



Belmont Citizens Forum

Is it Time to Get Natural Gas Out of Belmont?

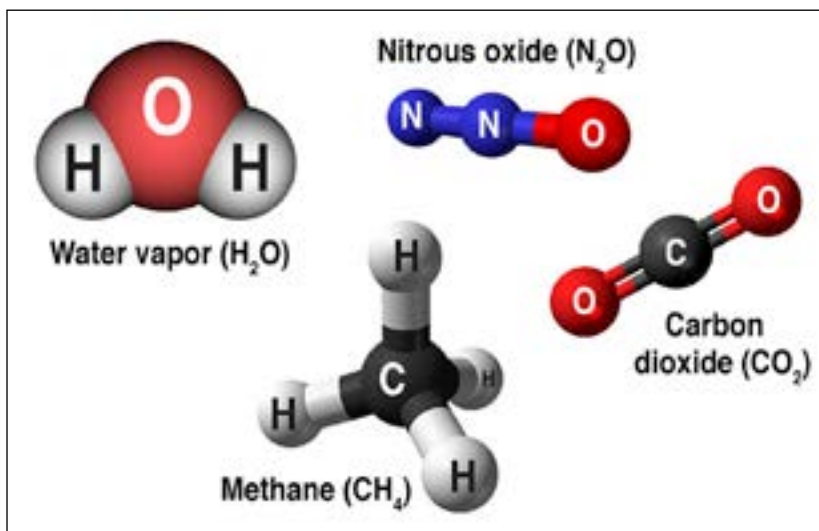
Local initiatives could affect emissions, climate

By Roger Wrubel

In 2009, Town Meeting adopted a Belmont Climate Action resolution committing to an 80% reduction in our town's greenhouse gas (GHG) emissions by 2050. An inventory in 2015 found that Belmont had reduced its GHG emissions by 5% compared with 2007. The inventory showed that the most of Belmont's emissions came from home heating and vehicles. Most of the reduction in emissions in the last nine years is attributable to a shift from using oil for home heating to natural gas, and a similar shift to natural gas from coal and oil to generate electricity for the New England grid.

In 2018, the Belmont Energy Committee issued *Achieving Our Climate Action Plan: A Belmont Roadmap for Strategic Decarbonization*. The roadmap showed that the rate of decline of emissions in Belmont was not sufficient to meet our 80% reduction goal by 2050. More aggressive action is needed. The roadmap calls for "strategic electrification" with electric heat pumps replacing 50% of oil heating systems by 2025 and 50% of gas heating systems by 2032, and for 50% of all new vehicles to be electric by 2030.

Electricity is the only form of energy we can produce without releasing greenhouse gases. No matter how efficient your gas furnace is and how much insulation you put in your house, you still need to burn natural gas to heat your house, which releases GHGs. But you can heat your house and heat your water efficiently with electric heat pumps without adding heat-trapping gases to the atmosphere by using solar, wind, and hydropower to produce electricity. If most of our electricity were produced from those



CLIMATE.NASA.GOV

Models of molecules of greenhouse gases that trap heat. Natural gas is primarily methane.

three sources, electrifying houses and businesses would drastically reduce our carbon emissions and the rate of atmospheric warming.

For Belmont, the strategy involves moving to all-electric homes and transportation while transitioning the electric grid to 100% clean energy. Toward this end, Belmont Light's strategic plan calls for moving to 100% renewable energy by 2022.

Electric Heat Pumps

Electric heat pumps are those square gray boxes that are becoming more common outside buildings. They are very efficient at moving heat from outdoors into buildings to heat them, even at typically low New England temperatures, and removing heat from inside a building for cooling. Heat pumps can also power water heaters. For more information on heat pumps and how they work, see bit.ly/MA_Heat_Pumps

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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.

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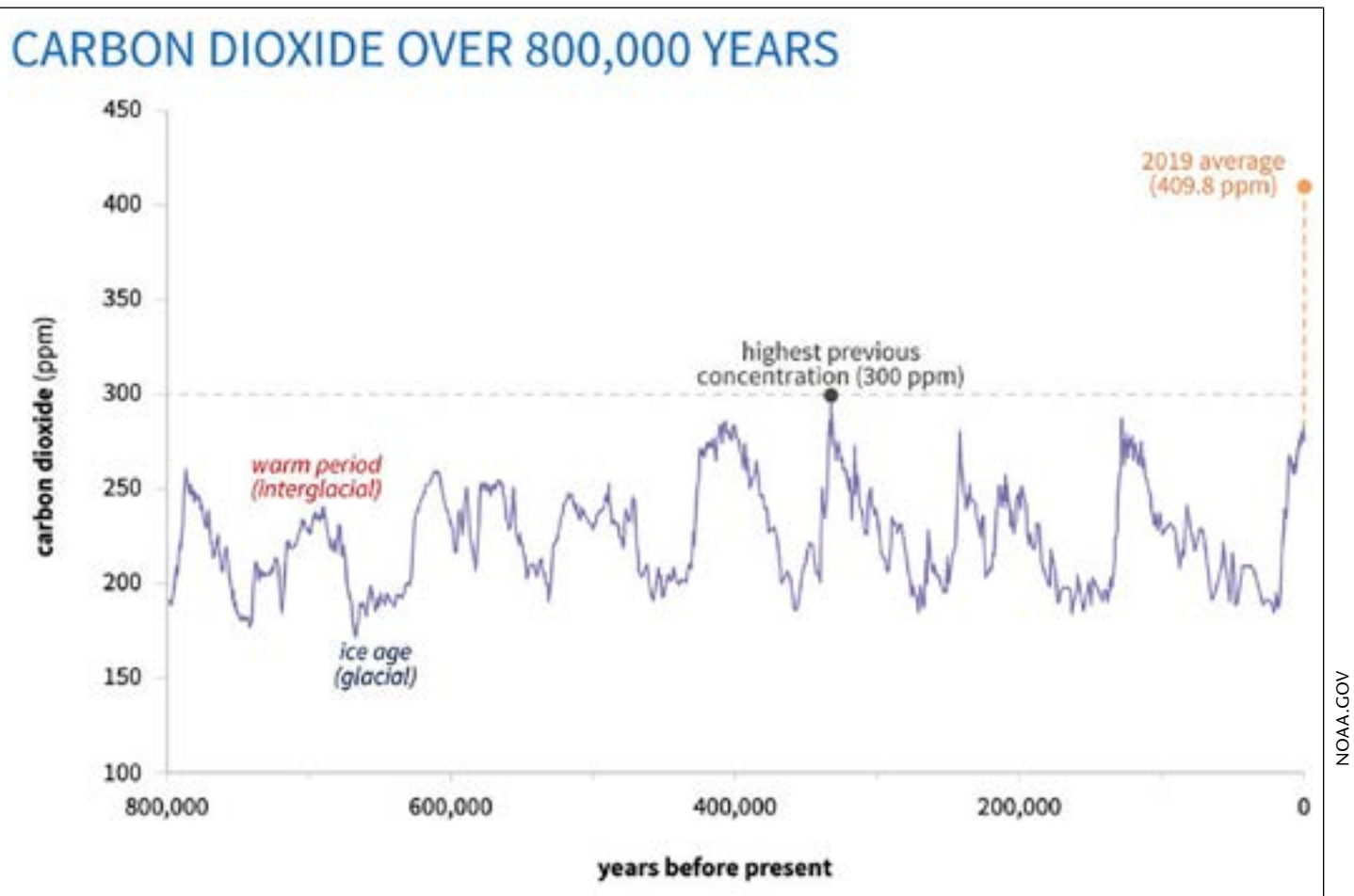
Massachusetts has recently begun to consider its own roadmap to reach its own aggressive climate goals. In April 2020, the Executive Office of Environmental and Energy Affairs (EOEEA) issued a Letter of Determination establishing a GHG reduction target of at least 85% from 1990 levels by 2050 as the Commonwealth's new legal emissions limit. State Senate and House bills addressing a pathway to reach the Commonwealth's goals are now in conference committee: House bill H.4912, An Act to Create a 2050 Roadmap to a Clean and Thriving Commonwealth and Senate bill S.2477, An Act Setting Next Generation Climate Policy.

