

Happy New Year

FROM THE FRIEND OF BOLTON LAKES



WE SEND TO YOU OUR VERY BEST WISHES FOR A
HEALTHY AND HAPPY NEW YEAR

As we look forward to the coming year we thank you for your continued interest and support.

This past year has been another wonderful year of lake living filled with swimming, boating, fishing and general enjoyment of the Bolton Lakes. Although there were ups and downs we look forward to another great year on the lakes in 2017.

In this newsletter we'll provide:

1. A review of the status of our lakes and watershed;
2. Highlights of lake living from 2016;
3. FBL key accomplishments for the year;
4. A look forward toward 2017;
5. Acknowledgements.

We are also happy to announce our first [Spring Seminar](#) to be held on the evening of April 20, 2017 at Bolton Town Hall co-sponsored by FBL and the Bolton Lakes Watershed Conservation Alliance. Landscape designer Kathy Connolly will present "Waterside Landscaping for Better Lakes and Rivers."

Topics include:

- How to create and sustain gardens that buffer water runoff;
- Planting suggestions for waterfront owners;
- Lawn care;
- Opportunities for scheduling private consultations.

We hope you will attend and take advantage of the opportunity to schedule private consultations, in which Kathy will visit your home and provide advice on how best to manage your waterfront lawns and gardens.

Additional information will follow as the date approaches.

1. Status of the Bolton Lakes Watershed for 2016

Introduction

The Bolton Lakes are a manmade chain of lakes within an approximately 2,400-acre watershed. Situated in the four towns of Bolton, Coventry, Tolland and Vernon, the lakes were [first impounded in 1832](#) to power the mills in Willimantic. The watershed consists of three inter-dependent lake regions each having distinct environmental and recreational characteristics. Water and nutrients flow between the lakes from north to south.

Despite the ongoing drought, lake levels remained near normal. Residents and visitors were able to enjoy traditional seasonal activities despite a June treatment for algae and invasive plant growth on the Lower Lake and an outbreak of pondweed in the Middle Lake.

In 2016, FBL worked with the Towns of Bolton and Vernon to develop Lower and Middle Lake winter drawdown requests geared toward the overall health of the watershed. In July the towns submitted formal letters to DEEP requesting the drawdowns. The requests were approved in October and the drawdowns, planned to be 1½ feet (but could vary to 2½ ft.), took place in early November.

UPPER BOLTON LAKE

The Upper Lake remains the most rural of the three lakes. Fed by 1,243 acres of watershed it continues to inspire those who venture out on it with its wilderness characteristics and natural beauty. Populated by a distributed group of wood duck houses and at least one active beaver hut, the lake was readily explored in spring, summer and fall. The beavers were especially active posing a challenge to Vernon Public Works by obstructing the flow from Upper to Middle Bolton Lake.

Of particular note is the stand of Atlantic White Cedars dominating the upper reaches of the lake. A rarity in Connecticut, this grove is the focus of special preservation efforts by the four-town Bolton Lakes Watershed Conservation Alliance. In 2016 the cedars were visited by a team of scientists doing a national study and have attracted interest from other states as well.



1. Atlantic White Cedars

HATCH HILL CULVERTS AND ROAD CROSSING



2. Hatch Hill Road signs installed

Waters feed the Middle Lake from the Upper Lake via culverts under Hatch Hill road in Vernon. Following up on concerns raised by a lake resident, in the interest of both pedestrian and wildlife safety, FBL requested the Town of Vernon to install signage to slow traffic near the narrow crossing over the culverts. Signs were installed on both the eastern and western approaches to the boat launch and crossing between the Middle and Upper lakes.

FBL also advocated to the CT DEEP and State legislators that the culverts themselves be deemed 'hazardous'. This designation means the culverts must be improved to assure the road is passable during storms and emergencies and to enable better control of the water flow among the lakes. The State Bonding Commission approved funds to begin design and reconstruction of the culvert. The responsible DEEP civil engineer presented an overview of the plan at our October forum and we were pleased to see a survey team on site within days of the presentation.



