



State Keeps Waltham Waiting for Fernald Plans

By Meg Muckenhoupt

The Massachusetts Division of Capital Asset Management (DCAM) is keeping Waltham officials in suspense about the future of the 196-acre site on Trapelo Road of the Walter E. Fernald Developmental Center, formerly the Fernald State School, which is about to be closed. Decisions about the property will affect not only the remaining residents but traffic in nearby Waverley Square and the ability to connect walking trails on the Western Greenway.

What happens to the Fernald property matters to Belmont because it will affect two types of traffic: cars on Trapelo and Waverley Oaks Roads, and pedestrians walking the Western Greenway, the ring of connected open space that runs through Belmont, Lexington and Waltham.

Fernald to Change Local Traffic, Walks

DCAM has said repeatedly that the Fernald site should have 250 to 300 units of mixed affordable and market-rate housing and 150 units of a health care or institutional facility. All those units would put more cars on Trapelo Road—a road which is already at 125 percent of capacity, according to Georgie Hallock, a representative of the League of Women Voters of Waltham and a member of the Fernald Working Group. At a public hearing last December, Hallock cited a report by Conley Associates saying, “The intersections along Trapelo Road are congested, and movement of people into, within, and out of Waltham is a major problem.”

Public transportation may not help much. The only bus line that reaches the campus, the 554, stops on Trapelo Road hourly from 7 a.m. to 7 p.m. and does not run on weekends. The next nearest bus lines stop at Waverley Square, a mile away. Asked whether Belmont had contacted Waltham about development at Fernald, Selectman Mark Paolillo expressed concern

about the effect on Belmont’s traffic, saying “If this were to move forward, we’d have to take a look at it.”

The Fernald site is also a vital link in the Western Greenway, a north-south route connecting the Beaver Brook Reservation on Trapelo Road to the Patriot Girl Scouts Cedar Hill Reservation and the University of Massachusetts Field Station on Beaver Street, home of Waltham Fields Community Farm. The Fernald campus itself is largely forested to the west, with several streams and a 250-foot hill Waltham children use for sledding.

DCAM has said repeatedly that the Fernald site should have 250 to 300 units of mixed affordable and market-rate housing and 150 units of a health care or institutional facility. All those units would put more cars on Trapelo road—a road which is already at 125 percent of capacity

The rest of the campus has been extensively developed since the first residential school for people with mental retardation opened on the site in 1889. At its peak in the 1960s, about 2,600 residents lived on the site. Today, 71 buildings and 14 other structures are spread over the site, totaling 1.2 million square feet. Those buildings include a power plant, a facility used by the Tufts Dental School, a homeless shelter for adult women and children, and the Eunice Shriver Center, a University of Massachusetts medical facility for people with mental and developmental disabilities.

Although all buildings on the site are on the National Register of Historic Places, they are not

all salvageable. While the pre-1940 buildings have the charm of Queen Anne and Colonial revival design, the post-1950 structures are starkly institutional and seem to be scattered randomly on the landscape. More worryingly, there is serious environmental contamination in and underneath several buildings, including asbestos, buried coal ash, suspected heavy metals, fuel oil spills and probable leaking underground storage tanks. The bill for removing and remediating these hazards could be very high.

DCAM Rejected Waltham's Plan

In March, DCAM rejected recommendations made by the Fernald Reuse Committee, complaining that they would not provide

enough housing and economic development. Now, Waltham is waiting for DCAM's appraisal of the site. It appears that in order to save the property, the city will have to buy the Fernald land.

The Fernald Reuse Committee was established by state legislation in 2003. Its work was delayed by lawsuits filed by guardians of residents at the Fernald Developmental Center, which treats severely disabled adults. These guardians sought to keep the Center open for residential care; the Patrick administration favors community and group-home placements, which cost less and provide more social contact for residents. In April, 2009, the U.S. Supreme Court declined to hear an appeal to keep Fernald open, and the state moved forward with plans to close the campus.

The committee resumed meeting in 2009 and issued a report in January 2010. According to a February 2010 letter by Mayor Jeannette McCarthy, the committee concluded that the Fernald reuse plan should include:

- a 100-foot open space border around the entire parcel, "to protect the various neighborhoods in the city;"
- transfer to the city, at no cost, the northern section of the parcel (74 acres) for uses including a cemetery, open space, recreation and farming;
- an additional 75 acres in the southern section of the site to be reused for institutional, health care, and residential uses;
- acquisition by the city of the 41-acre southwestern border, "including the forests which would benefit both the northern and southern parcels."

The Fernald Reuse Committee did not specify how many units of housing, light industry, or research and development space should be developed on the 75 acres. Last November, DCAM recommended building 250 to 300 residential units with 150 units for health care business on the site (see "State Pushes for Dense Housing at Fernald," Belmont Citizens Forum *Newsletter*, January/February 2010). Both the Reuse Committee and the Waltham City Council agreed that that much development would be too dense for the 200-acre site.

