



Belmont Citizens Forum

Natural Gas is Making Us Sick

By Adrienne Allen

Your Sunday night supper may be making you sick. Most of us heat our homes and cook our food with natural gas. Natural gas has long been promoted as the “clean” bridge from coal and oil to green energy. This year, a Harvard study on climate and air quality found that fossil fuel-related air pollution, including pollution from

natural gas, kills one in five people worldwide. In the United States, natural gas use has increased 400% since the 1950s, with unfortunate health and environmental outcomes.

We often think about air pollution as an outdoor threat—like the wildfire smoky haze that descended on us this summer. Yet cooking indoors with gas can worsen indoor air quality,

Health Effects of Chemicals Contained in Gas

System	Disease	Culprit
Pulmonary	Airway inflammation Asthma, asthma attacks COPD exacerbation Cough Pulmonary inflammation Wheeze	NO ₂ Ozone Particulate matter
Cardiovascular	Cardiovascular disease Congestive heart failure Stroke	NO ₂ Ozone Particulate matter
Hematologic	Blood disorders	Toluene Xylene
Neurologic	Parkinson's disease General nervous system disorders	NO ₂ Toluene Xylene
Obstetrical	Preterm birth Low birthweight	NO ₂
Oncologic	Cancer	Benzene
Other	Premature death	NO ₂ Ozone Particulate matter

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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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as chemicals become concentrated in our home, causing illness and even premature death. How does this occur?

Burned gas from stoves, furnaces, and water heaters releases nitrogen dioxide, volatile organic compounds, and small particles. All of these chemicals increase rates of asthma, chronic obstructive pulmonary disease (COPD), heart attack, stroke, and many other illnesses outlined in the table on page one. Two Boston area studies have shown that even short-term exposure to these fumes has been associated with illness and premature death.

Of these chemicals the most concerning is nitrogen dioxide or NO₂. It is formed when gas is burned. NO₂ is one of six air pollutants that have national standards for outdoor air. The United States' one-hour standard for NO₂ is 100 parts per billion (ppb). Canada's standard is lower, at 60 ppb. For indoors, the WHO recommends less than 106 ppb, and Canada suggests 90 ppb; the US does not set indoor NO₂ guidelines. The Rocky Mountain Institute notes that using gas stoves often produces NO₂ concentrations that exceed these limits.

Children are particularly at risk for NO₂-related illness due to higher breathing rates and physical activity, higher lung-surface-area to body-surface-area ratios, and immature immune systems. Children living in homes with gas stoves are 42% more likely to have asthma. The Massachusetts Medical Society (MMS) formally acknowledges that natural gas stoves raise asthma rates and advises that these risks can be eliminated by using induction electric stoves and somewhat mitigated by using ventilation.

Unfortunately, gas stoves emit dangerous chemicals even when the stoves are not in use. These chemicals include lead, chromium, benzene, hexane, formaldehyde, toluene, xylene, and NO₂. All of these harmful chemicals are increasing inside homes—and throughout the environment via increased use of gas and by gas fracking operations.

The American Medical Association (AMA) and the MMS both recognize the human health impacts of natural gas and natural-gas infrastructure (like the compressor stations and leaky pipelines mentioned in the accompanying article) and recommend ongoing health assess-

ments for any new infrastructure proposals. The MMS warns of the health-related effects of any smog and particulate-matter-producing devices, including leaf blowers, but that is a conversation for another article (see "Leaf Blowers Damage Belmont's Environment," page 14 in this issue).

Ethics of Gas

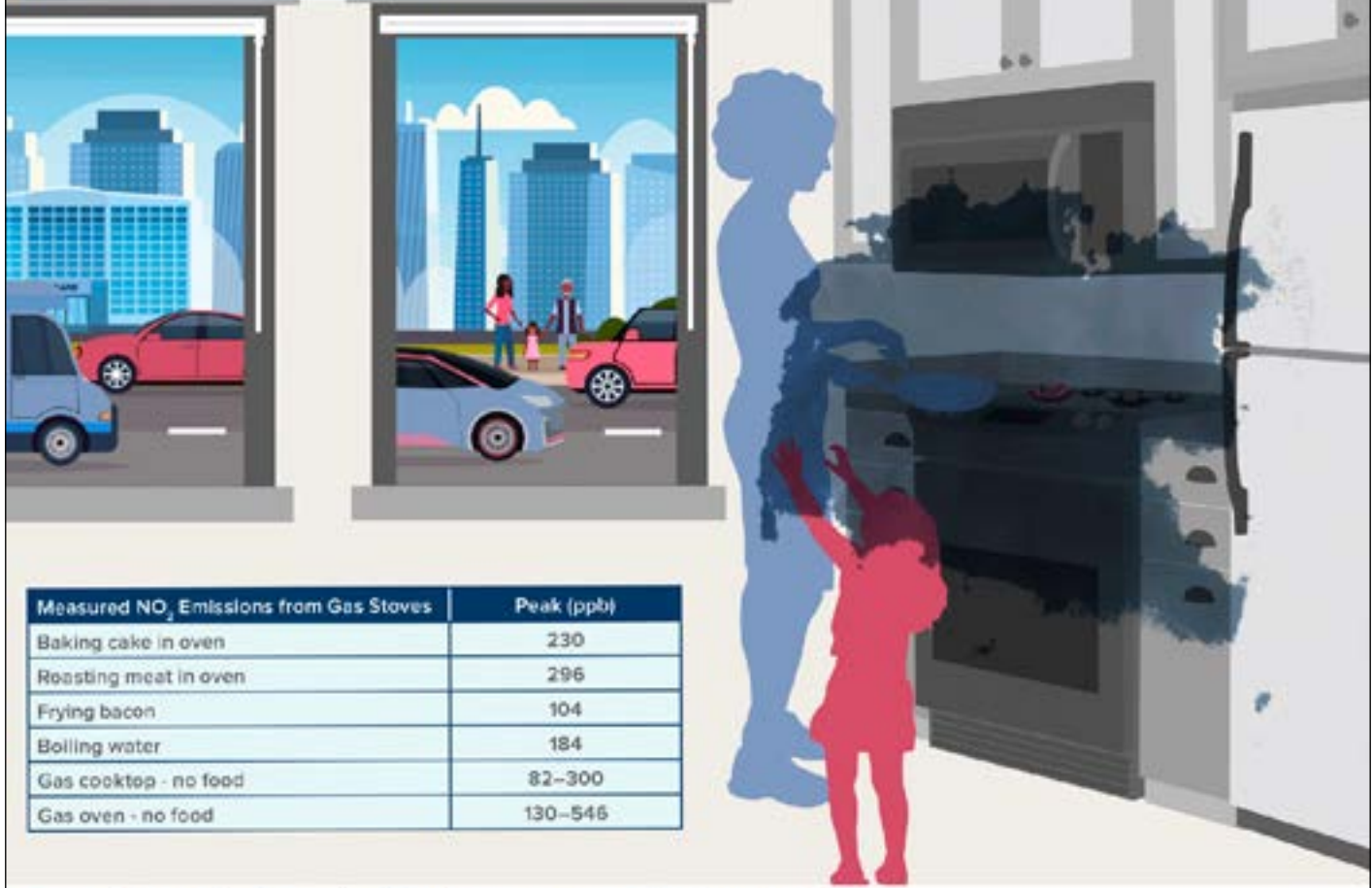
Most of the gas flowing through our pipelines is fracked gas. The ethics of using this fracked gas is becoming more and more fraught. Communities near fracking sites have suffered

numerous adverse health effects including cancer, preterm birth, respiratory disease, and cardiovascular illness.

