Massachusetts Department of Conservation and Recreation

THE CITIZEN FORESTER

Urban & Community Forestry Program

FALL 2023 | NO. 260

Return of the Trees

Revisiting Worcester Replanting Efforts

INSIDE THIS ISSUE:

In 2008, a large black beetle with white spots was found in Worcester, MA. When it was identified as the Asian Longhorned Beetle (ALB), it changed the course of urban forestry in the region by leading to the removal of 30,000 trees by the United States Department of Agriculture (USDA) and DCR. In a bid to preserve millions of acres of New England forests, trees that had stood for decades or even a century, were now being removed.

It was a sad and traumatic time for many residents of Worcester and beyond. Almost immediately, government officials, community activists, and local residents banded together to begin the plans for replanting all of the trees that were soon to be lost over the next several years. A new non-profit, Worcester Tree Initiative (WTI), was formed, initiated in January 2009 by Congressman Jim McGovern and Lt. Governor Tim Murray, with the original

The 2013 Worcester Tree Planting Crews. *Photo: DCR*

dcr Massachusetts

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mission to educate citizens about ALB, proper tree planting, and to provide free trees to residents. Funding for WTI was generated through donations from individual citizens and businesses, as well as state and federal grants.

Replanting efforts began in earnest in 2010 and were accelerated when the $4.5 Million American Recovery and Reinvestment Act (ARRA) funding kicked in. The federal government sought state and local bids for money for "shovel-ready" projects to get the funding out the door and into local communities as fast as possible, and what could possibly be more shovel-ready than tree planting?

DCR responded with a new planting model by moving away from costlier and more heavily mechanized contractor plantings, and instead hiring and trained local employees to plant by hand. As part of the ARRA program employment goals, DCR staff then included up to a total of 9 urban foresters and 45 seasonal staff to plant each fall and spring season, beginning in the fall of 2010.

The massive DCR effort had a goal to plant 15,000 trees in 2 years, and helped to account for the bulk of the replanting efforts. After a brief lull in activity as funding sources switched, a new DCR planting push began in 2013 that added even more trees over the next few years. In autumn 2014, the City of Worcester celebrated the planting of its thirty thousandth tree. The 30,000 trees planted include 6,250 planted by the Worcester Tree Initiative, 18,000 by the Department of Conservation and Recreation, 5,250 by the Worcester

Forestry Division—and several hundred by the towns of Auburn, Boylston, Holden, Shrewsbury and West Boylston. More than 100 people were on hand at Burncoat High School for the ceremony, which of course included a tree planting, as well as comments from local, state and federal dignitaries. As everyone gathered to reflect on the work done

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to replace the lost trees, it was equally important to turn an eye to the future, and what will become of all the newly planted trees.

Since it takes a lot of time, effort and funding to plant trees, it is important to monitor progress. To track the health and survivorship of the trees, DCR began working with Clark University's Human-Environment Regional Observatory (HERO) program, which is co-led by Dr John Rogan and Dr Debra Martin. It is a unique undergraduate-graduate-faculty experience that engages in research on human-environment relationships in Massachusetts.

Starting in the summer, HERO Fellows conduct hands-on research under the

mentorship of Clark University faculty. During 2015 and 2016, the HERO program conducted an inventory of over 1,500 of the trees planted in the Burncoat and

30,000 Tree Ceremony at Burncoat High School, Fall 2014

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Greendale neighborhoods, located in the north of Worcester, and reported those findings to the DCR. Now, the HERO program is back, and has conducted research this summer to follow up on the work done in the past. This includes evaluating them for survivorship, condition and growth using protocols established during the prior research, then studying the change over the 7-8 years since the trees were last surveyed. Additionally, the tree data will be evaluated by: (a) Genus and species type; (b) Planting site location (i.e., street, front-yard, back yard); (c) Time since planting; and (d) Maintenance and stewardship. In addition to taking measurements of tree width and leaf cover, the students will interview residents to get their perspectives on how the replanted trees are doing.