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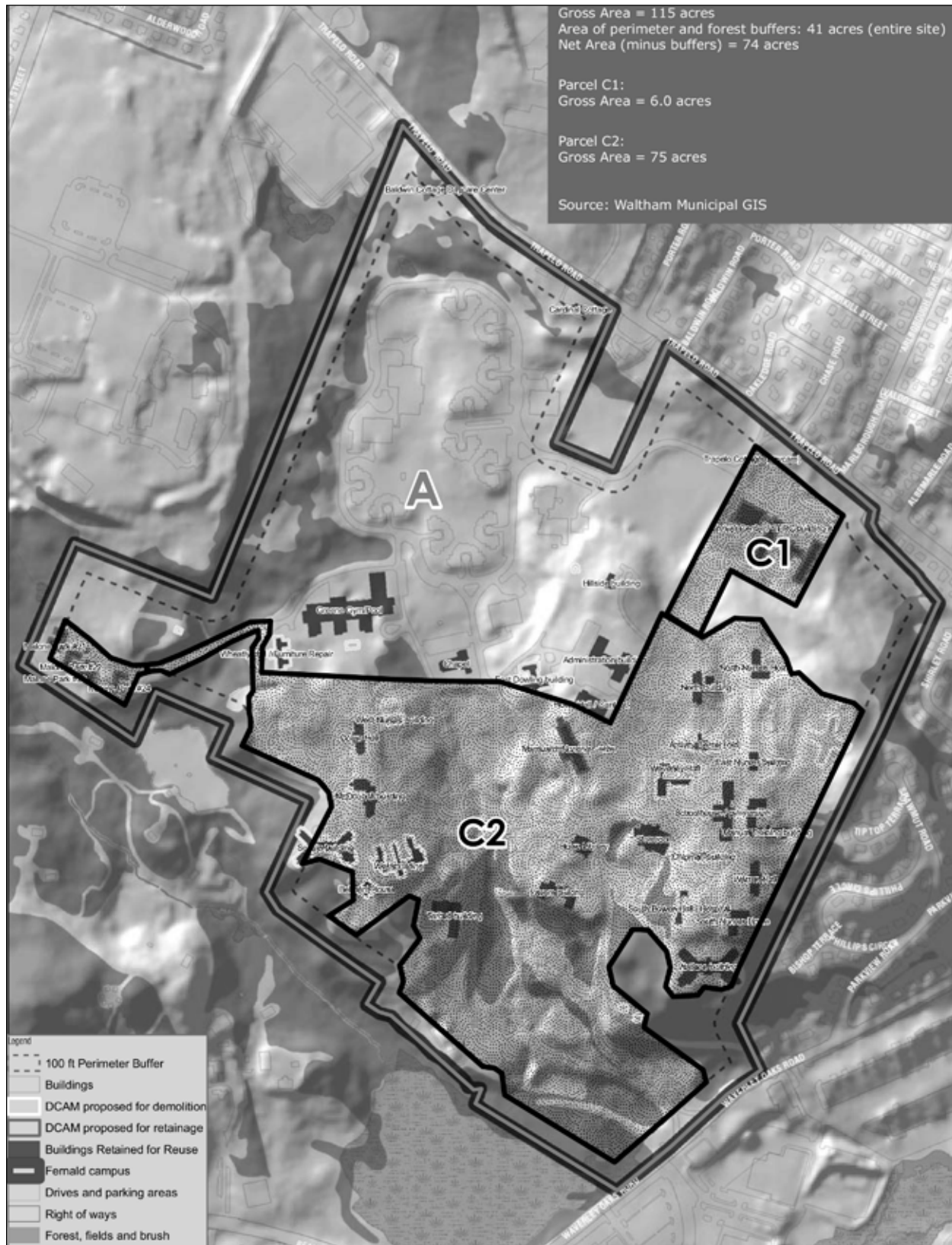
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Newsletter

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Belmont Citizens Forum Inc. is a not-for-profit organization that strives to maintain the small-town atmosphere of Belmont, Massachusetts, by preserving its natural and historical resources, limiting traffic growth, and enhancing pedestrian safety. We do this by keeping residents informed about planning and zoning issues, by participating actively in public hearings, and by organizing forums. Our *Newsletter* is published six times a year, in January, March, May, July, September, and November. Published material represents the views of the authors and not necessarily those of the Belmont Citizens Forum. Letters to the editor may be sent to P. O. Box 609, Belmont MA 02478 or to info@belmontcitizensforum.org.



FERNALD REUSE COMMITTEE/WALTHAM PLANNING DEPARTMENT

The Fernald Reuse Committee's suggested uses of Fernald site. Shaded areas indicate forested areas and open space. The 100-foot open space buffer is marked by a dashed line; Parcel A is the northern section Waltham requested for a cemetery, open space, recreation and farming. Waltham wishes to obtain both these parcels as well as the shaded areas to the west and south of Parcel C2. The Committee suggested the state retain 6-acre Parcel C1 and 75-acre Parcel C2 for institutional, health care, and residential use.

It may sound presumptuous for the city of Waltham to demand that the state simply give property away, but DCAM has done exactly that several times before, selling properties to towns for \$1—especially armories, which had been built on land donated to the state by a town. As McCarthy noted in her letter, “In an ideal world, in light of the fact that Fernald has been in Waltham since 1887 and that we have been such a good neighbor—providing city services with no taxes since 1887—Waltham should receive all 200 acres.”

State surplus land is currently handled under Chapter 7 of Massachusetts General Laws, which calls for legislative approval of all land transfers. [See “Towns Seek to Control Local Surplus Land,” Belmont Citizens Forum *Newsletter*, September 2007]

Last June, Waltham state Representative Tom Stanley refiled legislation (H102) that would give communities right of first refusal for purchasing surplus land and ensure the communities can buy the land at a discount; the House has not acted on that bill. Even if it did, that would not necessarily help Waltham much. A 196-acre buildable site would still cost millions of dollars.

DCAM was not in a mood to grant Waltham free land this spring. In March, Dana Harrell, state Division of Capital Asset Management real estate services director, stated at a Fernald Reuse Committee meeting that the state was rejecting the Committee’s plan because “it was not a comprehensive plan,” and “The reuse plan does not provide for acquiring the property at market value as legislation sets out,” according to a *Waltham News Tribune* article. McCarthy countered that it was impossible to include a plan for buying the property because the



Historic postcard of the Fernald Center prior to its 1925 renaming.

committee did not know the market value of the property.

Harrell referred to meeting the needs of the “state voters,” not just Waltham’s community—presumably by selling the land for as much money as possible. Harrell also said that the site’s current zoning for conservation and recreation was “economically limiting,” to which McCarthy replied that it was illegal to rezone the campus in anticipation of a plan being submitted for the Fernald site.

Thanks to DCAM’s rejection, if Waltham wants to preserve any portion of the site for open space, affordable housing, or any other use, it will have to buy Fernald land from the state. The city is waiting for DCAM’s appraisal of the site—and has been waiting since Massachusetts Secretary of Administration and Finance Jay Gonzalez promised an appraisal to Waltham city councilors last April. DCAM spokesman Kevin Flanigan wrote on August 25, “In keeping with our commitment to the City of Waltham, earlier this summer the Commonwealth retained consultants to prepare estimates of the value of the Fernald property as well as the cost of environmental remediation. We expect to be ready to finalize these estimates soon.”

“Soon” may mean November. “I think DCAM is hesitant to show its results before the [November] election,” said Steven LaFerriere, who has served on the Fernald Working Group, a coalition of Waltham organizations that have worked for a community-based plan for Fernald. LaFerriere expects that Waltham may get “some kind of discount” to buy part of the land for open space.

Where that open space will be is still at issue. The Fernald Reuse Committee had identified two types of open space at Fernald: the site’s links to the Western Greenway, and a 100-foot-wide vegetated buffer around the campus’s perimeter, to shield neighbors from development. “As long as politicians are making the decision, that buffer is the most important,” said LaFerriere.

For now, not much is happening. Although the state set a deadline of June 30 of this year

for closing the Walter E. Fernald Developmental Center, as of late July 47 residents were still living there, according to the *Boston Globe*. The residents’ families are appealing to the state to stop Fernald’s closing, a process that could take up to a year.

