Belmont Citizens Forum

Cambridge Redirects Runoff from 400 Acres

Cambridge Sewer Separation Makes Alewife Brook Cleaner

By Anne-Marie Lambert

On December 21, 2015, Cambridge celebrated a major milestone of the Alewife Sewer Separation project, a massive public works that separates sanitary sewers from storm sewers. When these two types of sewers are connected, heavy storms drive raw sewage into local waterways such as the Alewife Brook—as has been happening at the Brook for decades.

As of December 21, the city will now provide water quality treatment of stormwater runoff from more than 400 acres of the urbanized Huron Avenue and Fresh Pond neighborhoods by directing it to the 3.4-acre constructed wetland at Alewife before it enters Little River. The work was completed by removing a weir wall in an underground drainage vault at the Fresh Pond rotary after upstream sewers were separated.

This completed work will result in an 85% reduction of the annual combined sewage overflow (CSO) volume to Alewife Brook. In the past, many storms caused combined sewage and stormwater to flow directly into Alewife Brook at the CAM004/401A outfall. Now, during major storms, the only combined storm overflow water routed to Alewife Brook will come from the CAM401A part of the system (by Rindge Avenue). All other storm flows from the CAM004 area discharging into Alewife Brook have been separated from sanitary sewers. By design, during dry weather, some groundwater and remaining infiltration water leaking into the pipes from the ground will continue to flow and emerge at the CAM004/401A outfall.

The CAM004/401A outfall is located just behind the graffiti-decorated MBTA rotary parking garage by the Alewife bike path. It has

ANNE-MARIE LAMBERT

The CAM004 combined sewer overflow (CSO).

represented the tiny beginning of Alewife Brook ever since a portion of Alewife Brook that once reached Fresh Pond was buried in a conduit in the 1940s. The 72-inch Alewife Brook Conduit was installed under Wheeler Street to reduce the stench of what used to be a ditch running between Little River and the rotary.

This wasn't the first time Cambridge took action to address pollution concerns in this area. In 1873, the city built a small dam by today's Fresh Pond rotary to protect the city's water supply from 19th-century pollution coming from the increasingly stagnant "Great Marsh."

This pollution included combined sewage as well as direct waste from area tanneries, slaughterhouses, and roadside horse manure. At that time, Wheeler Street represented the boundary between Belmont and Cambridge.

The 1875 construction of tide gates on the Alewife Brook at Broadway Avenue in Somerville further restricted flow—and fishing—in this very flat area. With increasing concern about their public water supply, in 1880, Cambridge successfully petitioned to re-annex a portion of the new town of Belmont between Fresh Pond and Little River. Cambridge also experimented for 10 years with building a conduit to carry fresh water from Little Pond to Fresh Pond. Due to the poor water quality of this source, this practice was terminated. Fresh Pond was subsequently supplied with water drawn from Stony Brook and Hobbs Brook reservoirs.

It has taken 135 years to recognize and clean up pollution flowing from Cambridge and Somerville's CSOs and other downstream sources into Alewife Brook, on to the Mystic River and, eventually, into Boston Harbor. A 1991 court order, later amended in 2001, mandated that three major projects be completed by December 2015 within the CAM004 area to eliminate the incidence of CSOs into Alewife Brook:

1. Combined sewer separation and new storm and sanitary trunk sewers along Fresh Pond Parkway (contract 2 A/B)

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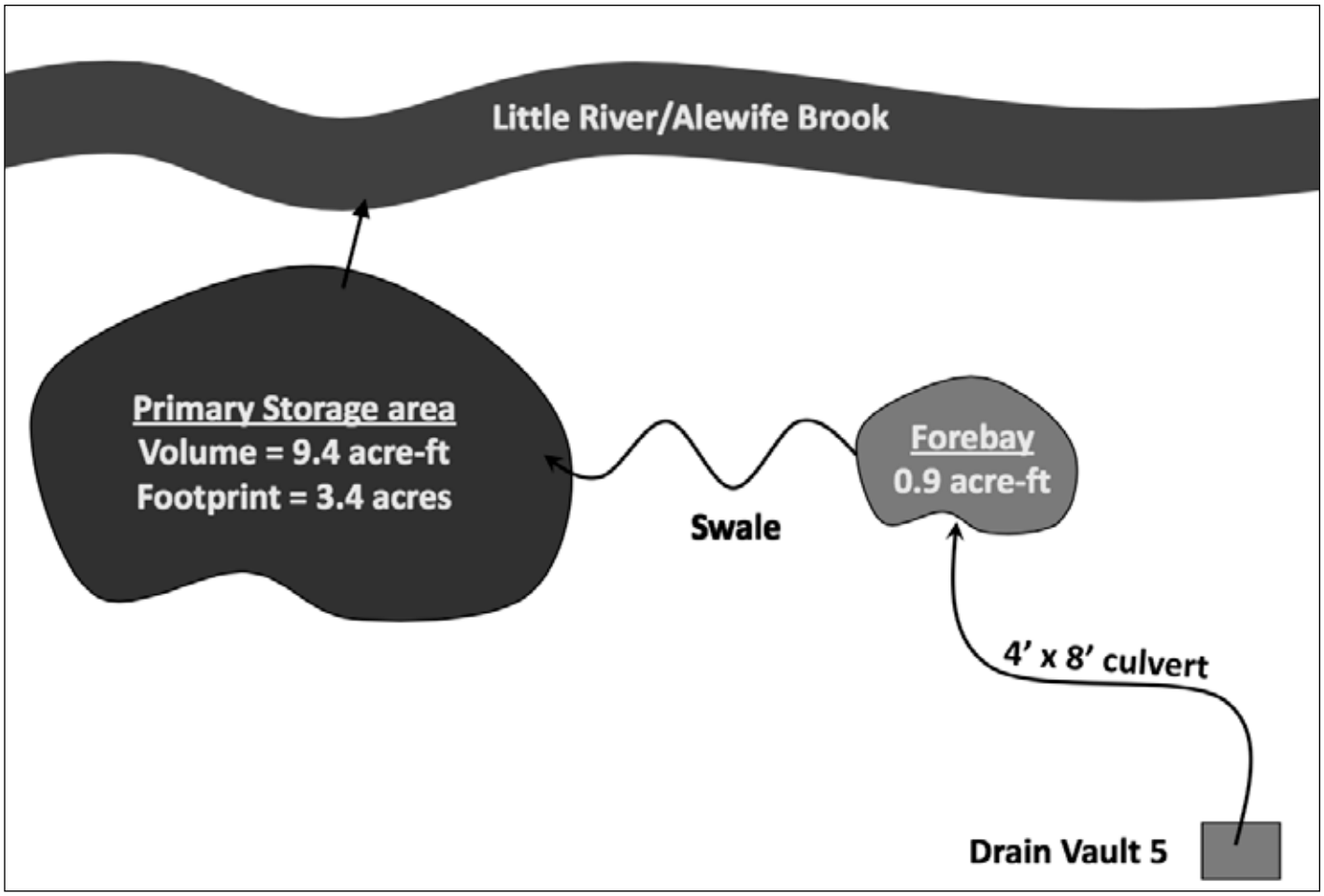
A CAM004 warning sign.



