Massachusetts Urban & Community Forestry Program

The Citizen Forester

OCTOBER 2017 NO. 207

Explore Your Region with i-Tree Landscape

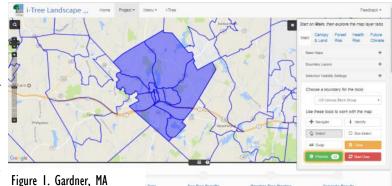
By **Mollie Freilicher** Did you ever wish there was an easy way to evaluate things like canopy cover, land use, or ecosystem services, along with census demographic information? Or wildfire potential? Or future climate scenarios? Now there is with i-Tree Landscape. i-Tree Landscape is a free, web browser-based tool in the i-Tree suite. Access landscape at: https://landscape.itreetools.org/.

Since its launch in 2015, i-Tree Landscape has grown into a powerful tool for understanding what trees at multiple landscape scales are providing for us. It enables users to better understand trees in and around their community, county, state, or region and allows users to prioritize planting areas based on the variables in the model related to demographics, canopy and land, forest risk, health risk, and future climate.

i-Tree Landscape is entirely web-based, so you do not need any GIS equipment to run an analysis or explore the data. All you need is a computer that is connected to the internet. It is also fairly intuitive, though if you do get stuck, there

is help in the form of clickable question marks, pop-up information, and a detailed help section.

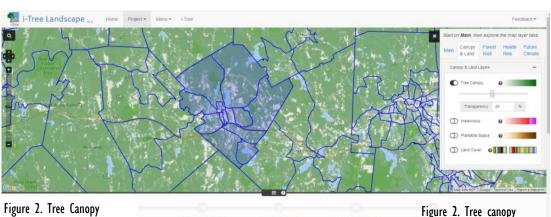
In Figure I (right), we've zoomed in on Gardner, MA, and selected the various census blocks that make up the town, using the menu on the right. Currently, census block is the smallest geographic area that can be selected in Landscape. Other options include census places, counties, congressional districts, and states, as well as U. S. National Forests, ranger districts, CFLR (Collaborative Forest Landscape Restoration) boundaries, and watersheds.



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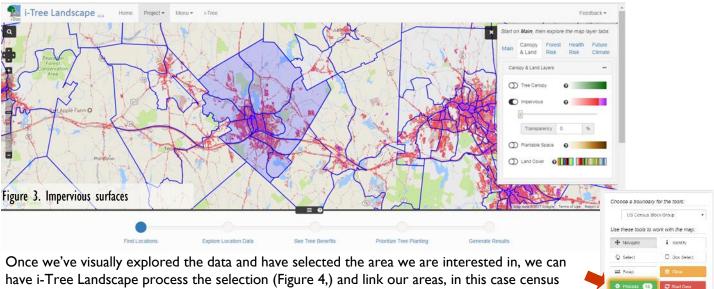
Up Ahead: i-Tree Landscape 1-3 **Species** Spotlight 4 Grants 5 Growing on 6-9 Trees Webcasts 6 Gleanings 9-10 News П On the Horizon 12

We can explore the tree resource in Gardner and environs from here. You can adjust the transparency of the selection so that other layers, such as tree canopy (Figure 2, below) or impervious surfaces (Figure 3, next page) are easier to see,



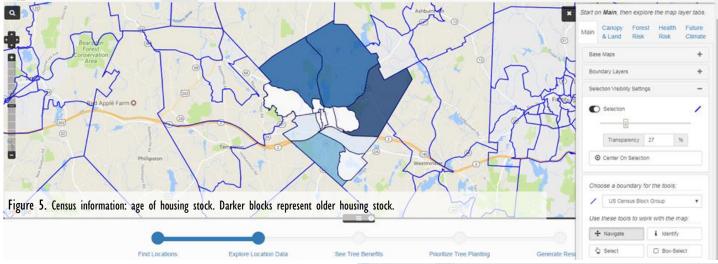
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Explore Your Region with i-Tree Landscape (continued)



Once we've visually explored the data and have selected the area we are interested in, we can have i-Tree Landscape process the selection (Figure 4,) and link our areas, in this case census blocks, with demographic and other information. Below (Figure 5.), we are looking at census information on housing stock. The darker the color, the older the housing stock.

Figure 4.



We can also look at environmental variables. Here (Figure 6), we are looking at Land Surface Temperature Difference: Darker blocks represent areas with warmer land surface temperatures, so if we were looking to reduce urban heat island, we might focus efforts in these areas.