Meg Muckenhoupt is Editor of the Belmont Citizens Forum *Newsletter*.

Boston Gardens and Green Spaces

If you google “Meg Muckenhoupt” you will immediately discover that she is the author of *Boston’s Gardens and Green Spaces*, published by Union Park Press last spring. If you dig deeper, you will find that Meg is the editor of this newsletter, if you had not already noticed.

I got a copy of *Boston’s Gardens and Green Spaces*. It describes nearly 100 sites, indexed by type and by location, with text and wonderful photographs. Meg’s emphasizes the sites’ horticultures, origins, and their specific recreational opportunities.

I checked some of Meg’s descriptions of sites with which I am familiar: the Minuteman Bikeway, the Western Greenway, Post Office Square, Crane Castle, Walden Pond, DeCordova Museum, Gropius House, Mount Auburn Cemetery... Meg nailed them all.

Sumner Brown



ANN COIT SIFNEOS

State Rep Candidates Answer BCF Questions

This fall, incumbent Democrat Will Brownsberger and Republican Lalg Musserian are both running for State Representative, 24th Middlesex District. This district includes all of Belmont and areas of Arlington and Cambridge. The Belmont Citizens Forum asked the candidates to respond to the following eight questions. The candidates were limited to 800 words total, or an average of 100 words in response to each question.

1. What is the next step for creating a regional bike path system?

Lalg Musserian

Obstacles have delayed the Belmont bike route; however, proper engineering and planning can solve these problems. The cumulative efforts of all three communities involved in this central rail trail—Belmont, Cambridge, Somerville—will be most effective at compelling the state to complete the work.

This bicycle infrastructure will provide both recreation and transportation. A bike path will promote clean energy, help curb greenhouse emissions, and cut energy costs while providing much-needed urban recreation space. It will also introduce tourism and help revitalize business opportunities.

Will Brownsberger

State planners envision a bike path running along abandoned railroads from Cambridge to Northampton. The next local step is to finish work on the segment from Brighton Street to Alewife. Soon it will be much easier for commuters from Belmont to reach Alewife.

The pending further step is to design a segment running from Brighton Street to Waltham. There are conflicting views as to the best route for that segment.

Last spring, I proposed to the Selectmen that we apply to the Metropolitan Area Planning Council to have them study the possible route alternatives and also the possibility of an underpass connecting the High School to the Winn Brook area. The MAPC recently committed to that study. It will start this fall and will include public input.

2. How can the state help Belmont become more sustainable while preserving its small-town atmosphere?

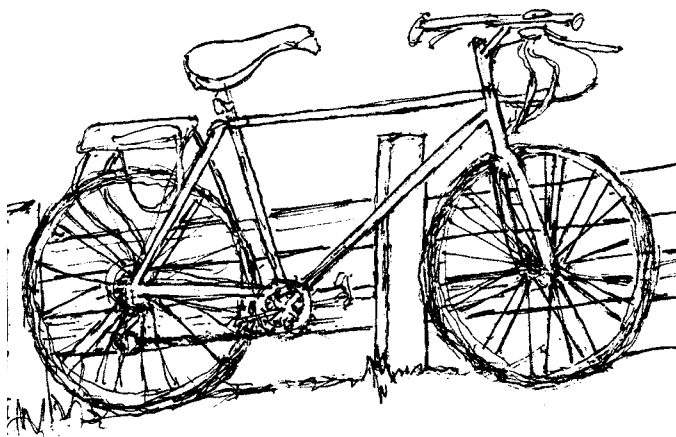
Will Brownsberger

Belmont faces financial sustainability questions but has long preferred to avoid lucrative but intrusive commercial development. The state can help Belmont by giving more local aid, but also by improving Belmont's ability to control its costs. I have supported politically difficult measures to help control health care and pension costs.

From an environmental standpoint, the state has helped Belmont by defining more stringent energy conservation building codes and facilitating contracting for energy conservation services. By clinging to its municipal utility, Belmont has isolated itself from direct financial supports for sustainability that the state offers. The issue of whether Belmont should remain a municipal utility deserves continued active study.

Lalg Musserian

The state should encourage, promote and assist in the creation of green buildings that are up to code with state regulations and guidelines yet



environmentally friendly—instead of creating industrial giants. However, the town of Belmont, under the proper leadership of department heads, should concentrate on key issues like energy conservation, storm water management, open space conservation and management, and waste management.

3. Traffic backs up, especially in the morning and the evening, both on local roads and on regional ones like Routes 2 and 16 at Alewife. Can these situations be improved? What aspects of traffic planning should be done at the local level? What should the state do?

Lalig Musserian

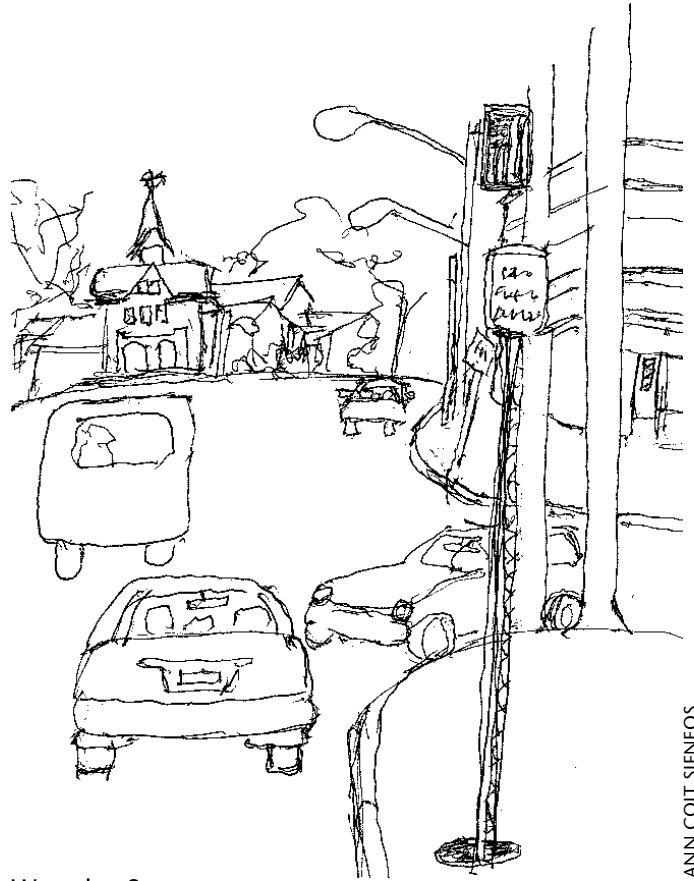
To improve traffic situation, town officials should evaluate the traffic patterns and conditions of main arteries such as Concord Avenue, Trapelo Road, Pleasant Street, etc., and work with inter-connecting cities and towns to baseline the traffic flow between towns and cities to remedy the situation.

