NEWTON CONSERVATORS

WINTER ISSUE

NEWSLETTER

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Results of Crystal Lake Conservancy's 2012 Water Analysis

Janice Bourque, Co-President, Crystal Lake Conservancy

The Crystal Lake Conservancy's continuing activities, carried out by our many dedicated volunteers, include two major efforts:

- Monitoring water visibility and temperature
- Water sampling and laboratory analysis.

The Conservancy held its third Annual Forum in October and presented the results of the water analysis it conducted from May 2012 to October 2012. Those results indicated that the health of Crystal Lake deteriorated over the past year. This article will summarize those results and present some solutions to the problems.

In full contrast to the situation in the summer of 2011, Crystal Lake was under a great deal of stress in 2012 and has entered a eutrophic phase, as indicated by higher-than-average water temperatures, increasingly low visibility, low dissolved oxygen, increased presence of nuisance aquatic plants (coontail appearing abundantly in Cronin's Cove) with higher bacteria, phosphorus and algae levels. Normal lake aging and eutrophication occurs over centuries and results from natural sources of nutrients and sediments. Crystal Lake, however, is undergoing a "cultural eutrophication," whereby this natural process is accelerated by the increased levels of bacteria and nutrients that flow off a more densely developed watershed area.

For the third year, volunteers recorded weekly temperature and visibility readings at three different depths (1 foot, 10 feet and 20-30 feet, which is the bottom of the lake) at six specific sites around Crystal Lake between May 2012 and October 2012. Water temperatures rose rapidly from 40-50 degrees in the spring to 70-80 degrees in the summer and remained fairly high and constant at all depths due to unusually high ambient temperatures during the summer. Water visibility was at 10 feet in late May but rapidly declined to 0-2 feet by the end of July; it then improved to 10 feet at the end of August but had another rapid decline to 0-2 feet visibility during the first

Marcie Scudder is a Newton photographer and writer who observes and captures the many moods of Crystal Lake and the life around it. You may follow her work on her Daily Practice blog at www.Marciescudderphotography.com, where you also may subscribe to a daily photo from her.

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week in September due to two large algae blooms. The State Department of Public Health closed the lake to public swimming when water visibility was less than 4 feet: lifeguards could not easily see swimmers in the water, and algae counts were high, which could expose residents to potential toxins.

Trained volunteers also collected water samples to identify factors affecting the overall health of the lake. Water samples were taken during an actual heavy rainstorm and within several hours of a rainfall or on the next day from six different locations on eight different dates from April 26 until October 4, 2012, and were analyzed by a state-certified lab. The CLC sampling methodology for water quality was consistent with state protocol for swimming water quality. The testing focused on Cronin's Cove, Levingston Cove, Lake Terrace, the center of the lake, the public swimming area and the outflow into Paul's Brook by the railroad tracks. The comprehensive tests included bacterial analysis (E. coli and Enterococcus), herbicides, pesticides and fertilizer components such as nitrate, ammonia, and phosphorus. Beals Associates conducted deep-water temperature, phosphorus and dissolved oxygen testing in August during the algae bloom. (Dissolved oxygen indicates the amount of oxygen in the water to sustain animal life.)

The results of CLC's sampling were as follows:

- Bacterial test results were variable depending on location and date. Five dates revealed bacteria levels well below the Maximum Contaminant Limits (MCL). However, three testing dates showed E.coli and Enterococci levels well above the MCL in Levingston Cove, Cronin's Cove, and Lake Terrace.
- No herbicides or pesticides were detected.
- Nitrate results were low and typically below detection limits
- Phosphorus was detected early in the season in the deep water and at Cronin's Cove. The deep-water detection was of particular concern given the opportunity for normal dilution as the water flows from the outfalls to the center of the Lake. Beals Associates' additional test results also showed increased phosphorus elevations in deep water.
- Average phosphorus levels are 10 parts per billion (ppb). Crystal Lake had phosphorus levels of 50-110 ppb.
- Dissolved oxygen levels began to drop when measured at a depth of 10 feet, with rapid decline to zero oxygen at 25 feet. Animal life would have a difficult time surviving at zero to no oxygen at these lower levels. Oddly, there was no indication of a fish kill during the testing period.

So what have we learned?

1. **Crystal Lake is high in phosphorus.**
   Data on phosphorus levels indicates high levels are present with a rapid increase over last year. High phosphorus is related to algae blooms, and the real source is unknown. We do know from the City of Newton's testing that there are high levels of phosphorus present at street-level prior to entering storm drains. Phosphorus is also distributed differently than bacteria and settles to deeper levels, where it easily can be stirred up again when the lake is disturbed or when it naturally turns over in the spring and fall.
2. **Bacteria are present and high in some areas.**
   Bacteria data has been consistent now for several years, with increased occurrences of higher levels in areas that have less current movement, such as in Cronin's Cove, Levingston Cove, and Lake Terrace. It is unpredictable when higher levels occur, and the direct source is unknown. Testing performed by the City of Newton has revealed that very high levels of bacteria are known to exist in street runoff PRIOR to its entering storm drains. This suggests the issue is in the watershed area, and the main source may not be any material found in the storm drains. Despite some high bacteria levels, there is rapid dilution of the bacteria to low levels as the flush from the streets moves toward the center of the lake.

