another CFL board member, Dr. George Knoecklein, is presenting a report to the Council on the status of invasive aquatic plant activity in Connecticut lakes and water bodies.

Lake organizations in Connecticut should continue to remind their State legislators to maintain support for the Invasive Plant Council, the CT. Dept of Energy and Environmental Protection and the Ct Dept. of Agriculture. These organizations provide vital research, information and the enforcement action necessary to control the spread of invasive aquatic plants to our lakes, ponds, rivers and streams.

Information on the Council can be found at http://www.eddmaps.org/ipane/ctcouncil/CT_invasive.htm



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
George Knoecklein. – Limnologist
George Benson, - Limnologist
John Burrell, - Columbia Lake
Mary Ellen Diluzio, - Bashan Lake
Bruce Fletcher, – Bashan Lake
Anne Lizaralde – Conn College
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, Maryellen DiLuzio.

Join the CFL

Membership is Free! Simply fill out and mail the form and mail it to CFL, PO Box 216, Windsor, CT 06095 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 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 Conservator \$250+ | <input type="checkbox"/> Lakes Guardian \$2,500+ |
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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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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.

Thank you!



Bruce Fletcher and Friends at the East Haddam Memorial Day Parade. They also proudly displayed the CFL banner on the truck.

Connecticut Federation of Lakes
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Windsor, CT 06095

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Calendar

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