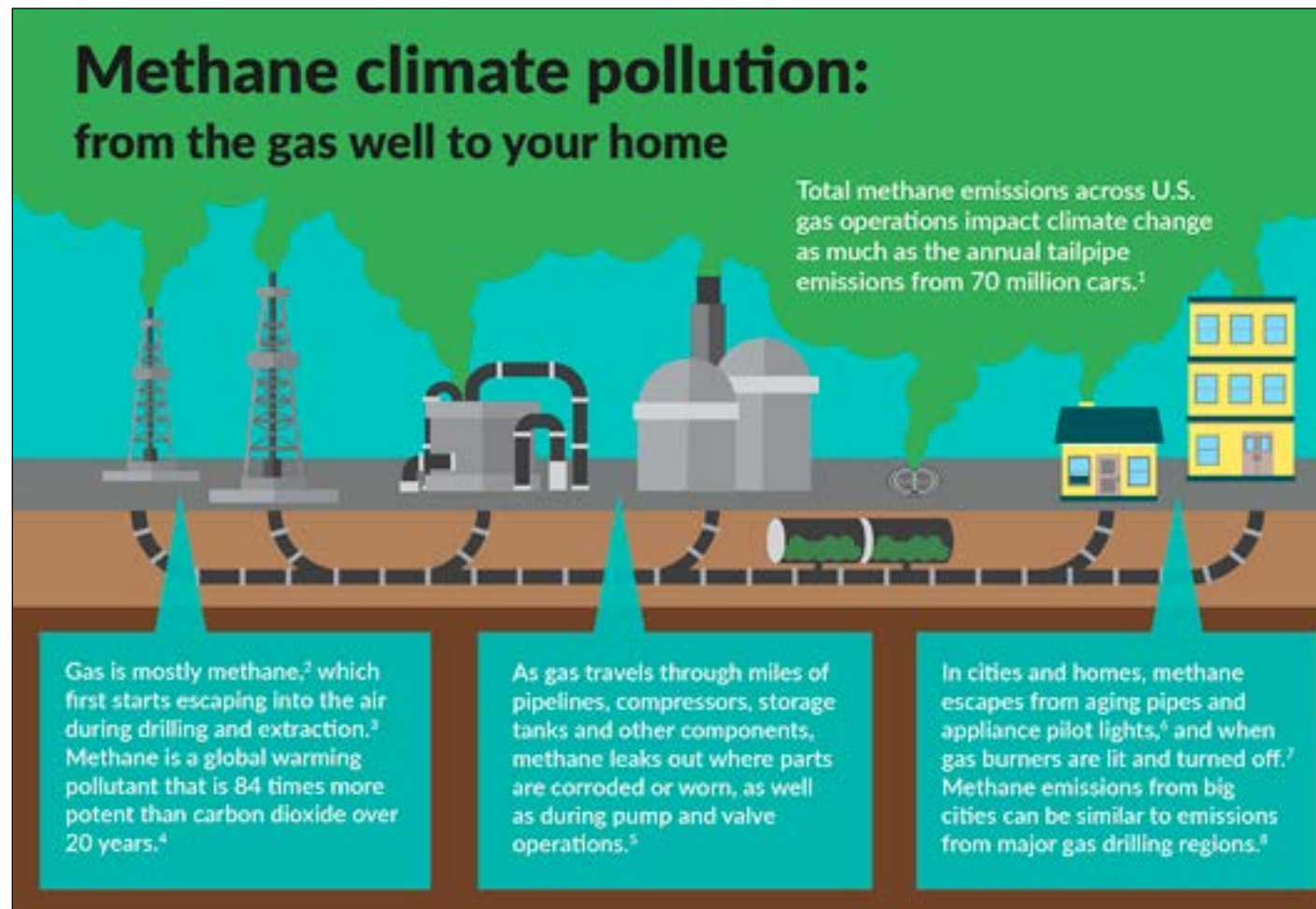
Fracking contaminates groundwater and worsens noise and air pollution. The transporting of the gas has led to environmental harm both along transport corridors and surrounding gas-compressor stations. Compressor stations are typically situated in environmental justice neighborhoods—which already have high rates of cancer and premature deaths. For example, the Weymouth compressor

Gas Stoves Can Emit Elevated Indoor Nitrogen Dioxide (NO₂) Levels Often Exceeding Indoor Guidelines and Outdoor Standards

Outdoor Standards for NO ₂	1-hr average (ppb)
US National Standard (EPA)	100
Canadian National Standard	60
California State Standard	180
Indoor Guidelines for NO ₂	1-hr average (ppb)
Canada	90
World Health Organization	106



Source: <https://rmi.org/insight/gas-stoves-pollution-health>



station last year “vented” extra gas into neighborhoods that can least afford to breathe it in. There is also the risk of exposure, which our area acutely felt in 2018 with the explosions that struck Lawrence and Andover a few years ago.

Climate Change and Natural Gas

The multiple extreme weather and wildfire disasters of this summer remind us that there is no time to waste in transitioning away from natural gas. The burning of natural gas creates carbon emissions. Worse yet, extracting natural gas releases methane, an even more potent greenhouse gas that worsens warming. Warm air also holds more air pollution, compounding all of the complications noted above.

What to Do

The good news is that we have the building technology to make our homes healthier. By moving away from gas and to all-electric homes, we can reduce carbon pollution and air pollution and make our homes safer.

The most immediate health benefits Massachusetts will see from moving to cold-climate air-source heat pumps and induction stoves will be improved air quality. Belmont Light is committed to clean energy, and by 2019, 50% of Belmont’s electricity was clean, increasing to 66% clean in 2020. Belmont Light also has multiple rebates to help households switch to healthier products like induction stoves and heat pumps.

Belmont has a climate action plan that outlines how we can electrify our homes to slow climate change. That same electrification will make us healthier today. Cutting out gas will improve air quality for everyone and help us all breathe a little easier.

Adrienne Allen, MD, MPH is a member of the Belmont Board of Health and Senior Medical Director of Quality, Safety, and Sustainability at the North Shore Physicians Group.

It’s Time to Switch from Gas to Clean Energy

By Debora Hoffman

Think natural gas is a clean fuel? Think again. The fossil fuel, touted as a bridge fuel in the fight against CO₂ emissions, is far deadlier to the planet—and our health—than is publicized.

The issue? Leaks. Leaked gas is methane, a far more potent greenhouse gas than CO₂ (see “Is it Time to Get Natural Gas Out of Belmont?” BCF Newsletter, November 2020). During its first 20 years in the atmosphere, methane is 86% more potent as a greenhouse gas than CO₂.

So how much gas is leaking? A lot. Statewide, gas utilities reported that 5,753 metric tons of methane leaked in 2020. Leaks occur at extraction sites, along transmission pipelines, and in aging underground pipes in urban and suburban communities—like Belmont.

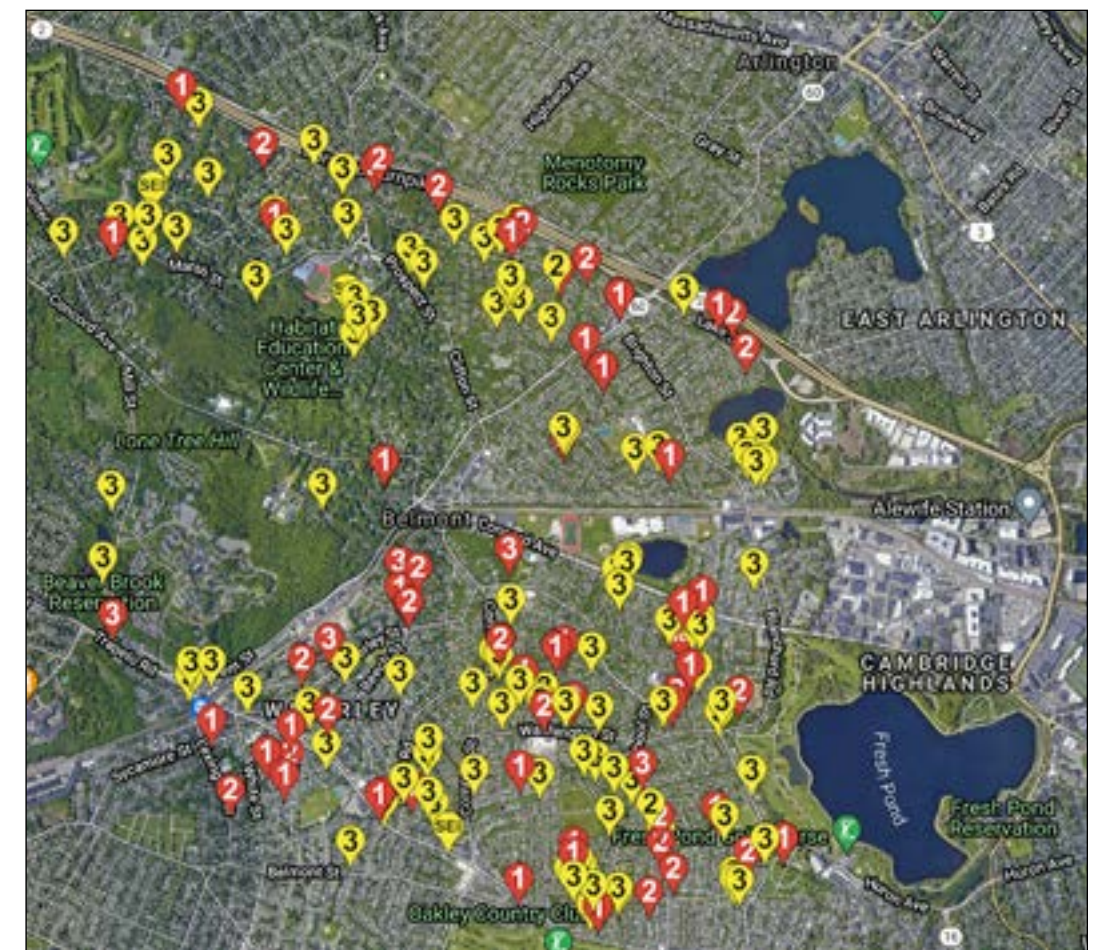
If Massachusetts is going to meet our goal of an 80% reduction in greenhouse gas emissions by 2050, we will need to stop using fossil fuels to heat our homes. A coalition of climate organizations known as the Gas Leaks Allies is pushing a new idea: allow gas utilities to sell heat from clean energy.