What can the watershed residents do to help decrease the amount of pollution flowing into Crystal Lake?

- Decrease the amount of nutrients (fertilizer, pesticides, compost) used in our yards that then flow onto adjacent streets and into the lake.
- Reduce the amount of bacterial flow occurring on street level in yards, driveways and streets. Do not dump waste into drains!
- Reduce stormwater and gutter runoff by allowing it to infiltrate into soil; manage waterfowl; and reduce any construction debris.
- Voluntary compliance is very important. If the situation does not improve, concerned residents might decide to explore creating new City regulations as a last resort.

What can the City of Newton do?

1. **Continue to investigate the storm drains and sewer lines and do regular cleaning out.**
   Leakage from sewer systems can cause sludge and detergents to leak into groundwater supplies, increasing phosphorus load. The City has done substantial work to investigate and insure the patency of lines.
2. **Investigate methods of draining street water into natural filtration areas before it runs into storm drains: create sustainable drainage.**
   Redirect storm drains to catch basins, retention basins, and detention tanks that won't drain directly to lake. The City could also explore improved drainage systems—swales, bioswales, and permeable paving.
3. **Explore alternative in-lake restoration techniques**
   The following measures involve more cost and time, can have negative side effects, and can be avoided if resources were put into finding and addressing the real source of pollution.

Through **hypolimnetic aeration**, oxygen could be pumped into the lowest level in the lake and could provide more dissolved oxygen to animal life. **Artificial circulation** (fountains, paddlewheels, air diffusers) such as used in the bathhouse area could provide aeration to expose the lake water to more oxygen and could be added to the various Coves. Through **hypolimnetic withdrawal**, siphons could be used to remove nutrient rich water, which then would be replaced by neutral water.

Dilution methods could flush the lake to reduce algae but would require lots of water. **Nutrient diversion techniques** could utilize expensive engineering to divert drains. **Dredging** could use heavy hydraulic equipment to increase the depth of the lake and could remove sediment; it was used for Bullough's Pond.

Nutrient inactivation could also be performed utilizing aluminum, iron, or calcium salts to inactivate phosphorus. Alum treatment (aluminum sulfate) can last eight or more years but also can have deleterious effects on the living creatures in the lake.

It is incumbent upon all of us to slow the accelerated eutrophication of Crystal Lake in order to keep it healthy for years to come. For more information on Crystal Lake and the work of the Conservancy, visit www.crystallakeconservancy.org.

Editor's Note

For a second issue of the newsletter, the focus of our first two articles is on storm water: the problems it is creating in our watersheds and the ways that residents and city government can help to alleviate those problems, which are expected to worsen as global warming increases.

Crystal Lake Conservancy co-president Janice Bourque presents evidence that the water quality in Crystal Lake is likely to be of greater concern in the future. She also presents suggestions that residents can follow to prevent pollution from their property from entering the storm drains. As you sit in your armchairs over the winter, scheming about what to do in your garden next spring, consider a rain garden. In our next issue, Ed Himlan, Executive Director of the Massachusetts Watershed Coalition, will present surprising statistics about the large amount of pollution that can be removed from stormwater runoff by the installation of simple rain gardens.

Marcie Scudder's beautiful photograph taken at Crystal Lake reminds us of the wildlife that is dependent on healthy water at Crystal Lake and all the city's bodies of water.

Alderman Deborah Crossley and Alderman Ruthanne Fuller give us a basic understanding of Newton's complicated sewer and stormwater system. We'll be waiting to hear more as the plan to update the stormwater system develops.

Beth Wilkinson

City Storm Water Management

Alderman Deb Crossley with Alderman Ruthanne Fuller

What's in a (storm) drain?

Which by any other name ("catch basin") should smell as sweet—as clean rain water. Ideally, it should contain nothing more.

The storm drains in our roads, however, also collect whatever the rains wash off the roads: dirt, leaves, trash, chemicals from car exhaust, pet waste, fertilizers and other garden chemicals. In places where there still are old connections to the sewer system and/or if the pipes are damaged and leaking, the storm drains also may be picking up sewage.

The previous article by Janice Bourque contains suggestions about what you as property owners can do to keep contaminants out of the city storm system. The city's responsibility is to provide and to maintain the public infrastructure in good working order, well functioning and reliable.

