

Belmont Citizens Forum

Vol. 6, No. 6

A Newsletter for Belmont Residents

November 2005

Recycling Pays Off for the Environment

By Meg Muckenhaupt

As we stand at the sink rinsing containers for recycling, as we lug a bin full of plastic and glass out to the curb, we've all wondered: does this really help the environment? Is it truly worth the effort?

It turns out that we haven't just been wasting our time. Recycling does make a difference.

On average, every person in Belmont produces 3.4 pounds of trash a day. A little over 1 pound of that is recycled. The rest has to go somewhere, either to a landfill or an incinerator. In Massachusetts alone, there are 980 landfills, but that's not enough. According to a recent *Boston Globe* article, the state exports 1.5 million tons of trash every year. That amount is expected to double by 2012.

Where Does Belmont's Trash Go?

Every weekday, trucks come to Belmont homes to take away trash, recyclables, appliances, and, when in season, yard waste. The trash is trucked off to the Massachusetts Refusetech Resource/Recovery Facility in North Andover, where it is burned. Old computer monitors and televisions, which contain about 5 pounds of lead apiece, are either resold or taken apart by a specialized recycler. Appliances are either sold for scrap or shipped to overseas markets where metals are scarce. Bags of leaves can be composted at the town transfer station, but chunkier yard waste goes to an off-site facility.

Belmont's recycling goes to the FCR facility in Charlestown. Containers are put on a conveyor belt, and a magnet removes metals from above. Plastics and aluminum are blown by air jets over to a manual-

sorting conveyor belt, while glass is hand-sorted by color on still another conveyor belt. The materials are weighed, sorted, and baled. FCR then ships the materials off to processors who manufacture recycled goods. The FCR facility does not wash recycling, and so dirty recyclables are considered garbage. If a truckload contains too much trash or dirty recycling, the entire load is rejected and sent off to a landfill or burned.

Many recyclable products do not get recycled. A 2004 survey in Cambridge found that the portion of recyclables being put in the bins ranged from 14 percent for mixed plastic in low income neighborhoods to 91 percent for newspapers in high-income neighborhoods. Belmont recycles one-third of its residential solid waste. Nationwide, the residential recycling rate in towns with recycling programs varies tremendously by category: from 93 percent for car batteries to 40 percent for paperboard to 22 percent

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Environmental Events Calendar

By Michael Stratford

Welcome to Fresh Pond. Saturday, November 19, 1 p.m.–3:30 p.m. Take a walk around the pond with Ranger Jean Rogers. She will talk about the natural and social history of the area and answer questions. This event is free and will consist of a 2 ¼-mile walk on a mostly-level paved road. Meet in the parking lot of Neville Place, 650 Concord Avenue, Cambridge. Children are welcome with an adult. Register with Elizabeth Wylde at 617-349-6391 or at friendsoffreshpond@yahoo.com.

North to Katahdin. Saturday, November 19, 1 p.m. In the first program in its new "Window on Walden" series, the Thoreau Society Shop will host Eric Pinder, author of *North to Katahdin*. In late summer of 1854, just over 150 years ago, Henry David Thoreau made his attempt at climbing Mount Katahdin. *North to Katahdin* uses the Appalachian

Trail to ask why people continue to flock to those places. This free event will take place at the Thoreau Society Shop, 195 Walden Street, Concord. For more information, please call the shop at 978-287-5477 or visit the website: www.shopatwaldenpond.org.

Wildflowers in Winter. Sunday, November 20, 1 p.m.–3 p.m. Learn how to use dried stalks and seed-heads to identify wildflowers, using the Winter Weed Finder by Dorcas Miller. Copies will be available to borrow or to purchase (\$4 each). Please dress for outdoor and off-path walking. Meet in the parking lot of Neville Place, 650 Concord Avenue, Cambridge. Children are welcome in the company of an adult. Register with Elizabeth Wylde at 617-349-6391 or at friendsoffreshpond@yahoo.com.

Concord-Alewife Zoning Hearings. Tuesday, November 22, 4:30 p.m., Cambridge City Hall. The Cambridge City Council has refiled the Concord-Alewife zoning petition. This is your chance to comment on increased density and traffic on Concord Avenue. For more information, see www.cambridgema.gov/~CDD/cp/zng/concalew/index.html#now.

The Farm Where You Live. Tuesday, November 29, 7:30 p.m. This free lecture is the second presentation in a series on farming history in Belmont. Come to the Belmont Public Library Assembly Room on Concord Avenue. Contact Jane Sherwin at 617-953-2614 for more information.

Floods, Drought, and the War Over Water. Wednesday, November 30. See page 5 for details.

Belmont Focus: Sewer/Flooding Concerns in Belmont. Wednesday November 30, 8–9 p.m. on your local cable channel. See a live discussion of Belmont's liquid destiny with Selectman Will Brownsberger and Nancy Hammett, executive director of the Mystic River Watershed Association. Show repeats at 9 p.m. Tuesday, December 7, and 8 p.m. Thursday, December 9.

A Night Walk. Friday, December 2, 6:30 p.m.–8:30

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Belmont Citizens Forum Officers and Directors

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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 on key subjects.

Our newsletter is published six times a year (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

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or to editor@belmontcitizensforum.org

Citizens Oppose Detention Basin in Park

By Sue Bass

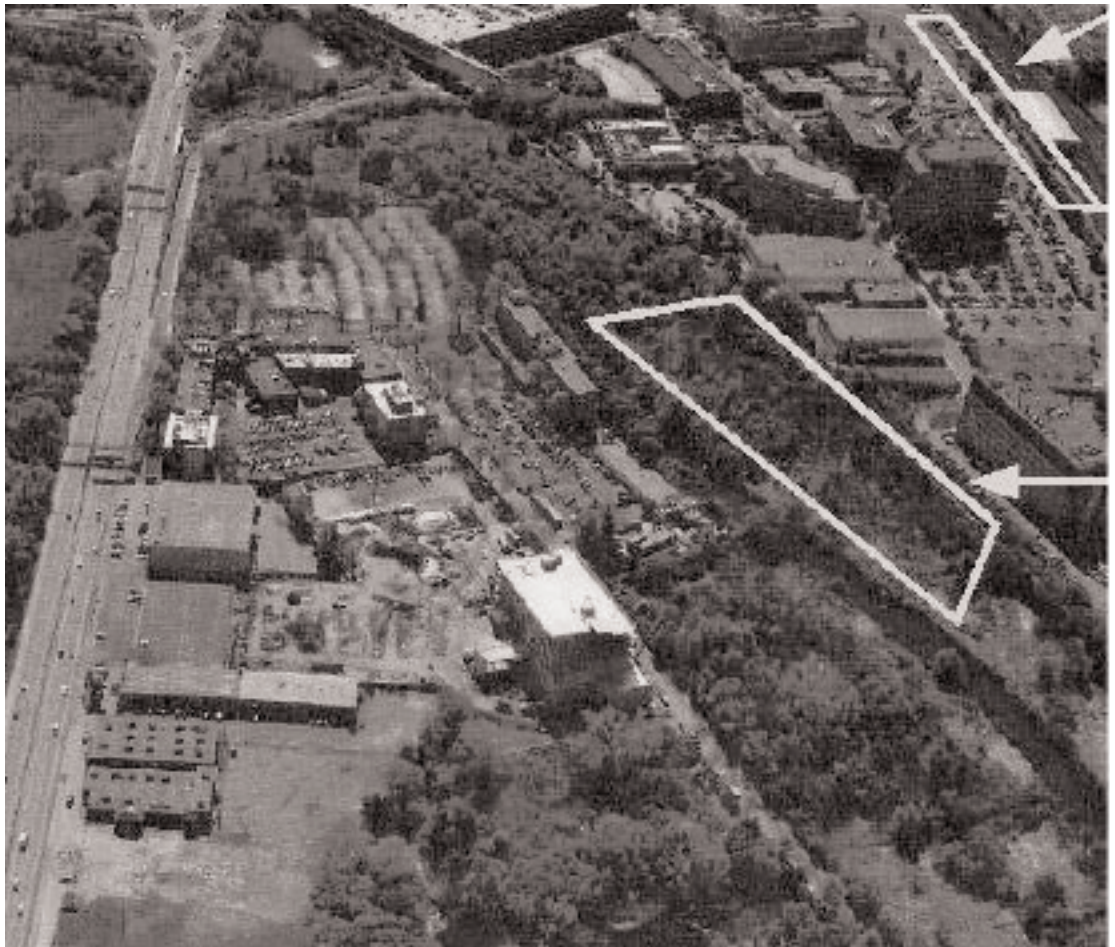
A group of Cambridge citizens has won a round in an effort to prevent the construction in the Alewife Reservation of a detention basin to store stormwater. The detention basin was proposed more than five years ago by the city of Cambridge as part of a long-term program to separate its combined storm and sewer drains. Building a basin was seen as a less expensive way to deal with stormwater from around Fresh Pond than building storage tanks to hold the water.