Right now, gas companies can sell only gas. The proposal, which is at the pilot stage, allows gas utilities to replace gas pipes with water pipes which would allow buildings to access geothermal energy via heat pumps to both heat and cool. A slideshow of the nonprofit HEET’s (Home Energy Efficiency Team) proposal is available at heet.org/geomicrodis-

[trict-introduction](#). “We absolutely need to fix the leaks, especially the most dangerous and biggest leaks. But the ultimate goal is to get off of gas altogether and transition as quickly as possible to renewable sources of heating and cooling,” said Ania Camargo, founder of the Gas Leaks Allies coalition.

Gas leaks affect air quality, harm trees, and endanger our health. Camargo has worked on the problem of gas leaks for years. She is passionate about having gas utilities fix leaks, and she worked to get a provision in the law in 2016 which requires companies to fix Grade 3 significant environmental impact (SEI) leaks. But she acknowledges that even though leaks are fixed every year, new ones keep popping up.

According to a Belmont Citizens Forum article five years ago, there were “80 Natural Gas Leaks in Belmont,” (BCF Newsletter, May 2016). In



A map of 2020 gas leaks in Belmont. Red numbers are repaired leaks, yellow numbers are unrepaired leaks. Numbers correspond to the severity of the leaks; 1 is most severe. For more details, see bit.ly/BCF-HEET-Map

2020 National Grid repaired 71 gas leaks in Belmont, but reported 112 new leaks in the same period. Statewide, there are about 15,000 unrepaired leaks.

Who Pays for Leaked Gas?

Who pays for leaked gas? We consumers do. Gas utilities pass on the cost of unburned, leaked gas to us. According to the Sierra Club, these leaks cost Massachusetts ratepayers \$50 million to \$128 million a year.

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In 2016, Massachusetts passed an omnibus energy bill intended to increase the amount of clean energy procured by the Commonwealth. One provision requires gas utilities to repair Grade 3 leaks found during construction projects that are deemed to have an significant environmental impact.

- According to HEET, gas utilities classify leaks by order of urgency:
- Grade 1 leaks are hazardous to people or property and must be repaired immediately.
 - Grade 2 leaks are nonhazardous, but could be hazardous in the near future; these must be repaired within a year.
 - Grade 3 leaks are nonhazardous and are expected to remain nonhazardous. Grade 3 leaks initially designated on or after January 1, 2018, are required to be repaired or eliminated within eight years.
 - Grade 3 SEI are Grade 3 leaks larger than 2,000 square feet in rectangular extent;these are leaks of significant environmental impact, or SEIs. They are approximately the largest, 7%,

yet contribute approximately 50% of all leak emissions. They are required to be repaired in one to three years.

So yes, some Grade 3 SEI leaks are now getting repaired. But gas companies are not required to fix older nonhazardous leaks–ever. What if gas utilities were required to pay for the leaked gas? Data from Texas, which limits how much gas companies can charge consumers for leaked gas, shows that pipes are getting replaced at a faster rate. Between 2010 and 2012, gas companies reduced their inventory of leaky pipes by 55%.

In addition, utilities are motivated to replace leaky pipes rather than fix leaks because replacement costs have a 9% to 10% rate of return as part of capital costs. Repair costs for leaks, except Grade 3 SEIs, are considered a part of doing business without a rate of return.

To replace one mile of pipe costs about \$2 million; to repair one leak costs \$3,000 to \$4,000. New pipes can be depreciated over 50 years, so we’ll be paying for all that new infrastructure for decades—far past when we will have already switched to 100% clean energy.

Gas leaks aren’t just harmful to the environment. They’re also bad for our health. Adrienne Allen, MD, a member of the Belmont Board of Health, wrote, “Natural gas leaks pose a health risk for our residents. Most of the gas in the pipelines is fracked. Fracked gas contains a mixture of methane, volatile organic compounds, benzene ... toluene, and xylene ... particulate matter, and nitrogen oxides.

“These compounds—alone and worse in combination—increase rates of asthma, heart attack, stroke, preterm birth, and premature death . . . It is imperative for our health to have these lines fixed.” [See Allen’s article on page 1.]

Jay Marcotte, director of the Belmont Department of Public Works, said that he and his staff work closely with National Grid around permits for new gas lines or line replacements. The most important thing that Belmont residents should know, he said, is to call the National Grid gas leak line at 1-800-233-5325 if a gas odor is detected.

Debora Hoffman is a resident of Belmont.

Help Belmont Students Breathe Easier

By Erika Roberts

So many of us are delighted the kids are in school full-time this fall. I for one will be skipping them hand-in-hand down the sidewalk on their first day back, even if my first and fourth graders are dying of embarrassment. The only part of the academic year that I dread happens daily during arrival and dismissal: dozens upon dozens of vehicles running their engines while parked as the drivers wait to pick up or drop off students.

With everything we have done to keep our children protected during a global pandemic, from remote learning to wearing masks to social distancing to getting vaccinated, it is clear their health and safety in and out of the classroom are a high priorities for us. Yet every day we subject our children and our town to significant amounts of air pollution from illegal idling, especially at our schools.

Know the Law

Idling is when your vehicle engine is running, but your vehicle is not moving. People idle for many reasons. It seems like such an innocuous thing at the beginning or end of a car ride (checking your phone, listening to the end of a radio program), but it is far from harmless. The harm to our cars, our health, and our environment is well documented by science, which is why many countries, cities, and states have had anti-idling laws on the books for years.

Of course there are times when idling is necessary, like waiting at a red light or being stuck in traffic, but the vast majority of times it is unnecessary, and unnecessary idling is against the law in Massachusetts (Chapter 90 Section 16A). The first offense is a fine of \$100 and every subsequent offense is an additional \$500. The Belmont Citizens Forum reported on this issue (“Idling Harms Your Car and Your Health,” Belmont Citizens Forum *Newsletter*, January 2017). Still, many people either don’t know the law or choose not to obey it.

Specifically, Massachusetts state law prohibits idling in school zones, regardless of the time of day or time of year. That means we all must turn off our vehicles when stopped in school



zones, even in the middle of the summer, or on a Monday holiday, or at midnight. It doesn’t matter if school is in session or if children are present. This law applies to passenger vehicles, delivery trucks, and school buses, with very few exceptions.

Furthermore, a “school zone” is defined as any area within 100 feet of the school property, not just the physical building. It also includes the parking lots, athletic fields, and playgrounds used for school purposes or functions even if they are owned by the town. For example, at Winn Brook School, the school zone includes Joey’s Park, the soccer fields, baseball diamond, and tennis courts. This law applies to school zones at any public or private accredited preschool, elementary, secondary, vocational school, or Head Start facility.

Outside of school zones, unnecessary idling is limited to five minutes in Massachusetts. Never leave your car running unattended. It violates motor vehicle laws as well anti-idling laws, and it is a serious safety risk.

