



Massachusetts Department of Conservation and Recreation

# THE CITIZEN FORESTER

Urban & Community Forestry Program

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Massachusetts



## Complete Streets Finding Better Homes for Trees

The old saying goes: “There are two seasons in New England, winter and construction.” You can’t go anywhere in the state these days without encountering some form of construction. Winter may cause us to be buried in snow, frozen in place, and longing for warmer temperatures, but at least it provides a brief respite to construction.

Taking some time this winter to reflect, let’s look deeper into how we can use our communities’ ever-present construction to make better homes for trees. We can start with the national trend of *Complete Streets*.

According to the [U.S. Department of Transportation](#): “Complete Streets are streets designed and operated to enable safe use and support mobility for all users. Those include people of all ages and abilities, regardless of whether they are travelling as drivers, pedestrians,



Images from Boston Department of Transportation  
Boston Complete Streets | [Boston.gov](#)

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bicyclists, or public transportation riders. The concept of Complete Streets encompasses many approaches to planning, designing, and operating roadways and rights of way with all users in mind to make

with the 19th century gridiron pattern of streets in the Back Bay and South Boston. Historic parkways and treelined boulevards link downtown with neighborhoods and main street districts. The result is a patchwork of iconic streets and squares, and an eminently walkable city.



the transportation network safer and more efficient. Complete Street policies are set at the state, regional, and local levels and are frequently supported by roadway design guidelines.”

At the local level, the City of Boston states: “Boston’s streets have evolved over centuries of growth and development. Winding streets in the North End and Dorchester contrast

Framed by a mix of historic and modern architecture, and brought to life each day by a diverse population, each street in Boston has a distinctive flavor.

This legacy of vibrant, walkable public spaces provides an ideal platform to explore new innovations in street design. [Boston’s Complete Streets guidelines](#) establish new

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standards for street design and reconstruction projects.” This includes trees and greenspace.

Boston’s design imperatives state that the streets should be Multimodal, Smart and Green.

They state Complete Streets should be energy efficient, easy to maintain, and include healthy trees, plants, and permeable surfaces to manage storm water. Design features should



encourage healthy, environmentally friendly, and sustainable use of Boston’s street network.

Street Trees with sufficient rooting volume to thrive, will provide shade and beauty; support wildlife habitat and reduce air pollution; and energy consumption.

In a perfect world, we would provide trees with the best possible opportunity to survive in urban settings.



However, as cities expanded, they either built around large historic trees, or removed trees to create space. Remaining trees were removed when infrastructure conflicts arose. New trees were then planted in unnatural locations, and people expected them to grow up in the middle of buildings and concrete.

Instead of repeating these errors, it is time to provide trees with locations that not only minimize infrastructure conflicts but provide trees with the necessary soil volume for survival. A recent example of this successful strategy occurred in Lawrence, MA..

Tennis Lilly, Climate Resiliency Program Manager for Groundwork Lawrence (GWL), said that they were



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approached by the city when a sidewalk replacement project on a treelined street encountered resistance from the residents. The City hired an engineering firm to manage the sidewalk replacement project and relied on their recommendation to remove 19 large



Linden trees. They wanted to take all the mature trees out, because in their view, "it will just make things so much easier." They reached out to GWL to come and manage the tree replacement. GWL worked with residents to persuade the DPW and City Engineer to preserve 11 of those 19 trees, and most importantly, to create new 19 tree pits as part of the sidewalk replacement to restore the

canopy that had been gradually lost over the last decade.

The City engineer and GWL had conversations with residents to see what they wanted. While all of the residents agreed that new sidewalks were needed, only 3 advocated for removing trees for the project while most residents said the shade canopy was part of the reason they moved to Greenfield street, and they wanted as many trees preserved as possible. Most of the residents wanted replacement trees planted, and several asked for more trees.



GWL worked to broker a deal between the city and the residents, to maximize the number of trees to be preserved and to get new trees planted. After the public hearing,

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the city decided to develop an alternative plan to preserve the majority of the trees. High risk trees were identified for removal, and the rest were set to be retained.