Why not natural gas?

Natural gas has been described as a bridge to a renewable clean energy future. This is because burning natural gas to generate electricity results in the release of 50% to 60% less carbon dioxide than oil and coal. Substituting natural gas for the other fossil fuels would allow us time, or the "bridge," to develop new renewable, non-greenhouse gas-producing technologies to meet our climate goals. That goal should be to limit the increase in the average global temperature to 1.5°C, compared to preindustrial levels, as recommended by the International Panel on Climate Change. Have we reached the end of the bridge?

The Natural Gas Council ads promote natural gas as clean, reliable, and domestically produced with a clean, blue flame. Perhaps you have switched from an oil-burning furnace to an efficient gas furnace, paid for largely with gas utility subsidies. These campaigns have been successful. Total consumption of natural gas in the United States increased by 29% in the last 20 years while total consumption of energy has been essentially flat. Hundreds of coal-fired electric power plants have been replaced with natural gas generators.

Burning natural gas still produces the greenhouse gas CO₂, and lots of it, as carbon dioxide concentrations continue to rise. It is hard to imagine how either Belmont or Massachusetts can reach their climate goals in the next 20 to 30 years without immediately transitioning away from natural gas. Instead, the gas industry is trying to ensure that natural gas



Atmospheric carbon dioxide levels over the last 800,000 years.

use will increase, as shown by their continued investment in gas infrastructure, including pipelines, gas compressors, and storage which will last decades. Do you think the industry is planning to abandon that infrastructure so we can eliminate emissions from fossil fuels by 2050?

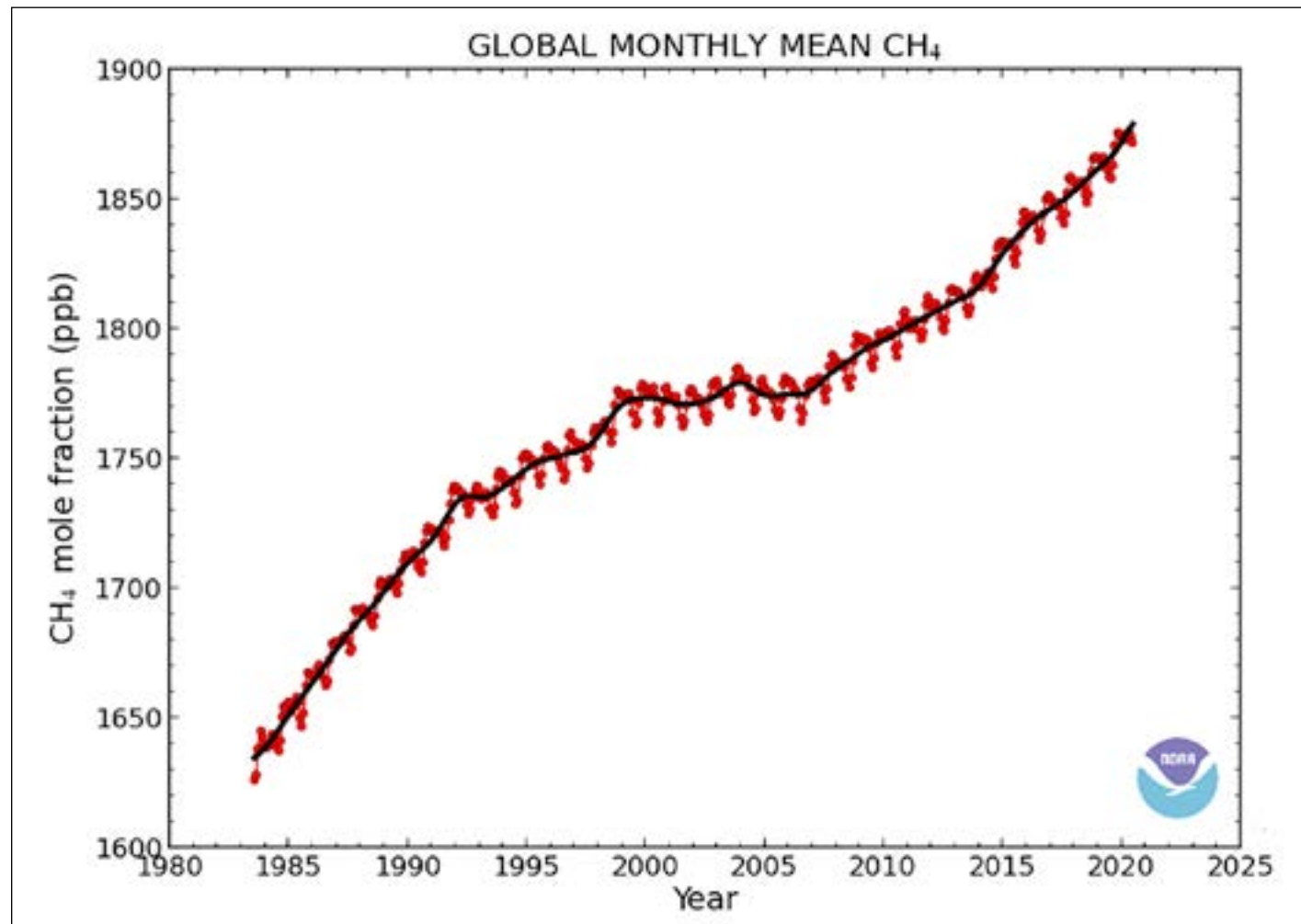
Besides carbon dioxide emissions, another troubling aspect of natural gas is that global methane concentrations in the atmosphere are also increasing. Natural gas is mostly methane, a carbon atom surrounded by four hydrogen atoms; natural gas that ends up in pipelines is about 95% to 98% methane. When methane is burned completely, the hydrogen-carbon bonds are broken, releasing energy as heat along with carbon dioxide and water.

Methane is released into the atmosphere by both natural and human activities. Methane is discharged from volcanoes and wetlands. Human-induced sources of methane include rice paddies, cows, landfills, and fossil-fuel production, transmission, and distribution. In

most cities you can commonly smell methane leaking from underground pipes. Methane is actually odorless so mercaptan, which stinks, is added to natural gas so leaks can be detected. (See "80 Natural Gas Leaks in Belmont," Belmont Citizens Forum *Newsletter*, May 2016.)