In the short term, getting state funding to at least have signage about traffic warnings and implementation of intersection improvements would be a good start. Other options include streamlining the traffic situation by improving and repairing main roads, programming traffic signals for improved traffic flow, and widening instead of narrowing roads to minimize traffic jams.

The town can also consider restricting directional traffic flow away from main roads during peak traffic hours to minimize backups. Educating and encouraging the people of Belmont about carpooling and other transportation alternatives is also essential. With proper funding, we can also invest in email/text message communication mechanisms to alert drivers about traffic, so we can load balance the number of cars on the roads.

Will Brownsberger

The Department of Transportation is currently designing modest streamlining measures for the Route 2/16 intersection. These may diminish aggravation, but the area will remain one of the most congested in the state.



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Waverley Square

Recent traffic studies of our area show that traffic is going from everywhere to everywhere, not just in and out of Boston. We cannot dramatically reduce traffic, for example, by extending the Red Line further. Additionally, the financial nightmare of the Big Dig has chilled any possibility of radical highway or transit projects.

Given these limits, we need to focus on local traffic safety and calming measures and do our best to support bicycle and pedestrian options. I favor increased local ability to maintain lower speed limits and design safe streets.

4. How would you go about preserving the Uplands?

Will Brownsberger

The Uplands are a valuable urban wilderness. They could serve the surrounding communities as a peaceful refuge.

To achieve this vision, the state should acquire the Uplands and join them to the Alewife Reservation. In my first term, I moved to the Governor's desk a bill which would have created



a process for the state to acquire the Uplands with funding collaboration from Arlington, Belmont, and Cambridge.

Unfortunately, the Governor vetoed that proposal. His environmental people are more interested in large acreage rural land acquisition and his housing people prefer to see the site developed for housing.

I still believe that a collaborative approach like the one I proposed is the most viable among weak alternatives.

Lalig Musserian

In order to preserve our uplands, our state, along with local town surveyors and engineers, needs to evaluate the existing town landscapes and soil conditions and survey the features of the Uplands to ensure that proper amount of trees, grass and vegetation are grown on the upland with protected barriers, to preserve the grazing of our land. Through citizen's environmental education and eco-environmental policy institutionalization we can enforce protectionism of our uplands.

5. How can our region maximize local aid?

Lalig Musserian

To improve local aid to cities and towns, the state has to take fiscal responsibility in balancing its budget and expenditures. The state needs to look at the local aid calculation formulas to make sure the towns in our district are accurately reflected, taking into consideration current demographics, income and other variables, which are all used to compute local aid. The current formula is very complicated, and not very transparent. Our community should work closely together to identify and advocate for critical town aid needs, such as Municipal Assistance, Education, Public Health and Safety, and Veterans' Services, to maximize our potential.

Will Brownsberger

There are two kinds of local aid: construction aid awarded for specific projects, and formula-based financial aid that supports local services.

Each community can maximize construction aid by working to fully resolve technical, legal and political issues that can delay funding. Belmont did well with the Wellington School and Pleasant Street, and is doing well with Trapelo Road. Regionally, we can collaborate to support state funding for regional projects, like the bike path from Alewife to the Mystic River.

Formula-based aid raises statewide issues more than regional issues. All legislators fight every year to maximize local aid within financial constraints.

6. How do you plan to vote on the Chapter 40B ballot question this November?

Will Brownsberger

As a citizen, I will vote for repeal, because I believe that 40B needs to change. However, if it is repealed, I will, as a legislator, support a strong replacement for it that continues to allow the development of affordable housing.

My concerns with 40B today are first, 40B places on communities the burden of protecting open space. If a community lacks the physical or political ability to develop good open space and affordable housing plans, 40B puts housing in regional open space. Second, 40B does not allow

any sensible regional allocation of housing development. It forces the opposite of smart growth.

Lalig Musserian

Our economy is in trouble, cost of living increases year after year, and with the state unemployment number just below 10%, we are all very concerned about the affordability of our homes.

Affordable housing strengthens our community, but we need to have laws that work with localities to promote the development of housing that meets the needs of the community, while allowing a reasonable rate of return to developers. For one thing, 40B allows developers to sidestep local zoning and conservation laws and much of the land that is sited for 40B would be otherwise unbuildable. I will vote "Yes" on this ballot question.

7. How can we reduce flooding?

Lalig Musserian

One of the critical elements to control and reduce flooding is to create regional or local wetlands, which over the past decades have decreased significantly due to the increased demand of roads, houses and commercial buildings in our cities and towns.

We need to dial back and start creating new bogs, marshes, swamps and wetlands which are very valuable in controlling floods. These land protected areas act as huge soakers of water that can help manage our floods and environment. Additionally, the town should diligently try to



prevent soil erosion, maintain street drains and reservoirs, reduce the use of sand during snow, and build under-street tanks to collect water, and prevent further flooding.

Will Brownsberger

I wrote extensively about this issue in this publication in April. In a nutshell: In the short run, we need to keep our drainage channels clear; in the long run, we need to reduce permeable surfaces in the watershed.

8. What state initiatives could help local communities be more cost-effective in their efforts to stop basements being flooded with sewage during rainstorms?

Will Brownsberger

The state and federal governments provide low cost financing for projects to keep rain out of sewage systems. Belmont is moving forward with that assistance on work that should dramatically reduce basement flooding in the Winn Brook area.

I will continue to play an active part in the regional conversation about flooding and sewage management so that further improvements can be identified. The Belmont project grew out of a dialog between the tri-community working group on flooding (which I then chaired) and the MWRA.

Lalig Musserian

The cities and towns need to be proactive in taking preventive steps, especially prior to the rainy season, to properly maintain drains and sewer lines. During a heavy rain, storm water enters the sanitary sewers, causing backups into one house and overloading the main lines, and contributing to backups in other houses. Planning, zoning, open space preservation, building codes and regulations and investments in our infrastructure for the proper maintenance of the sewer and drain systems can prevent most basement flooding.

The Belmont Citizens Forum thanks the candidates for their responses. Election day is November 2.

Sheep, Goats Clear Habitat's Weeks Meadow

By Meg Muckenhaupt

"We've got to get a goat."

In June, Belmont's Massachusetts Audubon Habitat Wildlife Sanctuary acquired Weeks Meadow, a field that was overgrown with a knee-deep layer of weeds. When Sandy Vorce, Property Manager at Habitat, talked with Sanctuary director Roger Wrubel about how to maintain Weeks Meadow, she thought goats. Now, thanks to a series of fortunate coincidences, there are five goats and six sheep nibbling on Weeks Meadow daily—and making a big difference in the landscape.