Tennis stated that originally the project manager was planning to put 24 inch wide “tree belts” back in, since that was what they were used to doing. When asked for plant recommendations that could fit in that small space, Tennis responded with “flowers.” The City’s main goal

solution that would move the project forward. It was time to propose a dramatic shift from traditional sidewalk installation. The tree pit concept GWL advocated for would place the pits on the “inside” of the sidewalk, opening to the residents’ front yards, providing room for future growth.

The street trees were still planted in the public right-of-way, but connected to the soil volume of the residents front yard. This would reduce the impact to the sidewalks, as the trees search for soil and



was to complete the project and install new sidewalks, something everyone wanted, but they were also sensitive to the resident’s desire to preserve trees and were open to any

water, and move them farther from the street and harsh conditions. Residents were asked to help take care of the trees and water them, which they did. GWL made sure the



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residents were happy with the situation, with the sidewalks and the trees. Every tree that was planted was “wanted” by the residents.

Another benefit of the engagement effort was that the city started to view street trees as “must have” infrastructure instead of “nice to have” amenities. Two other sidewalk replacement projects were redesigned that same month to widen the planting strip to accommodate shade trees. This resulted in nearly two dozen new trees added to streets that hadn’t enjoyed shade in over five decades. Today, every sidewalk and street replacement project in Lawrence includes space for new street trees.

Tennis said that “Engagement is what makes trees survival happen. It’s about engaging and connecting with people. Outreach is just putting information out there. Engagement is building a relationship with a community and having conversations with people. With that comes trust and familiarity, and that’s how you get to know people who live on a street and understand what their

values are. It helps you approach them in a way that is relevant.”

The tree canopy was what made the street special to the residents. Thanks to conversations with homeowners, 11 additional trees were planted in private yards through the [Greening the Gateway Cities Program](#).



*Tennis Lilly (standing right) and GWL tree planting crew in action*

Tennis stated that “I was glad we could engage with City Hall as well as the residents. We ended up with a much better project overall, and still within budget!” And that is something that we can all appreciate.

Lawrence Photos

Credit: Tennis Lilly

# Forester Focus

A deeper look into today's Urban Forestry topics



## Introducing a New Feature to the Citizen Forester!

**F**orester Focus will be a new featured section of the Citizen Forester that will provide brief but in-depth looks at interesting topics in the field of Urban & Community Forestry, and tap into local Urban Foresters' knowledge and expertise.

In the meantime, visit our DCR website for the latest updates to the Urban and Community Forestry [Factsheets](#) such as:

- What is a Tree Warden?

<https://www.mass.gov/doc/what-is-a-tree-warden/download>

- Laws Protecting Community Trees

<https://www.mass.gov/doc/laws-protecting-trees/download>

- Tree City USA in Massachusetts

<https://www.mass.gov/doc/tree-city-usa-fact-sheet/download>





# CLIMATE RESILIENCY

## **Baker-Polito Administration Awards Over \$1.4 Million to Support Local Land Use Planning**

**BOSTON** - The Baker-Polito Administration announced \$1,452,098 in grant funding for 35 projects from the Planning Assistance Grant Program. The program, which is funded through spending authorized in the Environmental Bond Bill, is part of an effort to encourage municipalities to implement land use regulations that are consistent with the Baker-Polito Administration's land conservation and development objectives. These objectives include the reduction of land, energy, and natural resource consumption; the creation of sufficient and diverse housing, and the mitigation of and preparation for climate change. The program is also part of the technical assistance offered to communities in support of the Baker-Polito Administration's Housing Choice Initiative.

"Working with municipalities across the Commonwealth is critical for us to achieve important objectives, such as building more housing, better protecting natural resources, and reducing greenhouse gas emissions, which will greatly improve local communities," said Governor Charlie Baker. "These important grants will enable updated zoning and better planning, ensuring the public will receive both immediate and long-term benefits."