Tree survival and health are important metrics for urban tree planting managers and policy makers so they can target resources to improve planting initiatives. The HERO research will help the DCR understand the most important ecological, biophysical and anthropogenic factors that have influenced the Burncoat and Greendale tree cohorts. Additionally, the research protocol is intended to be repeated again in 2029-2030, furthering the long-term tree data monitoring.

To better understand the impact of urban development on the tree cohorts under investigation, the second goal of the project is to use

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Granville Ave in Worcester
before tree removal 2009.

Granville Ave in Worcester
after tree removal 2009.

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remote sensing techniques to show change in land cover types in Worcester from 2010 to 2023. The Clark University Team will use high spatial resolution satellite imagery to map tree canopy cover, grass area cover, buildings, water, and impervious surface cover in 2010 and 2023.

when there was not paid staff present. It was originally hypothesized that having a resident who is responsible for the tree in their yard, would improve tree survivorship. However, attitudes such as, "I'll get to it next week," or, "I think it rained enough," probably contributed to trees not getting enough water. Another factor was that a single resident could be

Granville Ave four years after tree planting 2014.

Granville Ave thirteen years after tree planting 2023.

Contrary to initial expectations, street trees planted in the public right-of-way that received dedicated tree care such as regular watering and young tree pruning, had higher survivorship than trees planted on private property. The students believed the cause was that private property trees were less likely to be watered during the critical establishment period,

responsible for multiple trees on a property, which may have been too much work for them.

In all, the HERO team sampled survivorship information from 7,000 trees in the study area. Of the trees that were still alive, about 90% of them were classified as being in healthy condition. This leads the

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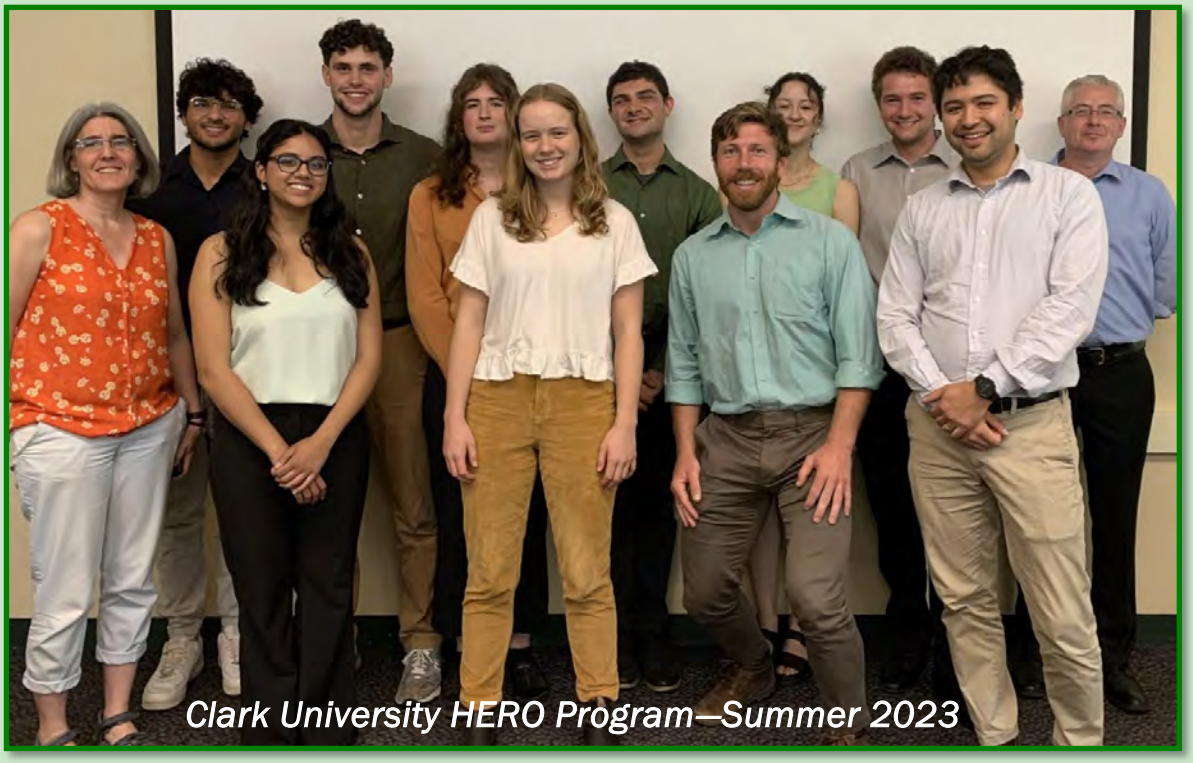
students to believe that if a person provides the necessary water and care to a tree, it will not only survive, but thrive. If trees were watered by residents, survivorship was 82%. Without stewardship, survivorship dropped to 67%. In comparison, street trees had a survivorship of 89%, boosted by receiving regular watering. Residents also interestingly tended to favor trees planted in their front yards—those trees showed the highest survivorship and vigor, when controlled for location.