It is important to consider the city's stormwater system within the context of the vast underground plumbing system that Newton maintains to serve its citizens. We must provide residents with **clean** water, remove **waste** water (sewage), and drain rain water from properties and streets. These systems are the extensions of the plumbing systems that our homes and businesses require to sustain our lives and work. Beneath Newton's approximately 300 miles of streets, we have an almost equal length each of water, sewer and storm water pipes, as well as associated pump stations, manholes, catch basins, culverts, outflows, etc., that complete the public infrastructure that the city must steward. Much of these systems are now very old, leaking and in need of repair, which usually means cleaning and relining but in some cases requires replacement.

So, how are we doing with our stormwater system?

Keep in mind that it is a huge system. We have 320 miles of stormwater drain pipes, 12,750 catch basins, two pump stations, 155 major outfalls (the places where the drain

Storm Water Management continued from page 3:

pipes end), 200+ interior outfalls, and seven miles of streams that are part of the system.

There are several things to consider, including the condition and capacity of this infrastructure, the ongoing maintenance efforts needed to keep the system clean and in repair (such as cleaning storm drains), and the way that other city infrastructure (sewers) and operations (street cleaning) impact the system.

Beginning in the winter of 2011, Alderman Fuller and I began working closely with the City's executive office and the water, sewer, and stormwater divisions to arrive at a comprehensive understanding of the condition of these systems, and in the spring of 2011 we resolved to prepare a strategic plan, including a financing mechanism, to bring these systems up to a point of "predictable maintenance." We found that the Department of Public Works has maintained excellent data on the condition of the water and sewer systems but that needed repairs and maintenance have been underfunded for many decades. With its data and numerous financial analyses, the City completed a ten-project-area, eleven-year plan for the sewer system, targeting the oldest and leakiest parts of the system first, and a longer-term plan for the water system, the first three years of which will correct for water pressure needed to serve fire-fighting requirements. There is an excellent PowerPoint presentation detailing the plan on the city website: www.newtonma.gov/civicax/filebank/documents/40846. This plan is approved, funded, and on schedule.

Although our storm drainage system is as old as our streets, the city does not have the same quality of information on this system as yet. We must complete the comprehensive evaluation. More on that in a moment.

Work on the sewer system is relevant and important to a well functioning storm water system. The network of pipes and culverts that carry theoretically clean storm water from our streets eventually drains into the Charles and a few other isolated bodies of water, such as our treasured Crystal Lake. We do not want contaminants entering this system. However, one of the largest contributors of contaminants is due to some of the oldest sewer systems in the city, where "underdrains" were used in areas of high ground water to lower the water table and to allow for sewer lines to be installed above them in dry ground.

In those days it was thought that the underdrains should also be used to flush out the sewers periodically, so they were deliberately connected back up to the sewers.

This both puts clean rain water into our sewer system (which we pay to send to Deer Island for treatment) and also delivers sewage to the underdrain, which really is part of the storm water system.

Newton has about 70 miles of underdrains beneath sewer mains. They exist in generally older areas of the city. Underdrains will be disconnected from the sewer mains as we update the sewer system.

That's a lot of information before we even get to a storm water plan!

As mentioned earlier, we need first to fund and then to undertake a comprehensive assessment of the storm water system and its component parts before we can develop a plan to prioritize repairs to the system.

By several recent estimates, this assessment, which involves underground camera work—sort of like arthroscopic surgery, will cost approximately $350,000. The City is discussing ways to fund this need. There is a storm water reserve fund that accrues from the small fee property owners pay into that fund. Newton was one of the first Massachusetts communities to recognize the need for, and to establish, such a fund, but to date it has proven insufficient to cover even the yearly maintenance of the system. Currently, homeowners pay $6.25 quarterly into that fund, and businesses pay $150 per year, regardless of the size of the property and its amount of impervious surface. In other words, a large shopping mall with a huge parking lot that creates a lot rainwater runoff pays the same $150 fee as a small retail store with no parking lot.

A little more work is needed, but the Aldermen should be able to vote next spring on a plan to restructure these fees to make them fairer. We expect to keep residential fees constant but to assess larger commercial property owners according to their impervious area. Taking this step to adjust commercial fees would add to the reserve sufficiently to fund the assessment. However we fund the assessment, we need to do it as soon as possible in order to avoid costly repairs on emergency basis only so that we are managing risk, rather than being subject to it.

One last point to keep in mind: there are new EPA stormwater regulations that require more stringent pollution prevention requirements. The City will need to make additional investments in coming years for this as well.

Newton's underground infrastructure working group continues to meet regularly to review progress on all elements of the strategic plan. Members of the working group include Fred Russell, Director of Water/Sewer; COO Bob Rooney; Commissioner of Public Works Dave Turocy; City Engineer Lou Taverna; Utilities Superintendent Ted Jerdee; and consulting engineers Weston & Sampson. As needed, the group has been joined by CFO Maureen Lemieux, Comptroller Dave Wilkinson, and former Water & Sewer Accounts Manager Ryan Ferraro.