BILL PISANO

A flow map of the Alewife Stormwater Wetland. For more details on the wetland construction, see "Constructed Wetland Opens At Alewife," BCF ***Newsletter,*** November/December 2013.

2. Combined sewer separation in CAM004 area near Huron Ave (contracts 8 and 9)
3. Stormwater wetland and conveyance pipeline (contract 12)

The amended court order also required numerous smaller downstream projects to reduce CSO discharges to practical limits within Cambridge and Somerville. These downstream projects have all been completed.

A Quarter-Century of Work

In September 2014, the Belmont Stormwater Working Group enjoyed a fascinating talk by Bill Pisano about the 25 years of adaptive planning and sustainable engineering required to address the court order. Now semi-retired, Pisano is a senior advisor at MWH, the engineering firm responsible for planning and designing much of the work for the city of Cambridge. He demonstrated how small "first flush" storm flows would be deflected to the new wetlands pond in Alewife Reservation for initial treatment by a special German bending weir that's underground. He recounted the challenge of discovering that the underground MWRA sewer interceptors from Belmont were lower than advertised, requiring redesign of a new 4-by 8-foot stormwater culvert system which brought stormwater from the CAM004 area into the new wetland pond.

Pisano also explained how a 1997 project to reconstruct pipes under Fresh Pond Parkway from Huron Avenue to the Concord Rotary and along Wheeler Street included a clever adaptation of a tank-cleaning technology. A daily "flush wave" is created by routing the filtrate waste from the nearby Cambridge water treatment plant into a special chamber which, when filled, rapidly opens, creates a cleansing "flush wave." This technology addressed the vulnerability of these pipes to clogging from "FOG" (fats + oil + grease) from local restaurants, which had previously filled almost half the sewer conduits under Fresh Pond Parkway. New public health regulations for restaurants now further reduce troublesome FOG in sewer pipes.

Today the 4-by 8-foot underground culvert conveys stormwater from a drainage vault

ANNE-MARIE LAMBERT

The CAM004 combined sewer overflow.

under Concord Rotary, under Wheeler Street and west along Fawcett Street, and then under the tracks, ending at the wetlands just north of Cambridgepark Drive near the bike path. There, stormwater is routed through a forebay to capture sediment pollution, and then into a bioswale, which filters certain pollutants through carefully selected vegetation. The award-winning constructed wetlands opened as a park in October 2013 and started accepting stormwater from other Cambridge neighborhoods downstream of the CAM004 area soon afterwards. In addition to treating pollution, it serves as a popular park for residents of the many recent Alewife area developments.

Separating the stormwater infrastructure from the sewer system in the Huron Avenue neighborhood took years of incremental construction projects, some on the drainage system of individual homes. It disrupted traffic. Bill Pisano explained that, in addition to separating the underground infrastructure, it was shown to be economical for the city of Cambridge to fund "private property inflow (PPI) control" measures to find and reroute roof drains and sump pumps so they went into the stormwater system instead of the separated sewer system. This PPI plan required careful building inspections of more than 1,000 homes. The plan eliminated potential wet weather sanitary sewer overflows (SSOs) for extreme storm events.

It should be noted that the constructed wetlands where the newly separated stormwater is treated have been designed and sized for the purpose of treating pollution and as a flood control measure for storms up to a 10-year frequency. For more intense storms, a separate project at the MWR003 outfall helps "mitigate the potential for flooding in tributary community sewer systems by providing extreme storm system relief in conjunction with … the planned closing of nearby outfall CAM004," according to the MWRA's December 15, 2015, Quarterly Compliance and Progress Report to the Massachusetts District Court. The MWR003 project was substantially completed in October 2015, with the installation of an automated gate, an underflow baffle for floatables control, and a 48-inch siphon interconnection at Rindge Avenue. The automated weir gate and upgraded siphon interconnection enhance the sharing of flow between the parallel Alewife Brook Sewer and Alewife Brook Conduit.