The sheep wouldn't be there if Miriam Weil, chair of Belmont's Conservation Commission, hadn't adopted a rescue dog last spring. Weil brought her new canine companion to City Dog Training for behavior lessons and talked with trainer Liz Shaw about Shaw's dog, a border collie named Rosie. The dog was going to be

trained to herd sheep, Shaw said—sheep that Shaw kept in Carlisle for lack of space.

Weil immediately recognized an opportunity. "This is something we talked about at the [Conservation] Commission years ago," Weil said. The



MEG MUCKENHOUP

Rosie the border collie.

Conservation Commission had envisioned having sheep graze Rock Meadow, but there were too many obstacles to bring sheep in for the 2010 growing season. According to Weil, the Conservation Commission had questions about public access to a sheep-fold, unruly teenagers in the Meadow at night, possible coyote attacks, and the sheeps' exposure

to harsh weather, among other issues.

Instead, Weil talked with Wrubel about Habitat. "He could move a lot faster than we could," Weil said. So could the sheep. Five Border Cheviot sheep, one Romney sheep, and four Nigerian dwarf goats moved in to Weeks Meadow on June 7 to start a pilot grazing program with a special permit from the Conservation Commission; another Nigerian dwarf goat arrived in July. As Vorce put it, "There's a synergy here. The neighbors were open to it, and it's a perfect place for



MEG MUCKENHOUP

Sandy Vorce, Habitat Property Manager, gives a Nigerian dwarf goat kid a treat.

Liz [Shaw],” who lives nearby. Vorce said that sheep have grazed on the Weeks land in the past, adding, “culturally and historically, they [the neighbors] are thrilled to have them here.” Shaw said, “There’s something very peaceful about the grazing animals.”

Grazing clears weeds fast

Since June, the flocks have been grazing a tangled mass of native and invasive plants: poison ivy, multiflora roses, Asiatic bittersweet, Virginia creeper, and other thick-growing ungainly plants down to a grassy meadow. In late July, the places the animals hadn’t grazed were covered with almost three feet of tangled weeds, but the pasture was nearly clear. Wrubel called



MEG MUCKENHOUP

This late July photo shows the difference between the areas of Weeks Meadow that had been grazed (left) and allowed to grow (right).



MEG MUCKENHOUP

A Nigerian Dwarf Goat eager to get to work.

the program “very successful.” “People like them,” Wrubel said, “and they’ve been doing their job keeping the meadow open and eating invasive plants.” Shaw added, “The sheep are very serious about their business!” Vorce added, “You should see them go after the bittersweet! They’re like, ‘YAHOO!’”

The sheep and goats have small shelters to rest in at night and are surrounded by an electric fence. Audubon staff adjust the boundaries of the grazing area from week to week, depending on what area needs clearing.

Over the winter, the sheep and goats will live off-site. Wrubel plans to approach the Conservation Commission in the fall to petition for their return next year. Shaw thinks the site could support more. “They’re happy campers,” Shaw said of her charges. “The goats have all gained weight, the sheep have all gained weight, [and] the goats’ coats are shinier from only eating forage and free-food minerals,” a dietary supplement.

For more pictures and updates about the sheep and goats, see Liz Shaw’s web site, www.farfetchfarm.com.

Meg Muckenhaupt is Editor of the Belmont Citizens Forum *Newsletter*

Deep Energy Retrofit Shrinks Utility Bills

By Dan Lech

On August 16, Will Brownsberger, Belmont's state representative, moved into a completely renovated home—and an experiment. When Brownsberger asked Paul Eldrenkamp, owner of Byggmeister Inc., how to make his Gilbert Road home as energy-efficient as possible, Eldrenkamp suggested a Deep Energy Retrofit (DER).

A DER is a process that focuses on maximizing the home's energy efficiency through super-insulating, energy transmission upgrades, and alternative energy sources. Energy firm National Grid is currently offering a Deep Energy Retrofit pilot program granting up to \$30,000 per unit in a multi-unit home and up to \$42,000 for single-family homes to upgrade and agree to monitoring and inspection. Brownsberger is one of the first participants in this new program, an energy-efficiency guinea pig of sorts.

DER Means Insulation

The term "Deep Energy Retrofit" doesn't have a single definition, but DERs usually include super-insulation. Insulation's effectiveness is measured in R values, and higher values mean that the insulation is more effective. A typical fiberglass batt has an R value of R-3 to R-4.

Eldrenkamp described it this way: "In the Northeast climate, there is some consensus that a deep energy retrofit probably includes something close to R-10 basement floor insulation, R-20 basement wall insulation, R-40 above-grade

wall insulation, R-60 roof insulation, and triple-glazed windows at about R-5. These R-values are roughly twice what the code would require. Also, high-efficiency heating and cooling and well-designed mechanical ventilation are essential components of a DER."

As Brownsberger states in his blog on the project, "Although even with the available grants, the cost is high, we have found that downsizing and building green feels very right – lower carrying costs, lower taxes, lower energy bills (and) a sense of doing the right thing to cut our dependence on foreign energy."

Generally a DER involves reducing a home's energy use, usually by 50-75 percent. Assessing the change can be tricky, though, as energy use in a home can be drastically reduced by upgrading heating equipment and changing residents' habits.

While a typical residential-insulating job consists of drilling holes in the exterior walls of a home and pumping in cellulose, foam, or other insulating material between the studs, a DER like Brownsberger's goes a step further by removing all of the siding on the home and encasing the entire outer surface in foam-insulating sheets. This insulation creates an airtight environment, insulates the studs and joists as well as the wall cavities, and requires that the home have a mechanical ventilation system.

Brownsberger described the system this way: "In a well-sealed house one needs to ensure fresh-air delivery with mechanical ventilation. We are installing heat-recovery ventilators that will consistently bring in fresh air, but transfer energy from exhaust air so as to avoid heat loss. They will deliver air through the same ducts as the heating system."

In the late-twentieth century, some houses were sealed too tightly and insulated with

Deep Energy Retrofit Web Sites

Brownsberger blog
<http://willbrownsberger.com/index.php/archives/4155>

National Grid Program
www.powerofaction.com/der

Byggmeister Inc.
www.byggmeister.com



DAVE LEGG/ NATIONAL GRID

David Joyce of Synergy Construction locks down the 4" of polyiso insulation using 8" screws through furring strips fastened to the home's 2x4 studs. Stud locations are marked out prior to placement of the foam, and the 8" screws are specially threaded to provide positive feedback when connecting with a stud.

fiberglass, leading to poor air quality inside the home. With the use of a mechanical ventilation system, Brownsberger said, "The expectation is that the indoor environment will be both fresher and more stable" than in a traditionally ventilated home.