If we click the "next" button, i-Tree Landscape will process tree benefits for canopy cover in the area we selected. At any time, we can also zoom out and visualize different data layers, while still preserving our selection.

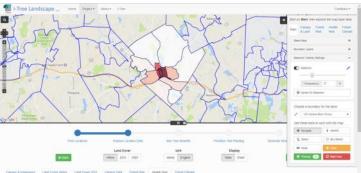


Figure 6. Land Surface Temperature Difference. Darker blocks represent areas with warmer land surface temperatures.

Explore Your Region with i-Tree Landscape (continued)

Right, we are exploring the Health Risk tab and looking at data on particulate matter smaller than 2.5 micrometers (PM_{2.5}). These are inhalable, fine particles that come from vehicles, combustion of fuels, and fires, and are a major air pollutant. The map below shows average PM_{2.5} for Massachusetts and environs. We can also zoom out on a national scale (Figure 8).

In the next section, you can explore the benefits that trees in the selected blocks provide in terms of carbon,

air pollution removal, and hydrology, and it is possible to view the results in both amount and a dollar value for the ecosystem service (Figure 9).



Figure 10. Tree canopy and PM₂₅ removal.

Looking at tree canopy and $PM_{2.5}$ (Figure 10), we can see that the darker areas also have more canopy than lighter areas. We could also be looking at other layers, such as impervious surfaces or land use, in conjunction with ecosystem services.

i-Tree Landscape enables users to prioritize areas of a community or region for tree planting, based on a



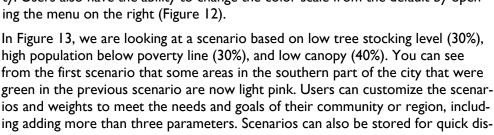
Figure 11. Priority planting scenario based on low tree stocking (30%), low tree cover per capità (30%), high population density (40%).

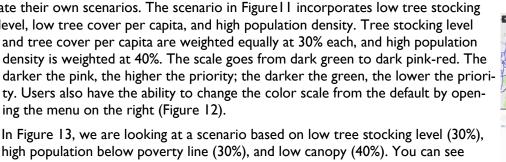


Figure 13. Priority planting scenario based on scenario based on low tree stocking level (30%), high population low canopy (40%).

number of variables related to demographics and the tree resource now and in the future. There are some pre-set scenarios that users can ex-

represent areas with more removal. plore, and users can also create their own scenarios. The scenario in Figure I I incorporates low tree stocking level, low tree cover per capita, and high population density. Tree stocking level and tree cover per capita are weighted equally at 30% each, and high population density is weighted at 40%. The scale goes from dark green to dark pink-red. The darker the pink, the higher the priority; the darker the green, the lower the priori-





play.

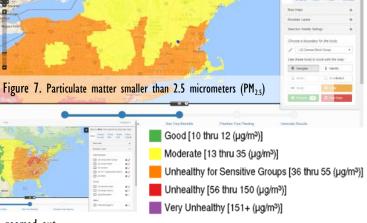


Figure 8. PM 2.5, zoomed out.

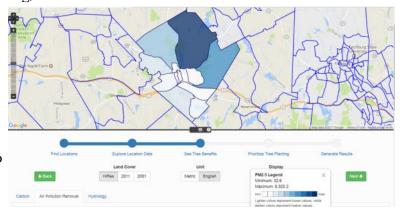


Figure 9. Removal of particulate matter smaller than 2.5 micrometers (PM25). Darker values

Figure 12. Changing colors for the map display

Clicking the "next" tab, users can then generate reports. To make things easy, there are a few default report styles to choose from to help share your findings.

i-Tree Landscape is a powerful tool that can help communities, counties, and regions better below poverty line (30%), and understand conditions as they relate to tree canopy. Explore your landscape today!

Species Spotlight Persian parrotia, Parrotia persica

By **Mollie Freilicher** A member of the witchhazel family, Hamamelidaceae, Persian



Form: Oregon State University

parrotia (Parrotia persica), also called ironwood or Persian ironwood, is native to Iran and the southeastern Caucasus Mountains. (For brevity, we will call Persian parrotia, simply, "parrotia" here, but note that there is also another parrotia cultivated for the landscape, Parrotia subsubaequalis, Chinese parrotia.) In the landscape, it is a tree that can provide year-round interest and is not too commonly planted in the

landscape. Parrotia is a small tree, growing 20 to 40 feet, with a spread of 15 to 30 feet. In Iran, it is found only in the Hyrcanian region, one of five phytogeographical re-

gions of Iran, and is bordered on the north by the Caspian Sea and on the south by the Alboroz mountains, a range which rises over 18,000 feet. The Hyrcanian region has a climate similar to Northern California - humid. wet, and mild. Parrotia is found from sea level, growing up to 3,000 feet. Parrotia is hardy in



Flowers: Oregon State University

USDA Zones 5-8. In some marginally hardy areas, the tree may die back a little. Parrotia can be a multistemmed shrub or small single-stem tree with a rounded, upright form. There are many cultivars that are more

upright and narrow, increasing its suitability for tight spaces.