Bill Pisano identified some key takeaways that could be utilized in other locations that are facing similar challenges to those overcome during the improvement of the CAM004 drainage area.

By adopting a more holistic approach to the design of infrastructure projects, sustainable engineering in the future will be able to take place more naturally and allow projects to reach their full potential in improving communities. This has been the direction of Cambridge's efforts over the last 20 years. The CAM004 separation program—including the Alewife Stormwater Wetland—is the culmination of these efforts, and has quickly become a "gem" as it encompasses all aspects of this methodology.

Anne-Marie Lambert is a Director of the Belmont Citizens Forum.

Belmont Driveways Can Soak Up Stormwater

By Anne-Marie Lambert

Most Belmont driveways are impervious surfaces, and they make local flooding and water pollution worse—but that doesn't have to be the case. When a driveway is made of asphalt or concrete, rainfall flows quickly to catch basins, erodes soil along the way, and increases pollution and flooding risks in downstream neighborhoods. Water that soaks into the soil doesn't have any of these effects. More and more homeowners are taking advantage of today's porous paver technologies in order to allow the soil to soak up rain before it reaches our catch basins and waterways. Plus, the pavers can look great.

In the article "Homeowners Can Reduce Yard Runoff," (BCF *Newsletter*, September/ October 2014), Anne and Fred Paulsen described their plans for replacing their cracked concrete driveway on School Street with porous pavers and turf pavers. As part of their project, the Paulsens also added a drainage grate in front of their barn. The grate directs stormwater flowing off the roof over to the lawn on the side of the barn. The Paulsens also installed a dry well at the back of their house to collect runoff from the drainpipes connected to the gutters on the roof.

In the downstream Winn Brook neighborhood, Allison Lenk and Sebastian Kossak were inspired by BCF *Newsletter* articles to research options for resurfacing the 30-foot gravel driveway to their three-car garage. Like the Paulsens, they made a decision this fall to install pavers placed far enough apart that water can drip down between them into an underground containment area. They chose Premier Pavers and Hardscape Co. of Lincoln, Mass., to do the work.

> The historic approach to stormwater runoff was "pave it, pipe it, and pump it away."

At this Winn Brook site, 16 inches of underground drainage space was excavated and filled with 13 inches of permeable stone base under 3-inch pavers because the clay soil was not porous; without the permeable base, water would have pooled and run off the site. The project took about five days to install and was completed in December. It cost about twice as much as an

ANNE-MARIE LAMBERT

The Lenk/Kossak completed permeable driveway.

asphalt surface. Guidelines from the Interlocking Concrete Pavement Institute (www.icpi.org) were followed to ensure minimal maintenance requirements. Lenk recommends getting several different estimates from companies with experience installing pervious pavers, and seeking out testimonials and recommendations from prior customers. She reports, "Seb and I are so glad that the driveway is completed—it looks great!"

For a historical perspective on impervious driveways, consider that the first tar road in Belmont was Pleasant Street, proudly laid with a steamroller in 1907. According to Richard Betts's book, *The Streets of Belmont and How they were Named*, over the next 100 years, the total number of miles represented by the streets of Belmont more than doubled, from under 40 miles to more than 80 miles. Each mile of street now includes dozens of driveways. As the automobile gained in popularity, farms and meadows were replaced by today's suburban housing developments, and asphalt driveways became standard.

The historic approach to stormwater runoff became "pave it, pipe it, and pump it away." Today we know a lot more about the unintended consequences of this approach. Slowly but surely, paving driveways has:

- Killed the biological life in the soil beneath our driveways
- Increased hydrocarbons and other car-related pollution in our waterways
- Eroded nearby soil as runoff rushes from paved surfaces to catch basins
- Increased sediment in waterways

In this way, paved driveways have contributed to rivers, streams, and ponds becoming shallower from the bottom up, resulting in increased temperatures in waterways, affecting fish and other species, and reduced capacity to absorb heavy rainfalls in rivers, streams, and ponds

With storms becoming more frequent and more intense, it is becoming increasingly important to take action to mitigate the effects of the last 100 years of paving. Winter is a great time for homeowners to do the research necessary to understand what it would take to make your particular driveway both permeable and attractive.

For more information about Belmont stormwater, see belmontcitizensforum.org/stormwater, or email to bcfprogramdirector@gmail.com ro contact the Belmont Stormwater Working Group, a group of citizens concerned about our stormwater issues.

Anne-Marie Lambert is a Director of the Belmont Citizens Forum.

ANNE-MARIE LAMBERT

The Lenk/Kossak permeable driveway as seen from the street.

Beth El Temple Climate Event

The Climate Team of Beth El Temple Center in Belmont and the Belmont Citizens Forum are cosponsoring a screening of the film ***Merchants of Doubt*** on Sunday, March 6, 1:30-4 pm.

Based on the book of the same name, the film exposes the use of public relations tactics to confuse and discredit established science in order to prevent government regulation of the tobacco, flame retardant, and fossil fuel industries, and explores the roots of climate change denial.

Peter Frumhoff, Director of Science and Policy at the Union of Concerned Scientists, will introduce the film and lead the discussion that will follow. For more information contact Jeri Weiss, goldman_weiss@hotmail.com.

Group Offers Solar Discounts Through April

By Alix van Geel

The shortest days of the season have passed, and now is the perfect time to consider adding solar to your Belmont home or business. For a limited time through April 30, 2016, Belmontians can take advantage of discount pricing for solar rooftop panels to provide electricity, thanks to Belmont Goes Solar.