Understand the Concern

Idling contributes greatly to air pollution, which is a major public safety, health, and environmental concern. Many people think

exhaust goes up and away after it leaves your tailpipe, but it is not that simple. The US Environmental Protection Agency has an [Idle-Free Schools Toolkit](#) to help support healthier school environments and describes the risks:

“Idling vehicles contribute to air pollution and emit air toxins, which are pollutants known or suspected to cause cancer or other serious health effects. Monitoring at schools has shown elevated levels of benzene, formaldehyde, acetaldehyde, and other air toxics during the afternoon hour coinciding with parents picking up their children. Children’s lungs are still developing, and when they are exposed to elevated levels of these pollutants, children have an increased risk of developing asthma, respiratory problems, and other adverse health effects. Limiting a vehicle’s idling time can dramatically reduce these pollutants and children’s exposure to them.”

So we’re not just talking about global pollution. We’re talking about the immediate

impacts locally, here where we live, work, and play—and where our kids go to school. Vehicle emissions are more concentrated near the ground where children breathe, and children are also more susceptible to the effects because they have faster breathing rates.

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This is why it makes sense that Massachusetts forbids idling in school zones. On a cold day you can see the clouds of exhaust settling around the cars and on the sidewalk, but on most days it is invisible: out of sight and out of mind. Even with the windows up and doors closed, you and your passengers are not protected from emissions in your car, but it is worse for people outside. What’s more, the school’s air intakes draw these pollutants directly into the classrooms.

Idling our engines for just one minute produces as much carbon monoxide as smoking three packs of cigarettes. Can you imagine how differently we would react if the children were dismissed into a parking lot full of that much second-hand smoke every day?

It is easy to see how these impacts become cumulative. Every driver coming to school that idles “just for a few minutes” (although I have often witnessed cars idling for upwards of a half an hour), times the dozens of cars at pick up, times all the schools in our town, times the number of school days each year.

Be the Change

Through education, reminders, and practice this will become second nature to all of us, just as “buckling up” became after seat belt laws went into effect. Most of us don’t “click it” to avoid the “ticket,” or even because we are consciously thinking about our safety. We do it because it has become part of our driving routine. Practice making this your new driving routine:

- Turn off your engine as soon as you stop your vehicle, and
- Do not turn your car on until you are ready to drive away safely.

Even car manufacturers recommend powering down your vehicle if you plan on stopping for more than 10 seconds. Idling is terribly inefficient, and it wastes gas and puts more wear and tear on parts than merely restarting the engine. Cars no longer need to be “warmed up” before driving even in cold weather, and the interiors heat and cool much faster in drive than while idling.

Teach your children about the anti-idling law. Mine love to be the “backseat police” reminding the adults in their life what the rules are. It may seem small, but we are also teaching these young people to advocate for their own health and safety

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Spread the word to all the drivers in your family: sitters, nannies, grandparents, the teenagers getting learner’s permits, and especially those drivers responsible for drop-off and pick-up of students at school. Don’t idle. It is common sense, and it is also the law.



Breathe Easier

Wouldn’t it be amazing if with the push of a button we could make an immediate beneficial impact on the local air quality around our schools, in Belmont, as well as the global environment?

What if by pushing this same button we also would comply with state laws, avoid fines, and save ourselves money every year?

Pushing this button is simpler than recycling, it’s easier than composting, and you don’t need solar panels on your roof or an electric car in your driveway to do it.

All we need to do is stop unnecessary idling. A small gesture with huge benefits is at our fingertips. So go ahead and push that ignition button to off, pat yourself on the back, and breathe easier.

Erika Roberts was an environmental consultant for more than a decade with a focus on conducting environmental studies and obtaining federal, state, and local permits for commercial-scale wind-energy projects. She is currently co-chair of the Winn Brook Safe Routes to School Committee



Belmont Tree Replanting Resumes

By Jeffrey North

Belmont has about 15,000 trees located in public rights-of-way, parks, schools, and public green spaces throughout town. In any given year, approximately 100 trees need to be removed due to damage or disease. The town has a program to replace them with even more new trees that refresh and assure continuity for our urban forest.

Thirty-three years ago Belmont was named a USA Tree City by the Arbor Day Foundation. Forestry and funding are vital components of this continuing honor. The value of trees on our properties goes beyond aesthetics to vital impacts on health, climate change adaptation, and property values.

The people who care for Belmont's trees

Tree Warden Tom Walsh has been involved with Belmont trees since his teens. His father owned a tree company, Superior Tree Service, which had a contract to care for Belmont's trees for several years. Thanks to his mental map of which trees are where and which trees need attention, Walsh knows our urban canopy better than anyone. He has seen many changes from the days when there was a tree nursery at the incinerator site to today, when the town buys 1½ inch diameter bare-rooted saplings wholesale.

Walsh, who has been our tree warden since 1981, is retiring this year. Jay Marcotte, Belmont's director of public works, was appointed acting tree warden by the Select Board in July with the understanding that Michael Santoro, assistant director of public works, will share the duties. The Select Board determined

that Belmont, like all of the towns in the area, needs a full-time tree warden. Lexington has not only a full-time tree warden but another arborist together supervising two tree maintenance crews, with guidance from a seven-member tree committee (and a 48-page [Tree Management Manual](#)). Belmont must soon make a larger investment in our tree program, as acknowledged by the Select Board at its July 20 meeting.

Marcotte is enrolled in the Massachusetts Qualified Tree Warden training program offered by the Massachusetts Tree Wardens & Foresters Association. For Marcotte, this is a return to his roots. Along with his MPA, he holds a BS in biology with a focus on dendrology, silvics, and land management. At one time, Marcotte wanted to work for the US Forestry Service as a forester.

Marcotte stated that even though his role, like Tom Walsh's before him, is part-time, he and Santoro are full-time town employees who can respond quickly and collaborate effectively with colleagues in the Department of

Public Works, with Belmont Light, and Asplundh Tree and other tree contractors. "We are on a lot of committees in town," said Marcotte, "so we will have a view to most of the activities and decisions that affect trees." Until a full-time permanent tree warden is hired, Marcotte and Santoro will oversee the care, maintenance, removal, and planting of all public shade trees.

Belmont's tree planting work

Funding for forestry work has been included in town budgets off and on for more than 40

years. Planting new trees was suspended last year due to pandemic-related labor challenges as well as an interruption in the supply of young trees (typically linden, sycamore, red maple, and London plane trees) from the grower. Years ago Belmont had its own tree farm, but now bare-rooted trees wrapped in burlap are sourced from a vendor in the Midwest. For FY 2022 the budget was restored by \$14,000 (after a pandemic-imposed hiatus) to resume the spring planting of 120 to 140 new town trees to replace trees lost every year to disease, age, or storm damage. State funding of \$50,000 was awarded to Belmont for the removal of dangerous trees and limbs (but not for planting new trees).

Charitable initiatives and private philanthropy have played an important role in the arboreal history of the town, bridging budget gaps and spaces. As a fitting project for Arbor Day this year, Walsh planted two red oaks on the Orchard Street town property across from the Wellington School. Emily Peterson, a proactive citizen and school abutter, raised generous funds in a GoFundMe campaign to replant eight (maybe nine) trees on town land along Orchard Street near the Wellington School with species selection assistance from the Shade Tree Committee.

The Belmont Garden Club (BGC) has also been an important contributor to our tree canopy. Garden club members have been driving forces behind tree plantings and replenishments with educational signage for more than 30 years. The BGC has planted many trees on the Belmont Library grounds, most recently a new tulip tree. The BGC donated many trees along Concord Avenue about 15 years ago. Last spring, even during the lockdown, the Belmont Garden Club donated \$15,000 to upgrade the Ruth Ippen tree walk along the Claypit Pond path. The Ippen family also donated a tree, and Belmont arborist Andrew Airolti donated another.

In 1983, the Environmental Advisory Committee recommended that the town form a shade tree committee to oversee and support Belmont's tree inventory. The Shade Tree Committee has been working diligently for 38 years. Of note, the committee has been instrumental in embedding new tree plantings in all Community Preservation Act grants to parks,

including Grove Street, Pequossette, and Town Field, and has consulted on the new high school and the community path.

Years ago, the Shade Tree Committee made a list of "Distinguished Trees" and in 2017 this was renamed "Notable Trees." The list catalogs impressive specimen trees to enjoy on a drive or walk around town. The list is available on the Shade Tree Committee [website](#).

Asplundh Tree Expert LLC, the local branch of a company from Willow Grove, PA, has maintained our street trees by removing and trimming them for almost 25 years. The company also assists Belmont Light with municipal power utility tree concerns. You can imagine how they are needed after a typical nor'easter. And we would be remiss if we failed to recall that both Kelly Brothers and the Hartney Greymont tree company recently donated a full crew for a day to prune all the trees on the library grounds, as did Kelly Brothers.

