



FRIENDS
OF THE LAKE

Lilly's Letter

Spring 2011



To All Friends of the Lake:

We are pleased to present the Spring, 2011 edition of the Friends of the Lake Newsletter. Much has happened since our last issue. As always, there is good news and bad news to report. In general, our beautiful Lake Lillinonah is headed in the right direction thanks to the many groups, organizations and government entities who continue to work hard to improve this lake. With our sincere appreciation for your continued support, and our best wishes that you have a safe and fun season the lake.

Yours Truly,

The Executive Board:

Jeffrey Silverman, Bridgewater
Greg Bollard, Bridgewater
Jeffrey Tinley, Southbury;
George Walker, Brookfield
Scott Conant, Newtown

Friends of the Lake:

Status Report: Phosphorus Reduction at the Danbury Water Pollution Control Plant

On July 14, 2009, the Connecticut DEP signed a Consent Order with the City of Danbury that required Danbury to implement additional chemical treatment to reduce phosphorous in the effluent of the Danbury Water Pollution Control Plant (DWPCP) from 1mg/l to a target of 0.5 mg/l from April through October. Danbury also was required to undertake a study to evaluate alternatives for infrastructure upgrades that would reduce the phosphorus effluent level to 0.2 mg/l.

So what has happened since?

There is some good news to report. Danbury has implemented additional chemical treatment for the past two years, with significant positive effects. DEP reports that this past summer phosphorus levels in the DWPCP effluent was reduced to an average of 0.28 mg/l, well below the 0.5 mg/l target. DEP also reports that a statewide plan for phosphorus reduction is under

development and DEP expects to determine the permit limit for DWPCP's new discharge permit shortly.

The study of alternative infrastructure upgrades to further reduce effluent discharge levels required by the Consent Order was to be delivered to the DEP by November 2009. However, the problem has proven to be more complex than anticipated. A DEP official recently advised that the report should be completed by May of this year. The DEP is planning to hold public participation meetings in the conjunction with the release of the report and the statewide phosphorus reduction plan. We will keep FOTL members posted as we learn more about these developments.

Once a plan for infrastructure upgrades to the DWPCP is developed and approved, the daunting challenge of finding funding for construction of the upgrades remains. Funding requires an allocation of funds from the Connecticut Clean Water Fund (CWF)



bonding program. Across the state, water treatment projects are given a ranking. Each year, the projects with the highest ranking are funded until the available bonding is exhausted. This means it is critical to keep the Danbury WPCP upgrades and Lake Lillinonah water quality in the spotlight.

To put this issue in context, statistics from a recent DEP presentation identified the cost of identified wastewater treatment infrastructure needs statewide over the next 20 years at just under \$5 billion dollars. Breaking this down into specific categories, the cost simply to correct sewage overflow incidents is more than \$1.5 billion and denitrification project costs are more than \$600 million. Phosphorus reduction project costs are estimated to be \$55 million.

The amount of available bond funds is far below the cost of the identified needs. Average bond funding for wastewater projects over the past five years has been just over \$200 million per year. As the DEP has noted: "The past five years of bonding for the CWF (Clean Water Fund) has shown that priorities for public health and resources through wastewater infrastructure have been lost in competing demands. It is time for a renewed priority for the CWF that becomes a commitment of the State for the next generation."

FOTL echoes the DEP's call for a new commitment to clean water issues. As Friends of Lake Lillinonah, we must keep a spotlight on these issues and make it known to our government officials that we support funding to improve the quality of the water in Lake Lillinonah. With your help, FOTL will continue to

make sure our voices are heard in Hartford on these issues.