Belmont Goes Solar is a group of volunteers working to expand small-scale solar energy installations in town. Belmont Goes Solar is supported by the Board of Selectmen and includes members of the Belmont Energy Committee, Sustainable Belmont, Mothers Out Front, and Belmont Light. The group's goal is to achieve 100 solar installations in Belmont in 2016.

The Belmont Goes Solar team is dedicated to making installing solar panels as easy and as inexpensive as possible. Many companies are willing to sell or lease solar panels, but it can be difficult to evaluate the options. Equipment type and quality, pricing, warranties, and finding a company that can stand behind its work, are all important. To help residents and businesses navigate these issues, Belmont Goes Solar conducted its own research, soliciting competing proposals from multiple vendors and interviewing the strongest candidates. Direct Energy Solar was chosen as Belmont Goes Solar's partner due to its extremely competitive group pricing package, the quality of their equipment, their installation capacity, and their deep experience with community solar programs.

Direct Energy Solar makes going solar easy. The firm provides a turnkey installation service, and after the array is operational, Direct Energy Solar offers free brokerage services for their customers' solar renewable energy certificates (SRECs).

The company also has the size and stability to be present for the long run, and to stand behind the 10- and 20-year warranties it offers. I can personally testify to the ease of the installation process and to their post-installation services, having purchased our array from Direct Energy Solar (then called Astrum Solar) in early 2012.

Belmont Goes Solar will sponsor several upcoming events to inform town residents and businesses about solar. The first "Meet the Installer" informational event (on January 13) has passed, but a recorded version will be available on local cable access through the Belmont Media Center. Another "Meet the Installer" event is scheduled for Saturday, January 23, at 2-3:30 PM at the Beech Street Center, 266 Beech St., Belmont. Additional events—including open houses where residents with solar panels will show their systems and answer questions—are also in the works.

Solar Prices Have Dropped

There has never been a better time to go solar in Belmont. Prices have declined dramatically in the past few years. The federal 30% investment tax credit remains in place, and the state subsidizes solar energy via a $1,000 tax credit. Proceeds from SREC sales help make a typical homeowner's payback period shorter than it has ever been (about 6-7 years).

That said, procrastinators may lose out. Massachusetts has capped the number of SRECs it will allow under the current SREC II program.

What is an SREC?

SREC is an acronym for "solar renewable energy certificate." During the first 10years of operation, the owner of a qualified solar array in Massachusetts will earn one SREC for every 1,000 kW of power generated. Investor-owned utilities are required to purchase a certain number of SRECs each year.

Owners of solar arrays can sell their SRECs, generating income that helps recoup some of the cost of the array. SREC prices vary. In November and December 2015, prices for the current (SREC II) program ranged from about $270 to $280 per SREC. Current SREC prices can be found at www.srectrade.com/srec_markets/massachusetts.

Belmont Solar by the Numbers

Size of typical home solar electric system	5 kW
Initial base cost to purchase a system through the Belmont Goes Solar program	$3.30 per installed watt, $16,500 for a 5 kW system
Estimated tax credits	$5,950 ($4,950 federal and $1,000 state)
Amount of electricity generated per year	Site-specific, but can be ~6,600 kW
Number of SRECs generated per year	~6, for 10 years
Estimated payback time	~ 6 to 7 years
Avoided carbon dioxide emissions per year	~3 metric tons

Without legislative action, these SRECs may be fully allocated by the end of 2016. Arrays installed after the SREC cap is reached would not generate additional SRECs. Without SRECs and their associated income, payback periods would be longer.

Financing

Financing the cost of solar panels is a frequent concern. Some individuals or businesses can buy a system outright, which is generally the best financial option. Others obtain financing for their system, often through a home equity loan or home equity line of credit. Specialty solar loan programs are also available including some through Direct Energy Solar. The Mass Solar Loan program represents a brand new option. Under that program, lenders offer low-interest loans to Massachusetts residents, including people with moderate incomes or low credit scores. Direct Energy Solar also offers a purchase power agreement option (similar to a lease).

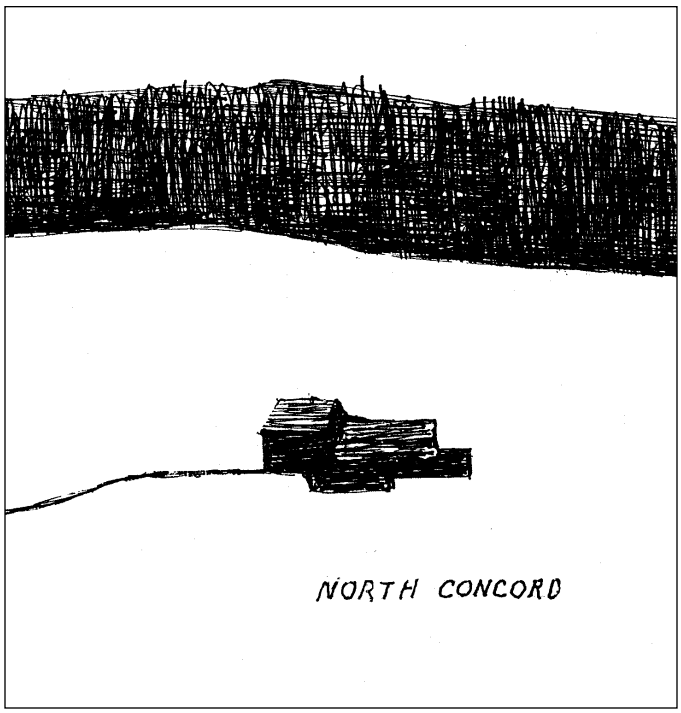
How to Go Solar

The Belmont Goes Solar website (www.belmontgoessolar.org) provides answers to many common questions, and knowledgeable Belmont residents have volunteered to serve as solar coaches to answer additional questions. To contact a Belmont Solar Coach, call 617-855-8209, or email coach@Belmontgoessolar.org.