“We are very pleased to be able to help municipalities update local regulations so that they can better achieve their housing, economic development, natural resource protection, and other goals,” said Lieutenant Governor Karyn Polito. “The grants represent exactly the sort of partnership between state and local governments that our Administration has worked to encourage.”

The grants are awarded to the Commonwealth’s municipalities and Regional Planning Agencies acting on their behalf to support their efforts to plan, regulate, and act to conserve and develop land consistent with the [Massachusetts’ Sustainable Development Principles](#).



“Under the leadership of Gov. Baker and Lt. Gov. Polito we are helping communities update and enhance their zoning, subdivision, and other land use regulations so that they can grow in ways that reduce land, natural resource, and energy consumption, said Energy and Environmental Affairs Secretary Kathleen Theoharides. “Projects we are funding today will help address climate change and make the Commonwealth more resilient, to the benefit for future generations.”

The administration’s [Housing Choice Initiative](#), which was announced in December 2017, is a package of technical assistance for communities, new capital grant funding, and pending legislation, An Act to Promote Housing Choices. This initiative, and its goal to produce 135,000 new units of housing by 2025, complements the investments made by the Department of Housing and Community Development in [affordable housing production](#) across the state, and supports local government actions to meet the demands of a growing and aging population in Massachusetts.

## Species Spotlight—River birch, *Betula nigra*

We often find that trees that do well in wet conditions also do well in urban settings, due in part to their ability to withstand low oxygen conditions, either in wet soils or compacted ones that occur in urban areas. This is true of river birch, a tree most often found growing along stream banks in the wild.

River birch is native to the eastern United States and grows from southern New England to Florida and west to Kansas and Minnesota. Its range includes the southeastern coastal plain, and it is the only native birch that naturally occurs there.



It is a medium-sized tree, growing to 40-70 feet, with a spread of 40-60 feet. From an oval or pyramidal form when young, river birch grows to a rounded form at maturity. River birch often grows as a multi-stem tree.

The alternate, simple, doubly serrate, diamond-shaped leaves are a lustrous green in summer and turn yellow in the fall, although in New England, the fall color of river birch may leave something to be desired. Like other birches, river birch grows at a medium to fast rate.



River birch is monoecious, with both male and female flowers occurring on the same tree. Both male and female flowers are catkins. Male flowers are usually in groups of 3 and are 2-3 inches long and droop down. Female flowers are shorter, 1 to 1.5 inches long, and upright. The fruit is a small nutlet, ripening in the spring.

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## Species Spotlight—Continued

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River birch, like all birches, will bleed sap if pruned in the spring. While not harmful to the tree, managers may prefer to prune river birch in the fall or winter.

River birch is known for its reddish-brown or salmon-colored, peeling bark that reveals a gray or gray-brown inner bark. As river birches mature, their bark becomes furrowed and platy and remains an ornamental characteristic.

River birch is more tolerant of heat than other birches, another advantage for planting the species in urban areas. River birch does best in soils with a pH below 6.5. In soils with pH above 6.5, iron chlorosis can occur. The canopy allows sunlight to pass through, making it possible to maintain a lawn underneath. It can be a good choice for locations that are wet for portions of the year, but dry in the summer. River birch makes



a great specimen tree and landscape architects have used groupings of river birches to great effect.



The wood from river birch is used for various wood products, including baskets, toys, furniture, and fuel. The Latin species, *nigra* (black), refers to the black color of the bark at maturity and *betula* is the classical term for birch.