How to keep Belmont's trees healthy

Considering the vital role our trees play in making Belmont attractive and enhancing our town of homes, we must do what we can to maintain our arboreal assets.

Here are ways to protect and prolong the lives of your trees.

- Avoid parking on the road verge (hell strip).
- Water the trees on your street regularly in dry spells.
- Avoid paving over tree roots.
- Pick up as many of the chunks of road salt that you can after a winter storm since the salt damages trees as it dissolves.

Celebrate our trees! We are lucky to have such a beautiful town richly endowed with such a diverse, valuable urban forest.

For more on Belmont tree management, see "[Belmont: Town of Homes and Trees](#)," BCF Newsletter, November 2018, by Shade Tree Committee chair Lucia Gates.

Jeffrey North is the ex officio Belmont Conservation Commission representative on the Land Management Committee for Lone Tree Hill and managing editor of the Belmont Citizens Forum Newsletter.



Copper beech by Wellington Station.

JEFFREY NORTH

Belmont's Invasive Plants: Norway Maple

By Jeffrey North

Invasive plant species are disrupting ecosystems from Belmont to Beijing, permanently altering the ecology of our forests, fields, and gardens and causing biodiversity loss and species extinction. This article is the fourth in a series on invasive plant species found in Belmont, the implications of their presence, spread, ecological damage potential, and hopes for their removal and remediation.

Acer platanoides, commonly known as the Norway maple, is a species of maple native to eastern and central Europe and western Asia. It was brought to North America in the mid-1700s as a shade tree.

The Norway maple is a large deciduous tree that can grow to 60 feet or more in height. As a lone tree, it can be magnificent. But these trees have very shallow roots and produce a great deal of shade which makes it difficult for grass and other plants to grow in the understory. This species can crowd out most others, including grasses, understory plants, and other tree species right up to the edge of its canopy.

Norway maples' fall foliage is arguably pale and anemic compared with native maples. A Norway maple's leaves turn a rich yellow in the fall under optimal conditions, but lack the brilliant reds and oranges that emblazon our Northeast forests and towns.

Norway maples grow faster than native maples and other forest trees and tolerate diverse environments. Seed production is prolific, and seeds are hardy and invasive. They are prone to sprout in the middle of existing ornamental gardens and hedges even as the species invades our forests and forest edges.

History

The Norway maple was introduced to the American colonies in 1756 by John Bartram of Philadelphia, a self-educated naturalist and explorer considered the "father of American botany" and a friend of Benjamin Franklin. The seedlings and saplings were soon widely planted on farms and in towns for their shade, hardiness, and adaptability.

Since Colonial days, Norway maples have spread throughout the northeastern United States from Maine to Wisconsin, south to Tennessee and Virginia, and west to the Pacific. With reforestation across the Northeast since the mid-nineteenth century, Norway maples have escaped from in-town plantings to our forests.

Identification

Norway maples are sometimes confused with our native sugar maple (*Acer saccharum*). Here are a few distinguishing characteristics that can be used to tell the two apart.

- The leaf of the sugar maple features three wide lobes (or main points) each with a few irregular wavy teeth, plus two one-point lobes near the stem. The bigger Norway maple leaf, by comparison, sports seven lobes.



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Autumnal Norway maple leaf.

- Norway maple trees ooze a milky white sap from their stems when you snap off a leaf. Sugar maple leaves have clear, watery sap.
- Norway maple leaves are usually broader than they are long, while sugar maple leaves are generally longer than wide.
- Norway maple seeds form in oppositely arranged pairs with a wide 180° spread; sugar maple seeds and other native maple seeds are horseshoe-shaped where the wings droop at a 45° to 90° angle.
- Norway maple terminal buds are large, rounded, and blunt, with only two or three pairs of scales; sugar maple buds are long and sharply pointed with many scales.

- The bark of mature Norway maples has tight, furrowed grooves, similar to our native ash, while sugar maple bark is both flattish and smooth when young or plated when older.
- Norway maple leaves are very distinguishable in the fall. They keep their leaves after most native plants have dropped them. Their leaves also turn a pale to orange-yellow in contrast to sugar maple's brilliant oranges and reds.

The Problem

The Norway maple thrives in urban environments due to a high tolerance for concrete, compacted soils, salt, and automobile exhaust. But the Norway maple is a bully. It beats up on biodiversity as it conquers ecosystems by developing impenetrable monocultures. Monocultures are inherently unstable. Sugar maples, meanwhile, play well with others. They thrive in mixed, biodiverse, healthy forests.

Norway maples are suspected of releasing chemicals from their roots that inhibit or



JEFFREY NORTH

Norway maple seeds.

prevent other plants from growing nearby, thus eliminating competition for water, nutrients, and light. Norway maples are also thirsty plants, absorbing much more water than other trees. Reduced groundcovers lead to erosion and loss of soil, which in turn lead to lower water quality in surface waters and wetlands. Furthermore, Norway maples are less susceptible to local diseases and pest insects than our native sugar maples, which gives them a competitive advantage.

Town planners once favored the Norway maples in part because caterpillars shun their waxy leaves. That is appealing to every gardener who wants to keep bugs at bay. But if trees are

free of bugs, birds find little to eat, so they leave the neighborhood.

Consider the fate of chickadees, as detailed by Doug Tallamy, a professor of entomology at the University of Delaware's College of Agriculture and Natural Resources and the author of *Bringing Nature Home*. According to Tallamy, chickadee nestlings generally eat at least 6,000 caterpillars, all foraged within 50 meters of their nest, before they fledge.

When Norway maples take over an area, few caterpillars survive, reducing the food available for little chickadees. The chickadees produce fewer young or do not reproduce at all.

The Solution

Mowing or hand-pulling Norway maple seedlings and small saplings can be effective. Mature trees will re-sprout from the stump if not treated with a systemic herbicide. Girdling (removing tissue around the circumference) of mature trees may be effective, especially when girdles are treated with herbicide, but in most cases, mature trees are best left alone or removed by tree professionals.

Belmont's streets need all the shade trees they can get, including Norway maples. However, when trees are removed due to storm damage or disease (an increasingly frequent occurrence in Belmont), replacing them with native trees that have value for wildlife is the best practice. Street trees in Belmont are replaced these days with sycamore, linden, red maple, and London plane trees (admittedly a small diversity range) by our Department of Public Works. You can find a list of recommended trees at the Massachusetts Department of Conservation and Recreation's Urban and Community Forest Program.

If people express horror about cutting down a tree, use it as an opportunity to tell them about the value of planting native species that increase ecological value while combating the evils of non-native, invasive species. Alternately, you might suggest they write a letter to the editor of this publication.

Jeffrey North is the ex officio Belmont Conservation Commission representative on the Land Management Committee for Lone Tree Hill and managing editor of the Belmont Citizens Forum Newsletter.

Leaf Blowers Damage Belmont’s Environment

By Barry N. Kaye and Brian Kopperl

Have you ever been in your backyard on a beautiful day when the noise of the leaf blowers next door was so loud that you could not have a quiet conversation, you were dodging the flying debris, and the smell was enough to make you go indoors? Most of us agree that leaf blowers are annoying, but some of us may not know just how harmful they really are.

Gas-powered leaf blowers typically have noise levels of 80 decibels (dB) or higher, which the Centers for Disease Control states can damage hearing. These noise measurements are taken at 50 feet away from the source. They’re even louder if you are closer or if multiple blowers are operating at the same time. The person using the machine is often exposed to noise levels over 100 dB, which can damage hearing in just a few minutes.

Quiet Landscaping Resources

Lincoln Quiet Landscaper List
bit.ly/BCF-Lincoln-Quiet

This list, assembled by the town of Lincoln, is a sampling of local landscapers who will honor requests to not use leaf blowers on your property. Your current landscaper may also be willing stop using leaf blowers on your property if you ask.

American Green Zone Alliance
Agza.net

AGZA is a national organization which works to improve landscaping practices for better quality of life for communities and better working conditions for equipment operators.

Quiet Communities
QuietCommunities.org

This nonprofit helps communities reduce health and environmental harm from noise via objective, evidence-based approaches to noise and pollution.