To sign up for a free assessment of your site by Direct Energy Solar, call 800-903-6130 or fill out an electronic form on Direct Energy Solar's Belmont-specific website (go.directenergysolar.com/belmont-goes-solar). The first 20 signed contracts will receive a $500 discount. If Belmont signs up for 100 solar installs during the campaign, Direct Energy Solar will donate $25,000 towards installation of solar panels on a Belmont school or other municipal building; 50 signed contracts will result in a $10,000 donation

Whatever you do, don't delay because the best time to go solar is now!

Alix van Geel is a senior consultant at an environmental consulting firm in Cambridge. Her home in Belmont has a solar array, which was installed in 2012 by Direct Energy Solar (previously Astrum Solar). She serves as a town meeting member for Precinct 7 and as a volunteer solar coach for the Belmont Goes Solar campaign.



ANN COIT SIFNEOS

Friends of Lexington Bikeways Serves Town

By Peggy Enders

The Friends of Lexington Bikeways (FoLB) is a nonprofit 501c(3) volunteer organization that promotes and supports biking and the shared use of bicycle routes in and around Lexington. FoLB was established in 1991 as the "Friends of the Minuteman Bikeway" at a time when the building of the Bikeway was underway but still had many residents concerned about possible negative impacts, including the loss of backyard privacy and declining home values. Those fears were never realized, and today the Bikeway is considered one of the most popular recreational (not to mention economic) resources in the area.

Today, the Friends work closely with the Lexington Bicycle Advisory Committee (LBAC) to preserve and enhance the Bikeway and other shared use paths and serves as the focal point for social, educational, and stewardship activities of both groups.

Path Stewardship

The cost of plowing the Bikeway in Lexington is paid for entirely by private donations solicited by the Friends. We work with the LBAC to hire the contractor and monitor winter conditions along the Lexington section. During other seasons, the Friends organize periodic trash pickup days, brush cutting and clearing, Bikeway user counts, boardwalk repair and construction, etc. We work with the DPW to plan for and publicize the periodic Bikeway closures when paving or other maintenance work is underway.

Education and Information

The Friends' website is www.folb.net. The Twitter account @bikeminman, mmbikeway@gmail.com, and the Bike-Lexington yahoo newsgroup were established by the Friends to communicate with users as well as to provide forums for exchange of bicycling-related issues, ideas and information. The Friends manage a Facebook page as well.

The Friends are involved with planning for Lexington's annual Bike Walk 'n Bus Week; we sponsor what's now an annual Bikeway "commuter breakfast"; a bike safety program for fifth graders; and a program for women riders to build biking confidence.

We sponsor of a semi-annual "Bike Donation Day" at Lexington's Discovery Day to benefit Bikes not Bombs.

We host a booth at Lexington's Discovery Day, where we provide general biking advice, encouragement, and freebies, including free helmets and fittings to all children who visit our booth (80 helmets last year, courtesy of a Boston law firm).

We posted "Burma Shave"-type signs along the Bikeway in Lexington. Sample signs: "One if by land/Two if by sea/Say something please/ When you're passing me!"

We wrote, published, and mailed a "Bike Lexington" brochure to all residents with the 2015 spring tax bill, containing information about state laws, bicycle road markings, safety tips, and resources.

We host monthly Bicycle Corrals at the Lexington Farmers' Markets, where bicyclists are offered $2 market coupons to encourage bicycling to the market.

We posted "Burma Shave"-type signs along the Bikeway in Lexington during the summer of 2015 with lyrical reminders about user courtesy and safety. Sample signs: "One if by land/Two if by sea/Say something please/When you're passing me!/Or just ring your bell/So you won't have to yell!"

Future Projects

The latest version of the Minuteman Bikeway map was published in Spring 2015. The Friends and the LBAC would like to improve mapping of other major bicycle routes in Lexington and surrounding areas, with guidance about the best and safest routes for different ability levels. The last such Lexington map was published in 1999 and is out of date.

We continue to press for improved signage and information kiosks on the Bikeway in Lexington; working with the other Bikeway towns, a DCR grant started the process five years ago, and we continue to work with the Lexington DPW and the Bicycle Advisory Committee on this.

Lexington has very little in the way of bicycle education and safety for school children, and the pilot we do during Bike Walk 'n Bus Week only underscores the need for it, since children really do need to learn about riding safely.

The Friends of Lexington Bikeways welcomes anyone who is interested in what we can do for bicycle advocacy and safety, on streets as well as shared use paths, for riders of all ages and abilities. For more information visit www.folb.net or write to FoLB Chair Bob Hausslein, rhausslein@rcn.com.

Peggy Enders has chaired the Lexington Bicycle Advisory Committee since 2008. She is a member of the Friends of Lexington Bikeways.