Methane is a much more powerful heat-trapping molecule than CO₂, although its atmospheric concentration is much lower than that of CO₂, and it cycles through the atmosphere much more rapidly than carbon dioxide. The half-life of methane in the atmosphere is about nine years, while CO₂ can hang around for centuries. Methane traps 86 times more heat than CO₂ over a 20-year period. So methane must be reduced to keep global temperatures below critical levels by 2050. Reducing natural gas use within this short time frame is an essential part of the solution as the window of opportunity to act closes.

Since many houses in Belmont and our neighboring communities have fossil-fuel heating systems, converting to electric systems will take



Mean monthly atmospheric methane levels 1984-2020.

some time. Most homeowners will wait until they need to replace their fossil-fuel heating system unless there is an attractive incentive. But it makes sense to require electric heating, hot water, and cooking appliances in new construction to avoid installing GHG-emitting infrastructure that will last 15 or more years. This seems to me like a small first step, but there seems little appetite at the federal or state level to take on this issue. However, local legislative action has been gaining momentum.

In July 2019, Berkeley, California, became the first municipality in the United States to prohibit natural gas hookups in new construction. The ordinance was approved by the California Energy Commission in December 2019 and went into effect in January 2020. More than 30 other California local governments, including San Francisco, San Mateo, San Jose, Santa Monica, as well as Marin County, have adopted similar rules, as have municipalities in Oregon, Washington, Ohio, and New York. Industry

sees the threat and has worked with several state legislatures, including Arizona, Tennessee, Louisiana and Oklahoma to prohibit restrictions on choice of utilities.

In November 2019, Brookline became the first municipality in Massachusetts to enact a restriction on fossil fuel infrastructure in new construction and major renovations. New laws in Massachusetts towns require approval by the state attorney general. In July 2020, Massachusetts Attorney General Maura Healey reluctantly rejected the ordinance, while expressing her office's agreement with the objectives of the Brookline ordinance, citing preemption by existing state building codes, gas codes, and a law giving the Department of Public Utilities oversight of the sale and distribution of natural gas in Massachusetts.

What has been happening in Belmont

Since it was created by the Select Board in 2010, Belmont's Energy Committee (EC) has

spearheaded efforts with Belmont Light to reduce the town's carbon footprint in a variety of ways, including inventorying GHG emissions and running clean energy campaigns: a residential energy efficiency campaign, Belmont Drives Electric, Belmont Heat Smart (encouraging electric heat pumps), and Belmont Goes Solar. In 2011, Belmont adopted the Massachusetts Stretch Building Code which required a higher level of energy efficiency in new construction and major renovations.

Marty Bitner, EC co-chair, states that the EC wants to engage with all town committees and town officials to make climate considerations front and center in the town's decisions. To this end, the EC has had a seat at the table in planning the new Belmont Middle and High School, now under construction, which will be zero-net energy and have no natural gas service. A general definition of a zero net energy building is that the amount of energy provided by on-site renewable energy sources is at least equal to the amount of energy used by the building (see www.energy.gov/eere/buildings/zero-energy-buildings). The EC has also worked closely with the Library Building Committee to shape that project, which is still in the planning phase. Bitner believes the library will also be zero-net energy without natural gas service.

EC members also have worked with the Planning Board and a developer to shape a condo/apartment project planned for the McLean subdistrict above Pleasant Street. While this development is likely to have natural gas infrastructure, the developer has agreed to have electric heating and cooling and some water heating with electric heat pumps as well as offering electric induction-cooking ranges.

Bitner said that the EC had readied an Emission-Free zoning by-law similar to the Brookline bylaw to present at Town Meeting. When the attorney general rejected the Brookline bylaw, Belmont's bylaw had to be shelved. Bitner said the EC is now studying legal alternatives: having the legislature pass an emission-free electrification bylaw for the entire state prohibiting fossil-fuel use for heating in houses and other buildings, or allowing each municipality to have the right to pass its own emission-free bylaw.

Bitner says there are four possible paths forward for emission-free electrification in Belmont.

- A nonbinding resolution. Belmont Town Meeting could pass a nonbinding resolution demanding the state enact legislation requiring electric heat and cooling in new construction, so that the state could comply with its own Global Warming Solutions Act adopted in 2008 as well as the Letter of Determination recently issued by EOEEA. The town could coordinate delivering parallel



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resolutions issued by other municipalities to enhance its impact.

- A home rule petition. Belmont Town Meeting could pass a home rule petition asking the state legislature for the power to prohibit fossil fuels in new construction, so the town could comply with its Climate Action Plan.
- Zoning. Communities can use their own zoning authority to encourage, but not require, building electrification. Incentives might include building height or density bonuses.
- Net Zero Stretch Code. Belmont Town Meeting can instruct the Energy Committee and the Select Board to join other municipalities across the state to insist that the Board of Building Regulation and Standards (BBRS), which writes the state building code, add a Net Zero Stretch Code to the basic building code. The original Stretch Code has not been updated since it was created in 2008 and is now out of date. Communities choosing to adopt the Net Zero Stretch Code would require modern standards of energy efficiency for new construction and renovations.

Switching to natural gas from coal and oil resulted in a reduction in CO₂ emissions from electrical generation in the United States. However, the release of methane during the production, transmission, and distribution of

natural gas may have cancelled out most of the benefits of the switch.

Compared with the timeline at which climate change is occurring, the timeline and extent of human reaction is too little and too slow, as evidence mounts that climate change is accelerating. The severity of the danger calls for acting quickly and boldly to reduce carbon emissions to avoid a long period of climate change and increasingly intense natural disasters.

What you can do to help

- Follow the deliberations of Belmont's Energy Committee and support their efforts to bring climate considerations front and center in all town decisions.
- Contact the Select Board and our state House and Senate representatives urging state action to support electrification in all new construction and major renovations, or a home rule petition that would allow Belmont to take action if the town desired.
- Contact the Select Board and our state House and Senate representatives and ask them to lobby the state for passage of a net zero stretch code.

Roger Wrubel is a Town Meeting Member for Precinct 5 and recently retired after 20 years as director of the Habitat Education Center and Wildlife Sanctuary.



IAN TODREAS

Energy Retrofit Keeps Saving after 10 Years



DAVE LEGG/ NATIONAL GRID

David Legg of Synergy Construction works on the Brownsburger roof in 2010.

By Will Browsberger

A little over 10 years ago, my wife and I proposed to my parents that we downsize into a two-family house together and make it as energy efficient as possible. (See “Deep Energy Retrofit Shrinks Utility Bills,” Belmont Citizens Forum Newsletter, September 2010.) This is a story of four experiments.

First, the living arrangement has worked out very well for all of us—we can be helpful in little ways to my parents and we feel very fortunate to see them more. Our only wish is that we had made the decision when the kids were younger.

Second, the decision worked out well financially. At the time, our first daughter was a college sophomore and we were staring at a long stretch of college payments for two more. Even with a substantial investment in energy efficiency, we were able to cut and stabilize

our costs and squeeze through the college cost tunnel.