Equally concerning, gas-powered leaf blowers often emit more pollution than a truck. Edmunds Auto comparison tests found that a gas-powered leaf blower running for a half-hour emitted as much hydrocarbon as driving a Ford F150 truck more than 3,800 miles! The pollutants that gas-powered leaf blowers emit are much more toxic than automobile exhaust and include carcinogenic chemicals like formaldehyde and benzene as well as nitrous oxide, which is converted to ozone by sunlight.

Leaf blowers also push 300–700 cubic feet of air per minute at 150–250 mph, stirring up large amounts of particles ranging from PM10 (particulate matter of 10 micrometers—think dust) to PM2.5 particles that are so small that they can penetrate and damage the deepest portion of our lungs. These particles are not just leaves. They are anything on the ground, including toxic lawn and weed chemicals and fecal matter from animals.

These toxins and noise do not stay on a homeowner’s property. They affect everyone around, especially the yard workers who are exposed to the noise and pollution all day and often without protective equipment.

Last spring, one of Belmont’s Select Board members proposed a very reasonable set of restrictions to address these issues. Sadly, it was opposed by some landscape businesses and a couple of homeowners who saw this as an infringement on their rights. The motion was tabled.

There are many of us in town who hope that before this coming fall leaf season begins, the Belmont Select Board will adopt leaf blower restrictions along the lines of those passed and operating in neighboring towns, including Arlington, Cambridge, and Brookline. Those neighboring towns’ experience shows that landscapers today have many alternative leaf blowers available that are far less noisy and pollute much less.

In the end, a reasonable balance can and should be struck which caps acceptable sound levels, enforces emission standards (EPA certified), and limits both hours of operation and the number of blowers permitted on a

property based on its size. Adopting leaf blower standards in Belmont would protect surrounding neighbors’ quiet enjoyment of their homes while balancing landscapers’ reasonable business needs.

There are some things that we all can do voluntarily in the meantime while we await Select Board action.

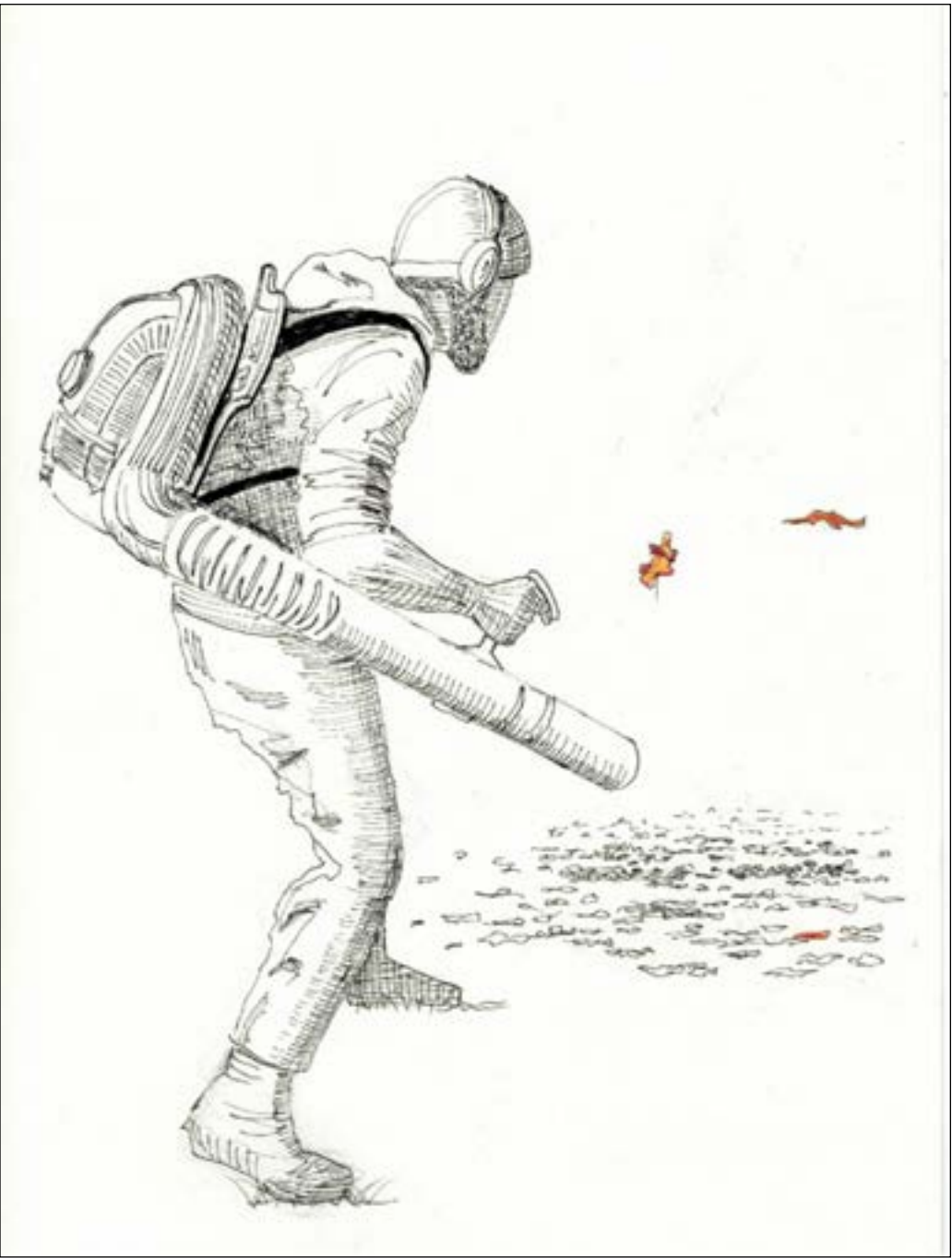
Ask your landscaper to use rakes and electric/battery-powered equipment. Even if they don’t do it today, they will begin to get the message and prepare for change.

Let them know that leaves are not trash. Leaf mulching your grass is good for the lawn and leaving some leaves in garden beds is good for the soil. While keeping wet leaves off walkways is a safety issue, having a few leaves left on the lawn is not the end of the world. There is no need for three guys with blowers to chase one leaf across the lawn.

Consider hiring a company that uses all-electric machinery (gas lawn mowers are almost as bad as gas blowers). They are out there and if other landscapers start to see that this is what customers want, they will respond rather than lose business.

Get the word out. Talk to your friends and neighbors. People may have no idea how bad these machines are or the effects that their use has on their neighbors.

Lastly, if you’re interested in joining a group discussion to go over the proposed leaf blower regulations in Belmont, please email Sustainable



Belmont at sustainablebelmont@gmail.com, with Leaf Blower Event in the subject line, and your name will be added to the list of volunteers working on this effort.

Barry Kaye, MD, is a Belmont resident and primary care physician at the Mass General Brigham in Everett. Brian Kopperl is managing partner of Renewable Energy Massachusetts LLC, a developer of large, ground-mounted solar facilities in the Commonwealth, and is a member of the Belmont Energy Committee.

Belmont Was Once a Town of Farms

By Jane Sherwin

Until the mid-20th century, agriculture was a significant part of Belmont life and economy. Three hundred years ago, it would have been unusual to find a family in this area with no engagement at all in growing things. Even a shoemaker would most likely have a few chickens, or a milk cow, or a small garden for vegetables.

The settlements on the land that is now Belmont go back nearly four hundred years. In 1630, Sir Richard Saltonstall led a group of families inland from the Massachusetts Bay Colony, to the area we now call Watertown, to start their own agricultural community. Long before the Europeans arrived, of course, Native American peoples had cultivated the land, growing corn and other crops.



Advertisement for the Belmont Strawberry.

In the 17th century, farming in New England had a strong communal aspect. Common lands were essential for grazing animals and for the hay that would feed them through the winter. Farming also was largely sustainable. Farmers grew enough crops and raised enough livestock to feed their families and pay for essentials they could not produce.

As the years passed, and Belmont’s population grew, farms were divided to meet the needs of succeeding generations, and common lands were divided and sold to individual farmers. As the economy changed, the farms changed too. Farmers began to concentrate on crops to sell to the growing city of Boston, and they discovered the powers of greenhouse cultivation. In 1859, for its seal, Belmont chose Pomona, the Roman goddess of fruits and gardens. She stands surrounded by an abundance of produce, with the Town’s rolling hills in the background.