The Cambridge citizens object to the use of parkland for this purpose. They also argue that putting the detention basin just 20 feet from the Little River will inevitably pollute the river and its bank, as stormwater is mainly street runoff polluted by oil and debris. Instead, they recommend that the city buy a portion of a vacant parking lot adjoining the commuter-rail tracks—1,500 feet away from the Little River—and build a detention basin there. Both alternatives are in the river's floodplain, but the city's preferred location is in the five-year floodplain, which has a 20 percent chance of flooding each year, while the citizens' preferred location is in the 50-year floodplain, which has a 2 percent chance of flooding each year. Steve Kaiser, one of the 12 citizens who organized to challenge the detention basin, estimated that the alternative basin would cost Cambridge and the Massachusetts Water Resources Authority \$16 million, including the cost of land-taking. According

to Kaiser, building in the reservation would cost just as much.

Riverfront has State Protection

Since the riverfront area where the city wants to build the detention basin is protected by the state River Protection and Wetlands Protection acts, the Cambridge Public Works Department needed the approval of the Cambridge Conservation



An aerial view of the locations of the detention basin (large trapezoid at right) and the parking lot site (upper right). Route 2 is to the left. Photo courtesy of S. Kaiser.

Commission, a body appointed by the Cambridge city manager. The Commission voted in favor of the detention basin in June 2004, but the citizens appealed that approval first to the state Department of Environmental Protection—which upheld the

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decision—and then to an administrative magistrate in the state Division of Administrative Law Appeals. On September 30, magistrate Mark Silverstein ruled on the city's motion to dismiss the appeal, deciding in the citizens' favor on most elements. The next step is a conference with Silverstein on November 8, at which a hearing schedule will be set.

One curious feature of this case is that it has arisen at all. Parkland can only be committed to other purposes by a two-thirds vote of the state legislature, according to Article 97 of the amendments to the state constitution. Initially, Cambridge officials announced that they would seek such a vote, but they have since decided against it. "I am not able to discuss anything about that because it's a court action," said Catherine Woodbury of the Cambridge Public Works Department. However, in the past, Article 97 votes have been skipped when land acquired for parks was used for public environmental purposes.

— *Sue Bass is a Precinct 3 Town Meeting member and a board member of the Belmont Citizens Forum.*

The Belmont Citizens Forum Wants to Write About YOUR Group!

The January 2006 Belmont Citizens Forum newsletter will feature a review of Belmont's environmental organizations. If you would like your group included in that issue, please contact the editor, Meg Muckenhoupt, by December 1, 2005, at editor@belmontcitizensforum.org.

Please include contact information, a brief summary of your group's recent activities, and a logo, drawing, or photo of your group (if one is available).



Focus on Sewers and Flooding in Belmont

See a live discussion of Belmont's liquid destiny with Selectman Will Brownsberger, chair of the Arlington, Belmont, Cambridge Stormwater Flooding Board; Ralph Jones, chair of the Belmont Sewer and Water Committee; and Nancy Hammett, executive director of the Mystic River Watershed Association.

Belmont Focus invites calls during the live broadcast at the studio telephone, 617-484-2443. Respond to the show on-line at BELMONT.FOCUS@belmontmedia.org.

**Watch Belmont Cable, Channel 8
Wednesday November 30, 8–9 p.m.**

Show repeats Tuesday, December 7, 9 p.m., Thursday, December 9, 8 p.m.

Floods, Drought, and the War Over Water

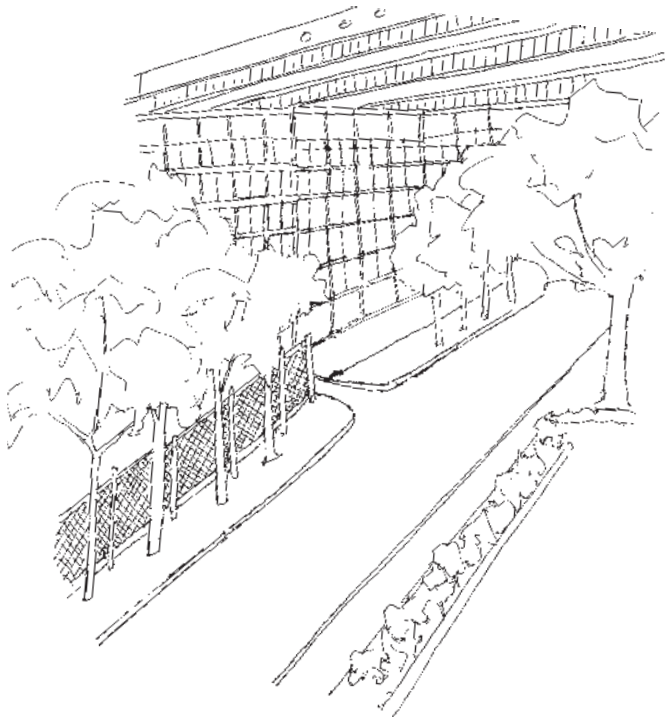
Speaker:

Kathy Baskin, Director of Water
Policy, Commonwealth of
Massachusetts

Wednesday, Nov. 30, 7:30 - 9 p.m.
Habitat Wildlife Sanctuary
Library Room
10 Juniper Road, Belmont



Even with 44 inches of rain each year, much of Massachusetts faces watering bans. Rivers are drying up; fish populations die en masse. Belmont often floods, and sometimes sewage backs up into people's homes. Many towns are caught in a war between water suppliers whose customers want to sprinkler their lawns and conservationists who want to keep stream flows strong enough for fish and wetlands.



Please join the state's new Director of Water Policy, Kathy Baskin of Belmont, a long-time member of Belmont's Conservation Commission and former Director of Projects with the Charles River Watershed Association, for a discussion of the Massachusetts Water Policy. Can we promote strategies for development that is consistent with managing our water resources sensibly?

Free of charge. Light refreshments.

Sponsored by the Belmont Citizens Forum and
Massachusetts Audubon Habitat.

For more information call 617-484-1844.

Turkeys Return to Massachusetts

By Meg Muckenhoupt

If you hear a gobbling noise outside your house this Thanksgiving, it isn't the ghost of your dinner. Wild turkeys have returned to town, even near Belmont Center.

As early as 1520, Spanish ships were taking American wild turkeys to Europe, where poultry breeders began creating domestic turkeys. Three hundred years later, wild turkeys were nearly extinct in Massachusetts, killed off by hunting and habitat loss. The last known wild turkey in the state was killed in 1851 on Mount Tom.

They were missed. Between 1914 and 1972, five attempts were made to reintroduce game-farm turkeys to the wild in Massachusetts; all failed. There were reasons to think reintroduction would work: since the Civil War, a large proportion of New England's farms had been abandoned and returned to forest, turkeys' favorite habitat. Nationwide, turkey populations rebounded from 320,000 to 1.3 million between 1952 and 1974.

In 1972, the Massachusetts Division of Fisheries and Wildlife (MassWildlife) changed tactics. Instead of releasing birds bred on game farms, MassWildlife

released wild birds captured in other states. They survived and bred. By 1978, 1,000 wild turkeys lived in the Berkshires.

