



News from Crystal Lake Conservancy

Fall 2015

The Crystal Lake Conservancy is dedicated to preserving and protecting Crystal Lake for the benefit of the public by promoting and supporting the enjoyment of the lake and the lake's unique natural beauty.

Come Join Us for An Afternoon of Fun on Crystal Lake!!

"PADDLES AND PUMPKINS"

Sunday, OCTOBER 4, 2015 (Rain or Shine)

1:00pm-5:00pm

20 Rogers Street, Newton Highlands, MA

Support Crystal Lake Conservancy's efforts to keep Crystal Lake healthy

\$10 donation per canoe/kayak/paddleboard

Cider, Refreshments, Strung Donuts, Pumpkin Decorating

Sponsors: Whole Foods, Shaws, Wegmans

The Village Bank

Enjoy a lovely canoe, kayak, or paddleboard ride on Crystal Lake on a crisp autumn day!

The Crystal Lake Conservancy and the Newton Parks and Recreation Department invite you to join us for a Sunday afternoon of activities on Crystal Lake. Participants may sign up for half hour slots between 1-5:00pm to enjoy the pleasures of canoeing/kayaking/paddle boarding. A lifeguard will be on duty and all participants will be required to wear life jackets and sign a waiver. Children under 16 must be accompanied by an adult while on the water. In addition all can enjoy catching strung up donuts, drinking fresh cider and decorating your own free pumpkin!!

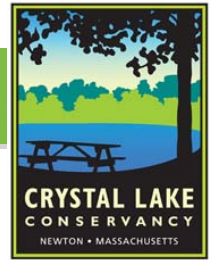
Learn about the Conservancy's ongoing testing and watershed activities to protect Crystal Lake!!

Visit our website at www.CrystalLakeConservancy.org or call Janice Bourque at 617-967-0797.

Volunteers are needed to help that day! Go to our website to volunteer or go directly to

VolunteerSpot: <http://www.volunteerspot.com/login/entry/5887801060110>

To learn more about the Crystal Lake Conservancy, visit our website at www.CrystalLakeConservancy.org



Legislative Support and Update on Storm Drains on Lake Avenue

Watershed storm water and rainwater are the only sources of water for Crystal Lake. This creates a great deal of pressure on Crystal Lake as all the runoff from the surrounding watershed and all of its pollutants and nutrients flow directly into the lake year round. There are over 1200 people PER DAY that use the bathhouse (not including swimming from the coves). The ages range from numerous children's camp swim programs to the elderly who line the benches to escape the heat.

The Crystal Lake Conservancy has worked closely with the City to install phosphorus filters in 23 out of the approximately 40 catch basins. Only 23 filters were installed because they fitted within the existing structure of some of the storm drains. The remaining storm drains need a range of structural improvements in order to allow any filter/storm water interceptors to be fitted into the structures. Lake Ave, which was under reconstruction, is the main street that wraps around the majority of the Lake and contains the key storm drains that receive the storm water before flowing into Crystal Lake. The CLC contacted the Department of Public Works in February 2015 to inquire and discuss the plans for the unfiltered storm drains on Lake Avenue. We felt strongly that the reconstruction of Lake Avenue was the perfect time for the additional storm drain to be addressed and the key drains fixed. Otherwise, once paved, the city would not open up the street for another five years and Crystal Lake will have five more years of unmanaged pollutants. CLC observed that both Jamaica Pond and Walden have suffered algae and bacterial issues this year.

After much persistence, the Crystal Lake Conservancy met with the Newton Dept of Public Works and the Parks and Recreation Department along with Aldermen Blazar and Danberg to discuss a potential plan and potential funding sources. We also did an investigative walk along Lake Ave with these city representatives and Alderman Dick Blazar and limnologist and engineer Larry Beals of Beals Associates. Mr. Beals has been a watershed and lake consultant for CLC and the City. It was determined which key drains at Lake Terrace, Cronin's Cove and Levingston Cove handled the largest amount of storm water load from the watershed. Additionally the pitch of the streets near Levingston Cove cause increased velocity of the storm water street runoff. This velocity forces the runoff to hit the curbing near the storm drain to "jump the curb" causing significant erosion and flow of nutrient rich soil into Crystal Lake. The CLC believes the repair and filter placement is very important to reduce the pollutant/nutrient load.

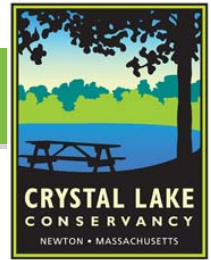
In addition, the CLC has been working closely with Rep Ruth Balser and Senator Cynthia Creem and their staff to create language for the State budget to obtain additional sources of funding beyond City funds to improve the quality of the water in Crystal Lake. **Due to the strong efforts of Rep. Balser and Sen. Creem, the CLC was able to obtain \$88,000 for the Newton Parks and Recreation Department under the MA Department of Conservation and Recreation (DCR) section of the budget.**

We were thrilled that our efforts paid off!

However, our work is not finished. We expect the City to complete an analysis of the storm drains on Lake Ave, on the specific retrofitting to accommodate the filters along with a cost analysis for storm drain reconstruction work on Lake Terrace, Cronin's Cove and Levingston Cove. Once completed, CLC plans to have the \$88,000 State budget funds used alongside any additional City funds to complete the work. We are assured by the Mayor that the recent paving of Lake Ave would not deter the necessary work on the storm drains.

It is crucial this work be completed and we will continue to work diligently with the City to accomplish this goal.