For the first hundred years of its life as a town, Belmont remained a vital farming community. Belmont’s farms characterized our beginning in 1859, as Frances Baldwin describes so well in her book, *The Story of Belmont*:

“Though Belmont had become a town in name, in fact it was scarcely a village. Rather it was a wide-spread collection of profitable fruit farms and market gardens, whose owners spent long sun-up to sun-down days cultivating the rich black earth and reaping the harvests thereof. Between Mr. Marsh’s hill-top farm at the northern end of town and . . . the southern Payson Park area, there stretched as beautiful an expanse of orchards, gardens and shimmering greenhouses, as could be found anywhere in New England.”

By the time of Belmont’s 1859 incorporation, there were several types of agriculture in town.

- Farms settled as early as 1630, many diminished in size but still active
- Farms of 10 to 25 acres, some farmed by descendants and some by newcomers
- Orchards large and small
- Dairies and stock farms, established for breeding of cattle or race horses, so-called “fast” horses.

There were also the estates purchased by wealthy families from the city like the Underwoods, who considered farming to be an important part of their role in life. They built greenhouses and cultivated orchards and gardens for learning and pleasure.

Belmont became famous for the quality and size of our produce. Baldwin says that Belmont was known for fruits and vegetables as the city of Paris was known for its ladies’ fashions. Belmont farmers were written up in agricultural magazines and newspapers.

Belmont farmers won prizes for their strawberries and held an annual Strawberry Festival that drew thousands. Belmont farmers were written up in agricultural magazines and newspapers for their strawberries, including the Colonel Cheney and Belmont varieties, and also for pears and apples such as the Clairgeau, the Roxbury Russet, the Red Astrachan, and Clapp’s Favorite. The Belmont gardenia remains a favorite of gardeners today all over the world.

Farmers and landowners with an interest in livestock imported cattle and pigs from Europe, sometimes introducing breeds to the United States. There were the dairies, from a cow or two all the way to a herd, selling milk in glass bottles which you can see at the Belmont Historical Society, located in the Claflin Room of the Belmont Public Library.

Our farmers were active in the Massachusetts State Farm Bureau and the Boston Market Gardeners Association. They served on committees of the Massachusetts Horticultural Society and were honored in its lectures and publications. They formed the Belmont Farmers’ Club, and had long evening discussions about the best ways to manage orchards and prevent plant diseases.

Immigrants from Italy, Ireland, and Poland rode the trolleys from the North End to labor in Belmont’s larger market gardens. Many immigrants worked from 7 AM to 5 PM, pulling celery from the ground, hauling it to the wash



COURTESY OF JANE SHERWIN

house, and loading the crates for delivery to Boston. Later they rented or purchased property for their own farms.

Belmont’s market gardeners farmed very differently from the husbandry of colonial times, and yet even they used techniques that might be called “sustainable”. Until the 1940s, farmer-sused few pesticides and chemical fertilizers. In fact, the record of pre-World War II agriculture is almost entirely a literature of what we now call “alternative” agriculture, according to the Cornell Agriculture Library’s web site, which is well worth a read.

By the late 19th century, Belmont was full of greenhouses, farms and market gardens, designed and operated to produce fruits and vegetables and flowers destined for Quincy Market. The demand for this produce was so great that farmers could afford to build elegant homes and to send their children to college. Many of these farms lasted 100 years and more, in the same family.

Most remarkable of all, we have the Belmont Acres Farm (formerly the Sergi Farm), owned and farmed by a single family and their descendants since the 17th century. Today, Mike Chase and his family farm this land in cooperation with the current owners, the Ogilby family. Belmont Acres was once the Hill/Richardson Farm, and is the last remaining part of the original 1633 land grant from King Charles I of England to Abraham Hill. The original grant ran from the remaining acres in Belmont all the way to Charlestown and the harbor. The Ogilbys have placed the land in an agricultural trust.



Belmont Abandons Agriculture

When refrigeration became available to market gardeners in the South, California and other faraway places, Belmont growers faced serious competition. With the Great Depression of 1929 and the manufacturing demands of World War II, people who had grown up on farms were encouraged by their parents to find another line of work. At some point, the tax valuation of land for residence became greater than the value of land for farming.

By 1950, land as real estate had become Belmont's chief asset. The real estate agent became the farmer's friend, saying, "I can take that land off your hands for you." The relatively sudden disappearance of agriculture is a loss that we all may feel, even those of us who came to Belmont decades after the removal of the last commercial greenhouses. When land becomes a commodity, our perceptions of it and our obligations toward it become very different. We lose the emotional tie, the "love of the land" that is so often part of farming.

It is not as though we suddenly stopped growing things after World War II, of course. There are private vegetable gardens all over town. The community gardens at Rock Meadow are a great place to visit any time during the growing season. If you walk along the west side of Pequossette Park, you'll see backyards facing the soccer field filled with densely cultivated gardens: grapevines, tomatoes, green beans, cabbages, squash.

And the ending? By the late nineteenth century railroads and streetcars had made living in Belmont an attractive choice for people who

worked in the city of Boston but wanted to live out in the country.

The same population that provided a market for our strawberries and celery was the population that wanted a good place to live within easy reach of the city. The *Belmont Herald* stated in 1954, "Progress will and must come with the constant demand for additional land for development in such a desirable residential community as Belmont."

Once our farms had gone (with the exception of the Sergi farm), who were we? The "Town of Homes" phrase

suggests the difficulty of defining a new identity. The earliest reference to this phrase was in advertising by the McGinniss coal yard in Waverley Square in the 1920s and 30s: "We heat Belmont, the Town of Homes." But doesn't it go without saying that, if you are a town, you have homes? Are we a Town of Homes because we have nothing else? Are we to be defined by an advertisement? Perhaps our agricultural history can help widen our understanding of who we are.

There are many signs of our farms. The next time you notice an old pear tree or an apple tree with a sturdy trunk, you may well be looking at a part of Belmont's orchards. Everywhere you go in Belmont you can see farm buildings and houses—homes that were built for farm families to live in. Some of them are as old as the first settlers, some of them were built as late as the 20th century.

Belmont will always have our history as a town that appeared suddenly, just before the Civil War, a town that used to be parts of other towns. But the farms and market gardens and greenhouses offer a continuity between the early settlements, Belmont's incorporation as a town, and the present. The one remaining farm, open spaces, and farm buildings are tangible evidence of the centrality of farming to our story. The more we know and understand this part of our history, the greater will be our connection to the life of our community.

Jane Sherwin is a Belmont resident with a longstanding interest in Belmont's agricultural history. This article is based on a series of her talks.

Travel the Town with the Belmont Passport

By Viktoria Haase

Looking for that fun family-friendly outdoor activity? Grab a Belmont Passport and start exploring!

A new Belmont Passport is now available to guide tours of local history. Town of Homes, the latest and third booklet in the series, highlights homes in Belmont, and describes their architecture, occupants, and other interesting facts that can help you understand why Belmont continues to enjoy its reputation as the "Town of Homes."

Inside the Passport are 27 locations including:

- The Howlett House designed by prominent

became a popular activity. With this Passport, you can learn more about the Roger Wellington Monument on Pleasant Street, view an original gatepost from the former Hittinger Farm along School Street, or discover a granite boundary stone on Washington Street.

The second Passport, titled Historic Sites, contains two dozen locations. This booklet will take you on a journey to places you may never have been and help you to better appreciate the stories behind familiar locations. Explore the reservoir in Payson Park, learn the history of the railroad underpass in Belmont Center, and understand the origins of Palfrey Square.

All three Passports combine carefully



The Howlett House, designed in 1948 by Walter Gropius with Benjamin Thompson of the Architects Collaborative.

architect Walter Gropius

- Several homes built in the 1700s like the Josiah Shattuck House
- The James Bailey House, built around 1840 and moved to Belmont from Arlington

The first Passport, titled Monuments, Markers, Memorials, was published in November 2020 and includes 28 sites. It was developed to provide residents with a way to connect to the unique history all around them and quickly

researched captions with photographs to celebrate what makes this community so special. You can pick up a copy of one or all three of these Passports at Belmont's 5 and 10 in Cushing Square, in the Belmont Town Clerk's office, or by contacting the Belmont Historical Society at belmonthistory1859@gmail.com.

Viktoria Haase is the president of the Belmont Historical Society.



Concord Avenue at Common Street.

Letter to the Editor

To the Editor:

I am a long-time Boston-area bicycling advocate, CyclingSavvy Instructor, and League Cycling Instructor, responding to the article by Jeff Roth in the July-August Belmont Citizens Forum *Newsletter*.