3. Upper Lake water level approaching the road

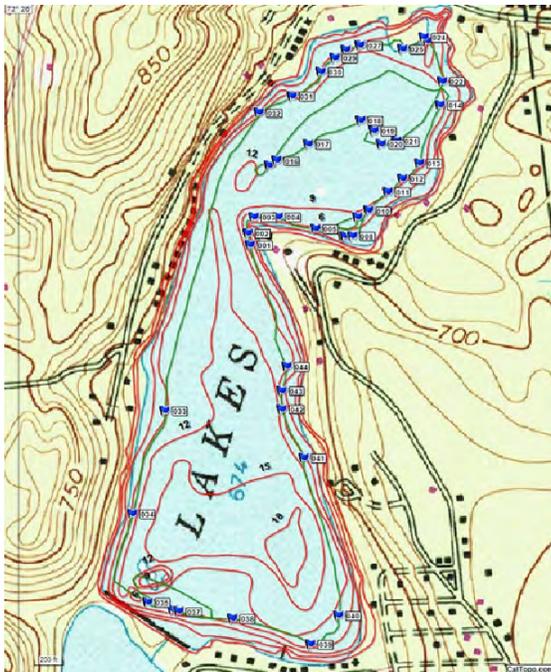
MIDDLE BOLTON LAKE

In addition to the culverts under Hatch Hill Road, Middle Bolton Lake is fed by 532 acres of watershed. In addition to the many homes in the neighborhoods surrounding the lake, there is still a notable percentage of the shoreline occupied by woodlands as well as Camp Newhoca, a seasonal

public beach and children's day camp, owned by the town of Vernon. In addition, the Rosedale and Lake Shores beach associations provide access to the lake for their members.

In 2016 many kayakers, some of whom fished for its largemouth bass and pan fish populations, frequented the Middle Lake. A number of the shoreline residents own pontoon boats that could be seen circumnavigating the lake for fishing and sightseeing cruises.

FBL lake water monitoring found that water transparency and clarity was nearly twice that of prior years, resulting in more sunlight reaching into the water. Possibly resulting from the increased clarity, expansive new areas of plant growth appeared. Prompted by resident's observations FBL [documented](#) the locations of these areas and reported them to the Town of Vernon and their consultants, Northeast Aquatic Research.



4. FBL 2016 Middle Lake Aquatic Plant Survey: Flagged locations indicate areas of significant plant growth

LOWER BOLTON LAKE

Water flows into Lower Lake from the Middle Lake and from its own 258-acre watershed. Surrounded primarily by year-round residential properties it has significant wooded shoreline and the Town of Bolton's popular Indian Notch seasonal public beach.

The lake is prized for its good winds for sailing and windsurfing, its large oval shape, and a healthy population of largemouth bass and pan fish. Numerous five lb. bass were caught as well as large state-stocked catfish.

Despite the presence of good recreational water quality for most of the year, a green, non-toxic, algae bloom persisted in the Lower Lake for a good part of the year, confirming the need to continue the process of remediation and to understand and address the underlying presence of excess phosphorous in the lake. High iron content, creating a brownish color, also needs continued investigation.

Although FBL's 2016 aquatic plant survey found Lower Bolton Lake to be largely clear of nuisance weeds, curly-leaved pondweed, an invasive plant found in several small areas demonstrated the need for vigilance and care to prevent its spread within the lake and dispersal into the watershed.

2. Lake Living 2016

PIG IRON SWIM CHALLENGE

On Sunday July 24th the Newington Bicycle Shop, in collaboration with the Vernon Department of Parks and Recreation, held its second annual "Pig Iron Swim Challenge" open water races on



5. The "Pig Iron Swim Challenge" course was marked with inflated rubber ducks for 1, 2, and 3 mile races.

Middle Bolton Lake. The weather and water conditions were ideal. Giant rubber ducks marked the course for the races, starting and finishing at Newhoca beach, and up to three miles in length. A total of 95 swimmers participated, cheered on by residents and friends. Many entered more than one event so there was a total of 160 individual swims. States represented were Connecticut, Massachusetts, Rhode Island, Vermont, New Hampshire, New York, New Jersey, Pennsylvania, and Georgia.