Help us stay green AND save paper and printing costs—sign up for our electronic newsletter by going to our website at www.CrystalLakeConservancy.org



The Birch Trees of Crystal Lake

By Beth Wilkinson



Do you like the small clumps of birch trees near Levingston Cove? Their beautiful bark and the rustling of their sharp-toothed leaves make birch trees favorites of many people.

The birches in the cove are gray birches (*Betula populifolia*). Their white bark almost seems to glow in the dark, and their triangular-shaped leaves are unusual and eye-catching. Chickadees and pine siskens love to eat their seeds.

The gray birch often is confused with the paper Birch (*Betula papyifera*), but its bark does not peel off as easily and, thus, was not used by Native Americans for the outsides of their canoes. Native Americans did, however, use the bark of the gray birch to help heal infected wounds.

You may have noticed that the number of birch trees along the shore surrounding the cove is decreasing, and some of them are showing damage. They are being replaced or crowded by other small trees.

Why is this happening?

The gray birch is a northern species that prefers to grow in regions where summer temperatures rarely exceed 75 degrees F. It also can be damaged by high humidity. During the winter, gray birches do best with a constant snow cover. Also, gray birches do not do well with competition from other species. In short, the current conditions and climate at Levingston Cove are not optimal for the gray birches.

There are other trees that are doing all-too-well along the shores of Crystal Lake. Without a doubt, the most common tree is the crabapple—the Siberian crabapple, *Malus baccata*, which is included on many experts' lists of invasive trees in Massachusetts. It is a shrubbier and thornier version of the crabapple tree that might be in your garden. If you look closely as you walk along the lake, you'll see crabapples of all ages—from plentiful thin saplings to mature gnarled trees.

Siberian crabapples are good in that they provide for wildlife. The downside is that they are too hearty. They thrive in both heat and cold, are happy in both sun and shade, and grow quickly. Thus, they out-compete most other trees around the lake. At Levingston Cove, we have beloved birches that are not the best choice for the site and crabapples that are becoming invasive and also are not typical wetland trees. Is there another solution?

Yes. River birches (*Betula nigra*) do well in compacted soil. Unlike gray birches, river birches are happy in hot summer weather. If the temperatures continue to rise with global warming, river birches will be the only birch trees able to grow well by our lake.

The bark of river birches is light brown and, when mature, peels off in vertical strips. River birches have the added value of playing host to the larvae of mourning cloak butterflies, and they also are resistant to some of the borers that kill other birches. They have the potential to do well along the shore of the lake. (Like all birches, however, they have a relatively short life span—perhaps fifty years—maybe shorter in an area that gets heavy use.)

Those of us who love birch trees along the shore might want to consider lobbying to have some river birches planted around Crystal Lake (and some of the crabapples removed). You could share your thoughts with the City's Conservation Department, which has jurisdiction over the shores of Crystal Lake.

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Did you know?

Some fun facts about Crystal Lake!

1. In 1930, boating, bathing and skating were available wherever safe conditions permitted. Crystal Lake swimming in summer and skating in winter were at their best. During 1934, Newton had fifty-six skating days and 37 tobogganing days.
2. Crystal Lake is a kettle pond formed by glaciers. It is not spring fed, but relies on rain and storm water runoff to keep it filled. (Hence why clean, filtered, low nutrient level storm water is VERY IMPORTANT).
3. Crystal Lake was originally named Wiswall Pond after Tom Wiswall, one of the first settlers in Newton.
4. Bullough's Pond had the first gristmill on Smelt Brook at the opening to Bullough's Pond. Water power was increased by water brought from Crystal Lake through an artificial channel.
5. Crystal Lake is 33.5 acres and is 30 ft deep at the center.

New Board Member joins Crystal Lake Conservancy

Liane Hartnett and her husband Paul moved to Newton Highlands in 1988. Paul's father had grown up in the Highlands. Paul remembers swimming in Crystal Lake as a child when visiting his grandparents. Liane grew up in Braintree, where her parents were active on School Committee and the Conservation Commission. She graduated from Wellesley College and obtained a PhD from Boston University in Medical Sciences. While her three children were growing up, she taught part time at several local colleges. All three children attended Newton Public schools, as well as Newton North and Newton South. Liane was active in PTO activities, the Parents Advisory committee at Brown Middle School, and Newton South Boosters club. Liane and Paul were also Co-commissioners of the Newton East Farm League for several years.

Liane is currently the Lab Manager for the Biology Department at Emmanuel College. As a biologist, she is concerned with the environment and preserving and maintaining natural space. She is an avid bird-watcher and amateur naturalist, believes in preserving habitats for current and future generations. Her daughter Annie currently lives in Newton and Liane and Annie enjoy walks with their dogs in Cold Spring and Hemlock Gorge.

Webmaster and Email Administrator Needed!

The CLC is in need of a volunteer who would like to participate in the stewardship of Crystal Lake by helping the organization effectively communicate to the public. Person would be supervised by the board Co-Presidents. Individual will managed all website content and has full design control. Website responsibilities include: maintenance of the home page to ensure content is current and relevant; posting of content and notices for upcoming events ; ensuring content is "web friendly"; archiving of older information; utilization of design and layout skills and hyperlinks as needed; maintenance of the domain registration.

Email administration includes: utilizing Vertical Response for membership and interested citizens; maintenance of email lists and managing email blasts and communication. A minimal understanding of Hypertext Markup Language (HTML) is preferred since emails are displayed in browser format.

If you are willing to contribute your skills, please contact Co-President Janice Bourque (617-967-0797).