We should have more interesting information to share in the coming months and would love to keep you posted.

President's Message, Winter 2012-13

Photo: Neil Phillips

As I look out my window, I see a juvenile great cormorant sitting on my neighbor's dock. Its big body, upright stance and bright white belly make it look a bit penguin-like. The problem is the great cormorant, while not as out of place as a penguin would be, shouldn't be where it is on the Charles River in Newton: it should be near the ocean. While this sighting is simply rare, other current bird sightings in Massachusetts in the wake of Hurricane Sandy—many brown pelicans, northern lapwings, white pelicans—are considered "cuckoo," in the words of Massachusetts Audubon's Joan Walsh, the Director of Bird Monitoring. Those birds are far, far away from where they should be.

"Cuckoo" seems about the right word for the bird sightings, and taken with the incredible devastation of that storm, it seems clearer and clearer that the natural world has entered an unpredictable phase, which many fear is permanent. How much of it directly relates to climate change is impossible to quantify, but we know that the rise in sea levels and temperature has a major impact on how powerful storms are and the devastation that results.

Protecting land is more important than ever because of this. Protected areas are needed to absorb flooding and to provide vegetated areas to mitigate the impact of carbon emissions. Our mission is more compelling than ever.

I wish you all a wonderful Holiday season and New Year.

Jane Sender, President

The Wilson Conservation Restriction—Finally after all these Years

As many of you know, longtime Newton Conservators Richard and Andrée Wilson own a beautiful two-acre parcel of property on Bracebridge Road in Newton Centre. Together with a smaller parcel donated to the City years ago, the area has both beautiful gardens and woodlands and provides wonderful habitat to a wide diversity of wildlife.

A very long and winding road led to the recording of a conservation restriction on this property at the end of September. Richard and Andrée worked extremely hard for nearly two years, in spite of significant personal health issues, to see this through. Why, you ask? Andrée's extensive garden and surrounding area, especially in the spring, simply takes your breath away. And then there were those nesting Merlins—where would they go if another house or two were built on the property? It is easy to understand their wish to leave behind, somewhat intact, a lifetime of work and pleasure in their natural environment.

Under the terms of the agreement, except for the approximately .4 acres on which the current house sits, the property is protected from any future development. Further, a permanent public right of access is established through the property along its southeastern boundary. The public has walked through the property for years, but now an official path has been established. The property remains in private hands, subject to the restriction. It can be sold, but the Conservators, as grantee, must make sure, in perpetuity, that anyone who buys the property adheres to the terms of the restriction: no building outside of the footprint of the house, preservation of the conserved area to maintain conservation values, and preserved public access along the path.

Why did this take so long? Permanent conservation restrictions must be approved by the Conservation Commission, the Board of Aldermen, the Mayor, and the Massachusetts Office of Environmental Affairs. A public benefit must be found. In addition, the IRS must be satisfied that its public benefit criteria are in place for the charitable deduction to be allowed.

Some might wonder how we decide what property we would consider for a conservation restriction. Our criteria, as well as other useful information about conservation restrictions and donating land, can be found on our website at www.newtonconservators.org/landprotection.htm.

Our criteria are that the land:

- is natural or scenic, is joined to conservation land, or benefits the neighborhood with its natural properties;
- has been identified by a governmental body as worthy of protection or is subject to environmental regulation;
- has significant natural habitat, is a corridor between such habitats, or supports rare or endangered species;
- contains vegetation that helps to ensure the quality of a water resource.

Again, we thank the Wilsons for this generous effort and wish them many more happy years on the property.

Jane Sender

Rare Northern Visitors—and Old Friends, Too

Due to a poor cone crop in far northern Canada this year, we in Massachusetts are being treated to an influx of unusual birds from the far northern boreal forests. There have been **Pine Siskins** around Newton, some at the bird feeders at my house. The plumage of Pine Siskins resembles the winter plumage of Goldfinches, but the siskins are streaked below and have smaller pointed beaks. They also make a high, rising "zzzzeeeeep" vocalization, which Goldfinches don't make.

Rare Northern Visitors continued from page 5:

Red Crossbill — *Phil Brown: http://nebirdsplus.com*

Female White-winged Crossbill — *George McClean Photography*

White-winged Crossbills — *Pete Gilmore*

There are both **White-winged and Red Crossbills** around Massachusetts this fall. Recently, a White-winged Crossbill was perched in a white pine tree across the street from my house. Crossbills have uniquely crossed beaks that allow them to pry into pine cones and extract the seeds buried in the cones.

Another beautiful little finch that is putting in an appearance here is the **Common Redpoll**. These little finches look like small sparrows until you see their brilliant red foreheads and the lovely pink wash on their breasts. They like to eat the cylindrical buds in birch trees known as catkins. There are stands of birch along Crystal Lake and along the soccer field in Nahanton Park where one can look for these rarities. They've recently also been in birches along the Charles River.