Leaves of parrotia are alternate, simple and oval to obovate-oblong and two-and-a-half to five inches long. The lower half of the leaf margin is smooth, maybe with a few teeth, and above the middle, it



Fall color: Paul W. Meyer, UPenn

is coarsely crenate or dentate. They are similar in shape to leaves of witchhazel (Hamamelis spp.). When leaves

emerge they are red-purple, and they become a lustrous and dark green in color during the growing season. Fall color can be brilliant, ranging from yellow to orange to scarlet.

The bark of parrotia becomes exfoliating, showing gray, green, white and brown. It

can take years for the trunk and branches to exfoliate, and when the tree is without leaves, it adds ornamental interest.

Parrotia blooms in early spring, though flowers are not showy. The flowers do not have petals, but have red stamens that are clearly visible. The fruit is also not ornamentally important and is a two-valved capsule, containing one brown seed in each cell.

Parrotia will do well in well-drained. loamy, and slightly acidic soil and can tolerate some shade. Once it is established. Michael Dirr writes that it



Trunk: Derek Ramsey, Wikipedia

is a tough plant, tolerating drought, heat, wind, and cold. It also does not have many pests.

In the landscape, parrotia is a great small tree for a variety of sites, with cultivars appropriate for confined areas, such as under utility wires. Some of these more compact

hybrids include 'Inge's Ruby Vase,' 'JLColumnar,' and 'Vanessa,' which was named Urban Tree of the Year in 2014. Dirr notes that on the University of Georgia campus, it grows in medians and planters surrounded by blacktop and does well. Of parrotia, Dirr also writes that it is "one of the best small specimen trees that I know."

Parrotia came into cultivation in 1830,



Twig: Virginia Tech

when a French botanist Augustin de Candolle described the plant as a Hamamelis. The next year, the botanist Karl Anton Meyer described his collecting of it in the Caucasus and placed parrotia in its own genus, Parrotia, in honor of the German naturalist F. W. Parrot, who explored and collected in Turkey and the Caucasus. It reached Kew Gardens in 1841, and the United States, in 1880, where it was planted in Cambridge, MA. The Arnold Arboretum has several parrotias in its collection, including the one grown in 1881 from a cutting of the original tree.

References

Dirr, M. A. 1998. Manual of Woody Landscape Plants. 5th Ed. Champaign, IL: Stipes.

Nicholson, R. A. 1989. "Parrotia Persica: An Ancient Tree for Modem Landscapes." Arnoldia. 49:4.

Rehder, A. 1927. Manual of Cultivated Trees and Shrubs. New York: MacMillan.

Leaf: Virginia Tech

Grants

DCR Urban and Community Forestry Challenge Grants

October I (Intent to Apply) | November I (Full Application)

Challenge grants are 50-50 matching grants (75-25 for environmental justice projects) to municipalities and nonprofit groups in Massachusetts communities of all sizes for the purpose of building local capacity for excellent urban and community forestry at the local and regional level.

The USDA Forest Service provides funding for the grant program, and DCR administers the grants with guidance from the Massachusetts Tree Wardens' and Foresters' Association.

Project areas include:

- ♦ Building and Strengthening Citizen Advocacy and Action Organizations
- ◆Securing or Training Professional Staff
- ◆ Developing and Implementing Systematic Urban Forestry Management through tree inventory and analysis, resource assessment, and development of plans
- ◆Attaining a Tree City USA Award, Growth Award, Tree Campus USA Award, or Tree Line USA Award
- ♦ Completing strategic community tree plantings and "heritage" tree care projects
- ♦ Other projects

The DCR Urban and Community Forestry Program assists communities and nonprofit groups in their efforts to protect and manage community trees and forest ecosystems, with the ultimate aim of improving the environment and enhancing the livability of all of Massachusetts's communities.