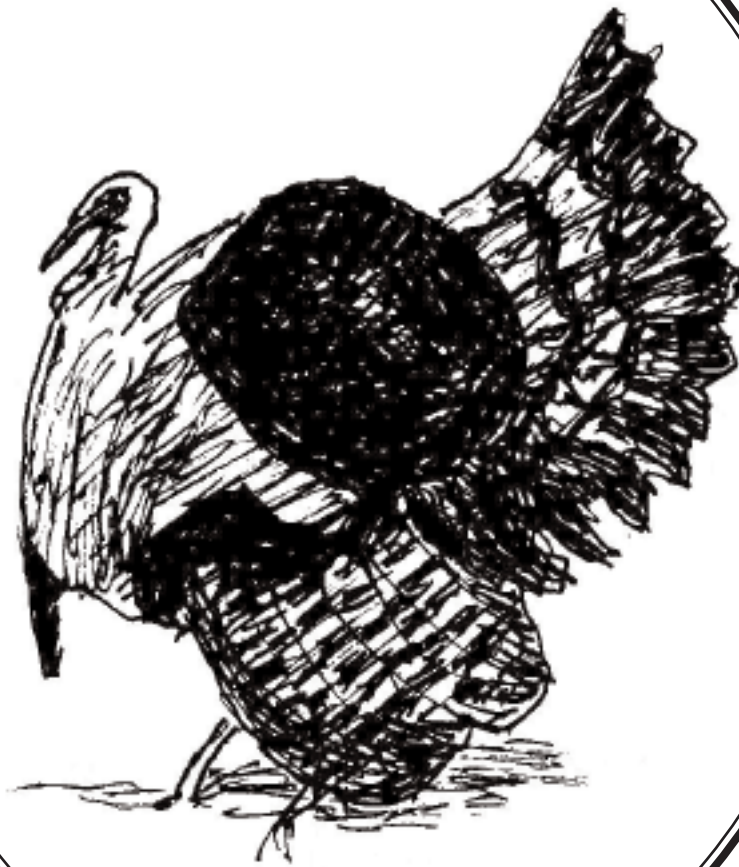
MassWildlife began to place the the Berkshires turkeys elsewhere in Massachusetts. From 1979 to 1996, the agency released 561 wild turkeys in 26 locations, in 10 counties. The releases closest to Belmont were in Groton, Boxford, and Topsfield, but the turkeys have migrated. They like this neighborhood.

Birders commonly see turkeys in Lexington, Arlington, Winchester, and the Alewife Reservation on the Cambridge/Belmont line.

The statewide population now numbers about 20,000, and wild turkeys waddle through all Massachusetts counties except Suffolk and Nantucket. The national population is 6.5 million. It's good to have them back. To see the turkeys spotted in 2004 near Common Street

(as well as other wonderful local wildlife), check out John Maguranis's photos at town.belmont.ma.us/Public_Documents/BelmontMA_AnimalCtrl/Belmont%20Wildlife.

—Meg Muckenhoupt is Editor of the Belmont Citizens Forum Newsletter



Belmont's Coyotes Have Settled Down

By Sumner Brown

I caught up with John Maguranis, Belmont's animal control officer, at Rock Meadow while John was patrolling.

Belmont Citizens Forum: Last year coyotes were constantly in the Belmont news. Now they are not. Where did they go?

John Maguranis: They are still here. ... When coyotes seemed to be everywhere in Belmont, we had transient coyotes competing for space. I believe an alpha male and female have claimed territory in the area. Since it's the natural behavior to defend territories, I believe they are keeping other coyotes away and have kept additional coyotes from entering. ... They are leaving us alone and we are leaving them alone ...

BCF You mean there is only this one pair of coyotes in all of Belmont? Are they practicing birth control?

JM Not at all. An alpha pair breeds once a year. Most of the pups will stay with the parents for over a year and then disperse. ... Unfortunately, there is no good data. We do not know how many coyotes we have or where the pups go.

BCF How can you tell that coyotes are still in Belmont?

JM Look at that! Coyote scat! (It looked like dark dog dirt but contained much hair and small bones.) Since coyotes are so elusive, I've used scat and tracks to monitor their movements and presence. There is far less evidence of them this year than in years past.

BCF When was the last time you saw a coyote?

JM Early last spring. I was at McLean ...

BCF Are pets still being lost?

JM Reports of missing pets have stayed about the same. What has changed is a decreased number of cats I see outside. People are keeping their cats inside more often ...

BCF So there are fewer coyotes in Belmont this year. Is that due partly to people not feeding animals outdoors and not letting their cats out?

JM I doubt it. I have checked every coyote scat I've come upon and have noted that they have always eaten natural foods and very seldom any trash. It appears that they are eating mostly rabbits, mice, and

wild fruits, nuts and berries.

BCF Last year we learned that coyote attacks on dogs are most common in late winter when coyotes are breeding. What happened this year?

JM There were no attacks. There has been so much press regarding coyotes that I believe pet owners are realizing that there's a risk to letting their pets roam free and unattended. They're getting the message, and it's paying off. People should continue to vaccinate their pets for rabies every year.

BCF Speaking of rabies, what about the rabid coyote that attacked a man in Northborough?

JM Rabid coyotes, like any wild animal that is sick, are unpredictable and dangerous. If you see a coyote that is behaving oddly or aggressively—that is, if it does not disappear quickly when it sees you—call me, 617-993-2724, or the Belmont Police at 617-484-1212.



BCF What parts of town do coyotes favor?

JM Coyotes are naturally shy and elusive, so they prefer cover and concealment. Rock Meadow, McLean, and the Met State Hospital sites provide good cover for coyotes. They are around Fresh Pond in Cambridge, and even downtown Boston.

BCF Have coyotes had an impact on other wildlife in Belmont?

JM The biggest impact on other wildlife is development. [The] Metropolitan State area is under heavy construction, as well as parts of McLean Hospital. A small herd of deer has moved from Met State through Rock Meadow and into McLean's prop-

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Coyotes *continued from page 7*

erty. ... The biggest news is the arrival of fishers in Belmont. I also saw a river otter at Clay Pit Pond.

BCF What are fishers?

JM They are members of the weasel family. They look like huge, bushy mink. A large male might weigh 20 pounds. They are ferocious predators ... and pose a much larger threat to domestic cats than coyotes. And they have been sighted all over Belmont.

BCF Why have fishers come to Belmont?

JM Habitat destruction. It's "do or die" for wildlife these days. Either they learn to adapt to urban living, or they perish. ... Conventional wisdom is that fishers need large tracts of undisturbed wilderness, but these guys are adapting. They have learned to live near us. I think we are seeing evolution in action.

BCF How are Belmont dog owners doing?

JM Most are responsible. A few are not. ... Unless someone gives me cause or reason, I give people a verbal warning the first time. I give a written warning the second time. The third time I write a ticket. It is remarkable how effective a \$25 ticket is to get people to stop behaving badly.

—Sumner Brown is a board member of the Belmont Citizens Forum.

To see John Maguranis's gallery of wildlife photos taken in Belmont—including coyotes and the Clay Pit Pond otter—see his page on the town website, www.town.belmont.ma.us/Public_Documents/BelmontMA_AnimalCtrl/Belmont%20Wildlife.



This building is one of 44 historic barns and carriage houses in Belmont. A new town by-law that would make it easier for homeowners to re-use historic accessory buildings on their property is expected to come before Town Meeting next spring.

Recycling *continued from page 1*

for glass.

According to 2002 statistics from FCR's predecessor, KTI, Boston-area municipal solid waste, including recycling, is composed of:

Paper	38%
Yard Trimmings	13%
Food Scraps	10%
Plastics	10%
Metals	8%
Glass	6%
Wood	5%
Rubber, textiles, other	10%

The Problem with Landfills

Landfill space in the Northeast is expensive. Few large expanses of open land are without neighbors to complain about a dump, and landfills must have costly shielding in place to protect groundwater and water supplies from contamination. Moreover, despite the smell, landfills are terrible places to get things to rot: piling up garbage in a big heap ensures that sunlight and oxygen never get to the trash. When archeologist William Rathje's Garbage Project sifted through 150 tons of trash in the 1970's and 80's, it found that newspapers had decomposed so slowly that 50-year-old editions could be easily read. Decades-old yard trimmings and food scraps were also still intact.