Yet another northern visitor that is being seen around us is the large, yellow **Evening Grosbeak**. These birds have large beaks, a big white patch on their wings and resemble huge goldfinches. They come to feeders that are supplying the larger sunflower seeds, often on a tray of some sort.

There are a few other winter, ground-feeding finches down from the north country. Beautiful **Snow Buntings** and more sedately plumaged **Lapland Longspurs** can be seen mixed in with the **Horned Larks** that nest along our shorelines in the summer. The Horned Larks have two little "devil's horns," which are feathers, on the top of their heads. They have striking yellow and black markings on their faces.

Common Redpolls — *Pete Gilmore*

Snow Bunting — *Pete Gilmore*

On a more ordinary note, the Newton Conservators sponsored a bird walk in Cold Spring Park on October 20. There was thunder, lightning and heavy rain from 3 to 4 AM that morning, but by 8 o'clock, it was 64 degrees, calm and overcast as a small intrepid group gathered in the Beacon Street parking lot for the walk. As we stood by our cars, we were treated to a close look at a **Blackpoll Warbler** on the ground near us in the leaf litter. These warblers have a very different look in the fall from their bright, black and white, chickadee-like plumage in the spring. In the fall they are drab with faint breast streaks and some yellow wash to their face and breast. They are not singing now.

We walked straight into the park from the cars. A pair of **Purple Finches** were close to us, low in the brush across the first wooden bridge, and a third, singing male serenaded us from overhead. Male Purple Finches have vivid raspberry heads and breasts that always catch your eye. The temperature of 64 degrees had many birds singing. Among the singers were **American Robins, Carolina Wrens, House Finches**, a **Red-winged Blackbird, Song Sparrows** and a few **White-throated Sparrows**.

We circled around to Beaconwood Road, detouring to walk along the side of the southern, more secluded wetland near that road. Here we watched a pair of beautiful **Wood Ducks** and a dozen or so **Mallards**. The ducks are now getting into colorful breeding plumages and will court and mate during the winter so that their eggs can be ready in the spring. They are ahead of most other birds in this respect. An **Eastern Phoebe** sang briefly across the water. A **Red-bellied Woodpecker** showed off his red head and black and white ladderback plumage on a dead snag in the water, very close to us. He remains in this park through the winter and carves out a few nest holes. He roosts in one, and the female, who goes south for the winter, arrives to choose the best hole for their nest in the spring. A few **Red-winged Blackbirds** and

Eurasian Green-winged Teal & American Green-winged Teal ↠ *Christopher Ciccone: www.cicconephoto.com/gallery/recent-work*

Common Grackles were in the trees. The sun came out in the afternoon, and the temperature rose to 70 degrees.

On November 14, there were 7 or so **American Green-winged Teal** and a few Mallards in the small ponds at Newton City Hall. More unusual was the presence of a **Eurasian Green-winged Teal** with the others. There are four differences between the American and the Eurasian Teals:

1. There is a vertical white mark on the shoulder of the American ducks while the Eurasian variety has no such mark.
2. There is a horizontal white stripe along the side of the Eurasian duck, just below the folded wing, whereas the American duck has no such mark.
3. At the tail end of both ducks, you see a triangular white patch and a vertical black bar in front of that patch. The Eurasian duck has a vertical buffy bar in front of the black bar, but the American duck does not have.
4. The facial markings in the Eurasian Teal have stronger beige curves between the green and rusty areas of the head.

These field marks are not always easy to remember, let alone see. But they distinguish the ducks in the Newton City Hall ponds. (The Eurasian Teal is called the Common Teal in Europe.)

You owe it to yourself to go out into Newton's open spaces to experience these and other beautiful sights and sounds. Dress warmly, and take the time to allow the peace of the world to awaken you to the peace inside yourself.

↠ *Pete Gilmore*

Chris Hepburn, Duane Hillis and Suzette Barbier. ↠ *Suzette Barbier*

Help for the Woodcocks at Nahanton Park

We couldn't have had better weather for a cleanup at Woodcock Meadow on Saturday, November 10th. It was sunny and mild, and we had a great turnout. This event was sponsored jointly by the Friends of Nahanton Park and the Newton Conservators.

Our goal this fall was to implement some of the recent Audubon Report recommendations proposed by Jeff Collins. He recommended thinning the area known as Woodcock Meadow so that woody plants do not take over. We also had another very important reason to keep the meadow as clear as possible—our woodcocks!