I am pleased to see progress on the Belmont Community Path and the Alexander Avenue underpass; also proposals for traffic calming and roundabouts. However, the article states:

“Protected bicycle lanes (PBLs) lower crash rates by a factor of two to 23 times . . . ‘Dooring’ crashes, which account for 20% of bike/car crashes, disappear almost completely with PBLs.”

The term “protected bike lanes” wraps itself in its own conclusion. I call them separated on-street bikeways.

Pedestrians have sidewalks, so why shouldn't bicyclists get similar treatment? It's because bicyclists are much faster than pedestrians and much less maneuverable. Safe separated bikeways have few or no crossing and turning conflicts. Many separated bikeways actually increase crash rates—sometimes dramatically. See this review of studies: bit.ly/safety-unproven.

Fear of rear-end crashes, rare in urban areas, tends to override concern about others. But 75%

of crashes that send a cyclist to the emergency room, and 10% to 20% of bicyclist fatalities, do not involve a motor vehicle. A 23 times reduction in crashes is patently impossible.

The largest cause of fatal car-bicycle collisions in the Boston area is the right hook: a motor vehicle, usually a large truck or bus, turns across the path of a bicyclist. A very good study of bicycle crashes in Boston clarifies the issues: bit.ly/bos-inj-rept.

Buses on Concord Avenue turning into the high school pose a right-hook risk. And there are numerous other crossing and turning conflicts along Concord Avenue.

Indeed, the Concord Avenue bike lanes should be replaced. But with what?

Only in front of the high school is there room for a proper separated bikeway. It could connect to good places to cross the avenue and be far enough from the street for bicyclists and motorists to negotiate right of way.

Concord Avenue is, however, ideal for striped bike lanes next to the curbed median. No cars park there. Bicyclists there are visible to other road users in every direction, and with no dooring problem, can safely leave more room for motorists to overtake.

Such bike lanes would also lead to the safest position from which to cross to Royal Road at the railroad underpass—in full view and out of

the path of right-turning traffic. The present bike lane offers no safe option to continue in any direction; see bit.ly/at-rr-bridge

You don't want to ride through that intersection? I don't blame you. I avoid it too, when I can. Let's talk about parallel routes:

* The Belmont Community Path will avoid street crossings all the way from Waverley Square to Brighton Avenue.

* Lightly used Alexander Avenue and the planned railroad underpass will connect between downtown Belmont, the Belmont Community Path, and the high school. A contraflow bike lane (for bicycle traffic opposite the street's one-way direction) in the one block from Leonard Street to Pleasant Street would complete the route.

* School Street is easy to reach from the high school and crosses Common Street to Waverley Street at a traffic signal. But Belmont banned westbound traffic past the Wellington School when students are arriving and departing. Solution? A contraflow bike lane past the Wellington School.

* Hittinger Street offers connections to destinations on Concord Avenue east of the high school.

* Bicyclists turning onto Concord Avenue on a fresh green light can easily turn left, then right into a side street before avenue traffic catches up.

I have prepared videos illustrating safe riding on Concord Avenue: bit.ly/concord-ave-videos

People in their teens and older can learn to ride safely on big streets, but I oppose making a street appear safe for young children, when it can't actually be made safe for them. Concord Avenue could, however, benefit from speed enforcement, and speed tables for traffic calming. After all, much of it is in a school zone.

Speedy cyclists belong on streets, not trails. E-bikes are becoming popular, too. Within 10 years, motor vehicles with automated crash avoidance will greatly reduce the rate of rear-end collisions.

And finally, cyclists can reduce their crash risk greatly through their own actions. I recommend cyclingsavvy.org for information. Check out the online courses, and classes I will be teaching!

To sum up, what I am saying is to look at the larger picture and find solutions that actually work.

Thank you for reading.

John Allen
Belmont



A swan paddles through the parking lot of the Mighty Squirrel Brewery, Waverly Oaks Road, after the remnants of Hurricane Elsa flood Belmont, July 2021.

Belmont Roots

Environmental News, Notes, and Events

By Meg Muckenhoupt



The only constant in life is change, according to Heraclitus, the Greek philosopher who strolled through Ephesus in the late sixth century B.C.E. The Greek letter most commonly used to represent change is delta, which is also the title of the variant of the coronavirus that is more contagious than previous versions and has persuaded the town of Belmont to mandate indoor masking.

So, instead of posting a page of fall walks, fundraising galas, hands-on classes, film screenings, talks, and volunteer opportunities, the Belmont Citizens Forum *Newsletter's* event listings once again offer the thin milk of online programming. I am sorry it has come to this.

Some changes are thrilling. Raptors migrate through Massachusetts in September each year on their way to their winter lairs. Millions of hawks pass through the state, forming circular “kettles” of dozens or hundreds of birds whirling high in the sky. It’s easiest to see them from the tops of short mountains like Mount Wachusett, but they’ve been known to pass by suburban hills as well.

Learn to spot, identify, and appreciate these birds with Mass Audubon’s Identifying Hawks



in Flight (bit.ly/BCF-Hawks-921) program on Thursday, September 9, 7–8:30 PM. Mass Audubon members \$20, nonmembers \$24. Mass Audubon states: “Every autumn millions of hawks migrate south, providing the best opportunities to see them in flight. However, identifying hawks in flight is very different from seeing them close-up in photos. This online presentation will introduce you to the 11 most commonly seen hawks in New England, providing the keys and a few tricks for you to begin identifying them at a distance on your own. By the end of the course, you’ll know where and when to look for them, and how to identify what you find.”

This season will also shift Bay State Bike Month (www.baystatebikemonth.org), a series of events supporting Massachusetts bicycling and bicyclists that’s usually held in May. This year, it’s September. As of press time, there aren’t many events listed near Boston, but perhaps that will change.

You can bring about a change in your environment, and perhaps your soul, via the Mystic River Watershed’s Reverse Tashlich (Mysticriver.org/reverse-tashlich). This is a trash-clearing twist on a Jewish tradition. As the Mystic River Watershed Association writes, “In addition to throwing sins into a body of water, as is customary for the High Holidays in September, we would like to promote a ‘Reverse Tashlich’ where people improve their local watershed by removing trash. From September 9 through the 16, we are asking small groups and family members to remove litter from the Mystic River watershed . . . By cleaning up your local watershed, you not only benefit your community—you also help prevent this litter from going downstream and ultimately ending up in the ocean.” Register and report your physical and spiritual progress at Mysticriver.org/reverse-tashlich.

For longer-term environmental change, you can learn to identify the invasive plants that are ravaging our local ecosystems, so you can choose your weeding battles. The Native Plant Trust is actually offering a hands-on, in-person class at their Framingham campus on Thursday, September 16, 6:30–8:30 PM, and Saturday, September 18, 10 AM–2 PM, \$108 Native Plant

Trust members, \$132 nonmembers. You’ll see slides and real-life examples of invasive plant species that are “an unwelcome and persistent presence in forests, fields, and wetlands,” and “discuss methods for managing invasive plant populations.” Register at www.nativeplant-trust.org/events/invasive-plants-identification-documentation-and-control.



Invasive Asian bittersweet.

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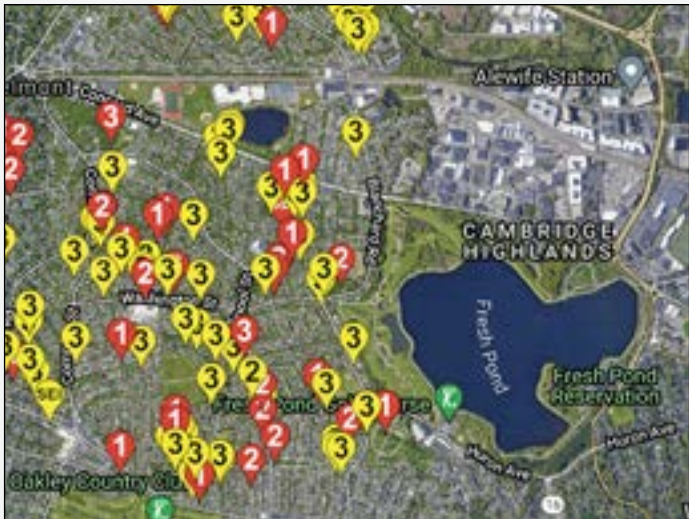
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