Third and fourth, the decision has worked out reasonably well environmentally. There were two environmental experiments: how much could we cut our carbon footprint and how well could we sustain the cuts.

We were lucky to find a two-family for sale in Belmont that had “good bones” but was in rough shape, a perfect target for a deep energy retrofit. We set out to find a builder who was experienced with the emerging techniques for reducing home energy consumption and could give us informed advice on our options. We were fortunate to end up working with Paul Eldrenkamp and Cador Price Jones of Byggmeister Construction.

Working with Paul and Cador and their team, we conceptualized a project that would cut energy use to the lowest possible level for the preexisting house, improve the living space, and

fix everything broken about the house (which meant replacing all the basic systems). The biggest cost element was a full reconstruction of the envelope of the house to maximize insulation. The team pumped cellulose into the walls and attic ceiling. Then they ripped off the siding and the shingles and buzzed off all the exterior architectural detailing to simplify the geometry of the structure. They wrapped the house in four inches of foam paneling, with six inches on the roof. For a week or two, the house looked like a giant refrigerator, with a tin foil outer layer and no windows or doors. Then the team cut in the windows and doors and went about installing new siding and insulated doors and windows.

The project included an energy recovery ventilator to reduce the energy loss associated with bringing in fresh air. We also included solar hot water and solar photovoltaic panels for electricity generation. Our modeling indicated that the blown-in insulation had a relatively short five-year pay-back period. However, the outer layer of foam only made a modest additional improvement in insulation value but accounted for most of the cost. We estimated a 92-year payback for that portion of the investment. The economics depend heavily on fuel pricing. Natural gas prices have trended down over the past decade, so that our actual payback period will be longer.

Our two households were initially able to hold our combined annual net energy use to only 11,000 kilowatt hours (counting both gas and electric in kilowatt energy units and netting out solar heat and power generated on site). That is about 20% of the average per household use in New England.

In 2012, we were the first house in Massachusetts and the sixth in North America to meet the standards of the “Thousand Home Challenge.” The project was featured on the cover of Home Energy Magazine in January 2013.

The final experiment was to just live in the house without constantly thinking about energy. The temperature in the house is stable both in winter and in summer and there are no drafts except when we want to open the windows. The house is also quiet. With windows closed, we do not notice much outside noise.

As we stopped thinking about energy use, our behavior did change. The thermostat got warmer in the winter and cooler in the summer. The showers got longer. The writing of this piece was a good occasion to check in on how our less-mindful energy use has drifted up. The numbers below summarize the results of our two environmental experiments.

Two-family living is a great choice from a personal and financial perspective. A deep-energy retrofit makes for a very liveable home and does save a lot of energy, although it is not going to pay for itself in energy use reductions alone. Finally, at least with current technology, the deepest energy reductions require sustained behavior change.

Notes

The “10 years after” period had both more heating degree days and more cooling degree days (5166/939) than the “Immediately post-project” period (4628/703), but this difference is not enough to explain the increase in energy use.

Site energy is from the Energy Information Administration’s survey of residential energy consumption for New England for 2015. It includes site generated energy in the total, whereas we back it out, but since the average home does not have much site energy, this difference does not materially distort the comparison.

Will Brownsberger is the Massachusetts state senator for the Second Suffolk and Middlesex District of Massachusetts.

Total annual purchased energy per household in terms of kWh

Pre project - average of two single-family homes	58,724 kWh
immediately post-project (9/2011-8/2012), average of two aparments	5,522 kWh
10 years after project (9/2019-8/2020), average of two apartments	10,211 kWh
New England average household site energy (2015)	28,516 kWh
Approximate annual contribution of solar PV panels, netted out of per-apartment averages	6,000 kWh

By far, the insulation is the part of the project that made the most difference in our energy consumption. We didn’t have prior consumption data, but our modeling suggested that the insulation reduced the heating needs for the structure by 80% to 90%. That made the choice of heating source less critical. The heating system we chose was two small, high-efficiency gas burners, one for each apartment. At that point in time, our analysis indicated that fuel pumps were not actually better in terms of their net carbon emissions, including energy generation. The fuel pumps are better now and the grid is somewhat greener. We are waiting for the right moment to make the upgrade.

The envelope investment does pay back in other ways. We will not need to paint for decades and the wood structure of the house is very well protected from moisture and insects. During the first year or two of occupancy, we continued to tune our use down—using the most efficient lighting, shower timers, and low-flow shower heads. We monitored and attempted to optimize power consumption by our various electrical devices and generally stayed conscious of our energy use. We also tracked our total energy use carefully to measure the success of the project. The state’s secretary of environmental affairs used the data we generated to develop standards for deep-energy retrofits.

Join the BCF Newsletter Team!

Are you plugged into Belmont and interested in helping maintaining Belmont’s small-town atmosphere? We are looking for a managing editor for our bimonthly newsletter to help keep residents informed about Belmont’s planning, zoning, and traffic issues; its natural and historical resources; and progress on the Belmont Community Path.

You’ll work closely with executive editor Meg Muckenhaupt and our newsletter committee to shape each issue by:

- Staying tuned in to the topics that we cover
- Planning articles and maintaining our running articles list
- Finding, encouraging, and providing feedback to writers
- Helping to manage publication schedule
- Participating in BCF board and newsletter committee meetings

Please contact us at bcfprogramdirector@gmail.com for a complete job description, starting date, and salary information.

Carrots and Sticks Nudge Belmont’s Cleanup

By Anne-Marie Lambert

Two key drivers are nudging Belmont to clean up our waterways and protect us from the storms coming with climate change: the threat behind an Environmental Protection Agency Consent Order and the tempting Massachusetts Municipal Vulnerability Program (MVP)

Every six months, Belmont is obliged to file a report with the New England region of the federal Environmental Protection Agency (EPA) to demonstrate compliance with a 2017 consent order under the Clean Water Act. The town has to show steady progress cleaning up the sewage pollution Belmont has sent to Boston Harbor due to the intermingling of Belmont’s sewer and stormwater systems.

Belmont’s waste ends up in Boston Harbor because the contents of our leaky sewers travel into our rivers and streams by way of nearby stormwater pipes. Most of the sewage winds up in Winn’s Brook or Wellington Brook, both of which feed into Little Pond or Little River. These waterways continue into Alewife Brook near the Alewife MBTA station. Alewife Brook then winds north through Cambridge and Somerville until it enters the Mystic River by Dilboy Stadium in Somerville. It’s surprisingly difficult to determine if the residents at any particular house—maybe yours or mine—are innocently contributing to Boston Harbor pollution with every flush and laundry load. (See “Hidden Leaks in Pipes from Street to House Pollute Waterways,” Belmont Citizens Forum Newsletter, March 2018.)

There will be a big difference between the disappointing July 2020 EPA compliance report and the upcoming January 2021 report. This year, the town decided to spend the first half of



Road markings for sewer work.

ANNE-MARIE LAMBERT

the year drawing up designs to bundle up all the known repair work into one umbrella contract in the second half of the year.