Mittens for Cold Weather Bicycling

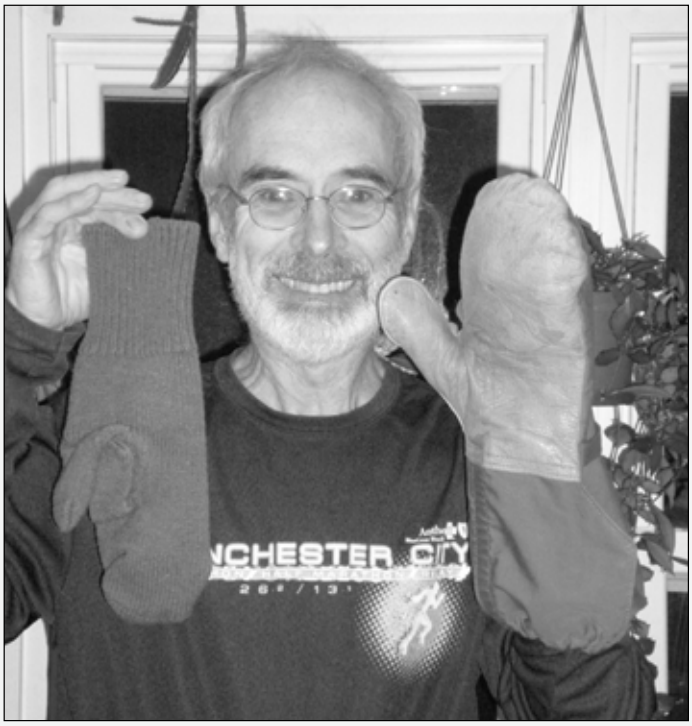
Cold hands are not a reason to stop bicycling in winter. You can fix cold hands with army surplus mittens that date from the Korean war. While there may be modern products that would work well for me, I have found that reasonable-looking bicycle gloves either do not keep me warm or are uncomfortable. I know other bicyclists who also consider these surplus mittens to be the best.

My army surplus mittens are shells that have supple leather where I connect with my bicycles. They are intended to be used with knit liners. The liner material is wool and nylon. The combination keeps me warm when it is too cold to use the shells alone.

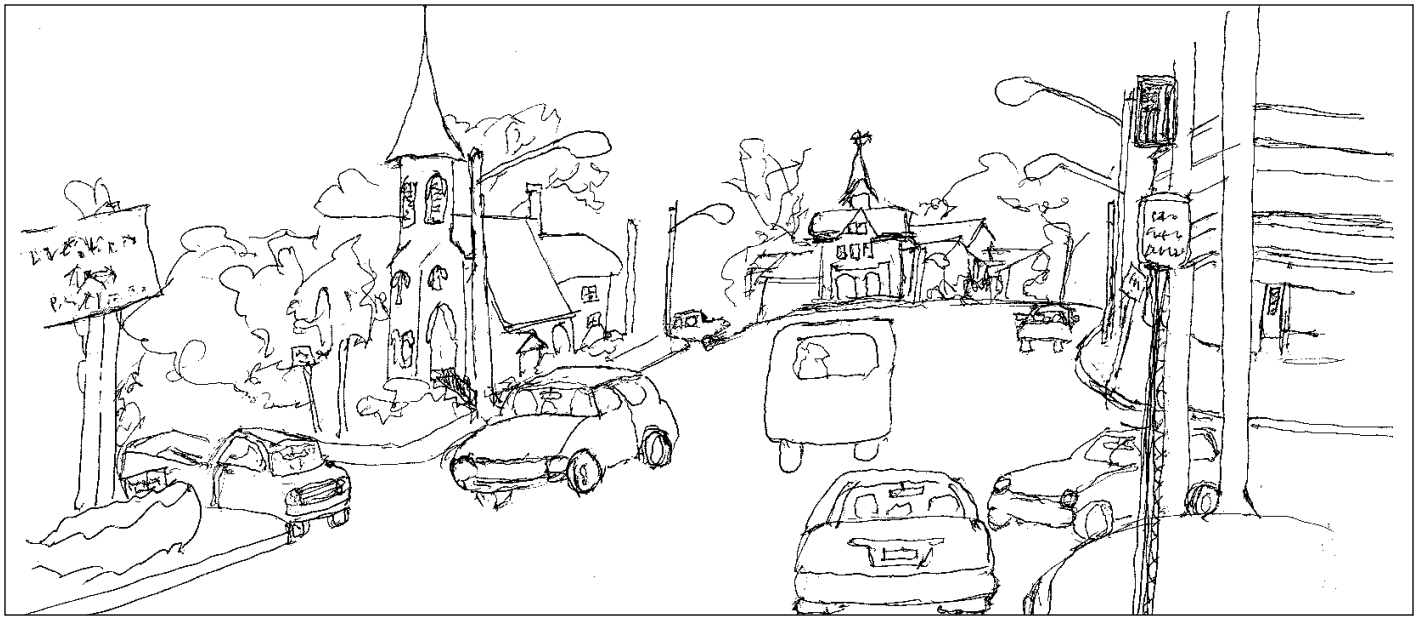
Comfort comes from the generous size. All the samples I have ever seen are huge. It feels as if I am not wearing the mittens. Rather, I am inside the mittens as I am inside my house, not wearing them. Stylish padded bicycling gloves feel comfortable when I put them on, but soon after I start riding my hands hurt.

These mittens cause no interference when riding a bicycle. But beware, you will have difficulty fixing a flat wearing them. To be safe, when the temperature is in the single digits, ride with a friend who is also good at changing inner tubes. The two of you can share the needed bare hand time.

You can find these mittens on line by Googling "military surplus trigger finger mittens." Prices are between $6 and $20.
—***Sumner Brown***



Sumner Brown and his mittens.



ANN COIT SIFNEOS

Letter to the Editor

To the Editor:

My first encounter with Belmont was commuting to Belmont Center from North Station as a co-op student working on a census project. In the 70's it was the most convenient way to reach Belmont without a car. One of the things I loved about the commute was the Belmont Center train station, which is now the Lion's Club. The elimination of station buildings like Belmont Center has been part of a cultural shift as well as a simple reaction to the economics of staffing and maintenance.