The students also compared their information to the baseline survey conducted in 2014. The survivorship of trees on private property went down 11% from 2014 to 2023. After conducting interviews with residents who received the trees, it was noted that the most common cause of tree mortality was removal by residents. The most common reason cited for removal was ownership change. This brings to light an important part of tree planting campaigns and tree canopy goals: tree protection. Trees along the rights-of-ways and in public spaces are protected by Massachusetts General Law, and possibly by additional local ordinances and bylaws. On the other hand, trees on private property are rarely protected by



Clark University HERO Program—Summer 2023

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Cheyenne Rd tree planting 2013.

HERO in the shade at Cheyenne Rd 2023.

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local ordinances and bylaws, despite the substantial need for protection.

Lastly, the students analyzed the impact of tree planting on surface temperatures over the last 13 years and saw significant cooling in the replanted areas. Regions that had an increase in temperature were correlated with new development and canopy loss. When interviewed about what residents valued the most from their trees, the most common answer given was shade. The students used iTree to analyze the ecosystem services of the planted trees and found that the larger shade trees provided the most benefits. The 1,615 trees sampled are projected to be removing 4.6 tons of carbon, as well as removing 236 pounds of pollution from the air annually.

Based on their analysis, the students recommended trees with the highest survivorship, which were; Linden, Tulip Tree, Pin Oak, Honeylocust and Red Oak. Based on their findings, the students recommend increasing stewardship and coordination for multi-family homes to maximize tree survival. The take home message, quite literally, is that residents should be watering their trees more often. The first few years after tree planting, known as the establishment period, is absolutely critical to young tree survival.

Thanks to the rigorous work of the Clark HERO team, DCR has implemented a variety of updates to the planting programs to ensure long-term success of trees.

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However, the largest challenge remains, of combating tree loss to development. Research like the work being done by Clark University can help to convince residents and property owners that long term success combating climate change will only happen by prioritizing the retention of tree canopy for the long-term. If you would like to be part of the solution, find out if your city or town has a tree protection ordinance or bylaw, and advocate for the canopy in your community!

References:

- City of Worcester Urban Forestry
- Clark University HERO Program
- MA DCR ALB Program
- USDA ALB Program - Worcester
- Vibrant Cities Lab - Case Study

Photos: Massachusetts DCR.

Tree Protection Zone (TPZ)

Looking at these trees in terms of public benefit can help advance the idea of community-wide tree protection. Additional consideration should be given during the planning phases of any development or redevelopment project. Often, existing trees can be saved from damage or removal, simply by adding a TPZ before work begins.

Forester Focus

A deeper look into today's Urban Forestry topics

Arbor Day Poster Contest

The Annual Student Award Program

Trees are the dominant feature of all forest communities and can be found in so many parts of our daily lives. They exist in parks, schoolyards, backyards, and along our roads. Whether we are in a city or small community, the urban and community forest is so ubiquitous that we often don't stop to think that we are actually part of a forest community and have a complex relationship with its ecosystem. Increasing students' understanding of their relationship with the urban forest and the trees around them is an important step toward appreciation of trees and of the environmental benefits they provide our communities.

