

The Urban Forestry Guidebook of Somerville

A Primer of Urban Forestry Issues as it Relates to Somerville and the Local Organizations Working on Urban Forestry Issues.

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Somerville's Climate Ambassadors 2025 Cohort



What is Urban Forestry?

Urban Forestry seeks to apply nature-based solutions to chronic and emergent economic, social, and environmental challenges.¹ This approach utilizes the natural properties of trees, landscaping, gardens, and other foliage to mitigate the impacts of climate change, and urban pollution. Urban Forestry follows a tradition that began with the passing of “Nail” laws in MA in 1896 that thinks of greener, specifically trees, as a public utility that must be cultivated and protected.²



Somerville has formally incorporated this approach into the city government in the form of the Public Space and Urban Forestry Department and the Urban Forestry Committee which is tasked with overseeing “all existing trees and shrubs on all public grounds and public ways in Somerville”.³ It also works closely with a few non-governmental organizations to try to achieve climate related goals throughout the city.

What issues does it seek to address?

Urban Heat Islands

On a micro level, you can experience an Urban Heat Island by walking from a car parking lot into the shade of a tree. Buildings, roads, and other infrastructure absorb and reflect the sun’s heat more than natural landscapes such as forests and water bodies.⁴ This effect accumulates as more natural landscapes are developed, creating a density of hot, highly built up areas that can be 3.0° F (1.6°C) warmer than areas with tree cover.⁵ To provide a local example, a heat island like Ball Square is projected to be 1 degree hotter than Davis square on a modeled hot, summer day.⁶



Rising temperatures across the United States are becoming a significant public health concern, particularly in dense urban areas. Heat is a leading weather-related cause of death nationwide.⁷ With more frequent and intense heat waves becoming the norm as our climate warms, the "heat island" effect further amplifies these dangerous conditions. Increased heat exposure is directly linked to rising rates of heat

exhaustion, heat stroke, and deaths from cardiovascular complications like heart attacks and strokes. What might appear as modest temperature increases are, in reality, creating severe health consequences.

For more information about Urban Heat Islands, see the EPA's Excessive Heat Events Guidebook at: www.epa.gov/heatislands/excessive-heat-events-guidebook).

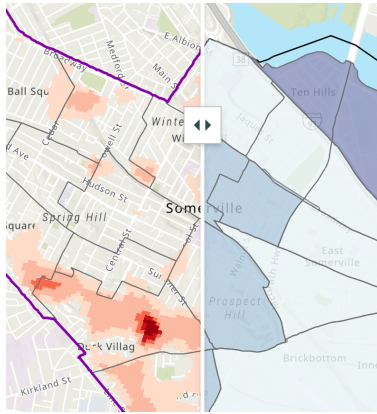
Watershed Management

The same infrastructure that creates Urban Heat Islands contributes to problems with stormwater runoff that negatively affect the watershed of developed areas. Surfaces like roofs, concrete walk-ways, and paved roads are largely impermeable, meaning when it rains water accumulates and then rushes over the ground instead of soaking into it. When this happens, runoff can pick up harmful pollutants and deposit them into streams, lakes, and eventually the groundwater.⁸ This effect can even be seen in how runoff affects the temperature of streams, with large amounts of run-off picking up heat from the surrounding infrastructure and creating temperature “shocks” that disrupt aquatic life.⁹

Planting trees and opening up areas with plantings and green spaces can lessen the harmful effects of stormwater runoff by providing avenues for water to soak into the ground, or be evaporated off, instead of accumulating¹⁰. Urban trees, for example, lessen run-off starting at their leaves and branches, capturing and holding rain-water before it reaches the ground. This allows some of the water to be evaporated and lengthens the amount of time storm-water has to reach the ground, lowering run-off intensity. The roots of trees, in turn, condition soil by creating pathways through the soil that allow deeper penetration into the ground. Once there, roots then draw water back out to be used between stores, which increases the water storage capacity of the soil.¹¹



Environmental Justice and Urban Forestry



It's impossible to discuss these issues without a mention of how Environmental Justice issues touch all aspects of Urban Forestry. Historically marginalized groups, specifically racial groups in red-lined zoning districts, now reside in dense, economically precarious, developed urban areas. These neighborhoods have less tree cover and open green space and therefore experience the brunt of the heat and run-off pollution issues outlined above¹². This can be acutely seen in the comparison maps of Somerville that layer average heat temperature to various factors like income, relative diversity, and even which language is primarily spoken.