Problems with Incineration

When the incinerator in North Andover was built in 1985, with Belmont's participation, the town was promised that the energy generated when our trash was burned could be sold, reducing trash-disposal costs. However, the financial calculations were so far off that, under the old contract, our participation actually cost more than alternative methods of trash disposal. The new contract, effective September 25, 2005, has brought costs down, but incineration still costs \$65 per ton.

Incineration does produce some energy—about 500 kilowatt-hours per ton of trash—and it also reduces the volume of waste. However, 10 percent of the trash remains as ash, which must then be sent to a landfill. While toxic emissions from incinerator smoke have been radically reduced by new



technology, the ash itself is contaminated with dioxin, lead, cadmium, and a host of other hazardous substances. Massachusetts produces 700,000 tons of incinerator ash each year, and five of the state's six ash landfills are scheduled to close in the next 10 years.

The Money in Recycling I: Energy

Is recycling worth it? It is certainly easier to throw newspapers or soda cans in the trash than to put them in special bins, and cleaning a peanut-butter jar for the recycling bin can take up minutes of valuable time or inches of precious dishwasher real estate—and if it isn't clean, it can't be recycled at the FCR plant.

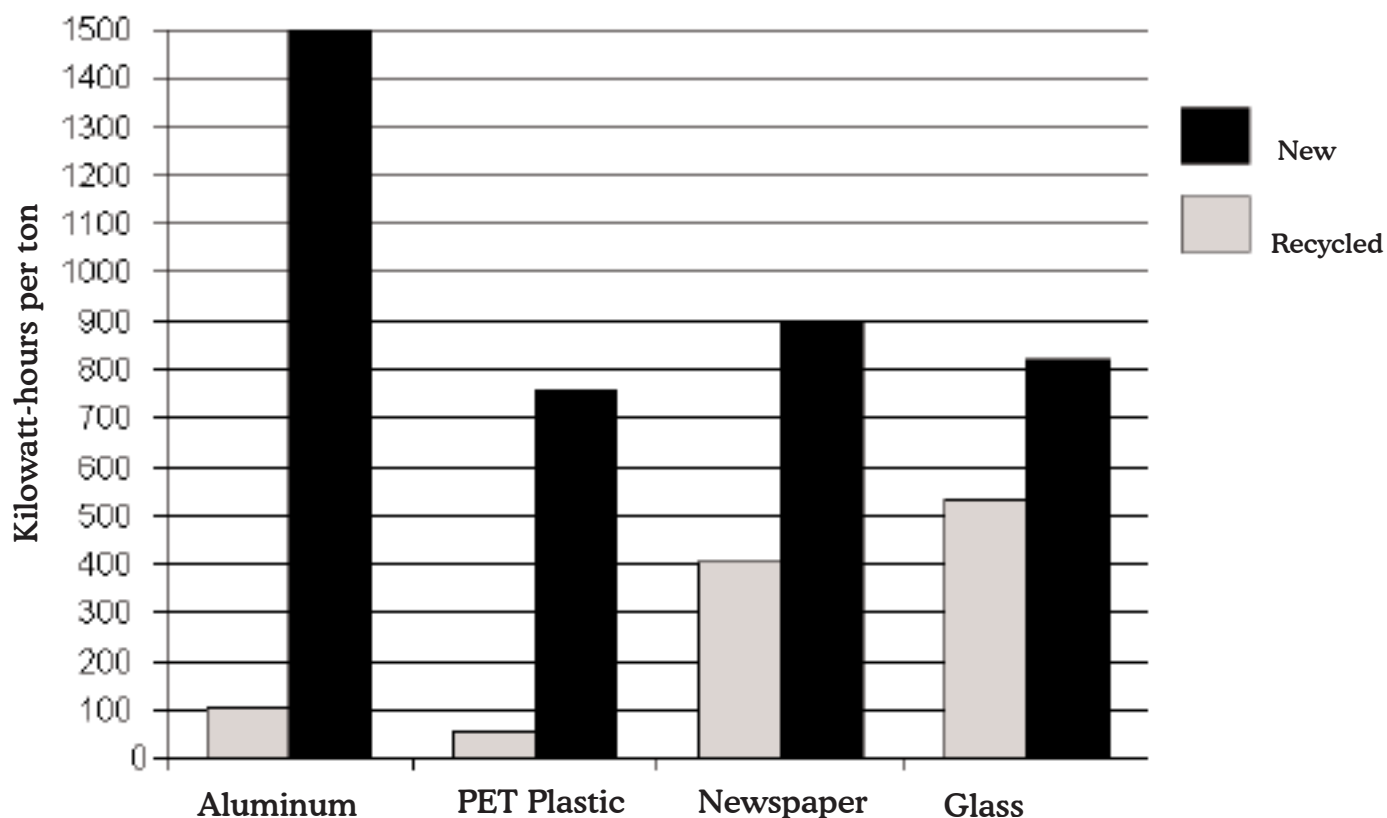
The simplest place to start is with energy. It takes more energy to make new things than to reuse old things—but how much? Below are analyses of the energy it takes to make and to recycle an aluminum soda can, a plastic peanut-butter jar, and a newspaper.

Soda Cans

Soda cans are made of aluminum, which is made from a mineral called bauxite. Making aluminum from bauxite takes a lot of energy: processors dissolve the bauxite in a caustic solution, heat it to 980 degrees

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Energy Usage, Recycled vs. New Materials



Recycling *continued from page 9*

F, then run an electric current through the slurry.

It takes about 7.5 kilowatt-hours (kWh) to make a pound of aluminum—enough for 32 14-gram soda cans. Dividing these numbers, it takes 0.234 kWh to make a single can. That's enough electricity to run a 60-watt lightbulb for about four hours.

Using recycled aluminum to make cans takes much less energy—about 95 percent less. A pound of recycled aluminum takes only about 0.375 kWh to be recycled into new cans. One recycled soda can requires 0.0117 kWh—enough electricity to run a 60-watt lightbulb for 15 minutes.

If you throw away a soda can without recycling it, you will get very little back, as aluminum only gives off 63 kWh per ton incinerated. Thus, each can thrown away means a net loss of 0.222 kWh, enough electricity to run a 60-watt lightbulb for about 3.5 hours.

Plastics (Peanut-Butter Jars)

The little numbers on the bottom of your peanut-butter jar tell you what kind of plastic was used to make the jar. Most peanut-butter jars are #1 plastic,

polyethylene terephthalate—otherwise known as PET. PET is also used to make two-liter soda bottles. Jar lids and bottle caps are made of a different plastic called polypropylene; they cannot be recycled unless they feature the three-arrow symbol.

Making a kilogram of PET plastic requires 83.8 kWh of energy; this includes the power needed for the process itself and the oil or gas used to make the plastic. A 28-ounce peanut-butter jar that weighs 42 grams takes 3.5 kWh to make; a 29-gram half-liter soda bottle takes 2.4 kWh; and a 47-gram 2-liter soda bottle takes 3.9 kWh. Burning discarded PET yields some energy: 1,761 kWh per ton. But that's a net loss of 3.49 kWh for a peanut-butter jar, 2.39 kWh for a half-liter soda bottle, and 3.89 kWh for a 2-liter soda bottle. Recycling the plastic into a new product uses only 7 percent of the energy needed to make plastic from new materials. Each bottle or jar that is recycled saves 30¢ to 35¢ worth of energy.

Newsprint: Killing Trees, Wasting Water

While aluminum manufacturing needs huge quantities of electricity and plastics gobble fossil fuels, paper production requires trees and water. To extract the cellulose fiber, wood pulp has to be

washed, filtered, and dried. Many American paper mills still bleach the paper with chlorine and chlorine dioxide, releasing carcinogenic dioxins into the water.