Each year Massachusetts fifth graders participate in the Arbor Day Poster Contest. Each school holds its own poster contest and submits their winning poster to the DCR. Prizes include art supplies and a tree for the winner's school.

As part of a major shift in the program, to include even more students, this year the contest will open up to third, fourth, and fifth grades across the state! Now, more than ever, it's important to educate younger generations about the importance of trees and nature, and instill a respect for our limited natural resources.

Each student who participates is asked to create a poster around the contest theme that reflects their understanding of trees and the importance of trees in urban and community forests. The poster may relate to the theme of trees in our

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communities and how they protect (and are a part of) our natural resources. Students are encouraged to be creative with the theme. The theme is intended to invite a variety of interpretations related to the importance of trees in our neighborhoods.
This year's winner was Emma L. from Old Hammondtown School in Mattapoisett. She and her school

participated in a tree planting event, conducted by DCR Urban & Community Forestry. The students were knowledgeable about the benefits of trees, and super enthusiastic for the addition to their school. We hope to see your town's nomination next year!

Poster Contest Rules:

- All entries must be the original artwork created by a student who is currently in the 3rd, 4th or 5th grade. A student may enter the contest only once.
- The poster must be related to the contest theme in some way. The current theme must be on the poster. All words must be spelled correctly and be written clearly.
- Entries must be no smaller than 8.5 x 11" and no larger than 14 x 18."
- Entries must be done on paper that will allow for duplication, display, and framing.
- Submit your school's entry to DCR's Urban and Community Forestry Coordinator, Julie Coop, as described on the "School Winner Report Form" on page six of the application.

For more information, visit:

https://www.mass.gov/guides/annual-arbor-day-poster-contest

CLIMATE RESILIENCY

Healey-Driscoll Administration Announces $1.3 Million in Tree Planting Grants

Boston – In an effort to help communities build resilience and mitigate the harms of the climate crisis, the Healey-Driscoll Administration announced $1.3 million in grants to support tree plantings in Gateway Cities across Massachusetts. Eight municipalities and two non-profit organizations will receive awards totaling $988,300 through the Greening the Gateway Cities Program (GGCP) Implementation Grants, and an additional 15 projects are receiving awards totaling $313,571 through the GGCP's Partnership Grants.

"Recently, I got my hands dirty in Malden planting trees. I saw firsthand the tremendous benefits the Greening the Gateway Cities Program has on communities," said **Governor Maura Healey**. "Our administration is proud to announce we're investing in our future by creating more tree canopy in Gateway Cities across Massachusetts to ensure we are providing healthy and livable communities for generations to come."

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"As a former mayor, I know how important the partnerships between municipalities and key stakeholders are in this program, not only by planting trees but also maintaining them," added **Lieutenant Governor Kim Driscoll**. "By employing residents in each community, we're fostering good stewards and providing them skills applicable to future employment in green industries."

The GGCP is a partnership between the Executive Office of Energy and Environmental Affairs (EEA), the Department of Conservation and Recreation's (DCR) Urban & Community Forestry Program, the Department of Energy Resources (DOER), and the Department of Housing and Community Development (DHCD), along with Gateway Cities and local grassroots organizations. These tree planting efforts help decrease energy use, reduce flooding from stormwater runoff, and improve the quality of life in these cities.

"Our Gateway Cities are on the front lines of the climate crisis," said **Energy and Environmental Affairs Secretary Rebecca Tepper**. "With summers getting increasingly hotter, it's critical that Massachusetts curbs the urban heat island effect. Planting more trees provides a cooling effect in neighborhoods, and is especially important in environmental justice communities where there's less tree canopy, older housing stock, higher wind speeds, and larger rental populations."

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"Planting more trees in our Gateway Cities helps shield our environmental justice communities from the extreme heat driven by the climate crisis," said **DCR Commissioner Brian Arrigo**. "Last year the Greening the Gateway Cities Program reached a milestone of 35,000 trees planted across the Commonwealth and we are excited to work with our partners create more urban tree canopies and green spaces in our communities that need them the most."