In recent years, we have been extremely fortunate at Nahanton Park to have several woodcocks that arrive early in spring. People come from Newton and other towns to witness the excitement. Around dusk, the males first make a repeated "peent" sound to attract the females. Then they perform their dazzling aerial mating display, flying up to 300 feet high into the air. The movement of their outer primary wings creates a twittering sound, and then as they descend, they begin a series of chirps before they reach the ground. Woodcocks prefer open areas for their performance, and we do not want to lose this specialized habitat to forest succession, which already has begun. We want to be proactive in maintaining an environment in which the woodcocks can thrive. As we all know, open areas like this are disappearing at an alarming rate.

Our generous and hardworking volunteers came armed with loppers and tree saws and performed such an incredible amount of work that we filled our dumpster and an overflow pile in one day. We concentrated on buckthorn, cedars and unproductive, weedy crabapples. In Newton, there is an ordinance that if a tree is 8" or more in diameter and on City property, only the City can take it down. We have provided an aerial map to Newton Parks and Recreation, denoting some of the larger pines and cedars that we hope will be removed so that we can keep the meadow open. We haven't

Help for the Woodcocks continued from page 7:

received approval yet, but we certainly hope it is in the works.

As this will be an ongoing project, we have learned from this experience, and we hope to rent a chipper next year to improve our efficiency.

In addition to thanking all our volunteers, we also want to thank Bob DeRubeis, Newton Parks and Recreation Commmissioner, and Carol Schein, Open Space Coordinator, for making this possible and for sponsoring our dumpster. Judy Dore, who oversees many activities at the park from the Nature Center and camps to the Community Gardens dropped by to see how all was going (as did Carol). Thanks to Jane Sender, President of the Newton Conservators, for her active role in this project, and thanks to Duane Hillis, President of the Friends of Nahanton Park, for his pickup truck that transported all the brush to the dumpster. We are very appreciative.

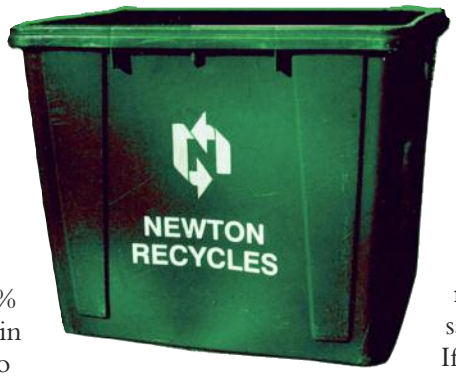
Suzette Barbier

Single Stream Recycling Update

Newton Recycles

Newton was the first city in Massachusetts to start newspaper recycling in 1971, and residents have been recycling curbside now for 40 years. In October 2009, the city moved to automated collections and single-stream recycling citywide. Since the switch, we've seen about a 20% reduction in trash tonnages and approximately a 7% increase in curbside recycling rates. Currently, our curbside recycling rate is about 35% of the households in the city. Before the switch, it never went above 30% and averaged 27% from 2003 to 2009

Courtney Forrester, the Recycling Manager for the City of Newton, reports that residents produce about 20,000 plus tons of trash per year, a reduction from years past when residents produced an average of 29,000 tons per year, with a high of 32,500 in fiscal year 2004. She notes that, "considering that our population is still increasing (with the City having delivered over 100 new sets of carts in the past year to homes that didn't exist or weren't occupied when the program began), the trash tonnage is holding relatively steady, which is pretty impressive".



The total recycling rate—including all curbside recycling, recyclables collected at the Rumsford Avenue Depot, and composted yard waste—has been above 50% for the last three years. The rates were 53% in 2010 and 54% in 2011. Before the switch to single stream collection, the rate averaged 45%.

Newton provides multiple options for reducing and recycling. In addition to weekly curbside collection and 39 weeks of yard waste collection, residents can visit the Depot six days per week to recycle a variety of products such as electronics, Styrofoam, and batteries. A Household Hazardous Waste drop-off facility operates 20 days per year. (Upcoming dates are Saturdays, September 15 and October 20, from 7:30 am to 12:30 pm and Wednesday October 17th, from 7:30 am to 12:30 pm.) In addition, the City maintains an online "Recyclopedia" to identify additional reuse and recycling options for household items. Here is the link for more information: www.newtonma.gov/gov/dpw/recycling/curbside/recyclopedia.asp

Households can have additional recycling carts at no extra charge. Please call Environmental Affairs at 617-796-1471 to request an additional cart (35 gallon or 64 gallon capacity). Additional recycling cart requests are accepted from May through November. The recycling carts are for residential use only. Alternatively, you can bring extra recyclables to the Rumford Recycling Depot.