Between 2.2 and 4.4 tons of new wood or 1.4 tons of wastepaper are needed to make a ton of paper pulp. A ton of new paper also requires between 5,000 and 10,000 gallons of water (depending on the age of the plant), compared with about 4,000 gallons per ton for recycled newsprint. Electricity use is about 9,000 kWh for a ton of new paper and 4,950 kWh for a ton of recycled paper. That's 45 percent less electricity than it takes to make new paper.

Putting a newspaper in the trash is equivalent to discarding 6 kWh of electricity. That's 57¢ at Belmont prices, based on calculations that a year's worth of the *New York Times* weighs about 519 pounds, for an average daily weight of 22 ounces. Burning the newspaper will get you back about 0.5 kWh, for a net loss of 5.5 kWh. It takes 2.7 kWh to recycle that average *New York Times* —2.8kWh less than making a new newspaper.

The Money in Recycling II: Materials

You and I can't sell the kilowatt-hours stored in a soda bottle, and neither can anyone else. What brokers, towns, and recycling plants sell is materials: wastepaper, glass, aluminum, plastic. It is difficult to

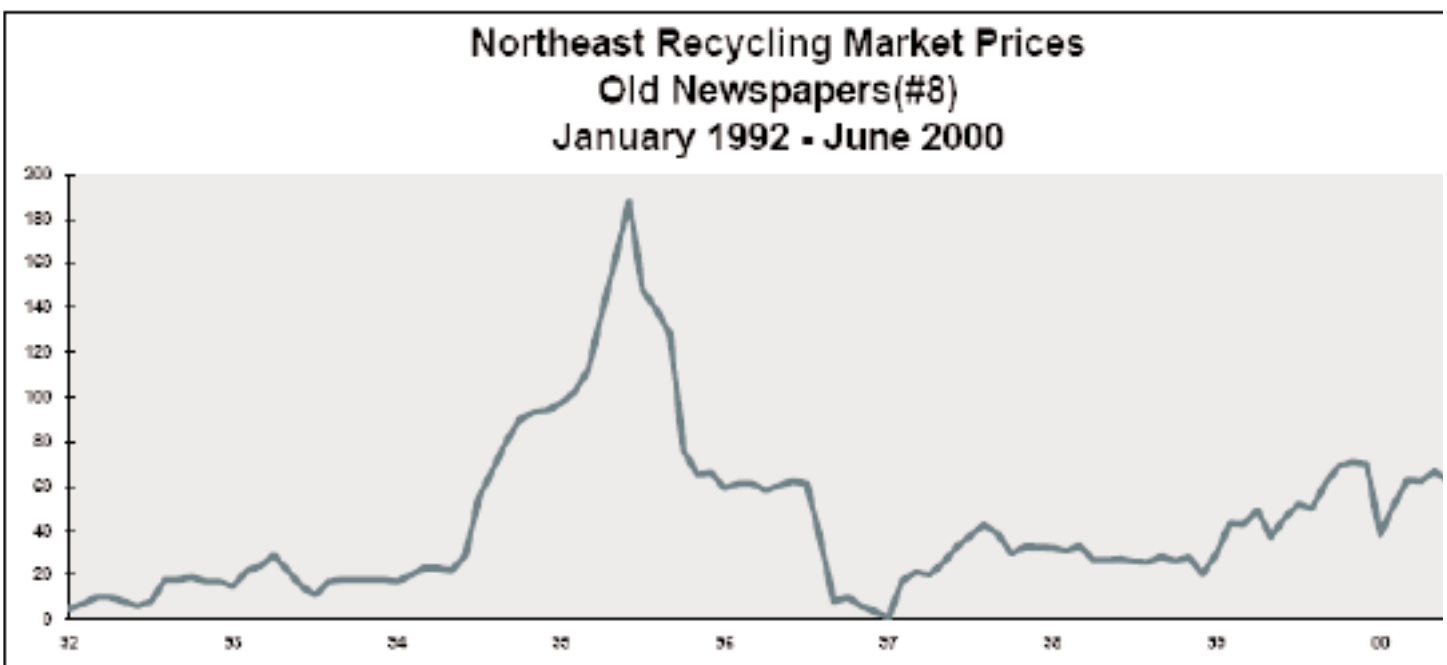
As of October 22, the prices for recycled goods according to *Recycler's World* were

Aluminum cans	\$\$.41/lb
Mixed PET scrap	\$.16/lb
Newspaper	\$34/ton
Post-consumer glass	\$6/ton

make decisions based on the value of those materials, because prices change so much. The two graphs show how the prices of just two recycled commodities—newspapers and PET bottles—fluctuated in the 1990s. The prices of other materials, like aluminum, were more stable but also varied by a factor of two over the eight-year span.

The United States is one of the world's largest exporters of recycled materials. Most of the office paper, newspaper, and cardboard recycled at the Charlestown FCR plant is exported to China. When the Asian economy slowed in the late 1990s, every

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Prices in dollars per ton

Source: Sound Resource Management, Seattle, WA.

recycled commodity lost value.

The Money in Recycling III: Pollution

Recycling reduces pollution. Using energy to make new cans, paper, glass, and plastic means burning more gas, oil, or coal, or using nuclear power. Fossil fuels emit carbon dioxide and nitrogen oxides when burned: carbon dioxide is a greenhouse gas that increases global warming; nitrogen oxides contribute to smog and acid rain. Nuclear power plants don't produce smoke, but their waste fuel must be stored safely in near-perpetuity, something not yet possible.

Energy isn't the end of it. Manufacturing soda-bottle grade PET generates between 62 and 92 pounds of organic pollutants per ton. Making a ton of aluminum generates between 0.3 and 2.5 tons of "red mud," primarily made up of iron oxide (or rust) and aluminum oxide. Red mud can poison farmland and waterways, and open mine pits destroy habitat and leach contaminants into groundwater. Every ton of new paper manufactured wastes at least 1.2 tons of wood pulp, leaves an array of chemical sludge that includes "rotten egg" sulfur compounds, and contaminates thousands of gallons of water. Recycling a ton of paper, however, produces 60 pounds less of air pol-

lutants than manufacturing new paper.

Recycling and the World

The earth would see far more benefit—less pollution, fewer habitats destroyed—if everyone would simply use less stuff. However, given that we will keep using things, the question is what to do next. The problem in calculating recycling's worth comes from trying to put a value on its effect on the environment.

Every piece of trash that is recycled is kept out of a landfill—a landfill that smells bad, looks terrible, and may leak toxic sludge into local groundwater. Compared to dumping trash in landfills or burning it and collecting the resulting heat for energy, recycling still takes less energy. Compared to throwing away goods, recycling releases fewer greenhouse gases that contribute to global warming and fewer acids that poison rain, and puts fewer pollutants into the waterways and air—thus reducing the toxic waste that reaches your body.

In the end, the value of recycling depends on how much it is worth to keep the earth green, clean, and cool. How much would you pay for that?