48TH ANNUAL BOLTON LAKE SAILING CLUB REGATTA

On May 22nd twenty-three entrants turned out for the [48th Annual Bolton Lake Sailing Club Regatta](#) on Lower Bolton Lake. The club welcomes Sunfish sailors of any experience level to participate. Club members are happy to share tips on boat setup, faster sailing, race strategy and tactics, as well as help in understanding the rules. Bill Brangiforte took home 1st place at the 2016 event. We're looking forward to the 49th Regatta in 2017.



6. The long-running The Bolton Lake Sailing Club Regatta has been a presence on Lower Bolton Lake for nearly five decades.

AND...THE VIEWS



7. A spectacular sunset, highlighted by contrails across the sky, marked the end of a fall day on Lower Bolton Lake.

3. 2016 Friends of Bolton Lakes Membership-Sponsored Activities

In 2016 we continued our activities of [water-quality monitoring](#), communication, education, collaboration and advocacy. Our activities are coordinated by the Board of Directors who act on your behalf to protect and enhance the ecological health of the lakes.

WATER QUALITY MONITORING



8. FBL Science Committee Chairman, Peter VanDine measuring oxygen and temperature as a function of depth in Upper Bolton Lake.

2016 data collection included:

- Water transparency via a [Secchi disk](#) depth measurement (70 measurements);
- Depth profiles of temperature and dissolved oxygen (552 measurements), and water alkalinity (538 measurements);
- Depth profiles of water chemistry, primarily phosphorous and iron. (41 samples submitted for analysis);
- Sharing all of this data with experts including Northeast Aquatic research.

We must send water samples out for analysis to determine the phosphorous and iron content but we can analyze the other data elements on our own. Laboratory analysis, when required, is entirely funded by member contributions and constitutes one of our major expenses. The sampling and analysis provides an early warning system to share with the professional limnologist hired by the towns.

We also carried out our [annual aquatic plant survey](#) noting the GPS coordinates and density of plants found. Results are discussed above in the status section for Lower and Middle Bolton Lakes.

COMMUNICATION AND EDUCATION

2016 activities included:

- Coordinating submission by Bolton and Vernon of the formal letters to DEEP requesting drawdowns of the Lower and Middle Lakes.
- Maintaining and updating our [website](#), to provide timely information to our membership and the general public.
- Emailing alerts to our distribution list of over 200 residents, members, and colleagues interested in the health of the Bolton Lakes watershed
- Briefing town and state officials including the Bolton and Vernon Town Administrators, Bolton Board of Selectmen, Vernon Town Council, Vernon Conservation Commission, and the four-town Bolton Lakes Watershed Conservation Alliance
- Holding the Third Annual Bolton Lakes Watershed Community Forum on October 27th including the following presentations
 - FBL 2016 Activities
 - “Lake Management and the Bolton Lakes” by Hillary Kenyon, NE Aquatic Research
 - The status of the Upper Lake culvert repair by Ashley Stewart, CT DEEP
 - Town of Bolton activities by Bob Morra, Bolton First Selectman
 - Town of Vernon activities by Steve Krajewski, Vernon Parks and Recreation
 - Activities of Bolton Lakes Watershed Conservation Alliance by Rod Parlee, Chair
 - The status of Hydrilla in Coventry Lake by Debby Zeppa, Coventry Lake Advisory and Monitoring Committee

The forum featured also featured:

- A display of aquatic plants;
 - A community question and answer and discussion session
 - Informative handouts regarding grinder-pump maintenance and watershed property management
- Preparing a [brochure](#) for area newcomers and current residents providing helpful information on the region, watershed, sound property management practices, and emergency and routine contact numbers. A plan for brochure distribution to residents is underway.

- Sponsoring an Eagle Scout project to construct and install signage between Middle and Lower Lakes to warn visitors about the dangers of transporting invasive species between the lakes.