During the first six months of 2020, no new sewer rehabilitation work was completed. Moreover, some of the 2020 measurements revealed that certain repairs done in 2019 were insufficient to make the storm drains run clean. In particular, there are still elevated levels of E. coli, a hazardous bacteria carried in sewage, in the area around Bow Road, Randolph Street, and Lincoln Street, indicating an additional sewage source has emerged. Most 2020 measurements, though, showed the storm drains running clean, indicating that other 2019 rehabilitation work had done the trick.

As part of preparing designs, the town’s contractor sometimes sends a camera down the drain to inspect for cracks and the general condition of each pipe. They will often see mineral deposits around joints or cracks, indicating that seepage occurred at some point in the past. Cameras can also detect whether tree roots are damaging the pipe. Sometimes the camera shows some surprises: under Dalton Road, earlier this year the camera showed a plastic baseball bat stuck in the drain.

This summer, the \$493,220.51 comprehensive sewer system rehabilitation contract was awarded to National Water Main Cleaning Company of Canton (see “Cleaning Belmont’s Water Means More Work,” Belmont Citizens Forum Newsletter, May 2020). This project is funded under the Massachusetts Water Resources Authority (MWRA) I/I Grant Loan Program, and is expected to be completed in December. Work is underway to address issues found in 2019. Most of the work is lining sewer and stormwater mains under the road, work which can be done between manholes without digging up the streets. It also includes some repair of broken pipes and lining of sewer and stormwater lateral lines (the smaller pipes which run between each home and the main underneath our roads). The contract addresses at least one illicit connection, where a house had been sending sewage directly to the storm drain instead of the sewer system.

The Sewer System Rehabilitation contract includes work in the following locations:

- Maple Street, Bartlett Avenue
- Oliver Road
- Knox Road, Bellington Road, Herman Road
- Shaw Road, Herbert Road, Houghton Road
- Livermore Road
- Betts Road
- Hoitt Road, Westlund Road
- Hill Road

Many factors go into deciding when to take a fix-as-you-go approach and when to bundle work into a large project. As far as I can tell, the main limitation preventing the town from moving faster to clean up our pollution continues to be the availability of town staff qualified to oversee this type of contract work. Without the staff to oversee the work, it’s challenging to take advantage of all the funds made available through the MWRA I/I loan program, and difficult to pursue more measurement and rehabilitation projects in parallel.

ANNE SIFNEOS



Nonetheless, the prospect of additional state funds motivated the town to identify even more potential projects related to stormwater: Belmont submitted an application for a Planning Grant under Governor Baker’s Municipal Vulnerability Assessment (MVP) program. Unfortunately, the town was not granted an MVP Planning Grant this year. Glenn Clancy, Belmont’s director of Community Development, expects to learn soon what factors may have influenced that decision.

The exercise of preparing the application helped the town identify and prioritize key vulnerabilities and countermeasures to make the town more resilient to the effects of climate change. It also required the town to identify funding sources and regional partnerships which might help overcome the current oversight challenges. As storms become more intense, I’m hopeful the Select Board prioritizes asking Clancy and his staff to propose creative ways to oversee and fund the priority projects identified in the MVP application.

I remain impressed with the power of legislation and government leadership at different levels. The Massachusetts Municipal Vulnerability Assessment Program (MVP) and the Clean Water Act, as enforced through the EPA Consent Order, together served as a carrot and stick to motivate our town leaders to figure out ways to take concrete actions they were unlikely to have taken otherwise.

Ultimately, though, the most powerful force of all is the voice of citizens. Until more of us make obvious to local leaders that cleaning up our waterways and making us more resilient to climate change really are top priorities, they will spend their time and energy addressing other issues. It’s time for citizens to find and create opportunities to help town leaders celebrate victories and to have their back when they invest even more in resilient and clean waterways. It’s time to ask them which of the priority MVP projects they will find a way to fund, and to ask what it would take to make even faster progress on cleaning up our waterways. It doesn’t have to be this slow.

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

Community Path Proponents Offer FAQ

By Sara Smith, Eric Batcho, and Jarrod Goentzel

What is the Belmont Community Path?

The Belmont Community Path is a proposed shared-use path running just over two miles through Belmont along the former Central Massachusetts Railroad line connecting Cambridge and Waltham. It is a critical link in the 104-mile Massachusetts Central Rail Trail (MCRT) between North Station and Northampton. See a map and more details on the MCRT at www.masscentralrailtrail.org/interactive-google-map.

Who is it for?

The shared-use path is for a wide variety of non-motorized users, including walkers, runners, bicyclists, roller skaters/bladers, wheelchair users, and people walking dogs on leashes or pushing strollers. The path will comply with the Americans with Disabilities Act and include accessible connections to Belmont Center and the Belmont Middle and High School.

What are the path’s phases?

The path is being designed and constructed in two phases. Phase 1 includes the rail trail from Brighton Street through Belmont Center to the Clark Street pedestrian bridge and also the railroad underpass from Alexander Avenue that extends along the future Belmont Middle and High School to Concord Avenue. Phase 2 continues from the Clark Street pedestrian bridge to the Belmont/Waltham line.

Phase 1 has two components. Phase 1a includes a railroad underpass between Alexander Avenue and the Belmont Middle and High School and an extended path across the campus to Concord Avenue. Phase 1b is the portion of the path from the Clark Street bridge to Brighton Street, where it meets the existing Fitchburg Cutoff Path to Alewife Station.

Will the path be safe?

Yes, the path will be safe. The path will be completely separated from the MBTA railroad corridor by a continuous fence.



Design and construction phases of the Belmont Community Path.

To accommodate different types of users, in most locations the paved path will be 12 feet wide with a 4-foot shoulder. In certain locations, such as Belmont Center and the Alexander Avenue underpass, the path will narrow to 10 feet due to site constraints.

The path will also include new signals and gates to enhance safety at the Brighton Street

crossing. The underpass tunnel will include lighting to improve safety.

How are concerns about the path being addressed?

The town hired Nitsch Engineering to design Phase 1. Nitsch has met with stakeholders to solicit feedback to inform the project design.



Design and construction phases 1A and 1B of the Belmont Community Path.

Stakeholders have expressed concerns about privacy, security, noise, drainage, and parking. To address these concerns, Nitsch's proposed design includes:

- extensive vegetation and screening for abutters,
- a network of swales and sub-drains to reduce water runoff and improve drainage, and
- parking restrictions near the Alexander Avenue underpass access point.

As the project moves forward, Nitsch will continue to seek input from stakeholders to enhance the project's design.

Who is paying for the path?

Payment for the path is divided into design and construction phases. Funding for the design of Phase 1 has been allocated from the town's Community Preservation Act funds and from MassTrails, a state interagency initiative led by the Governor's Office.

Construction costs are expected to be covered by the federally funded Transportation Improvement Program (TIP), a five-year budget plan administered by the Boston Metropolitan Planning Organization (MPO).

While construction of Phase 1 is listed in the TIP "Universe of Projects," it has not yet been programmed. In 2021, the MPO will assign a specific fiscal year for funding based on factors such as safety, mobility, sustainability, equity, and economic vitality relative to competing projects from other towns. Construction of Phase 1 will only start once TIP funding is in place, and will take at least another year to complete after it is funded.

How can I learn more and give input?