Other Lake Lillinonah Events our members should be aware of

- The Shepaug River Association has confirmed its spring water quality monitoring date: Saturday, May 7th from 9:00a-12:00p (Rain date: Sunday, May 8th) – meet at Roxbury Town Hall. They are going to be sampling 6 of the 8 sites along the main stem. There will be a pizza party for volunteers around noon once the sorting and ID work has been completed. They are going to be holding two 2-hour training sessions the week before the event for anyone that has not previously done a rapid bio-assessment: Tuesday 5/3 in Washington (location TBD) and Thursday 5/5 in Roxbury (Town Hall). Both sessions will start at 6:30 and probably run about 2 hours. (There is no cost for either the training or the event and all required equipment will be provided.)
- The Still River Alliance will be participating in the annual Still River Cleanup the following Saturday (May 14th) in Brookfield from 8a-2:30pm. Anyone with a boat is welcome to bring it and help with in-stream debris removal, otherwise cleanup will be land-based and all supplies will be provided. For more information on any of these events please email us at info@friendsofthelake.org.

2011 projects and status:

Gleon Buoy deployment:

Special thanks to Scott Conant for preparing the application for the Gleon Buoy. It remains our ambition to deploy the electronic data sensor equipment early this spring. This buoy will be located just south of the route 133 bridge in the old river channel.

Dock Monitoring:

For the 4th year, Friends of the Lake and Fairfield University co-sponsored the Lake Lillinonah Volunteer Water Quality Monitoring Program. The goals of the program are: 1) to provide credible information on water quality conditions to State and local agencies, 2) to educate the public on water quality issues, 3) to build a constituency of involved citizen scientists. The Volunteer Water Quality Program expanded to 7 sites in 2010. We had sites at

GMS Rowing Center, Posion Ivy Island, S-curve, Barkwood Cove, 133 Bridge, South of the Newtown Boat Launch, and Scatacook Shores on the Shepaug Arm. We gained much new information about the spatial variability of the algae blooms thanks to our new volunteers. We also trained a number of alternate monitors who were available to fill in for the primary monitors. Trainees for 2010 were Jim Ball, Greg Bollard, Ryan Bollard, Alex Calder, Bob Calder, Dyann Calder, Jim Conant, Joanne Conant, Scott Conant, Denise Fitch, Christy Heidbreder, Cindy LaPorta, Linda Leaden, Christopher Mino, Warren Mino, Mike Orzolek, Craig White, and Rebekah White. Thanks to all for their dedication to Lake Lillinonah! Special thanks to the Bollard and Calder families for their participation in all 4 years!



A few brief results:

- 1) In 2010, the monitoring period (May-September) was dry with several significant storms (about 1 per month). The dry periods provide the calm, warm conditions good for algal growth and the storms likely brought new nutrients into the lake.
- 2) In 2010, the Shepaug site (Scatacook Shores) had higher water clarity than the others sites (<5% of days had poor water clarity). Among the sites in the Housatonic Arm, Barkwood Cove and the S-curve had higher water clarity (~30% of days with poor water clarity) than Poison Ivy Island and the 133 Bridge site (~65-75% of days with poor water clarity).
- 3) We have 4 years of data from the 133 Bridge Site. 2010 had the poorest water clarity, followed by 2008. Water clarity measurements in 2007 and 2009 were similar and were much higher than in 2008 and 2010. These differences are not due solely to differences in flow, as 2007 and 2010 were dry and 2008 and 2009 were wet relative to the long-term average.
- 4) Combining the water clarity data collected by the volunteer monitors with the continuous data collected by the GLEON buoy sensor system will help us to identify which changes in physical and chemical conditions in the lake lead to changes in water clarity.

For more information: Contact Jen Klug jklug@fairfield.edu

Bio-Assessment:

Carl Berg & Denise Fitch will schedule and choose at least 3 locations for 2011. This CT-DEP endorsed program is used to help identify the health of inlet streams and watercourses that feed into Lake Lillinonah. Check our website if you want to be trained for the Lake Lillinonah stream team. Meg Ruta from HVA will be providing a training class this spring.

Educational Outreach:

Dyann Calder continues to research funding availability and programs that teach water quality basics to local elementary school students. If you have any contacts or ideas please contact us so we can develop a local program.

E-coli testing and Algae bloom toxin monitoring:

FOTL will start an indicator monitoring program of e-coli and of toxins present within the algae living in our lake. Should our field test show any major problems we will alert our membership, area health districts and the CT-DEP to encourage additional testing.

Algae Harvest / controls:

As part of our ongoing research Jim Conant is investigating various methods that might be available to harvest or help control algae blooms.