Solar Energy Helps to Get to "Net Zero"

In addition to insulation, Brownsberger's home was fitted with energy-efficient windows and the old oil furnace/steam radiator system was replaced with a smaller, gas-powered unit with ducted-air delivery. Three solar thermal panels were installed to reduce the energy used to heat the home's hot water.

Brownsberger hopes to install photovoltaic panels in the near future to generate electricity. When asked if he hoped to achieve a "net zero" home which creates as much or more energy than it consumes, Brownsberger said, "We hope to come close, but don't expect to quite make it."

The cost of a DER is substantial. Brownsberger estimated that the \$30,000 grant would cover

about a third of the energy-related renovations to his new home. When asked about the project paying for itself, Eldrenkamp said, "A well-executed DER will likely have a service life of 50 years or more . . . At what point it starts paying for itself and starts making money for the homeowner will depend on what extent energy inflation exceeds general inflation—and at what point our economy starts pricing energy in a way that factors in all the costs of consuming that energy . . . There are non-energy benefits to a DER, in that super-insulated homes tend to be more comfortable and healthier than conventional construction."

As Brownsberger states in his blog on the project "Although even with the available grants, the cost is high, we have found that downsizing and building green feels very right—lower carrying costs, lower taxes, lower energy bills (and) a sense of doing the right thing to cut our dependence on foreign energy."

When asked if they had considered tearing the building down and starting from scratch



Brownsberger's home was stripped down to the studs.

Brownsberger said, "We gave that only passing consideration. One of the green aspects of the project is using as much of the existing structure as possible. There is a lot of embedded energy in a building. We did nonetheless discuss it enough to conclude that building from scratch would have been vastly more expensive (although we might have been able to achieve somewhat higher performance)."

Eldrenkamp noted that "It is indeed sometimes more viable to start over," but added "One Canadian study indicated that a

conventional home has an embodied energy roughly equivalent to 10 years of operating energy. Additionally, an existing home can be viewed as a small-scale carbon-sequestration program; if you tear it down a lot of that carbon will go to the landfill and soon make its way into the atmosphere. So there are energy and carbon consequences to replacing older homes that need to be considered in deciding whether to retrofit or start over."

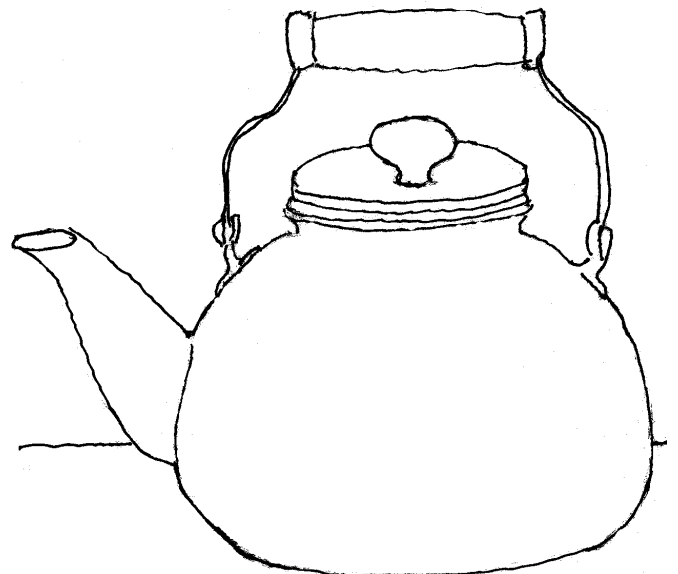
The costs are substantial, the benefits are numerous. If you think that a Deep Energy Retrofit might be right for you National Grid is seeking more participants and would be happy to help you with your green home makeover.

Dan Lech is an 11-year Belmont resident, wine professional, and musician who is attempting to think globally and act locally.

Correction

In the article "Green Burials are Easier on the Earth," Belmont Citizens Forum *Newsletter*, July 2010, it was stated that cremation and burial plots at Belmont's Highland Meadow cemetery are the same size. In fact, burial plots are 3'2" by 8', cremation plots are 3' by 3'.

The *Newsletter* regrets this error, and apologizes for any confusion it may have caused.





The Belmont Citizens Forum is pleased to present

An Urban Wild: A Photographic Exploration of the Silver Maple Forest and the Alewife Reservation

by Parrish Dobson

on exhibit at Mass Audubon's Habitat Sanctuary, 10 Juniper Road, Belmont

October 1 through November 5, 2010

Opening reception Sunday, October 3, 5-7 p.m. at Habitat

It's rare that you can reach wilderness by subway, but the state's Alewife Reservation is just such a rarity. Bordering the reservation is a Silver Maple Forest which is partly protected because some of it lies within the Reservation. But another beautiful section, often called the "Belmont Uplands," may be developed with 299 apartments. Development would shrink this small bit of "urban wild" and would threaten wildlife throughout the reservation by diminishing the size and the variety of contiguous habitats. Dobson's photographs look at the surprising beauty of this sliver of conserved land and the threatened areas. Her photographs help us see the importance and mystery of these wild areas along the margins of urban sprawl.

Parrish Dobson has been photographing landscape in New England, Europe, and parts of the American West for over 25 years. Her work has been exhibited and collected widely. She lives in Belmont and teaches photography at the Buckingham Browne and Nichols School in Cambridge.

Sales of the photographs in this exhibit will benefit the Land Acquisition Fund of the Belmont Citizens Forum.

Bruce Freeman Rail Trail Gets Design Funding

By John Dieckmann

Lt. Governor Tim Murray announced on June 18 that the Bruce Freeman Rail Trail (BFRT) now has full design funding of \$1,435,500 for Phase 2A, the route linking Westford, Carlisle and Acton, and Phase 2C (Concord). The ceremony was held on the proposed BFRT right-of-way in Acton. Funding for Phase 2B, the Route 2 crossing, is already included in the Concord Rotary project.