Photos

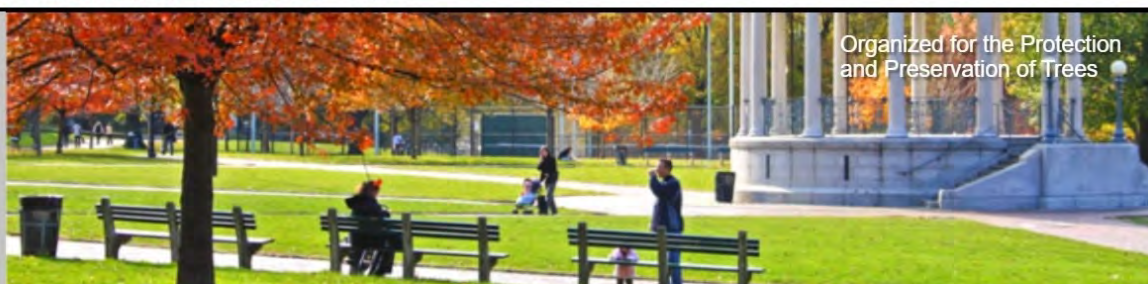
Flowers: Duke University

Leaf: Virginia Tech

Form: Geneva Wirth

Bark: DCR

## Massachusetts Tree Wardens and Foresters Assn.



Organized for the Protection  
and Preservation of Trees

## Now is the time: order your seedlings

- The Massachusetts Tree Wardens' and Foresters' Association (MTWFA) **2022 MTWFA seedling sale** is in full swing. Order now to have seedlings available for Earth Day and Arbor Day celebrations at schools, parks and more. Just in time for spring planting, you can choose your delivery date, any time up until mid-May.

## What is the seedling program?

- The MTWFA sponsors an annual packaged seedling program as a popular way to help municipalities, garden clubs, businesses, arborists and other interested individuals and organizations promote Arbor Day.
- The program is inexpensive, easy to implement, and readily embraced by educators and others throughout the community. Net proceeds from the seedling program support the MTWFA Scholarship Fund. Scholarships are awarded annually in March to students enrolled in arboriculture and urban forestry programs statewide.



More info at: <https://masstreewardens.org/arbor-day-seedling-program/>



# On The Horizon

## Tree City USA/Tree Campus Higher Education/Tree Line 2021

Did you get your 2021 application in on time? Arbor Day 2022 is right around the corner, start planning today! Of note for 2022, Arbor Day celebrations and proclamations will both be required.



**TREE CITY USA®**

March 3	<b>Conference:</b> UMass Amherst Community Tree Conference (Virtual) <a href="https://ag.umass.edu/landscape/events/umass-virtual-community-tree-conference-2022">https://ag.umass.edu/landscape/events/umass-virtual-community-tree-conference-2022</a>
March 9	<b>Webinar:</b> Forest Service's Urban Forest Connections 1:00-2:15pm (EST) <a href="https://www.fs.fed.us/research/urban-webinars/">https://www.fs.fed.us/research/urban-webinars/</a>
March 15	<b>Deadline for Arbor Day Poster Contest is March 15, 2022</b> <a href="https://www.mass.gov/guides/annual-arbor-day-poster-contest">https://www.mass.gov/guides/annual-arbor-day-poster-contest</a>
March 17	<b>Webinar:</b> Urban Forestry Today 12pm (EST) Trees & Design in the Urban Environment <a href="http://www.urbanforestrytoday.org/">http://www.urbanforestrytoday.org/</a>
March 22	<b>Webinar:</b> The TREE Fund 1pm (EST) The Cost-effectiveness of Integrated Vegetation Management <a href="https://treefund.org/">https://treefund.org/</a>
March 24	<b>Meeting:</b> Massachusetts Tree Wardens' and Foresters' Association, Western Chapter Spring Dinner Meeting <a href="https://masstreewardens.org/events/">https://masstreewardens.org/events/</a>
Thursdays in March and April	<b>Webinar:</b> Yale Forest Forum 11:30am-12:10pm (EST) The webinar will have a wide range of topics that will be presented by researchers and urban forestry practitioner experts. <a href="https://resources.environment.yale.edu/calendar">https://resources.environment.yale.edu/calendar</a>
Spring, 2022	<b>UMass University Without Walls:</b> Sensible Pruning for Beginners and Experts. Info: Dr. Brian Kane <a href="mailto:bkane@umass.edu">bkane@umass.edu</a>



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