Funding for strategic tree planting grants is now tiered:

| Grant Funding Request for Tree Planting | Eligibility | |
|---|---|--|
| \$1,000 - \$7,000 | All communities may apply | |
| \$7,001 - \$20,000 | Community must be a Tree City USA | |
| \$20,001 - \$30,000 | Contact DCR Urban and Community Forestry to discuss | |

Download our recently-revised grant application at:

http://www.mass.gov/eea/agencies/dcr/conservation/forestry-and-fire-control/urban-and-community-forestry-challenge-grants.html

For more information on the Challenge Grants, including our Eversource Go Green grants and National Grid Partnership Grants, contact Julie Coop at 617-626-1468 or julie.coop@state.ma.us or Mollie Freilicher at 413-577-2966 or mollie.freilicher@state.ma.us.

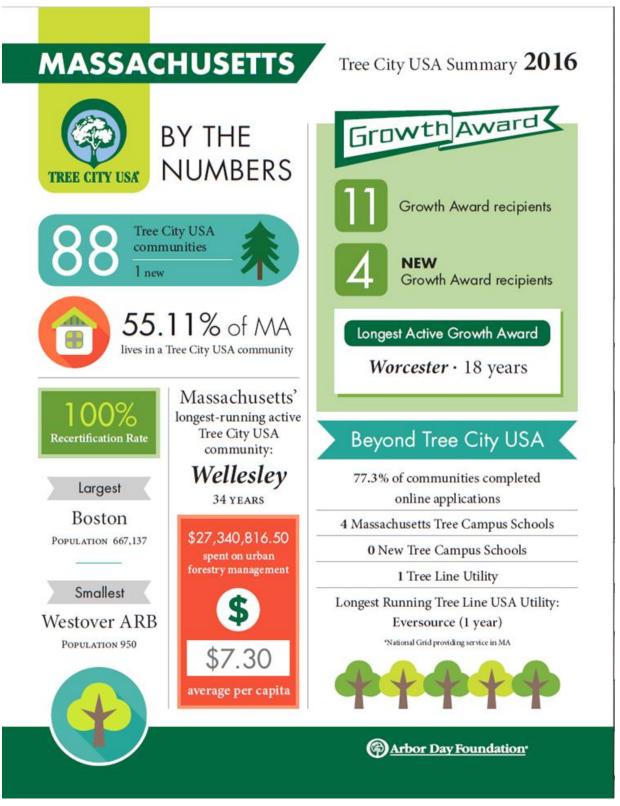
TD Green Streets Program to Launch October 9, 2017

The program will award a total of \$200,000 in grants in support of local forestry projects in low- to moderate-income (LMI) neighborhoods in communities in TD Bank service areas. Funding can go towards the purchase of trees, tree planting and maintenance, education, and training opportunities. The maximum amount of each grant request is \$20,000. No more than 50% of the total project funding can be designated for new trees. Municipalities and nonprofit organizations are encouraged to partner on this project; however, a municipal employee must be the primary applicant.

Grant applications will open on October 9, 2017, and run through November 21, 2017. Check the <u>TD Green</u> Streets website beginning October 9 to learn more and to start your application!

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Growing on Trees



Applications for 2017 are currently being accepted. Contact Mollie Freilicher, mollie.freilicher@state.ma.us or 413-577-2966 for more info.

THE CITIZEN FORESTER

Growing on Trees—Webcasts and Events

Green Infrastructure Webcast

Teach, Learn, Grow: The Value of Green Infrastructure in Schoolyards

Wednesday, October 11, 2017 | 1:00 p.m. – 2:30 p.m. (Eastern)

EPA's Green Infrastructure Webcast Series is for public officials and practitioners beginning to implement green infrastructure, as well as for those looking to enhance established programs.

This webcasts is free, but registration is required. Register and find out more <u>here</u>.

TREE Fund Webinar

Drought Tolerance in Trees – Improving Tree Selection for Challenging Urban Sites

November 30, 2017 2:00—3:00 p.m. (Eastern) Andrew Hirons, PhD, Myerscough College, U.K. http://www.treefund.org/webinars

EAB University Fall 2017 Webinar Series

Coming up:

After EAB: Encouraging Regrowth of a Healthy Forest October 12, 2017 | 11:00 a.m. (Eastern)

Thousand Cankers Disease: Threatening the Nation's Walnut Trees

October 19, 2017 | 11:00 a.m. (Eastern)

Watch these and archived versions of earlier webcasts at http://www.emeraldashborer.info/eabu.php.