Debris management:

George Walker continues to monitor FirstLight Power's progress with their debris management program. George will be attending the annual Debris Management Advisory Committee meeting in late March to represent FOTL and review the FLP presentation and documentation regarding their 2010 results and DMP plans for next year. FLP has reported they operated the debris skimmer 41 days and their pontoon boat "debris plow" was operated an additional 13 days removing approximately 770 cubic yards of material from the lake between May and September 2010. These debris removal results are significantly higher than 2009, the volume being 85% larger than the prior year. These higher volumes are a direct result of FLP operating the skimmer for a longer period on Lake Lillinonah and moving the debris skimmer into other previously untouched coves and shoreline areas on the lake and North of the Rte. 133 Bridge.

A cooperative team from FLP, LLA, and FOTL surveyed the debris on the lake with photos and mapping throughout the boating season and allowed FLP to manage and direct the skimmer work group more effectively to focus on debris accumulations throughout the lake instead of just removing debris in the vicinity of the dam and South end of the lake. We are looking forward this year to FLP continuing to move the skimmer throughout the lake and to be as effective as last year. We are also of the opinion that FLP could be much more effective, productive, and efficient with the DMP on Lake Lillinonah if updated equipment would be used for the debris removal.

George Walker will commence a FOTL volunteer monitoring program that will help document and report on the status and effectiveness of the 2011 program. We need help with documentation of any bad conditions, including photographs and email descriptions. Please visit our website to learn about our new



iPhone application to help you report bad conditions. We are also looking for volunteers to be assigned areas of the lake for this volunteer monitoring program.

Cooperation with other watershed groups:

FOTL continues to build relationships with other area watershed groups. This winter we have met with CT-DEP, The River Alliance Group, The Washington Water shed group and the Still River Alliance, and continues to work with the Housatonic Valley Association. It is great to see how many dedicated people / organizations are working on watershed protection, awareness and improvement programs. It is also great to have newly appointed Meg Ruta from HVA so active in all of the river and watershed programs.

Additional programs of 2011:

- FOTL is pleased to announce funding for an intern this summer for data collection and processing with Fairfield University Professor Jen Klug.
- CT-DEP 319 grants will no longer fund water quality studies of Lake Lillinonah performed by George Knocklein of Northeast Aquatics. We will be discussing with the LLA and DEP what other options are available for continued research of the lake.
- USGS study of internal nutrient loading. We expect to review a proposal for this study in the near future.
- Storm water discharges into the Still River and beyond. The newly re-formed Still River Alliance is actively pursuing grants to start developing a plan to tackle water quality issues in the Still River Corridor. FOTL supports this initiative.
- Building a partnership with the HVA, Shepaug River Alliance and Still River Alliance to reduce nutrient loading. FOTL continues to reach out and find ways to address up-stream nutrient loading sources. We hope to stimulate a Housatonic Watershed forum to help address specific priorities for the next decade that include those major nutrient sources that affect our water quality.
- Grants and funding opportunities. FOTL continues to work on attracting research and grant opportunities for the lake. It remains our hope that with the GLEON data collection site we might attract some more programs to help with water quality concerns.

Please contact FOTL if you wish to participate in any of these projects. We all enjoy this beautiful lake and it is all of our responsibility to protect, increase public awareness, and improve our lake. Many very simple acts of watershed management can have a significant impact on our water quality. Please join us in this effort!

Membership

Membership is the fuel that powers Friends of the Lake. Please look for your 2011 renewal form in the mail. We continue to encourage you to push your neighbors, family and friends to join. This organization is here to protect Lake Lillinonah but we can only do it with your help.

Website

The Friends of the Lake website is still the best place to go for all the information you need to know about Lake Lillinonah. Remember – you can get news, real time water levels, access to water quality reports and more. You can also download the Friends of the Lake iPhone application. Shepaug River Association

Shepaug River Association

The Health Monitoring Committee of the Shepaug River Association is planning next summer to conduct a pilot “Streamwalk” program in Battleswamp Brook, a tributary of the Shepaug River in Washington and Roxbury. The Streamwalk model was developed by the USDA Natural Resources Conservation Service to provide an effective first step in assessing watershed stream conditions, to connect local volunteers with the resources in their watershed and to serve as a tool for public outreach and participation. After receiving training, teams of three or four volunteers each walk river segments making specific observations about river conditions and documenting any conditions that might raise concerns about river health.