COLLABORATION

FBL is committed to fostering collaboration with town and state departments and officials, technical experts, and relevant non-profits to better understand how to address the key issues affecting the watershed.

2016 activities included:

- Working with the Towns of Vernon, Bolton and the CT DEEP to allow the towns to submit the requests for coordinated annual drawdowns of the Bolton Lakes.
- Working with Bolton Lake Commissioner, Kim Welch, to provide an aquatic plant identification service. Citizens who find a suspicious aquatic plant in the watershed are encouraged to contact Kim using a photograph and the [protocol](#) outlined on our website.
- Regular meetings with the four-town Bolton Lakes Watershed Conservation Alliance to support the health of Upper Bolton Lake and the Atlantic White Cedar grove.
- Working with the Coventry Lake Advisory and Monitoring Committee to address shared issues of watershed preservation and management.
- Attending meetings of the [Connecticut Federation of Lakes](#) to gain insight into issues facing lakes across the state, the organizational structures and management practices they employ, and benefit from the expert knowledge found among the attendees and speakers.

ADVOCACY

We continue to advocate on behalf of our members regarding issues that affect restoring, maintaining, and enhancing the ecological health of the Bolton Lakes and their watershed.

2016 activities included:

- Successfully opposed channel catfish stocking in Lower Bolton Lake. We believe that there is a stable population of catfish in the lake and that further stocking presents an unnecessary risk until Lower Lake remediation is successfully completed.
- Successfully advocated to CT DEEP that the culverts between the Upper and Middle Lake needed to be rebuilt to better control water levels and prevent road flooding that could make the road unpassable in the event of a major storm. Money was appropriated in bond funds from the State of Connecticut and the project is in the design phase.
- Successfully engaged the Vernon Traffic Control Commission and Public Works Department to install road signs to slow traffic in the area between the Middle Lake boat launch and the Upper Lake.

4. A Look Forward to 2017

DRAWDOWNS

In 2017, FBL will spearhead the submission of a single coordinated drawdown request from the Towns of Bolton and Vernon. The water level in the Upper Lake will be maintained by the Town of Vernon to prevent the possibility of a fish-kill and to ensure protection of the Atlantic White Cedars.

Water levels in all three lakes will be co-monitored by FBL and the DEEP and water samples will be taken to document the concentrations of nutrients flowing through the watershed. Water level restoration after the 2016 drawdown is expected on or about April 15, 2017.

FRIENDS OF BOLTON LAKES 2017 ACTIVITIES

Our plans for the year include:

- Host the seminar “Waterside Landscaping for Better Lakes and Rivers” on April 20th, 2017;
- Continue to provide email and web-based public awareness of lake status, news and events;
- Host the 4th Annual Bolton Lakes Watershed Community Forum in October;
- Continue to advocate to town and state officials on behalf of the watershed;
- Continue observations, water-quality monitoring, and aquatic plant surveys;
- Identify and define watershed management approaches that will proactively preserve watershed health and address the underlying causes of unwanted algae blooms and invasive aquatic plant growth;
- Collaborate with the CT Federation of Lakes to conduct a lake water quality monitoring session for their Annual Meeting.

OPPORTUNITIES TO PARTICIPATE IN FRIENDS OF BOLTON LAKES ACTIVITIES

While we have a dedicated core of volunteers, we are still in need of more help to meet our goals. In particular, we would like additional participants to:

- Help author and enhance our web-based communications;
- Gather, author and distribute educational information;
- Participate in the development of science-based watershed management plans.

MEMBERSHIP RENEWAL

We rely on your membership to assure our ability to advocate and your financial support to fund equipment and chemical analysis collaboration! Please renew your membership for 2017 using the [form provided on our web site](#).

5. Acknowledgements

We were glad to see so many friends and colleagues at our Third Annual Bolton Lakes Watershed Community Forum in October. We thank you for venturing out in spite of the inclement weather. Our thanks also to the Bolton and Vernon Town officials and CT DEEP representative who spoke, and the State Legislators who took the time to attend. Particular thanks to Northeast Aquatic Research for their presentation on lake and watershed management.