Link to Comparison maps:

<https://storymaps.arcgis.com/stories/1a67fc4fc76444e68f318c4d3a7743d0>

Some other benefits of Urban Forestry. In addition, open green space and a mature tree canopy¹³:

- Reduces energy usage and related cooling and heating costs
- Increases carbon sequestration
- Improves air quality through pollution absorption.
- Increases property values.
- Improves public health and well-being (reduced stress, improved mental health).
- Increases biodiversity and wildlife habitat creation

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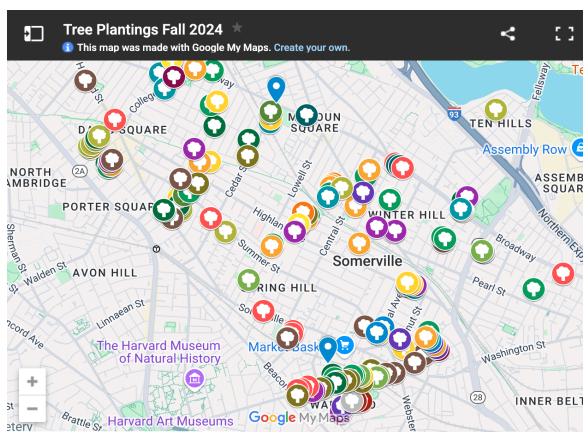
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Urban Forestry Division (PSUF)

& the Urban Forestry Committee

The city of Somerville has its own Public Space and Urban Forestry Division (PSUF) which operates under the Office of Strategic Planning and Community Development (OSPCD). It's tasked with planning out, managing, and caring for Somerville's more than 12,000 trees and is committed to implementing the city's Urban Forestry Management Plan which was completed in 2021¹. This plan started out of work done on Somerville's Open Space and Recreation Plan (2016-2023) and was given significantly more attention when the Climate Forward Plan was first implemented in 2018, granting PSUF more resources and giving it the lofty goal of planting 350 trees in Somerville every year.²

There are a huge number of programs that PSUF is involved in and I've chosen to highlight a few of the data initiatives that came with the Urban Forestry Management Plan. These programs showcase Somerville's commitment to expanding and caring for its urban forest while being a great resource to learn about your local trees!



Tree Mapping and the Tree Inventory.

Each spring and fall the PSUF updates a new tree planting map which is posted publicly on their homepage. This map updates twice a year and gives a sense of where PSUF is focusing on new planting. You can click on each tree icon and it will give you info like species, what number the tree was planted in the year and it's exact location. This data is useful for finding new trees

in your area so that they can be cared for, as young trees are vulnerable and require frequent watering. You can also adopt a tree with the city but more on that later.

This data on new trees amends a city wide Tree Inventory that was finalized under the Urban Forestry Management Plan in 2021. The data here is fantastic and was compiled with help from outside consultant the Davey Resource group. The inventory has a detailed map with an icon for each tree in Somerville. When you click on a specific tree, a page will come up that will give you all sorts of info including the species, planting growing space, a picture, and when the tree was inventoried. If you click on the \$ icon within this page it will give a detailed calculation of the impact of the tree in U.S. Dollars over different time periods. For instance, my favorite tree on my street, over the past 20 years, has prevented approximately 7000 gallons of runoff,

sequestered 800 pounds of carbon and removed various air pollutants that, in sum, have conferred \$190.20 in overall benefits. The Inventory also has data overviews on the tree canopy, overall benefits calculated in dollars, historic data on parks, and a report builder function so you can pull spealized reports. The data here is fantastic and I highly recommend looking through it to better understand the trees in your area and to explore all of the benefits that our own urban forest provides.