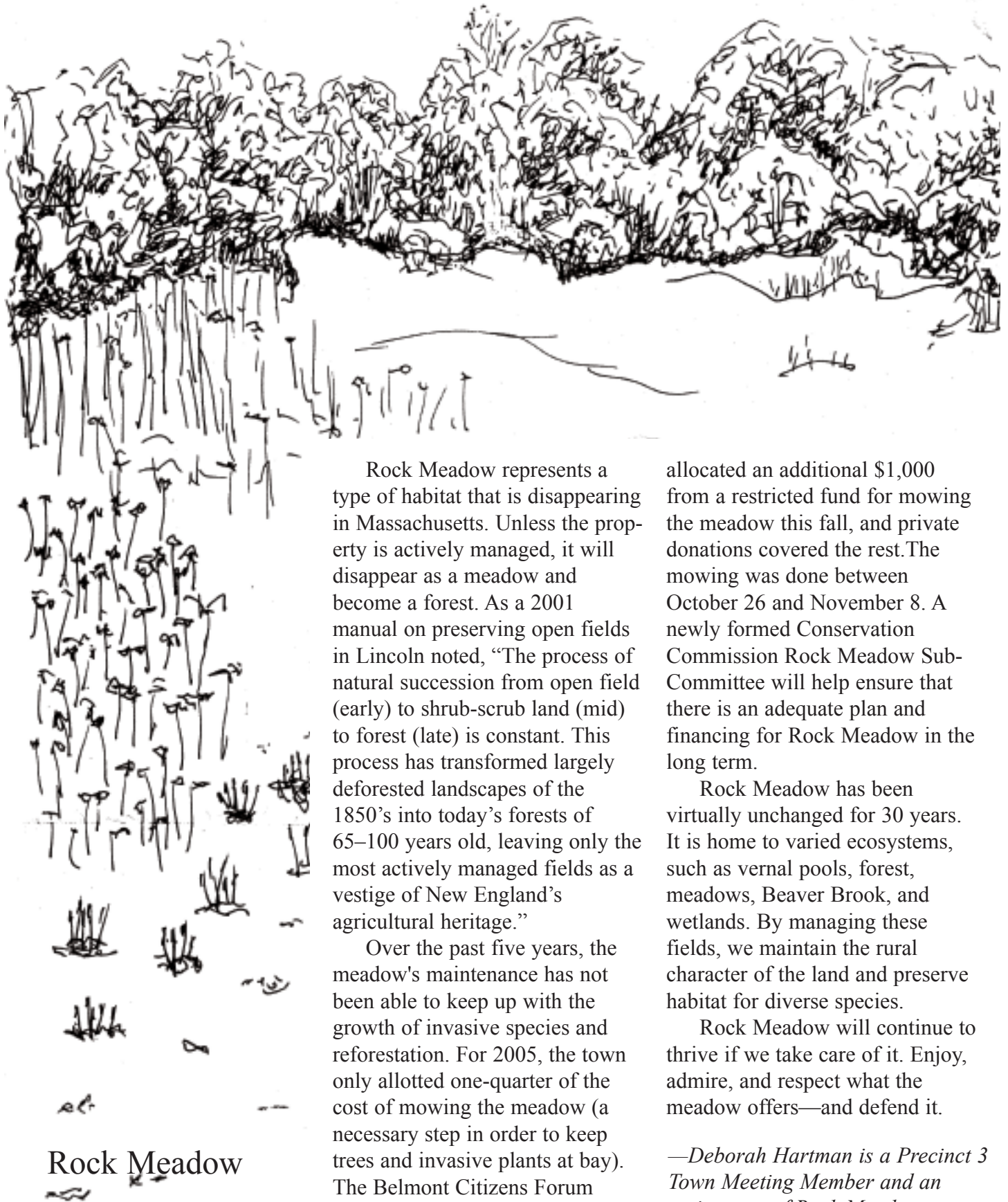
—Meg Muckenhoupt is Editor of the Belmont Citizens Forum Newsletter.

According to the U.S. Environmental Protection Agency, recycling reduces global warming in four ways:

- **Reducing emissions from energy consumption (burning fossil fuels)**
- **Reducing emissions from incinerators (burning trash)**
- **Reducing emissions from landfills – rotting organic wastes, such as the peanut butter in your jar, release methane, a greenhouse gas. Recycling and composting reduce the methane that would be released from a landfill.**
- **Increasing carbon storage in forests – every tree that is left standing in a forest takes carbon dioxide (a greenhouse gas) out of the atmosphere.**

Rock Meadow Needs Care to Stay Open Space

By Deborah Hartman



Rock Meadow represents a type of habitat that is disappearing in Massachusetts. Unless the property is actively managed, it will disappear as a meadow and become a forest. As a 2001 manual on preserving open fields in Lincoln noted, "The process of natural succession from open field (early) to shrub-scrub land (mid) to forest (late) is constant. This process has transformed largely deforested landscapes of the 1850's into today's forests of 65–100 years old, leaving only the most actively managed fields as a vestige of New England's agricultural heritage."

Over the past five years, the meadow's maintenance has not been able to keep up with the growth of invasive species and reforestation. For 2005, the town only allotted one-quarter of the cost of mowing the meadow (a necessary step in order to keep trees and invasive plants at bay). The Belmont Citizens Forum

allocated an additional \$1,000 from a restricted fund for mowing the meadow this fall, and private donations covered the rest. The mowing was done between October 26 and November 8. A newly formed Conservation Commission Rock Meadow Subcommittee will help ensure that there is an adequate plan and financing for Rock Meadow in the long term.

Rock Meadow has been virtually unchanged for 30 years. It is home to varied ecosystems, such as vernal pools, forest, meadows, Beaver Brook, and wetlands. By managing these fields, we maintain the rural character of the land and preserve habitat for diverse species.

Rock Meadow will continue to thrive if we take care of it. Enjoy, admire, and respect what the meadow offers—and defend it.

—Deborah Hartman is a Precinct 3 Town Meeting Member and an active user of Rock Meadow.

Sandler Lot Could Have Friendly 40B Building

By Bill Ellet

Pass by 58–60 Concord Avenue, and you'll see something unusual for Belmont: a patch of urban blight. You'll notice a boarded-up gas station with peeling paint, an abandoned Jeep with two flat tires, faded signs, and, seen through the dirty windows of a decrepit retail store, a towering potted plant that has long since died and shed large brown leaves in a circle on the floor.

Yet the Sandler Skate shop still has an active phone number. The owner, Murray Sandler, regularly spends time in the building. The gas-station lot appears to have a regular clientele, including landscaping trucks and even boat trailers, that uses it for off-street parking. The town assesses the value of the two lots at just over \$1 million.

The future of the property once seemed very clear. In 2003, Elie Jammal, an Arlington developer of com-

mercial property (including the Store 24 in Belmont Center), announced plans to build a Walgreens drugstore at 58–60 Concord. In June of that year, he filed for a special permit with Belmont's Planning Board and Zoning Board of Appeals (ZBA). The application said the gas station would be demolished and the skate shop would be "altered and slightly extended." In this case, "alteration" meant that a new building, totaling nearly 10,000 square feet, would be constructed on the footprint of the old building.

As word of the proposed development spread in the neighborhood, opposition quickly developed. The Concord Avenue Neighbors (CAN), an ad hoc group led by Patrick Brennan and Steve Tomczyk, was formed that summer. Over the next few months, a consensus emerged strongly supporting development but opposing a Walgreens. Neighbors objected to a high-volume commercial use, preferring a residential or mixed residential and commercial use.



A view of the gas station adjacent to the Sandler Skate Building. Photo by Bill Ellet.

The group's primary concerns were traffic, safety, and the effect on the neighborhood's character (including concerns such as trash, lighting, and long hours of operation). The developer's traffic study estimated the drugstore would generate nearly 700 new vehicle trips per day, adding traffic to streets already congested by commuters trying to avoid the Route 2 bottleneck at Fresh Pond. The addition of a high-volume parking lot at a busy intersection, Bright Road and Concord Avenue, also raised safety concerns. Finally, a large retail building with a height of as much as 28 feet seemed to many residents to be out of proportion to the surrounding homes and businesses.

The neighbors sent a 17-page document to the ZBA advocating dismissal of the special-permit application, along with a petition opposing the development signed by nearly 400 Belmont residents. Two hours after the documents were submitted to the town on September 8, Jammal's lawyer phoned Fred Paulsen, who had provided some legal advice to CAN, and told him the permit application would be withdrawn.

In the *Belmont Citizen-Herald*, Jammal was quoted as saying he withdrew the application because of "blackmail tactics by an abutter." According to the *Citizen-Herald* article, he wanted to buy the home at 48 Concord and claimed the owner was demanding twice the assessed value of the property. Jammal did not explain what the purchase of the home had to do with the commercial development of the Sandler property. Joseph Barrell, then chair of the Planning Board, said he was "shocked" by the withdrawal and told the newspaper, "There was certainly no groundswell of protest against the project by the neighborhood."