If you are interested in learning more or getting involved, please contact the Friends of the Belmont Community Path at belmontpath@gmail.com. Opportunities to explore the work that has been done to date and track future opportunities for giving input include:

Nitsch Engineering belmontcommunitypath.com/

The Community Path Planning Committee www.belmont-ma.gov/community-path-project-committee

Belmont Community Path Feasibility study: www.belmont-ma.gov/community-path-implementation-advisory-committee-cpiac/pages/community-path-feasibility-study

A webinar on the MassTrails team, the path, and the TIP funding process youtu.be/2O7uv4owuns

A complete history of the project www.belmontcitizensforum.org/2020/03/02/community-path-began-decades-ago/

How will the Belmont Community Path link to other local paths?

Construction of neighboring links on the Mass Central Rail Trail continues to move forward:

- The Fitchburg Cutoff segment from Alewife Station to Brighton Street was completed in 2013.
- The Wayside Trail segment from Weston to Wayland was completed in 2019.
- The Somerville Community Path segment adjacent to the Green Line Extension is expected to be completed by the end of 2021.
- Waltham has completed a final design for the segment of the path directly to the west of Belmont. That segment is budgeted for construction in the next fiscal year.

The Belmont Community Path is a critical link. Clear plans and support from town leaders and residents this next year could yield outside funding to build a major town amenity, and broad support could accelerate the timing. In addition, Belmont should begin the design process for Phase 2 as soon as possible to avoid significant delays in the funding and construction of Phase 2.

Sara Smith, Eric Batcho, and Jarrod Goentzel are members of Friends of the Belmont Community Path. They can be reached at belmontpath@gmail.com.

Jerry's Pond May Have A Chance to Shine

By Greg Harris

Since developers have targeted the Alewife area for rapid development, with housing interests erecting massive apartment complexes and life sciences companies rushing to turn the area into a second Kendall Square, long-time residents have feared the trampling of their history, quality of life, community health, and the remaining natural environment. But these changes present opportunities as well as risks.

If a coalition of long-time residents and neighborhood activists get their way, life science developer IQHQ's \$125 million dollar acquisition of land next to the Alewife T Station may result in the resurrection of Jerry's Pond. This neighborhood landmark has been fenced off due to pollution for nearly 60 years, but it offers a chance for a restored and accessible natural reservation.

Environmental sustainability—and justice

To understand the appeal of a long-inaccessible pit sitting on industrial land and what moved Cambridge's City Council to unanimously pass a resolution pushing for it to be restored to public use, consider both the neighborhood's present needs and its enduring history.

The present needs are not hard to define. Drowning in traffic, with a skyline set to be crowded by ever-more condominium complexes, office buildings, and laboratories, the Alewife region must act now to preserve and enhance its green spaces, parks, and open corridors or see access forever lost.

Floodwater management is a large concern. Alewife sits at the heart of what used to be called the Great Swamp, stretching from Little Pond



An aerial view of Jerry's Pond. Russell Field is in the left foreground; Route 2 and Alewife station are visible at the top of the photo.

in Belmont and Spy Pond in Arlington down to Fresh Pond in Cambridge and draining to the Mystic River via Alewife Brook. When storm surges and sea level rise threaten, the remaining natural water features of the landscape need to be preserved and expanded. Though Jerry's Pond was created by digging clay, it is part of the Great Swamp. The land fenced in along the pond's edge is among the largest stretches of undeveloped green space in Cambridge that has not been set aside for conservation. It also has a rare gem, a thriving six-acre pond with an annual great blue heron rookery.

Jerry's Pond represents an issue of environmental justice. Alewife holds Cambridge's greatest concentration of affordable housing, including the Jefferson Park apartments just across the street and the Rindge Towers, three Le Corbusier-style high-rises with 777 housing units. The 4,000 people living in these units—disproportionately poor, and composed significantly of people of color and recent immigrants—have for decades faced a polluted,



Historic photo of swimmers at “The Cape Cod of North Cambridge.”

fenced-off property. As neighborhood activist Eric Grunebaum, a cofounder of Friends of Jerry's Pond, puts it, “It's no coincidence that the City of Cambridge has mostly taken a hands-off approach to Jerry's Pond's given where it's located. If it were located in West Cambridge, there's little doubt that these issues would have been addressed long ago.”

It turns out that there is political support for Alewife's green space as well. Cambridge Mayor

immigrant brickworker who prospered enough to form his own brickmaking company. The “pit,” as it was called, filled back up with water, and by the turn of the 20th century had become a neighborhood swimming hole. From at least the late 1880s to 1961, it was the beach where the working-class residents of North Cambridge spent their summer days off, earning it the nickname “The Cape Cod of North Cambridge.” Not only that: in the 1920s, the J. B. Johnson

Sumbul Siddiqui grew up in part in the Rindge Towers and sponsored Cambridge City Council's resolution on Jerry's Pond.

“The Cape Cod of North Cambridge”

What could Jerry's Pond mean to the neighborhood? A glance at its history shows just how much. It was originally excavated from the marshlands of the Great Swamp in the 1860s for its clay, spearheaded by Jeremiah (“Jerry”) McCrehan, an Irish

Company used Jerry's Pond as a source of ice to manufacture its locally famous ice cream, carving out 10,000 tons of ice blocks a year and storing them in an icehouse next to the pond.

The roots of the nearby land's eventual pollution problem and abandonment are obvious, though, in early photographs. As sunbathers lay out on the beach and dogs and swimmers frolic in the waters, industrial works loom on the north side of the pond, from brickworks to lumberyards to, most ominously, the manufacturing plants of Dewey & Almy Chemical

Company dating from 1919. Waste products were often left in settling lagoons on the site.

In 1954, the W. R. Grace Company purchased Dewey & Almy Chemical. W. R. Grace's role in polluting Woburn's waterways was made famous by the book and movie, *A Civil Action*. In 1961, Jerry's Pond was fenced off, and the McCrehan swimming pool, named after “Jerry” McCrehan's grandson, was built on the adjacent Russell Field.

Contaminants still found on the larger site include byproducts of manufacturing rubber—especially DAXAD (naphthalene sulphonate)—and, north of the pond, a large quantity of asbestos once used in brake linings and insulation. The city of Cambridge passed a Council Order in 1914 calling for the purchase of “Jerry's Pit so called, for the purpose of using it in connection with Russell Field for bathing purposes,” and the city operated a bathhouse there for public enjoyment for decades.

However, the land remained private, limiting Cambridge's options for cleanup. This proved an obstacle as recently as 2018 when then-Councilor Siddiqui and other residents reached out to the EPA to inquire about a Targeted Brownfields Assessment grant, a crucial first step in determining the current levels of pollution. The Cambridge's city manager signaled he did not believe Cambridge had standing to pursue the assessment without permission of GCP Technologies (a W.R. Grace spinoff). GCP Technologies refused such permission, writing in a letter that it was instead engaged in a process “to evaluate business options.”

A last best chance?

Those “business options” came to fruition this summer with GCP Technologies' sale of its headquarters to IQHQ for an astronomical \$125 million. Plans have been announced to develop the site as a life sciences campus. The 26.5 acres stretch between Whittemore Avenue and



Current view of Jerry's Pond facing Rindge towers.