Honeylocust: Thornless at 50 SPENCER AVE



Site

Species

No transfer sources for this site

No Documents Available

Somerville Trees

Address 50	Suffix
Street SPENCER AVE	Side Front
Site 0	On Street SPENCER AVE
X 760404.907296354	Y 2968728.33415279
Site ID 36292	Inventory Date 11/12/2018
Park Name N/A	Growing Space Type Well/Pit

i-Tree Eco Benefits		
Total Benefits Over 20 years \$190.24	Currency USD	Carbon Dioxide Uptake \$75.48 Carbon Sequestered 885.13 pounds CO2 Equivalent 3,245.46 pounds
Storm Water Mitigation \$67.00 Runoff Avoided 7,497.26 gallons Rainfall Intercepted 32,230.28 gallons		Air Pollution Removal \$47.77 Carbon Monoxide 4.74 ounces Ozone 196.84 ounces Nitrogen Dioxide 55.83 ounces Sulfur Dioxide 2.66 ounces PM _{2.5} 6.44 ounces
Energy Benefits Unavailable		Report Run on October, 15 2024 14:12:47 -0400 using i-Tree Version(Engine) 2(0.15.1)

PSUF is involved in even more ways. Including³:

- Maintaining Somerville's native Ash Trees and combating the spread of the Emerald Ash Borer -- an invasive species.
- Detailing how street trees require special care and how to help.
- Creating the Somerville Young Tree Training Program
- Invasive species management, native planting ordinances.

The Urban Forestry Committee

The Somerville Urban Forestry Committee advises the city on the management and care of trees across Somerville. Established under a tree preservation ordinance passed in 2019, its responsibilities include advising on tree health and maintenance, updating the city's tree inventory, and supporting public education about urban forestry. The committee collaborates with city departments to provide input on policies and plans related to urban forestry. If you're looking to get involved, meetings are held monthly on the third Thursday, and are currently conducted remotely.

The committee has started an Adopt A Tree program to help residents get involved with caring for newly planted trees. Look for a colorful "Adopt me!" tag on newly planted trees. This tag has a QR code (or [visit tinyurl.com/somervilletree](https://tinyurl.com/somervilletree)) that can be scanned in order to adopt the tree. Once you've adopted a tree, you can name it and even receive an adoption certificate from the city. The goal of the program is to give citizens a sense of ownership of newly planted trees which require a lot of care, especially watering. Newly planted trees need 15–20 gallons of water weekly from May to October—and even more during especially hot months in the summer. They also encourage you to water any tree in your area during dry, hot spells.⁴



You can find even more info, including schedules and meeting notes, on the committee's page [here](#).

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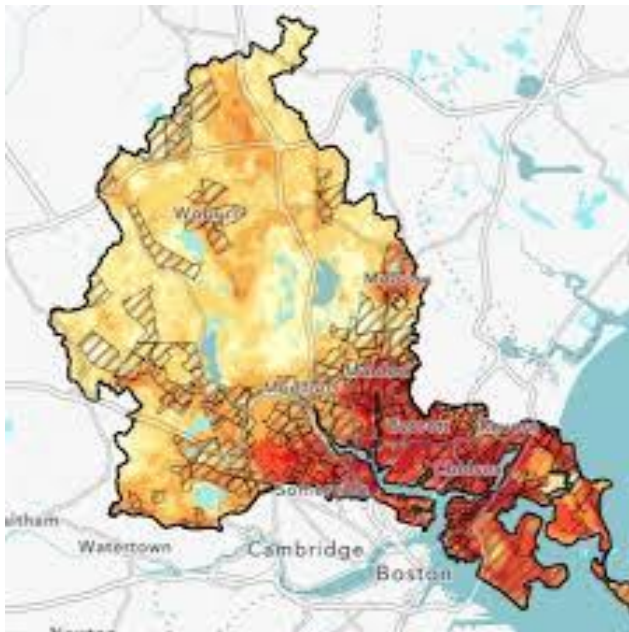
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Mystic River

WATERSHED ASSOCIATION

For more than 50 Years the Mystic River Watershed Association has sought to improve the environment in the greater Boston area via the watershed of the 21 towns and cities that make up the Mystic river. Their work encompasses various initiatives centered around education, advocacy for greenways, clean air and water, and building climate resilient communities.