For the next year and a half, there was no public discussion of the property's future. In spring 2005, though, at a meeting with CAN, Jammal announced a new plan for 58–60 Concord: a 40B residential project. Under Chapter 40B of the Massachusetts General Laws, developers can seek exemption from local building regulations—including zoning—but only if the exemptions are necessary to make the project financially feasible. In communities where less than 10 percent of the housing qualifies as affordable, developers can ask the state to overturn a local denial



Detail of the Sandler Lot gas station. Photo by Bill Ellet.

of a building permit if they promise to meet certain conditions. (In the world of 40B, "affordable" means housing that can be leased or bought by households earning 80 percent or less of the area median income.) The developer of 40B housing must reserve either at least 25 percent of the units for households with incomes at or below 80 percent of the area median income or at least 20 percent of the units for households with incomes at or below 50 percent of the median. In addition, the development must maintain the affordable status of the units for at least 30 years (15 in the case of rehab projects).

Media descriptions rarely emphasize that 40B developers must limit their profits and do not have a completely free hand in overriding local laws and preferences. Moreover, the law works. 40B developments have accounted for the overwhelming majority of affordable housing built in the state since enactment of the law in 1969. In 2004, 60 percent of all new affordable housing in Greater Boston was developed under 40B; if the city of Boston is excluded, that percentage rises to 80 percent.

Nevertheless, 40B proposals often provoke hostile reactions in suburban communities. Current local examples are the O'Neill Uplands project and a proposed 20-unit condominium adjacent to the Minuteman bike path in Arlington. The Uplands development has become a textbook example of an "unfriendly" 40B, with town officials and many residents adamantly opposed to the developer's plans

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Events *continued from page 2*

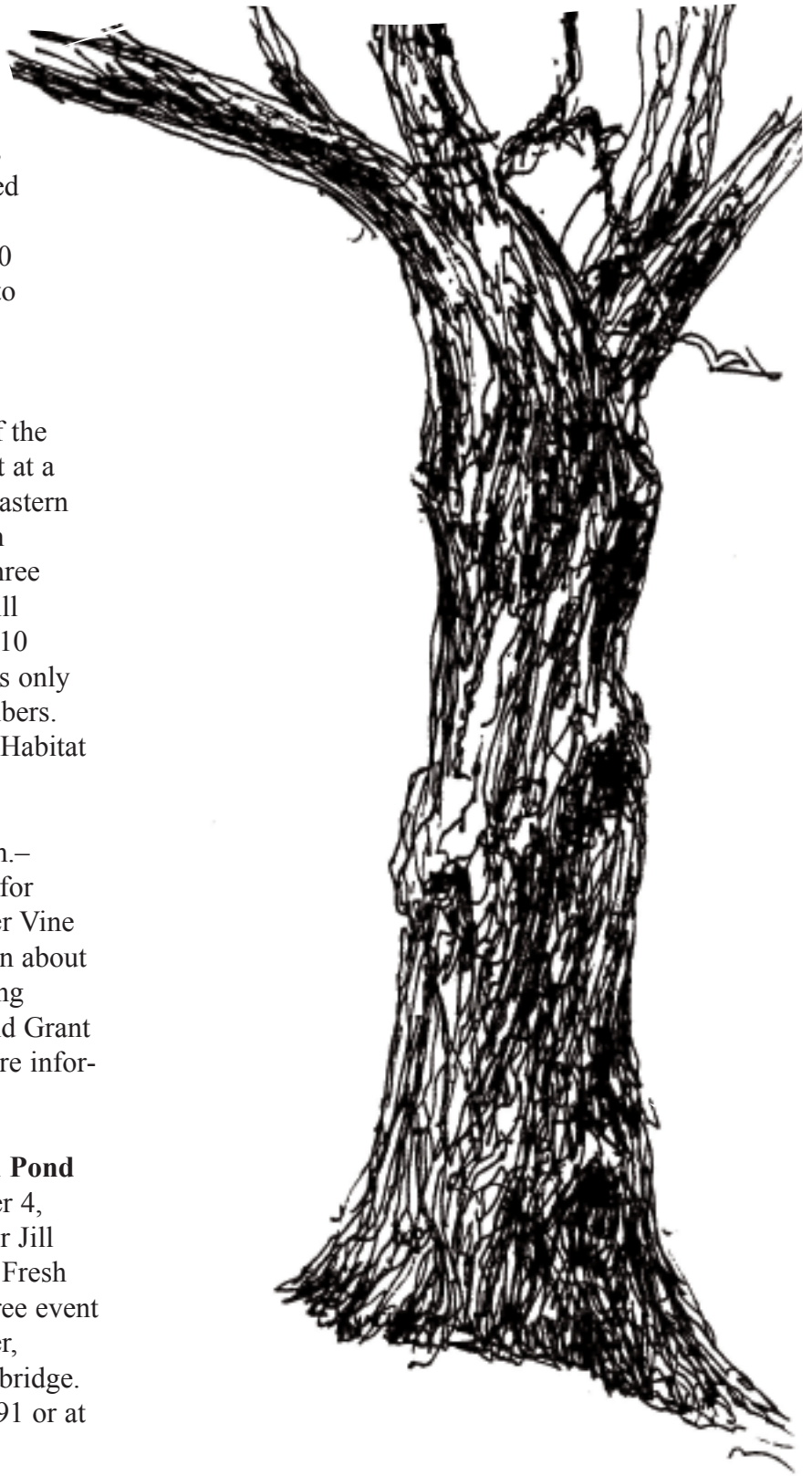
p.m. Find out how nocturnal animals make their way in the dark and observe the night sky with special binoculars. For children ages eight and up accompanied by an adult. Located at Habitat Sanctuary, 10 Juniper Road, Belmont, this event costs \$8 for members, \$10 for non-members. For more information and to register, contact Habitat at 617-489-5050.

Owl Prowl and Sunrise Birding. Saturday, December 3, 5 a.m.–8 a.m. Take advantage of the late sunrise to join expert birder Bob Stymeist at a wonderful time for calling great horned and eastern screech owls. Last year on the Greater Boston Christmas Bird Count, 14 screech owls and three great horned owls were tallied on Belmont Hill before sunrise. Located at Habitat Sanctuary, 10 Juniper Road, Belmont, this event is for adults only and costs \$12 for members, \$15 for non-members. For more information and to register, contact Habitat at 617-489-5050.

A Winter Walk. Saturday, December 3, 9 a.m.–11:30 a.m. Keith Ohmart will lead a Citizens for Lexington Conservation walk along the Lower Vine Brook from North Street to Hayes Lane. Learn about the importance of this greenway corridor. Bring binoculars if possible. Meet at Hayes Lane and Grant Street. Contact Keith at 781-862-6216 for more information.

The Design and Social History of the Fresh Pond Area in the 19th Century. Sunday, December 4, 2 p.m.–4 p.m. Landscape historian and author Jill Sinclair will give a talk and slide show about Fresh Pond and vicinity in the 19th Century. This free event will take place at the Maynard Ecology Center, Neville Place, 650 Fresh Pond Parkway, Cambridge. Register with Elizabeth Wylde at 617-349-6391 or at friendsoffreshpond@yahoo.com.

Sustainable Belmont Monthly Meetings. December 7 and January 4, 7 p.m.–9 p.m. Topics for these meetings (to be held in the Belmont Public Library's Flett Room) include discussions about developing a climate action plan and green building-design guidelines for public buildings in Belmont. For more information, contact sustainablebelmont@gmail.com.



BCF Welcomes Two New Board Members

Two engineers trained at the Massachusetts Institute of Technology have recently joined the Belmont Citizens Forum board of directors. They are Sumner Brown and Stephen Pinkerton, both of Belmont.

Sumner Brown works as a consultant specializing in systems that involve electronic, magnetic, and mechanical elements, and he has done research on magnetically levitated transportation. A nationally-ranked runner, Brown regularly jogs through Belmont's natural areas, taking binoculars and stopping to look at geological formations and wildlife. His runs past Junction Brook led him to question planned development nearby. His wife, Judy McSwain, is a Precinct 2 Town Meeting Member. He has two grown children who attended Belmont public schools.