The GGCP Implementation Grant awards funding to municipalities and non-profit organizations seeking to maximize tree planting in urban residential areas of Gateway Cities. The GGCP Implementation Grant awardees are:

City of Everett	$100,000 to plant 65 trees.
City of Fall River	$99,650 to plant 190 trees in three parks with aging canopy in need of rebalanced age diversity.
City of Fitchburg	$88,650 to plant an estimated 50 trees in 3 parks and pursue arborist training to certify 2-3 staff.
City of Haverhill	$100,000 to plant 300 trees and disseminate educational brochures pertaining to the benefits of a healthy tree canopy and tree care.
City of Holyoke	$100,000 to plant 60 trees in tandem with community outreach conducted with OneHolyoke CDC in the Flats, Downtown and Churchill Neighborhoods.
City of Malden	$100,000 to plant 154 trees in partnership with the Mystic River Watershed Association.
City of Quincy	$100,000 to plant 60 trees in the Quincy Point neighborhood, as well as create or expand an estimated 40 tree pits in coordination with DCR.
City of Salem	$100,000 to plant 105 trees in Environmental Justice communities and urban heat islands within Wards 1, 4, 6, and 7 with outreach conducted by Salem Sound Coastwatch.
Groundwork Lawrence	$100,000 to this community-based non-governmental organization to plant 350 trees in the South Lawrence West neighborhood impacted by the Columbia Gas line explosion, and the Tower Hill neighborhood.
New England Botanic Garden	$100,000 to expand the "Get a tree, Plant a tree" program, and complete 200 more residential tree plantings in the Grafton Hill, Main South and Bell Hill neighborhoods of Worcester.

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The Partnership Grant awards funding to cities to create planting space and non-profit partners conducting outreach. The GGCP Partnership Grant awardees are:

City of Chelsea	$30,000 to purchase and install two catch basin tree pits to intercept storm water runoff and support tree growth.
City of Fitchburg	$12,944 to prepare 16 tree pits within the DCR planting zone.
City of Holyoke	$30,000 grant award to prepare 19 tree pits in the Flats, Downtown, and Churchill neighborhoods of Holyoke.
City of Salem	$29,990 grant award to prepare 46 new tree planting sites in the Church Street and Riley Plaza parking lot areas.
City of Quincy	$30,000 grant award to prepare 40 3'x8' tree pits for street trees within the DCR planting zone.
Groundwork Lawrence	$20,000 to conduct door-to-door canvassing, literature mailings and tabling at community events to raise awareness of GGCP tree planting within the Haverhill DCR tree planting zone and communicate the benefits of urban canopy.
Groundwork Southcoast	$15,000 to conduct door-to-door canvasing and disseminate literature in New Bedford, as well as increased awareness of the program via social media.
Growing Places	$33,862 to grow community awareness of the GGCP in both Leominster and Fitchburg; connect DCR foresters with new landowners for tree planting and increase knowledge of the many benefits of urban tree planting within the community.
Lowell Parks & Conservation Trust	$20,000 to provide a series of programs to engage community residents in the GGCP-Lowell tree planting program and identify high priority planting locations to increase the city's canopy.
One Holyoke CDC	$20,000 to disseminate information to residents in One Holyoke CDC properties in the planting zone via door-to-door canvassing, educational events focused on the GGCP, as well as assist with Spanish translation for outreach materials.
Regreen Springfield	$40,000 to install city bus shelter wraps along the major roadways in the GGCP neighborhoods to highlight the tree planting efforts of the GGCP and encourage residents to apply for a tree as well as to produce several short videos that raise awareness of the importance of urban trees in Springfield.
Salem Sound Coastwatch	$20,000 to conduct outreach and generate interest in the GGCP program, and recruit residents to have trees planted on their property as well as identify high priority planting locations.
Westfield Puerto Rican Association	$11,775 to strengthen partnerships and address environmental justice concerns through community outreach in coordination with the DCR tree planting team and conduct door-to-door outreach to raise awareness of the GGCP.