For more information on recycling go to the City website: www.ci.newton.ma.us/search/default.asp?q=recycling

Recycling is more important than ever. It conserves resources, saves energy, decreases greenhouse gas emissions, and saves money by reducing the need for landfills and incineration. Recycling one aluminum can saves enough energy to run a TV for three hours—or the equivalent of a half a gallon of gasoline. A 60-watt light bulb can be run for over a day on the amount of energy saved by recycling one pound of steel. In one year in the United States, the recycling of steel saves enough energy to heat and light 18,000,000 homes. Recycling plastic saves twice as much energy as burning it in an incinerator. Each ton of recycled paper can save 17 trees, 380 gallons of oil, three cubic yards of landfill space, 4000 kilowatts of energy, and 7000 gallons of water. This represents a 64% energy savings, a 58% water savings, and 60 pounds less of air pollution. If all our newspaper were recycled, we could save about 250,000,000 trees each year![1]

However, we need to do still more. The recent failure to expand the bottle bill in Massachusetts to include non-carbonated beverages like water, sports drinks and juices burdens communities with the need to handle all recycling. We are a "throw away" culture. Americans use approximately 2,500,000 plastic bottles every hour; most of them are thrown away, and we throw away 25,000,000 Styrofoam coffee cups every year. We use over 80,000,000,000 aluminum soda cans every year. Plastic bags and other plastic trash in the ocean wreak havoc on marine life and kill an estimated one million sea creatures every year.

Remember the three "R's"—Reduce; reuse; recycle.

Alison Leary

1 www.recycling-revolution.com/recycling-facts.html

New In-House Tree Crew

Tree crew at work after Hurricane Sandy. *Julia Malakie*

At long last, Newton has a tree crew again—and has it ever been busy! After having disbanded and outsourced the Forestry department in 1990, the City recognized that it can be more effective to have an in-house crew to plant, prune, and respond to tree emergencies all year round.

Three employees were approved in this year's budget; two started in October; and the search for the third is ongoing. All are experienced tree workers. They join Marc Welch and his assistant Butch DeSimone in making up the City's Forestry department.

The crew, Jordan Jason and Eric Bucaria, were very busy during and after Hurricane Sandy, in which the city lost 150 street trees and had downed limbs in over 900 locations. Their efforts were supplemented by outside contractors, who have mostly moved on to the New York and New Jersey area, but the in-house clean up effort continues.

After the Sandy cleanup, the crew will resume its focus on removals of unsafe trees; stumps are being left for the moment but will be ground down starting in spring of 2013.

Jordan and Eric were also instrumental in the most recent Community Tree Planting of Newton Tree Conservancy (NTC) on November 17. Fifty more trees were planted on McCarthy Road in Oak Hill Park, West Street in Nonanutm, Vineyard Road in Newton Centre, and Daniel/Jackson Streets in Thompsonville. Over the past three years, NTC in collaboration with Marc Welch and the City now has planted 200 trees in 20 neighborhoods throughout Newton. It was a great help to the homeowners and volunteers who were planting and digging to have the able and eager assistance of Jason and Eric.

The crew drives white and black bucket and log trucks that were bought used and reside at the Eliot Street DPW lot. Please watch out for the new tree crew, and welcome the new employees to Newton!

Katherine Howard

In Memory of: Frances Seasholes—Newton Conservators' Advisor

Frances (Cressey) Seasholes, decades-long participant in Newton community organizations, mother of four, and widow of Tufts Professor Bradbury Seasholes, died on November 13, 2012, at age 79. During her 56 years in Newton she was actively involved with The League of Women Voters, the Newton PTAs of Bowen, Weeks and Newton South High School, The Arlington Street Church (UUA), The Second Church in Newton (UCC), Newton Dialogues on Peace and War, The Newton Conservators, The Newton Green Decade, Newton Community Development Foundation, The Newton Centre Task Force and the Newton/San Juan del Sur (Nicaragua) Sister City Project. Fran was raised in Syracuse, NY, educated at Oberlin College, the American University of Beirut (Lebanon) and the University of North Carolina. As a Child Welfare Social Worker she was employed by the Orange County (NC) Welfare Department, The New England Home for Little Wanderers, The Gaebler Children's Hospital, and Protestant Social Service Bureau (now ISS in Quincy). In recent years Fran and her husband traveled widely and provided homestays for about 225 foreign students here to study English. She is survived by their four partnered children and two grandchildren: Laura Seasholes, Brian Booth and Andrew Barton of Seattle, Catherine Seasholes and April Calvert of Mequon, WI, Edward and Bereniz Seasholes of Framingham, Kenneth Seasholes, Andrea Chiasson and Hope Seasholes of Tucson, AZ. Her sisters are Marjorie Bowler of Newtown, PA and Eleanor Webster of Montpelier, VT. Messages to the family may be sent to BradFran3@yahoo.com and memorial donations may be made to one's charity of choice.

Published in The Newton Tab from November 17 to November 24, 2012

Save the Date!

Conservators Annual Meeting—on May 1, 2013

As the snow flies this winter, keep yourself warm with thoughts of flowering plants (and their evolution). Then, as spring is settling in, come to hear about them at the Conservators Annual Meeting—on May 1.