Since this comfortable station building has been closed, more often commuters will wait outside in weather for the train to approach. You could say that the romance of the public space has been lost with the easy access to automobiles.

At one time people from local neighborhoods might walk to the station, pick up the paper, and get on the train—a car was not required. Today many commuters are looking to drive a car to the train and park for less money than they would pay downtown. In earlier times the emphasis was on economic necessity, whereas today the emphasis is on convenience. If we had a historic train station lobby today, it might not see much use unless there were a coffee shop in the lobby!

But I miss that old lobby. Both the Belmont Center and Waverley stations are unappealing from a customer perspective. At Waverley we climb down below the level of the road into a very harsh concrete and asphalt platform. At Belmont Center the level of the track is above the road, where the platform is exposed to the weather. Both seem like an afterthought, not a welcoming experience, and climbing up to the train car can be a challenge as well.

Waverley has many benefits. It has a great connection to the bus, it has better parking than Belmont Center, and yet it is not well used. Clearly it is not worth changing the stations unless the situation can be improved, and we will have to listen to the needs of modern commuters.

To that end my preference would be a single station located on Pleasant Street, with at least 50 parking spaces, and clearly designated bike and walking paths to both Belmont Center and Waverley Square. And there should be a nice heated waiting area with a local coffee shop.

We should do everything we can to encourage commuters to use this resource, and solve the difficult walking conditions on Pleasant Street from Star Market to Belmont Center. Moving the station would also reduce the Balkanized parking confusion in Belmont Center.

So... we can have a pleasant station on Pleasant street!

Kindly,

Rich Snow
Harriet Ave., Belmont

A Tribute to Judith K. Record's Legacy

This tribute has been edited for length. A full version can be found on the blog at the Belmont Citizens Forum website at www.belmontcitizensforum.org/2016/01/10/judith-k-record-tribute/
By Heli Tomford

A January, 1996, *Boston Globe* headline stated: "McLean may quit Belmont campus to reduce costs." McLean did not quit its campus. Instead, the hospital and the town of Belmont embarked on a long, arduous journey to reach an agreement on how McLean's 238-acre campus would be used—a journey that was significantly influenced by Judith K. Record.

While Belmont's selectmen initially chose a cautious wait-and-see approach, many residents were deeply concerned. Problems at the hospital, including cutting a third of its staff between 1992 and 1995 and years of multimillion dollar deficits, had received some press coverage. However, many Belmont residents became alarmed because extant zoning at McLean legally allowed single family homes on 25,000-square foot lots. These houses could potentially cover McLean's campus, most of which had been open green space for more than a century.

The League of Women Voters sponsored an informational meeting in March 1996. An overflow audience asked questions until the library closed. One attendee—Judy Record—felt there were too many unanswered questions, and that the time to try to begin answering them was now, not later.

Like many other residents, Judy and her family chose Belmont as home because the children could attend fine schools and the parents could commute to work easily. Whether walking, riding a bike, or cross-country skiing, Judy relished her routine of daily time outdoors, and she valued the natural habitats Belmont offered. In 1995 Judy retired from working as a lead systems analyst, managing large, complex software projects for major financial institutions. She opened her professional tool box again as she set out to protect the woods and meadows she had come to know so well.

TREE SPECIALISTS INC.

The Pine Allée at Lone Tree Hill.

Information gathering was different a generation ago before the internet explosion. Whether land conservation, McLean's history, zoning issues, or vernal pools—anything pertinent to the local land protection—Judy was relentless in educating herself about the issues at hand. She trekked to government offices and libraries to do research, tracked down and interviewed anyone with relevant knowledge, and attended lectures and meetings in other places facing similar land use situations.

Before long it became evident that because many other people also cared about keeping this important green space, it was time to form an organization. Thus, the McLean Open Space Alliance (MOSA) began with Judy at the helm.

When the town appointed a McLean Task Force in the summer of 1996, Judy was rejected as an appointee. Nonetheless, she attended every meeting or made sure another MOSA member did. She reviewed what happened at meetings and followed up with more rounds of calls, conversations, and information gathering, now also delegating tasks to the growing MOSA membership.

Over the course of three years, the town and McLean reached an agreement that came to a March 1999 Town Meeting. It failed the two-thirds vote (133-132) required for zoning articles. The defeat revived the threat of "by right" development with mega-mansions scattered across the open space.

At that point, Judy's practical sensibility came to the fore. She supported a compromise: save a large swath of open space by allowing re-zoning to accommodate multiple uses of the McLean campus. It was approved 206-61 at a May Special Town Meeting. That vote was tested just a few months later by a citizen-initiated referendum attempting to override Town Meeting's decision. Judy was instrumental in getting out the vote to uphold the zoning changes. Over 50% of voters cast ballots (unusually high for Belmont's local elections), favoring Town Meeting's decision 6,108-2,677. A Memorandum of Agreement between the Town of Belmont and the McLean Hospital Corporation was signed on November 22, 1999.

While some organizers might have sat back at this point, Judy continued with a goal of ensuring that the allowed re-zoning would be environmentally sensitive. In an ironic twist, she was often sought out for her expertise on the McLean landscape. For example, the developer of the new townhouse zone asked Judy's advice about which trees to keep! Judy encouraged civic engagement both as a way to protect land and as a way to define Belmont's values and make them a reality.

Judy Record died on September 11, 2000, from head injuries sustained in a tragic bicycle accident. Her loss was keenly felt by colleagues and friends, concerned citizens, and members of town committees and municipal agencies. In recognition of her work, the Massachusetts Chapter of the American Planning Association honored her posthumously with its Citizen Planner Award. With a wish to recognize Judy's dedication to land conservation, family and friends created the Judith K. Record Memorial Conservation Fund (JKR Fund) for the protection, rehabilitation, and maintenance of open space in Belmont and surrounding areas.