Friends of the Lake Committee Reports

Save the Lake Day

Committee Chair: Steven Bowman

Committee Members: Kathy Berg and Barbara Petriccione

Friends of the Lake is once again proud to announce that our annual Save the Lake Day will be held on Saturday, June 11, 2011 from 9AM to 1PM. The event location is at the route 133 State Boat Launch (Steel Bridge) in Bridgewater.

Save the Lake Day is a great opportunity to contribute to our community. See what a difference your effort can make by simply removing garbage and debris from Lake Lillinonah. All supplies and food will be provided; we just ask for a small amount of your effort and time.

Everyone who participates makes a huge contribution, whether it is by cleaning on land or by venturing out onto the water – this is an excellent way to see parts of Lake Lillinonah you may not have had the chance to explore.

Please spread the word throughout your neighborhood. Tell friends, co-workers and neighbors about this event. Please make sure to mention to those who own waterfront property to clean up their shoreline and place the debris collected within plastic bags on their docks for our teams to pick up.

We encourage all of our members to promote this event and to come out and join us on Saturday, June 11th. Please watch closely for follow-up emails and updates on our website.

If you would like to volunteer or are interested in becoming a sponsor of the event please contact us at volunteers@friendsofthelake.org or call us at (860) 210-8064.

Dine Around on Lake Lillinonah

Committee Chair: Mae and Tom Orkisz

Committee Members: Rick & Kathy Fattibene, Bill & Marge Davidson, Angela Macchiarillo & Bernd Woerner, Kristen Briody, Mary-Ann Goldstein and Annette & Jeff Marcus

This summer instead of the Annual FOTL picnic, there will be a Waterfront Dine Around. Members of FOTL and invited guests will visit 4 to 5 host homes that are located on the shores of Lake Lillinonah for different courses of a full dinner. The 1st home will serve drinks and appetizers, the 2nd, 3rd and 4th homes will be serving the main course and the 5th and final home will serve dessert. A water taxi service will shuttle people to and from the homes, or people may take the land route and drive their cars. This event will allow people to visit other FOTL member's homes and foster better friendships in the lake community. The date is Saturday, July 9th with the rain date being Saturday, July 16th. For more information or to volunteer your time, home or boat please email us at info@friendsofthelake.org.

Water Quality/Debris Committee

Committee Members: Greg Bollard, George Walker, Professor Jen Klug, Jim Conant, Dyann Calder, Bob Calder, Alex Calder, Craig White, Rebekah White, Carl Berg, Denise Fitch, Anderson Family, Mike Cram, Cindy LaPorta, Hale Rickman, Ken Dougherty, Hugh Rawson, Gary Steinman, and Meghan Ruta

Zebra Mussels Invade Lake Lillinonah:

Last fall we were made aware of the invasion of zebra mussels at Lakes Lillinonah and Zoar. Zebra mussels are a non native, nuisance and invasive species of freshwater mollusk that, under the right conditions, can greatly impair the recreational use and ecology of a lake. Thus far, it appears that Lake Lillinonah will likely support a prolific environment for the mussels to have a major impact within a few short years.

FOTL IS PARTICIPATING IN A ZEBRA MUSSEL TASK FORCE SPONSORED BY THE Candlewood Lake Authority (CLA).

The task force has met twice already to develop a plan to

prevent introduction into Candlewood Lake and to develop an appropriate plan to contain the infestation of Lake's Lillinonah and Zoar. There are at least two more meetings scheduled prior to the start of the 2011 boating season. The task force members include CLA delegates and staff, as well as other local and regional stakeholders, including members of the lakefront community.

Some of the action items the committee is currently working on include:

1. Developing signage for access points and other educational materials. Education and outreach are key components

of all the other efforts around the country.