Species Spotlight
Black gum, Nyssa sylvatica

Fall is a great time to enjoy the beauty of black gum, a native tree that has lots to offer landscapes throughout the year. Black gum is naturally found from southwestern Maine, west to southern Ontario and east Texas, and south to

Florida. It grows in a variety of habitats, from rich alluvial valleys to upland hardwoods. It is known as black gum, black tupelo, tupelo, sour gum, and pepperidge. It is highly pyramidal when young, similar to pin oak, with the crown becoming conical or flat-topped as the tree matures. The branches are horizontal and droop down toward the tips. At maturity, black gum can reach 50 feet tall and 20-30 feet wide, but can occasionally grow to 90 feet tall.

The leaves, a lustrous green color, are alternate, simple, ovate, and 3-6 inches long. In fall, they consistently become

scarlet, almost purple in color, providing a wonderful fall display. The bark is dark gray and, with its deep ridges, achieves a blocky appearance. The flowers, not ornamentally important, are polygamo-dioecious and appear with the leaves. The fruit develops on female trees only and is a half-inch-long drupe, bluish-purplish in color that ripens in the early fall. The fruit provides high levels of crude fat, fiber, phosphorous, and calcium, making it an important food source for birds and wildlife.

Black gum has been used in furniture, shipping containers, cross ties, bridge ties, and factory flooring where floors were subjected to heavy

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Species Spotlight—Continued

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wear, but it is not a commercially important species.

In urban forestry, black gum makes a handsome specimen tree and can be used as a street tree in areas where it will not be exposed to high levels of salt. It will grow best in full sun, and prefers moist, acidic soils. It tolerates poorly-drained soils and can grow in standing water. On the other end of the spectrum, tolerates some drought and adapts to some dryish soils. This makes tupelo a great species to

consider when designing green infrastructure projects, such as stormwater tree pits. Although slow-growing, it still needs to be sited in an area which affords plenty of room for future growth. The taproot on black gum can make it difficult to transplant and Michael Dirr recommends planting it in the spring.

The genus name, Nyssa, is derived from the word Nyssa or Nysa and refers to a water nymph from Greek mythology. The specific epithet, sylvatica, means "of the woods."

With a changing climate and the hunt for tree species that can tolerate extreme conditions, the black gum may distinguish itself. Global change models involving future increases in carbon dioxide and temperature predict that black gum will increase in various locations throughout the eastern United States. Let's do our part to promote the increased use of this beautiful, and adaptive, native tree.

Photos:

From DCR, Virginia Tech, and UConn Plant Database

Tree City USA & Tree Campus Awards

This June, DCR Urban & Community Forestry Program celebrated the 2022 Tree City and Tree Campus USA award winners, in Greenfield, MA. The event was graciously hosted at Greenfield Community College, with Mayor Wedegartner in attendance to accept the 21st award for the city of Greenfield.

Representatives from over 30 communities and universities were in attendance to receive their awards, with a record breaking overall total of 90 cities and town who achieved their Tree City USA certification for this past calendar year.

Attendees participated in three educational workshops for continuing education credits. Presenters for the day were: Paul Newell, City of Greenfield, Mary Chicoine and Emily Boss Greenfield Tree Committee, “City of Greenfield Tree Program” Nicole Keleher, DCR Forest Health, “Massachusetts Forest Health Concerns” and Sean Mahoney, DCR Wood Products Utilization “Wood Markets and Utilization Program Update.”

City of Greenfield Mayor and Tree Committee with DCR Commissioner Arrigo and Bureau of Forestry Staff.

In 2022, Massachusetts Tree City USA communities invested $32.5 million in 91 towns and cities representing 3.4 million people with over 20,000 hours of volunteer time.

Talk to your community about TCUSA today!