Why is this much funding required for the design? Because the BFRT's route is very complicated. It includes six road crossing and seven bridges in Acton, two more bridges in Concord, a tunnel, and many more road crossings. All these structures must be designed to meet

Why is this much funding required for the design? Because the BFRT's route is very complicated. It includes six road crossing and seven bridges in Acton, two more bridges in Concord, a tunnel, and many more road crossings. All these structures must be designed to meet

Massachusetts Department of Transportation standards. The BFRT is a popular cause. A member of the Friends of the Bruce Freeman Rail Trail Board who chose to remain anonymous reported, "I spoke to the Mass Highway staff members who set up the podium and flags for the event on Friday. They told me that part of their job is actually counting the house, as they do at all these events. Their 'official' count was 125. They also said that Bruce Freeman gets the best attendance of any group for this type of event. They said that they've been to the opening of a \$12 billion (that's BILLION!!!) bridge and there were fewer attendees."

The bad news is that construction of Phase 2A and 2C is scheduled for 2021-2025. The good news is that the BFRT is scheduled for construction at all; many worthy rail trail projects are not. With full design funding in hand, The Friends of the Bruce Freeman Rail Trail can advocate for an earlier construction date for Phases 2A and 2C.

The Bruce Freeman Rail Trail is a 22-mile rail trail that will run from Lowell to Framingham when completed. Phase I, a 6.8 mile long section of the trail in Chelmsford, opened in September of 2009.

John Dieckmann is a Director of the Belmont Citizens Forum.

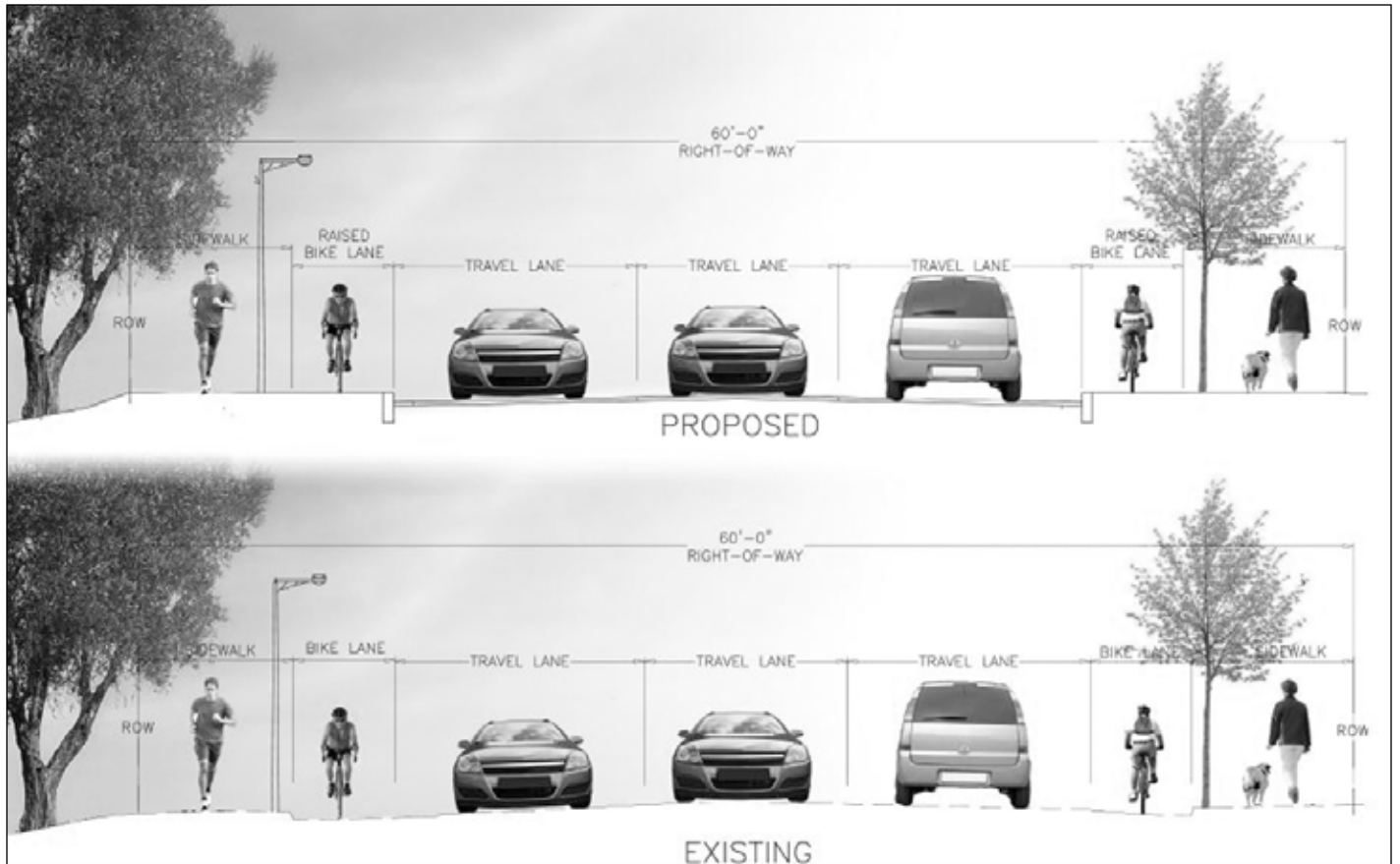
MAPC Begins Belmont-to-Waltham Bike Study

The Metropolitan Area Planning Council (MAPC) has begun a study to identify and evaluate the potential routes for the Belmont Community Path to link the Alewife to Brighton Street path with the Mass Central Rail Trail in Waltham. Eventually, the Mass Central Rail Trail will extend across the state from Cambridge to Northampton.

In this study, MAPC staff will review maps, do on-ground surveys, and interview stake

holders so that the advantages and disadvantages of potential routes can be thoroughly analyzed. The outcome of this work will lead to a design feasibility study for the recommended route, which would in turn be followed by detailed design and construction of the community path through Belmont.

For more information, see www.mapc.org/smart-growth/transportation/bike-ped-projects



CITY OF CAMBRIDGE, MA

In April, the City of Cambridge's contractor began an 18-month-long project to reconstruct Concord Avenue between Fresh Pond Parkway and Blanchard Road. The project involves building new raised bicycle lanes next to the sidewalk on both sides of Concord Avenue. Above are the new design (top) and existing conditions (bottom).

Environmental Events

Tour of the Water Purification Facility
Monday, September 20, 6-7:30 pm, and
Monday, October 18, 6-7:30 pm

The Cambridge Water Department is offering tours of the city's beautiful Walter J. Sullivan Water Purification Facility. The program will include a PowerPoint presentation explaining the process by which water that falls as rain in the suburbs 10 miles west of Cambridge is transported to Fresh Pond and made into pure drinking water for Cambridge. Registration required. Free. Information: www.friendsoffreshpond.org, friendsoffreshpond@yahoo.com, 617-349-6489. *Water Purification Facility front door, 250 Fresh Pond Parkway, Cambridge.*

The Flood Last Time: In Over our Heads?