Photo: Dan Brody

Our Guest Speaker will be Ned Friedman, Director of the Arnold Arboretum.

In January 2011, Dr. William (Ned) Friedman became the director of the Arnold Arboretum, the oldest public arboretum in North America. He also is the Arnold Professor of Organismic and Evolutionary Biology in the Faculty of Arts and Sciences at Harvard University. He conducted his doctoral work at the University of California, Berkeley, where he did research on the reproductive structures of plants and on the rise of flowering plants. He and his research associates recently discovered a reproductive structure in an ancient flowering plant that may represent a critical link between flowering plants and their ancestors. Dr. Friedman also has long been interested in the history of biology, particularly the history of evolutionism.

Look for more details in the next issue of the newsletter…

Time to Renew Your Membership— and to consider reading this newsletter online!

Recently, renewal notices were sent to all current members.

You can renew your membership on our website (www.Newtonconservators.org).
You also can use the Membership Options to "Update Profile" in addition to "Join" and "Renew."
Update Profile lets you update your e-mail address, mailing address, and email preferences. In addition, you can choose to read your quarterly newsletter online.

MISSION
Newton Conservators, Inc.

The Newton Conservators promotes the protection and preservation of natural areas, including parks, playgrounds, forests and streams, which are open or may be converted to open space for the enjoyment and benefit of the people of Newton. It further aims to disseminate information about these and other environmental matters.

A primary goal is to foster the acquisition of land, buildings and other facilities to be used for the encouragement of scientific, educational, recreational, literary and other public pursuits that will promote good citizenship and the general welfare of the people of our community.

The Newton Conservators was formed as a not-for-profit organization 51 years ago in June 1961.

The Newton Conservators Newsletter© is published four times each year by the Newton Conservators, Inc., in June, September, December, and March. Deadlines for these issues are the first Friday of each month in which an issue is scheduled to be published.

We welcome material related to our mission from any source. Send proposed articles or letters by email in MS Word or rich text format to bethwilkinson@mac.com. Digitized photographs, maps and diagrams are also welcome.

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If you haven't renewed your membership already, now is the time. And consider a gift for a conservation-minded friend.

NEWTON CONSERVATORS

NEWTON CONSERVATORS
PO BOX 590011
NEWTON CENTRE
MA 02459

2013 MEMBERSHIP RENEWAL

YES! Please renew my tax-deductible membership at the level checked below:

- ☐ $100 Patron
- ☐ $75 Donor
- ☐ $50 Sustaining Member
- ☐ $35 Family Member
- ☐ $25 Individual Member
- ☐ Additional contribution ___

NAME _____

ADDRESS_____ ZIP _____

EMAIL _____

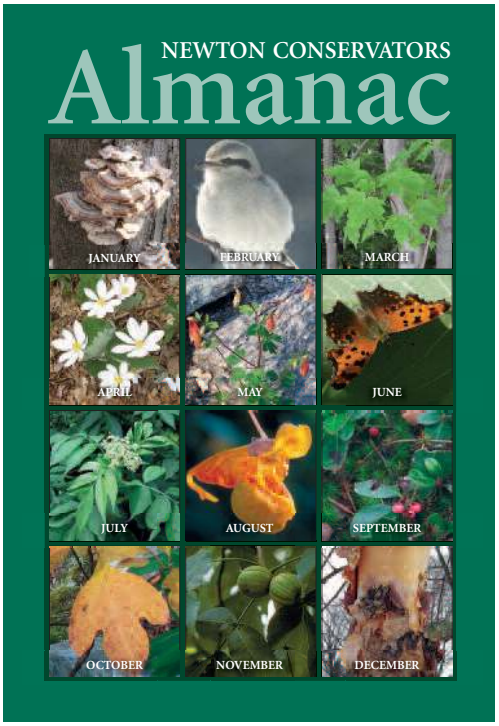
Please make checks payable to Newton Conservators, Inc.

Visit our website at www.newtonconservators.org if you wish to renew your membership online.

Season's Greetings!

Photo by Pete Gilmore

Wonderful holiday gift ideas!



Shop online at www.newtonconservators.org/books.htm to purchase Newton Conservators publications. Discounts for members: Almanac is $15.95 + shipping, and the Trail Guide is $6.95 + shipping. Buy today in time for holiday giving!

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NEWTON CONSERVATORS

WINTER ISSUE

NEWSLETTER

Newton's land trust working to preserve open space since 1961

WWW.NEWTONCONSERVATORS.ORG • WINTER 2013

IN THE WINTER ISSUE:

Go Green!
…and all the other colors of the rainbow.
You can view this newsletter at www.newtonconservators.org/newsletter.htm
To elect not to receive a paper copy of the newsletter, update your membership profile at www.newtonconservators.org

Enjoy your parks this winter!

Photo by Dan Brody