For more information, visit:

https://www.mass.gov/guides/programs-in-partnership-with-the-arbor-day-foundation

TREE CITY USA
An Arbor Day Foundation Program

Tree City USA Summary

MASSACHUSETTS 2022

BY THE NUMBERS

91
TREE CITY USA **COMMUNITIES**
6 NEW

49.06%
OF STATE **LIVES IN A TREE CITY USA COMMUNITY**

98.84% RECERTIFICATION RATE

REPORTED NUMBER OF **TREES PLANTED** **10,244**

LARGEST
Worcester
POPULATION 206,518

SMALLEST
New Salem
POPULATION 950

LONGEST-RUNNING ACTIVE TREE CITY USA COMMUNITY:
Wellesley
40 YEARS

$32,536,531
SPENT ON URBAN FORESTRY MANAGEMENT

$9.49
average per capita

Growth Award

11 Growth Award Recipients

LONGEST ACTIVE GROWTH AWARD
Worcester
24 YEARS

0 NEW Growth Award Recipients

BEYOND TREE CITY USA

TREE CAMPUS HIGHER EDUCATION
An Arbor Day Foundation Program

7 Recognized Massachusetts Schools

1 NEWLY Recognized Schools

TREE LINE USA.
An Arbor Day Foundation Program

0 Tree Line USA Utilities

TREE CAMPUS HEALTHCARE
An Arbor Day Foundation Program

Recognized Healthcare Facilities:

Arbor Day Foundation

50085109

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The rainy season is good for trees!

Greening the Gateway Cities Program plants over 2,000 trees in Spring of 2023

With the difficult drought conditions of the fall of 2022, the spring of 2023 was a welcome relief for trees and towns across the state. The Greening the Gateway Cities Program continues to plant trees to assist Environmental Justice communities that have a lack of urban canopy cover. 2023 saw new tree planting in the cities of Everett, Malden, Taunton and Worcester.

Everett crew assisting on a tree planting to shade impervious surfaces.

Fitchburg crew hard at work restoring canopy to the city's downtown area.

With continued rain over the summer, the program is hopeful for a productive fall planting season. Demand for trees continues to be high and we are looking to fulfill all remaining tree planting request for the year. A big "THANK YOU" to all our tree planting crews for their hard work and dedication!

More info at: https://www.mass.gov/service-details/greening-the-gateway-cities-program

Holyoke crew installing trees in newly designed tree pits, with funding from EEA municipal grants.

Malden crew making a new home for trees.

DCR foresters leverage EEA grant funding in Salem for structural soils to increase tree survivability.

Worcester crew planting around multifamily homes.

More info at: https://www.mass.gov/service-details/greening-the-gateway-cities-program

Research Update

Diversifying Partnerships in the Face of Forest Threats: New Research on EAB Management

As climate change challenges the resilience of our forests, the presence of nonindigenous insects and pathogens will continue to threaten the existence of certain trees and the lifeways they support. Thanks in part to a USDA National Institute of Food and Agriculture Critical Research and Extension Program grant, Harvard Forest researcher Dave Orwig partnered with experts throughout the northeast, including Harvard Forest Research Affiliate Tony D'Amato (University of Vermont) to research considerations of species preservation, with a particular focus on response to the emerald ash borer (EAB).

Published in the Journal of Forestry, three new papers describe a novel framework for nonindigenous insects and pathogens (NIIP) adaptation, including unique case studies with broadened preservation values relative to EAB and new insight into how foresters and loggers approach decision-making on stands threatened by this invasive pest.

The first of these research articles[1] introduces a broadened concept of "preservation values" that encompasses ethical responsibility, cultural integrity, genetic conservation, and ecological function. "The more preservation values a strategy seeks to protect, the more likely it is to attract diverse partners interested in collaborating, which can increase support, resources, and opportunities," write the authors[1].

Building relationships is integral to this approach, as explained in the second paper[2]. Two case studies build from coauthor experiences to examine similarities and differences between preservation values and approaches for ash with the Akwesasne Task Force on the Environment (a group working for

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the Saint Regis Mohawk Tribe), the Maine Indian Basketmakers Alliance & Brown Ash Task Force (groups comprised and led by Tribal basketmakers, ash harvesters, and natural resource staff from the Wabanaki confederacy), and partnerships across state/federal agencies in Vermont and New Hampshire.