Rindge Avenue and include GCP Technologies' buildings and parking lots, the fenced-off nine acres of Jerry's Pond and its perimeter, and the equally fenced-off green spaces on either side of the pedestrian and bicycle path that connects Russell Field to Alewife Station.

Many unknowns surround the sale, including just how much of the purchased land IQHQ intends to develop. Due diligence would have shown IQHQ that much of the undeveloped land



Friends of Jerry's Pond volunteers clean a perimeter path.



Nesting herons at Jerry's Pond.



One conceptual plan for restoring Jerry's Pond.

is deemed a Massachusetts Hazardous Material Site, subject to an Activity and Use Limitation as well as a City of Cambridge asbestos ordinance.

Those same designations guide the restoration of public access to Jerry's Pond, particularly the perimeter furthest from the factories, where contamination is thought to be far less extensive. The Friends of Jerry's Pond envision strolling paths and boardwalks for wildlife viewing, not the return of a swimming beach. And that plan would have to be carefully managed to allay the concerns of long-term neighborhood advocacy associations such as the Alewife Study Group.

Cambridge has weighed in on the side of realism and hope. The city recognizes that other contaminated areas have been safely made into public reservations, such as Belle Isle Marsh in East Boston. At a July 27 meeting, soon after IQHQ's purchase was announced, the City Council resolved that City Manager Louis D. Pasquale be "hereby . . . requested to contact IQHQ and engage the relevant city departments regarding next steps for restoration, health and environmental protection, improvement, beautification, and making the surrounding areas of Jerry's Pond publicly accessible." The goal is

"incorporating Jerry's Pond into the adjacent public parklands, with pedestrian and bicycle connections to the MBTA Station, the Alewife Reservation, Minuteman Bikeway, and the Linear Park."

Perhaps most encouraging for open space advocates, Cambridge's "Envision Cambridge" planning process for Alewife, completed a year ago and published as the Alewife District Plan, recommends on pages 111 to 112 that Jerry's Pond and the large swath of land extending north of the site be restored as green open space.

Pasquale has contacted IQHQ. Now the neighborhood—and the broader region of Belmont, Arlington, Cambridge, Somerville, and Medford, connected by human paths and by the remaining waterways of the Great Swamp—waits to see: Will Jerry's Pond sparkle at the center once again?

Greg Harris is on the Alewife Subsidiary Board of Green Cambridge and resides in North Cambridge. A long-time teacher of writing at Harvard University, Greg is founding editor of Pangyrus Literary Magazine.

Letter to the Editor

To the Editor:

Overall, it's positive that the Belmont Citizens Forum devoted two articles to the topic of affordable housing in Belmont in the September/October *Newsletter*. However, it was disappointing that the picture of 40B was incomplete, and neither article acknowledged the benefits of increasing the stock of housing—both affordable and market rate—including social, racial, and economic benefits for the residents of Belmont and the region.

"How Affordable Housing Works in Belmont," by Meg Muckenhoupt, incorrectly states the townhome number of the 91 Beatrice Circle site development as 32. The developer originally proposed 16 units and then revised it to 12. The article states that only four units would count

toward Belmont's subsidized housing inventory. Under 40B rules, the total number—12—of rental apartments built, both market and affordable, would count towards the inventory.

Regarding the real estate tax burden for those who own affordable homes or townhouses through Chapter 40B developments, the real estate tax will reflect the lower assessed value of the homes due to the deed restrictions.

The article states that the requirement of a deed rider for a unit to be considered affordable is hard for many to understand. Perhaps it's hyperbole: "It doesn't matter if half the housing in Belmont costs only \$1,000/month." Clearly, that's not the case; as two-family homes are sold or converted to condos, the number of below-market rentals has dwindled.

In the article "Affordable Housing on Belmont Hill," Sumner Brown notes that 40B does not count housing that is affordable in cost, but not



Detail of a rendering of the planned 91 Beatrice Circle development, as submitted to MassHousing in May 2020.



MARY BRADLEY

91 Beatrice Circle, summer 2020.

certified, so “the wonderful housing I enjoyed while a graduate student did not count.” The reason for deed restrictions is that they render a property permanently affordable, and not subject to the change in ownership and market movement. The over 2,000 low-income households now living in Belmont are able to do so because they live in subsidized housing, or are long-term tenants of kind landlords, or because they have owned their homes long enough to have paid off their mortgages. The long-term renters cannot depend on that situation: stories of tenants losing their apartments due to ownership change are widespread.

This article attributes the town’s official Housing Production Plan to the Belmont Land Trust, rather than the Housing Trust. It would have been prudent for the Citizens Forum to consult with the Housing Trust on these articles before publishing them.

The inset box titled “Friendly vs. Unfriendly 40B” describes the friendly kind but includes only an example of the unfriendly kind—the Belmont Uplands. The proposed development on the McLean Hospital land is an excellent example of a friendly 40B resulting from cooperation between a developer and town boards (the Planning Board, Housing Trust, and

Select Board) to shape a project with benefits to all parties. More recently, Town Meeting overwhelmingly approved the zoning change required to let the McLean development move forward. As a 40B, all the rental units will count toward Belmont’s subsidized housing inventory.

The article also states that these developments in Belmont can be expected to increase property taxes because of the increase of school-aged children. Note that for a municipality to make development decisions to exclude families with children violates the Federal Fair Housing act. Appropriately, the apartments to be created at McLean will be a mix of age-restricted units and units open to all renters.

We hope your readers will have a chance to re-consider these two articles in light of the points made in this letter.

Sincerely,

Gloria Leipzig, Belmont Housing Trust
Judith Feins, Belmont Housing Trust

The Belmont Citizens Forum thanks Gloria Leipzig and Judith Feins for their corrections and clarifications and regrets the errors. This letter has been edited for length.