Stephen Pinkerton has more than 25 years of

experience in energy conservation and alternative energy technology and policy. He helps energy utilities, businesses, and consumers reconcile their economic and environmental responsibilities through efficient delivery and use of conventional and renewable energy resources. Pinkerton is a bicycle commuter most of the year and also rides in the National MS Society's annual fund raising events. He is a Precinct 7 Town Meeting Member. Pinkerton, his wife, Vicky Slavin, and their daughter have lived in Belmont for nearly 8 years.

Two long-serving board members, Jim Graves and Tom Shapiro, have recently left the board. Graves, a founder of the Citizens Forum and its second president, has taken a job that requires extensive overseas travel. Shapiro left the board during the illness of his late wife, Emily Kline. Both are greatly missed.



Sandler Lot *continued from page 15*

for a variety of reasons, from environmental concerns to increased costs for the town. In the Arlington case, developers want to build condominiums on land zoned for industrial use; there the main objections are project density and traffic-safety issues.

Neighbors welcomed the prospect of a residential development on the Sandler property, and some applauded the affordable units mandated by 40B. The main disagreement between the developer and local residents concerned the number of units. At a May 2005 meeting with neighbors, Jamal proposed building 28 units. By the end of the meeting, he had proposed 19 as the absolute minimum. According to Ann Verilli, a Belmont-based housing consultant, a standard density guideline for 40B developments is four times the underlying zoning. Assuming a two-family house is the underlying residential zoning for both lots on the Sandler property, the density

consistent with the guideline would be four times four units, or 16 units.

Still, for a 40B project, the gap between the developer and the community is small. Roger Colton, chairman of the Belmont Housing Trust, said, "Given the narrow difference of opinion on the number of units, a negotiated settlement is a strong possibility, and everyone could walk away happy." He added, "We have to put Walgreens in the past."

Murray Sandler, the owner of the two lots, confirmed by phone that "Jammal is in control." In a recent interview, Jammal said, "I am not going to let that property go." He added, "There will definitely be a 40B there." He seemed unconvinced, however, that neighbors support a 40B residential development and would not say when he would take the next steps in the process.

— *Bill Ellet is owner and editor of Training Media Review, and is a writing consultant at Harvard Business School. He is a member of CAN.*

water. The sewage bill for the town depends on the total volume of sewage we send to Deer Island. In 2004, Belmont bought 782 million gallons of Quabbin Reservoir water and paid for 1,431 million gallons of sewage disposal. Of the Quabbin water, 10 to 30 percent is used to water lawns and does not go into the sanitary sewer.

In other words, most of our sewage is unused water that should not be in our sanitary sewers. This means that one-third of your water bill pays for treating unused water. How does clean water get into sanitary sewers? Part of the answer is groundwater.

Groundwater and Foundations

Here are some facts about groundwater:

- Groundwater flows through the ground: quickly in sandy soil, very slowly through clay.
- If you dig a hole, it will fill with water to the groundwater level.
- The groundwater level varies depending on recent



rains.

- Groundwater levels are high in the spring, low in August.

Every house built in Belmont must either solve the groundwater problem or deal with water in the basement. New construction sometimes has a waterproof membrane in the foundation, making the basement waterproof like a boat—but even boats need pumps.

The traditional solution is to place gravel and a drain system around the base of the foundation so that any groundwater near the foundation gets carried away. Unfortunately, the water from the drains must go somewhere, and sometimes the drains don't work properly.

Foundation drains are placed lower than the floor of the basement and must run downhill. If a house is sited on a hill, the drain can run a short distance and then discharge onto the backyard or the street. Another solution is to attach the foundation drain directly to the storm system. This works if your house is in a flat area.

Sometimes the drain is linked to the sanitary sewer. This is an easy, inexpensive solution that works for the homeowner on the hill who is not concerned about the unfortunate people at the bottom of the hill. In some communities, this was once an acceptable solution. It is not acceptable in Belmont, as it causes sewage to flood into basements, streets, and streams. No surprise then that this setup is illegal.

If your basement collects water, you can turn to aftermarket solutions, like sump pumps. But sump pumps still need a drain, and getting a legal attachment to a storm drain can cost a few thousand dollars. Putting the water down the sanitary sewer may be easy, but it is not acceptable to residents of the Winn Brook neighborhood, a low-elevation part of town where flooding is a problem. Another solution is to drain basement water into a clean-out hole in the floor connected to your home's sewer line. Again, easy but bad—and illegal.

Groundwater Without Foundations

Even where no illegal house connections exist, groundwater can still get into sewers, since sewers leak just like basements.

Some leaking is inevitable because sewers cannot be closed systems like our water supply. We need

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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.

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sewer manholes to provide access in order to clear blockages, and these manholes leak. The pipes between manholes also leak. Like traffic accidents, sewer leaks can be reduced but not eliminated.

How much of Belmont's problem is due to improper connections at private properties and how much to leaks in the town's sewers? No one knows.

For several years, Belmont has been conducting smoke tests to find improper basement drains. Inspectors introduce smoke into sewer lines and then check to see if the smoke emerges in people's basements. This test can only find open sewer clean-outs, but it has already detected more than 200 such connections. Unfortunately, other types of illegal drain connections cannot be found with this test.

What Can Be Done?

Our town government has recognized the need to spend significant amounts of money to correct past mistakes. Belmont has had a Sewer and Stormwater Drainage Committee for years, but in August 2004, the Selectmen shifted the committee's focus to planning long-range improvements.

The first step in rebuilding our sewers is to gather data. Currently, Belmont's sewers are a mystery. Not

only does the town not know where the leaks are or how serious they are, but it is not even completely sure how the sewers connect together. Belmont is in the process of buying GIS software to map the system. By placing monitoring devices in manholes, the Water Department will be able to determine which sewer lines get the most stormwater.

The Future

Most people are happy to know nothing of where water goes when it rains, as long as it is gone. Recently, a neighbor of mine was surprised to find that his septic system was located in his neighbor's yard. He had been living there for more than 25 years. Who knows what shortcuts were taken when your house was built?

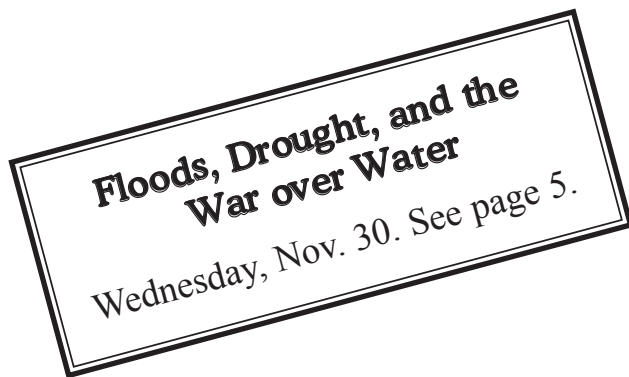
—Sumner Brown is a board member of the Belmont Citizens Forum.



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People Are Asking

Why are the Sewers Full of Clean Water?

By Sumner Brown

Seventy homes in Belmont were flooded with dirty water in the “hundred-year” storm of 2001. This year, during the storm of October 7–12, three homes got a flood of filth. While these problems do not compare with those of New Orleans, no one should get sewage in the basement when it rains.

The problem: rainwater gets into Belmont’s sanitary sewers in such high volume that the sewer lines became pressurized. This pressure forces sewage up into basements.

Walk down your street and look for manhole covers. If you were to pull the cover off a sanitary-sewer manhole and look inside, you *should* see an intermittent flow of used, dirty water. Unfortunately, you would be likely to see a continuous flow of clean-looking water. This clean water is big trouble. When it rains, the clean water in Belmont’s sewers runs hard, threatening to escape—along with the filth—to places where we do not want it. This water in sanitary sewers—water that was not used to clean, cook, or flush anything—is called infiltration and inflow (sometimes abbreviated as “I and I”), and it costs Belmont money.

Sewage treatment is paid for by the cubic foot, whether the water is clean or dirty. And living in Belmont, we pay more for sewage disposal than for

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