Tuesday, September 21, 7 pm

Bob Zimmerman, Executive Director of the Charles

River Watershed Association, Tom Daley, Newton's Commissioner of Public Works, and Fred Abernathy, Gordon McKay Professor of Engineering at Harvard University who has studied Newton's wastewater collection system, will address the issue of storm water management in Newton and beyond. Information: www.crwa.org, charles@crwa.org, 781-788-0007. *Newton Free Library, 330 Homer Street, Newton Center.*

Rain Gardens and More

Saturday, September 25, 9 am-noon

Rain gardens take advantage of the natural abundance of rainfall, using water flowing from roofs, driveways, or lawns to create beautiful gardens rather than allowing it to run off. Learn about additional rainwater-retention strategies such as bog gardens, roof gardens, swales, and terraces, tailored for particular situations or to solve problems such as erosion, icy walkways, or wet basements. Feel free to bring photos of a site issue to

discuss. \$33 New England Wild Flower Society members, \$39 nonmembers. Information: www.newfs.org, 508-877-7630. *Garden in the Woods, 180 Hemenway Road, Framingham.*

Lot 1 Trail Clean-up

Saturday, September 25, 9 am

The Friends of Beaver Brook Reservation is sponsoring a clean-up of the trails behind Brookhaven. Wear long sleeves and long pants, bring gloves, water, and any clippers or shears if you have them. Information: www.jumpstartlinux.com/fobbr, allenwest1010@comcast.net, 781-538-5286. *Brookhaven parking lot, 1010 Waltham Street, Lexington.*

An Evening Walk in the Upper Cambridge Watershed

Monday, September 28, time TBD

Chip Norton, Cambridge Watershed Manager, will give a tour of this Cambridge-owned land. The carpool leaves from the Water Department parking lot promptly at the TBD gathering time. Long pants and shoes or boots are recommended. Registration required. Free. Information: www.friendsoffreshpond.org, friendsoffreshpond@yahoo.com, 617-349-6489. *Water Purification Facility front door, 250 Fresh Pond Parkway, Cambridge.*

Sustainable Belmont Monthly Meeting

Wednesday, October 6, 7 pm

All are welcome. Information: sustainablebelmont@gmail.com, www.sustainablebelmont.net. *Assembly Room at the Belmont Public Library, 330 Concord Avenue, Belmont.*

Beaver Brook North Exploration

Saturday October 9, 1:30 pm

Explore the latest addition to the trail network on DCR's Beaver Brook North Reservation with Citizens for Lexington Conservation. Walk the new 500' boardwalk constructed last summer by Lexington's Conservation Steward Volunteers across cattail marshes west of Avalon at Lexington Hills. Information: www.lexingtonma.org/clc/, 781-862-6216. *Metropolitan Hospital administration building off Metropolitan Parkway South opposite 480 Trapelo Road, Waltham.*

Belmont Serves Day

Sunday, October 11, 8 am-1 pm

Volunteer to work on a variety of Belmont service projects including cleaning up Rock Meadow or McLean conservation land. Information: www.belmontrc.org/service.html, service@belmontrc.org. *Various locations.*

Climate-Conscious Landscaping & Gardening

Saturday, October 16, 10 am-noon

Many traditional gardening practices actually contribute to ecological disruption and climate change. This workshop will address the ways we, as gardeners, can diminish our ecological impact and make our work climate neutral, or even better, a climate sink. The class will look at ways to protect healthy natural landscapes, preserve and build soils, reduce or eliminate lawns, and capture carbon in the garden. Sponsored by Drumlin Farm and Concord Climate Action. Massachusetts Audubon Members \$15, nonmembers \$20. Information: www.massaudubon.org, 781-259-2200. *Directions to Concord site will be sent to registrants.*

Living More Sustainably: Food & Shelter

Saturday, October 16, noon-2 pm

Two key aspects of living more sustainably involve taking more responsibility for growing your own food and making your home easier to heat in the winter. Examples of both are presented as part of this on-site visit to a home with an attached greenhouse, plantings of fruits and berries, and efforts to improve the thermal effectiveness of the building envelope through the use of movable insulating shutters, airlock entryways, and passive and hybrid solar architecture. Cosponsored by Drumlin Farm and Concord Climate Action Network. Massachusetts Audubon Members \$10, nonmembers \$12. Information: www.massaudubon.org, 781-259-2200. *Directions to Concord site will be sent to registrants.*

Western Greenway Walk: New Trails Walk

Saturday, October 23, 8 am-11 am

Habitat is part of a much larger regional greenway running through Lexington, Waltham, and Belmont: the Western Greenway. The Friends of the

Western Greenway has been busy building new trails, boardwalks, and bridges to extend the Greenway trail connecting the Greenway parcels. The group will drive to and then explore three new segments of the Western Greenway Trail including Waltham High School to the Waltham Y; Metropolitan Parkway to Walnut Street in Lexington; and Shady's Pond Conservation Area in Waltham. Massachusetts Audubon members \$16, nonmembers \$20. Registration required. Information: www.massaudubon.org, habitat@massaudubon.org. 617-489-5050. *Habitat, 10 Juniper Road, Belmont.*

community organizing. Information: www.friendsofalewifereservation.org, friendsoffreshpond@yahoo.com, 617-349-6489. *Location TBA.*

Fresh Pond Reservation Walkabout

Monday, October 25, 6-7:30 pm

Chip Norton, Watershed Manager for the Cambridge Water Department, will give tours of Fresh Pond Reservation's conservation areas. Registration required. Free. Information: www.friendsoffreshpond.org, friendsoffreshpond@yahoo.com, 617-349-6489. *Walter J. Sullivan Water Purification Facility Front Door, 250 Fresh Pond Parkway, Cambridge.*

Democracy Planning for the Environment

Saturday, October 23, 1-4 pm

Join the Friends of the Alewife Reservation and the Cambridge Tree Stewards for a workshop on

We need you.

If you can volunteer even a few hours a month, you can make a difference. You do not need to be an expert—just a person who cares about our town.

I can devote time to:

- Archaeology & Historic Preservation
- Environmental Protection
- Planning & Zoning
- Community Path
- Walking in Belmont
- Mailings
- Newsletter

I can help pay for this newsletter:

It costs about \$4,000 to publish each issue of our newsletter. Please donate for this purpose:

\$25 \$50 \$100 \$250

Name _____

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If you have questions, please call (617) 484-1844. The Belmont Citizens Forum is a nonprofit 501(c)(3) organization. Your donation is deductible from federal taxes to the full extent provided by law.

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Thank you.

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