In 2021 they created a program centered around Urban Heat Islands called Wicked Hot Mystic. This program was a data venture that sought to provide a heat map of the towns encompassing the watershed. The results are free to use, and provide vivid examples of how communities like Somerville are affected by Urban Heat islands. In 2023 this data birthed the Wicked Cool Mystic program which seeks to inform residents about cooling and find ways to create resident based solutions.



Here's a [link](#) to the posted heat map

Since then, MyRWA has received two grants in order to provide and care for new trees as a means of addressing Urban Heat Islands. The first is a single year grant from the Massachusetts Department of Conservation and Recreation (MA DCR) that gave funds for trees, feeder bags and stakes. The second is a larger grant from the U.S. Forestry Service centered around providing cooling opportunities for Urban Heat Islands. The USFS grant provides two to three years of funds for tree planting and then two years of additional funds for tree maintenance. With these grants MyRWA has started a tree program where residents of Chelsea,

Somerville, Everett, Cambridge, Malden and Revere can apply for, and have planted by a group of volunteers, a free tree.

In addition, MyRWA has organized groups of Tree Ambassadors for each of the participating towns. Somerville has three Tree Ambassadors, Jennifer, Allison and Amy, who help residents assess tree viability, advocate for residents with landlords, and spread the word about the program.

I chatted with Karina Ramos, a Project Manager at MyRWA who's heavily involved with the program. She's excited about creating local engagement via the Tree Ambassadors and what it could mean for the city to create lasting momentum for Urban Forestry issues.

If you'd like to apply for a tree, get involved with tree plantings or get in contact with a Tree Ambassador. Please visit the Tree landing page: <https://mysticriver.org/trees>



Green and Open Somerville was co-founded by Renée and Tori, two residents of the city in 2014. Its focus is “Getting more Green” to Somerville, says Cofounder Renée Scott. Through efforts to lobby city government, increasing the native foliage in the city, and, most notably, a depaving program, Green & Open Somerville has been advocating within the city for more than a decade now and has no plan to stop.

The project originally started with some brainstorming sessions of residents with a heavy focus on fighting the implementation of artificial turf fields. The idea was that the field's plastic turf trapped a lot of heat and contributed to the Urban Heat Island problem and plastics pollution. Ultimately, these efforts failed, but the group was galvanized to continue fighting for more green space in Somerville.

The DePAVE the WAY! Initiative has been the group's most popular. “It's like barn-raising,” says Renée. Groups come together throughout the warmer months and rip up pavement on private property in order to increase green space through plantings in the newly unearthed soil. These nature-based



solutions cool the local climate, increase groundwater recharge while reducing runoff, and create pollinator habitats. The program was inspired by a similar concept in Portland, OR and was originally founded in 2010 with a local climate coalition supported by Green & Open Somerville. DePave the WAY! came under Green & Open Somerville in 2021 and has since been trying to increase the number of depavings each year. If you're interested in participating or applying for a depaving you can fill out the [Depaving Interest Form](#) on their website.

I asked Renée what her favorite win with Green & Open had been. She admitted that Depavings had been a lot of fun, but her favorite success was lobbying the city for a native planting ordinance which eventually passed in 2021. "It took a while, and could have been a lot stronger" she said, "but people we're calling us for years afterwards to learn how to get their own towns to pass similar ordinances". The ordinance was the first of its kind in any city in America, and since then numerous towns in MA have passed similar laws. For an entirely volunteer run and funded initiative born of brainstorming sessions with locals about turf, Green & Open Somerville has changed the landscape in the city and hopes to continue for years to come.