As our conservation and research worlds grapple with a long history of excluding Tribal partners from decision-making, foresters are uniquely poised to bridge this gap, as the case studies above illustrate. "The complementary nature of recognizing both the traditional ecological knowledge and the Western science-based knowledge associated with these tree species and EAB as counterparts that are equal in value will be essential in fully understanding and developing solutions.[2]"

In a concurrent study[3], researchers at UMass Amherst (Marla Markowski-Lindsay and Paul Catanzaro) partnered with Harvard Forest researchers Dave Orwig, Jonathan Thompson, and Danelle LaFlower to better understand the role of foresters and loggers in response to EAB in Massachusetts and Vermont, with particular attention paid to the "secondary disturbance" caused by preemptive harvesting.

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[1] Anthony W D'Amato, David A Orwig, and others, Species Preservation in the Face of Novel Threats: Cultural, Ecological, and Operational Considerations for Preserving Tree Species in the Context of Non-Indigenous Insects and Pathogens, *Journal of Forestry*, 2023;, fvad024, https://doi.org/10.1093/jofore/fvad024

[2] Anthony W D'Amato, David A Orwig, and others, Towards Tree Species Preservation: Protecting Ash Amidst the Emerald Ash Borer Invasion in the Northeast, *Journal of Forestry*, 2023;, fvad025, https://doi.org/10.1093/jofore/fvad025

[3] Marla Markowski-Lindsay and others, Forester and Logger Response to Emerald Ash Borer in Massachusetts and Vermont: a Secondary Disturbance, *Journal of Forestry*, 2023;, fvad019, https://doi.org/10.1093/jofore/fvad019

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FOREST SERVICE US DEPARTMENT OF AGRICULTURE

New and Stories from the Northeast Region

The Forest Service Urban & Community Forestry Program provides

Urban Tree News in the Northeast, a collection of articles published in the media that have relevance to urban forestry in the Northeast.

Boston's summer heat is an issue of racial equity. 'Greening' our city is one solution
Mayor Wu and PowerCorps Boston Celebrate Graduation of Second Cohort
How Trees Increase Equity Across Worcester Neighborhoods
Indigenous rep added to Woodlands Partnership of Northwest Massachusetts board
USDA Releases Five-Year Strategy to Combat Spotted Lanternfly
White roofs and shade trees: How cities try to soften heat
Shade is an essential solution for hotter cities
NASA Moon Trees Quest
Environmental Scientist Uses Sensors to Study Trees' Cooling Power

On The Horizon

September 7	**Webinar:** Urban Forestry Today— Understanding Social Implications & Human Health Effects of Urban Trees. http://www.urbanforestrytoday.org/
September 12	**Event:** UMass Extension Conifer Diseases Walk—Arnold Arboretum in Jamaica Plain, MA https://ag.umass.edu/landscape/events/conifer-diseases-walk
September 15	**Webinar:** Yale Urban Ecology — Urban Forests: Solutions for a Changing Climate. https://hixon.yale.edu/events/conference/hixon-center-urban-conference-3
October 1-3	**Event:** New England ISA — Conference & Trade Show. Portland, ME. www.newenglandisa.org
October 21	**Event:** MA Town Forest Conference "Land Protection and Climate Change" — Ashland, MA. Registration required at: bit.ly/3Kf27wZ
September 6 to November 15	**Training:** Massachusetts Qualified Tree Warden Certificate Course—Worcester, MA. This six-module course is designed to teach tree wardens what they need to know to fulfill their duties. Limited to 50 participants. Register Here.
October 13 & 27	**Training:** DCR Tree Stewards Training. Foundation training for tree activists. East & West MA locations. Register here: https://www.mass.gov/forms/dcr-tree-steward-training
THIS OLD TREE PODCAST	**Podcast:** This Old Tree — *Heritage trees and the human stories behind them*. Old trees are awe inspiring links to the past that fire our historical imagination. https://www.thisoldtree.show/

Tree Tip:

Protect your trees!

Keep mowers and trimmers away from trees.

The living tissue is near the outside of the tree and can easily be damaged. When bark is damaged, water and nutrient distribution in the tree is restricted. Trunk damage also causes trees to be more susceptible to harmful insects and diseases.

***The Citizen Forester* is made possible by:**
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www.mass.gov/dcr/urban-and-community-forestry

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