2. Developing an early detection and monitoring program in conjunction with WCSU and the CT DEP.
3. Exploring other preventative and containment measures, i.e. ramp monitoring, self certification programs, etc.
4. Investigating legislation or regulations with local legislators (State Senator McLachlan & State Representative Chapin) and the CT DEP, respectively, that would make it illegal to knowingly transport and introduce the aquatic invasive invertebrate.

KNOWN AND UNKNOWN

We have learned a lot and continue to learn about Zebra mussels. However, there is still much, much more we don't know, for example:

1. Will the water chemistry of Lake's Zoar and Lillinonah support a full life cycle, including reproduction; or will adults that are found be the result of upstream recruitment?
2. What kind of funding sources are out there for the kind of education and monitoring that our task force believes we should implement?

We hope to have answers to these and other questions in the near future. FOTL will email the final recommendations of this task force to our members. Without a doubt this will change our lake. And, without a doubt, this will add a responsibility to our lake users to contain this invasive species.

Please link the following websites for more information:

www.100thmeridian.org

<http://www.candlewoodlakeauthority.org/claupload/Zebra%20Mussels%20overview%20-%20Nancy%20Balcom%20-%20November%202010.pdf>

<http://www.candlewoodlakeauthority.org/claupload/zebra%20mussel%20powerpoint%20-%20Peter%20Arrestad%20-%20November%202010.pdf>

<http://www.candlewoodlakeauthority.org/claupload/Zebra%20Mussel%20Presentation%20-%20Ethan%20Nedeau%20-%20November%202010.pdf> ■

Memorial

In Memoriam

On December 31, 2010, Jim Bean of Southbury, a great husband, father, neighbor and loyal Friends of the Lake member died peacefully at his home after a courageous battle with ALS. Jim had a deep affection for Lake Lillinonah and considered a "perfect day" a day spent on the lake with friends, his wife Kelly and his daughters Kelsey and Sam. His neighbors at Scatacook Shores plan to install a memorial to Jim at the Scatacook Shores beach area. Jim's family prepared the poem and image below to remember him.



In Loving Memory of Jim Bean

An adventurous life that came to an end, he died as he lived, everyone's friend. In our hearts a memory will always be kept, of one we loved, and will never forget.

As Jim would say after a flawless wakeboard pass, he had a perfect run.

July 11, 1965-Dec 31, 2010



Join FOTL: Become a member of Friends of the Lake.

Membership

Join us in preserving and protecting this great natural resource. Each member who joins Friends of the Lake is another voice. The more voices we have, the harder it will be to ignore us. Together, as a group, we can solve the water quality and debris problems for the generations to come.

All Memberships Include: Newsletter, Watershed Awareness Guide, Friends of the Lake window decal for your boat or car, Special invitations to Friend of the Lake events, Email Alerts on Lake Activity, Email and Phone Alerts on Water Treatment or Level Fluctuations, and much more...

**Simply fill out the form below and mail it with a check made out to Friends of the Lake to:
Friends of the Lake
PO Box 403
Bridgewater, CT 06752**

MEMBERSHIP TYPE:

Membership Level	Annual Cost	CHECK ONE
Patron	\$50	<input type="checkbox"/>
Family	\$100	<input type="checkbox"/>
Lake Supporter	\$500	<input type="checkbox"/>
Landscaper	\$1,000	<input type="checkbox"/>
Lake Guardian	\$2,500	<input type="checkbox"/>
Lake Protector	\$5,000	<input type="checkbox"/>
Corporate	\$5,000	<input type="checkbox"/>

FIRST AND LAST NAME: _____

COMPANY NAME: _____

ADDRESS: _____

EMAIL: _____

PHONE: _____

Please provide the name of your landscaper: _____



Friends of the Lake

(FOTL) is a non-profit group of concerned citizens who care about the management, safety and recreational uses of Lake Lillinonah and wish to develop a lake community to encourage the continued protection of its natural beauty and wildlife. The objective is to work closely with the Lake Lillinonah Authority, elected officials and residents of the bordering towns to increase awareness, foster stewardship and solicit additional funding for prioritized projects in order to reduce debris and pollution so that we may protect and maintain the quality of Lake Lillinonah now and for future generations.