Mass Audubon is the JKR Fund's fiscal agent, and a Board of Trustees directs the Fund's

Pine Allée

The most breathtaking spot on Lone Tree Hill conservation land is the Pine Allée. This long walkway runs east and west, parallel to Concord Avenue, between double rows of 165 huge white pines. It invites a quiet stroll on a bed of soft pine needles. Unfortunately, during its approximately 100-year existence, the majestic trees have suffered. Some have blown down owing to top-heavy growth; adjacent woodlands have encroached on the allée; insect-borne disease and thick undergrowth have damaged this lovely feature of the open space.

Recognizing the urgent need to care for this remarkable place, the trustees of the JKR Fund chose Tree Specialists Inc. of Holliston, MA, to conduct an assessment of the health and condition of the trees in the allée and make recommendations. On the basis of the company's report, the trustees offered to meet the costs of up to $150,000 to care for the allée, with Belmont's Land Management Committee contributing $15,000 for the planting of pine seedlings in the gaps along the rows.

Tree Specialists Inc. will begin high priority work in January 2016, removing invasive brush in the understory, removing dead trees, and high pruning designated trees.

activities. With initial memorial contributions supplemented by subsequent annual fundraising, the JKR Fund has made over two dozen grants that meet the Fund's criteria. A variety of local organizations and projects have benefited from this support. Foremost is Lone Tree Hill, the 88-acre conservation area deeded to the Town by McLean in 2005—the area Judy Record worked so diligently to protect. See "Record Fund Protects Belmont Open Space," BCF *Newsletter*, January/February 2014 for details about past grants.

Soon after Judy's death, flutist Andrea Nolin organized a memorial concert. Over the years, the Record Players' concert has become an annual winter tradition, thanks to the dedication of Nolin and her fellow professional musicians. Information about the Fund, including the grant application process, can be found at www.jkrfund.org.

Heli Tomford is a Trustee of the Judith K. Record Fund.

Judith K. Record Fund Concert

All-French program featuring music of Dollé, Debussy, Milhaud, Fauré

Saturday, February 27, 7:30 PM
The First Church in Belmont
404 Concord Avenue, Belmont
Wheelchair accessible

The Record Players will present this classical program to benefit the Judith K. Record Memorial Conservation Fund. Admission is free: voluntary donations to Mass Audubon and the JKR Fund may be made at the door.

The Record Players are Colin Davis, violin; Anne Black, viola; Ray Jackendoff, clarinet; Sarah Freiberg, cello; Andrea Nolin, flutes; and Leslie Amper, piano.

For more information, see jkrfund.org.

Environmental Events

Belmont Stormwater Working Group: Permeable Pavers

Thursday, January 21, 7 PM

Ian Forman, an expert on the installation of permeable pavers, will present the details of a recently completed project in the Winn Brook neighborhood and answer questions. Forman has eight years of experience installing pavers as owner of Premier Paver and Hardscaping Co in Lincoln. The group will also review and discuss Glenn Clancy's January 11 presentation on Belmont's sewers and stormwater. *Assembly Room of the Belmont Memorial Library, 336 Concord Avenue, Belmont.*

Meet the Installer: Solar Info Event

Saturday, January 23, 2-3:30 PM

Join Belmont Goes Solar and Direct Energy Solar for an informational event. Light snacks provided. Solar is a win-win for residents, businesses and the environment. Act now! For more info or to request a free solar assessment: www.belmontgoessolar.org. *Beech Street Center, 266 Beech Street, Belmont.*

Roof-Top Solar: Do it Now

Saturday, January 30, 1-2 PM

If you have been thinking of installing solar panels on your home the time to do it is now! Come to this session to learn about current financial incentives available in Massachusetts and specifically the changes in Belmont's policy towards solar that now make it attractive for Belmont residents. You may also look at Google's SunRoof program, which allows you to assess, for yourself, how much sunlight your roof receives, and visit the Habitat solar array. Free event. Info: www.belmontgoessolar.org or www.massaudubon.org. Register online or call 617-489-5050 to register by phone. *Habitat Education Center and Wildlife Sanctuary, 10 Juniper Road, Belmont.*

Native Plant Gardens: Learning By Example

Tuesday, February 3, 7-8:30 PM

Landscaping with native plants is becoming the rule rather than the exception, but good examples can be hard to find. Come for a visual tour of some truly instructive native plant gardens, large and small, public and private. A diversity of styles,

ranging from formal to naturalistic, will illustrate the usage of native plants in both residential and public landscapes. Speaker Carolyn Summers is an adjunct professor at Go Native U, a joint project of Westchester Community College and The Native Plant Center. Info: www.grownativecambridge.org. *Cambridge Public Library, 449 Broadway, Cambridge.*

Sustainable Belmont Regular Meeting

Wednesday February 4, 7-8:30 PM

Come to Sustainable Belmont's regular monthly meeting to learn about their work. Info: www.sustainablebelmont.net. *Belmont Public Library, 336 Concord Avenue, Belmont.*

Belmont Stormwater Working Group

Monday, February 22, 7 PM

Join the Belmont Stormwater Working Group's regular monthly meeting to discuss water in Belmont. *Assembly Room of the Belmont Memorial Library, 336 Concord Avenue, Belmont.*

Thank you for your continued support.

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____ Event organizing

Contact us: info@belmontcitizensforum.org.

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