Belmont Roots

Environmental News, Notes, and Events

By Meg Muckenhoupt

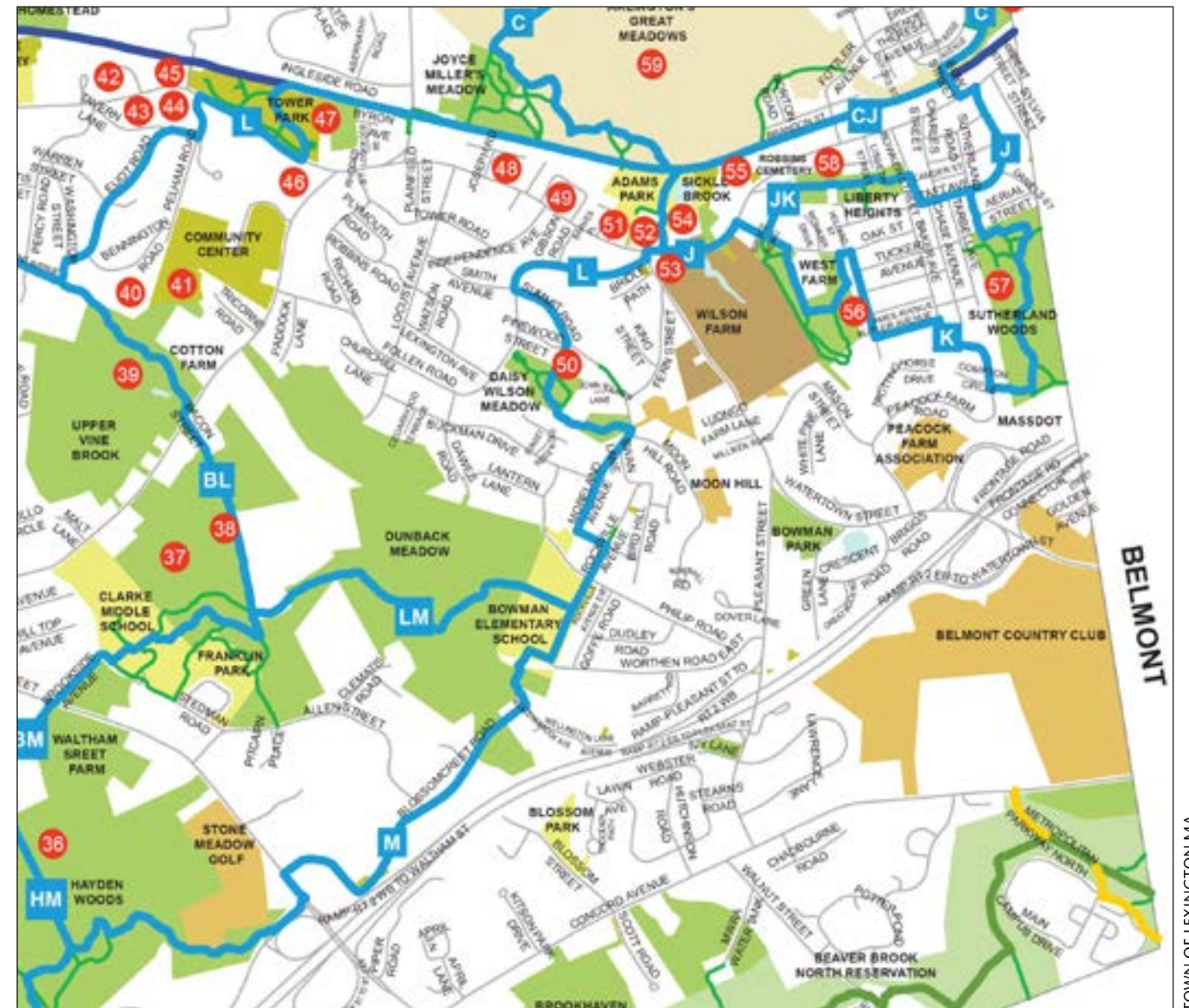


Now is the winter of our discontent. We’ve watched all the videos of past events at the Belmont Historical Society and the Charles River Watershed

Association. It’s getting cold, but it may be time to get outside. Nature is a balm when screens separate you from the world.

If you’ve walked all of the Western Greenway and Lone Tree Hill, consider trying the ACROSS Lexington Challenge. Walk all 12 ACROSS Lexington trails—more than 35 miles!—record the dates, and submit your record to get a certificate and get added to the “baggers” list.

Many spellcheck algorithms replace “COVID-19,” the virus, with the word “corvid,” meaning “a bird of the crow family.” Perhaps it’s a subtle suggestion that you ought to figure out what corvids are doing around the Commonwealth. For example, you may be hunkering down with your family for the long, cold winter—but if you were a Massachusetts crow, you might be roosting with 10,000 friends and relations every



TOWN OF LEXINGTON MA

Detail of ACROSS Lexington map.



A raven.

night. Mass Audubon is sponsoring an online talk titled “Crows, Ravens, and Winter Roosts,” on Thursday, December 3, 7-8:30 PM. Expect to learn more about the intelligence and life history of crows and ravens, and their many clever behaviors. The cost for this program is \$20 for members, \$24 for nonmembers. Register for the class at www.massaudubon.org/programs

Corvid enthusiasts can also enjoy one of the in-person field trips to a large crow roost in Springfield the Mass Audubon Arcadia Wildlife Sanctuary is offering on January 3 and 10. Literary corvid enthusiasts should look into Bernd Heinrich’s classic study of bird behavior, *Ravens in Winter*, or *Ka: Dar Oakley in the Ruin of Ymr*, by John Crowley, the author of *Little, Big*. A fable told by a two-thousand-year-old crow, *Ka* contains reflections on both corvid and human behavior as well as morality, history, and loss. At 465 pages, it’s also long enough to take up roosting sessions on long, dark winter evenings.

If you’re a little less fussy about species, Mass Audubon is also presenting an online program titled “Intro to Winter Bird Feeder Watching” on Thursday, December 10, 7-8:30 PM. Bird feeding areas provide great opportunities to learn how

to identify bird species and enjoy them from a close distance, but different feeders and seed types affect what you attract. This online presentation will cover different winter birds, bird feeders, types of food, and what birds they attract, so you’ll be ready to participate in Mass Audubon’s “Feeder Watch’ in February. “Feeder Watch” is a national citizen science program. Counting birds at your feeders provides valuable data to scientists monitoring bird species, especially in the face of climate change. The cost for this program is \$20 for members, \$24 for nonmembers. Register for the class at www.massaudubon.org/programs. At least you won’t have to watch your feeder birds on Zoom.

Once you’ve filled your bird feeders, consider making the rest of your yard more lively. The Native Plant Trust is offering two online gardening talks: “Slow Gardening,” Saturday, November

14, 1-3 PM, and “Ecological Gardening,”



Thursday, December 3, 6:30-7:30 PM. “Slow Gardening” is about doing more with less effort. The description reads: “Why wait for the last minute to plan and prepare your gardens? Save your back and knees from all that weed and turf removal! Learn some passive, elegant, and simple techniques to let nature do the work for you. A little prep now will give you a fresh start come next spring.” The cost is \$30 members, \$36 nonmembers. Register at nativeplanttrust.org.

Once you know how to save your knees, you can garden to save your ecosystem. “Ecological Gardening” tackles topics like how to take a wildlife-friendly approach to gardening, and how to manage perennials, trees, and shrubs for health, beauty, and wildlife value as winter approaches. This session is \$12 members, \$15 nonmembers. Register at nativeplanttrust.org.



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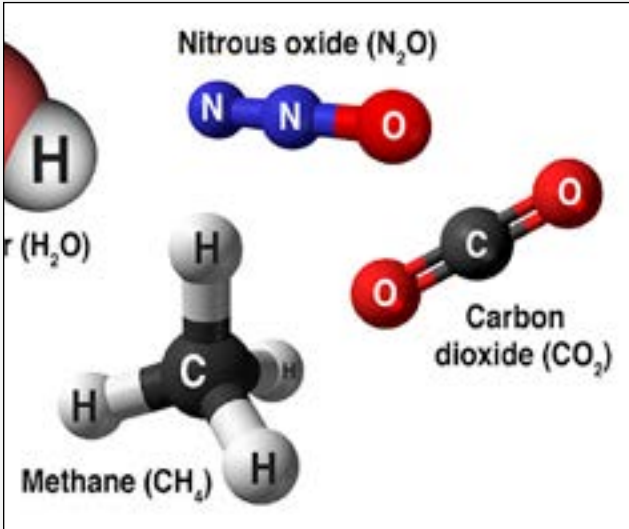
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