Admittedly low-tech, the best way to get involved is via their email:
GreenopenSomerville@Gmail.com

They also have two mailing lists: a depaving specific newsletter and a more general one as well. Reach out to the email to get on the list!



GROUNDWORK

Somerville

Modeled after a similar organization in the UK, Groundwork Somerville began in 2000, and was one of the first of the US based programs under the umbrella of Groundwork USA. Groundwork Somerville primarily focuses on issues around food insecurity, youth outreach and urban forestry. The program places significant emphasis on environmental justice, and works to create holistic solutions to climate issues that address the social, racial, and economic justice that underpin them.

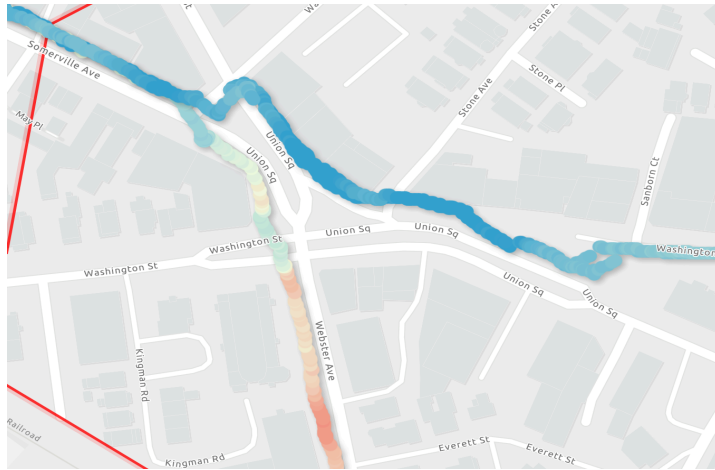


Groundwork Somerville began with the creation of the Green Team, a paid teen employment and leadership program that initially focused on issues around the green line extension. Since then, the Green Team has expanded its scope, and works frequently with a network of gardens at local schools in Somerville and Groundwork's own South Street Farm.

The farm was a project born from a partnership with the Somerville redevelopment Authority in 2011 and Groundworks leases the plot yearly from the town. Focused on education and addressing food insecurity, the farm is split into two plots, South Street 1 and South Street 2. South Street 1 is primarily open garden space for members of the community which Groundworks apportions plots to based on needs with a special focus on recent immigrant families. South Street 2 is used for educational programs and grows food (about 2000 pounds of produce each year) that is donated to the Somerville mobile food market and to Project Soup.

In terms of Urban Forestry issues, Groundworks has their own Urban Forestry Grant that provides funding to plant 60 new trees and provide upkeep for 85 trees. It's unclear yet if this grant will be canceled by the Trump administration, but it seems likely. If funding remains, the hope is to try and find a suitable area for an 'Urban Micro-Forest' that can be planted and cared

for. Groundworks has also partnered with the Mystic River Watershed Association as a Community partner and facilitates groups of volunteers for tree plantings through the city.



Through their Climate Safe Neighborhoods program, Groundworks has also sought to gather local climate data. Equipping their green team members with sophisticated heat sensors provided via grants, they set out around Somerville to collect hyper local climate data that could be used to find the best location for cooling infrastructure. Much of this [data](#) is publicly available. This is what our very own Union Square looks like.

Next time you're in the area, look around and see if you can tell why Webster Avenue is so much hotter than Washington street. If you're interested in this type of work, Groundworks has hosted walking audits of the city that will try and gather more of this type of data and are hoping to do so again!

If you're looking to get involved in Groundworks, check out their instagram page <https://www.instagram.com/gwsomerville/> (@GWSomerville) for news updates and opportunities and their website (groundworksomerville.org). The South Street farm also has open hours every other Wednesday in the growing season if you're looking to get your hands dirty!

All of the information in this section was obtained via interviews conducted with representatives of each organization over April and May of 2025 or via their website.