Forestry and Natural Resources Webinar

Fall Cankerworm Biology, Ecology, and Management in Urban and Rural Landscapes

October 4, 2017 1:00 – 2:00 p.m. (Eastern)

This webinar will discuss the biology, ecology, and management of the native fall cankerworm. Management strategies in the urban and rural environment will be covered.

For more information, go to www.forestrywebinars.net.

Urban Forest Connections

The USDA Forest Service's Urban Forest Connections webinar series brings experts together to discuss the latest science, practice, and policy on urban forestry and the environment. These webinars are open to all. Past webinar presentations and recordings are available here.

Integrating Trees into Stormwater Management Design and Policy

October 11, 2017 | 1:00 - 2:15 p.m. (Eastern)

Future webinars:

December 13, 2017 | 1:00 - 2:15 p.m. (Eastern) January 10, 2018 | 1:00 - 2:15 p.m. (Eastern) February 14, 2018 | 1:00 - 2:15 p.m. (Eastern) To access the webinar, go to https://www.fs.fed.us/research/urban-webinars/.

Urban Forestry Today Webcast

Performing an Urban Site Assessment of Street Tree Planting Sites

November 9, 2017 | 12:00 p.m. (Eastern) Bryant Scharenbroch, Ph.D

The Urban Forestry Today Webcast Series is sponsored by the University of Massachusetts Department of Environmental Conservation, in cooperation with the USDA Forest Service, Massachusetts Department of Conservation and Recreation, University of Massachusetts Extension, and Massachusetts Tree Wardens' & Foresters' Association.

Online Course: Urban Forest Adaptation Planning and Practices

The Northern Institute of Applied Climate Science (NIACS) and USDA Northern Forests Climate Hub are offering the Forest Adaptation Planning and Practices training as an online course for urban foresters and natural resource managers. Sessions will be biweekly from November 7, 2017 to January 30, 2018.

GEOGRAPHIC FOCUS: Information will focus on urban areas in the Midwest and Northeast, but applicants from other regions are welcome to apply.

REGISTER ONLINE: www.forestadaptation.org/ UrbanFAPP-online

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Growing on Trees

Drought Monitor

Conditions as of October 3, 2017. Currently, about 90% of Massachusetts is classified as "abnormally dry." Looking back a year ago, approximately half the state was categorized as being in "extreme drought." Let's hope for some rain!

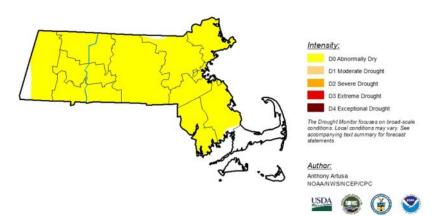
Check out the updated drought monitor website: http://droughtmonitor.unl.edu/

Massachusetts Drought Information

U.S. Drought Monitor Massachusetts

October 3, 2017 (Released Thursday, Oct. 5, 2017) Valid 8 a.m. EDT

http://droughtmonitor.unl.edu



Gypsy Moth in Southern New England Summer 2017 Update

By Mike Bohne, U.S. Forest Service, Northeastern Area State and Private Forestry

It is late summer in southern New England, and the hardwood forests look different than normal. The large, broad leaves that usually soak up the August sun are small and wispy, more reminiscent of the leaves that are present right after buds break open in the spring.

These forests are recovering from a massive outbreak of gypsy moth, the largest defoliation event caused by the caterpillar since the early 1980s. The gypsy moth has been a pest of hardwoods in the United States since its introduction in 1869. It mostly feeds on oaks, but defoliates many other species when populations get this large.

Gypsy moth defoliation of this magnitude has been a rare event in New England

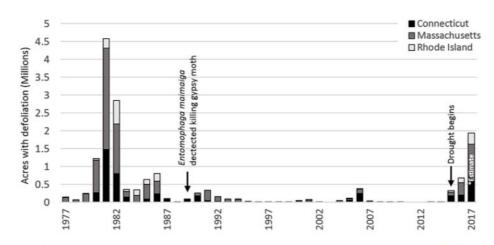


Figure 1. Acres with gypsy moth defoliation in southern New England (1977-2017) as reported through cooperative <u>Forest Insect and Disease Detection Surveys</u>. The acreage for 2017 is an estimate and is expected to increase marginally.

since 1982 (Figure 1). The rarity of gypsy moth outbreaks has been largely due to the emergence of the soil-borne gypsy moth fungal pathogen called *Entomophaga maimaiga*. This Japanese fungus was intentionally introduced into the United States by scientists in 1910 and 1911, then again in 1985 and 1986. These attempts to establish the fungus to control gypsy moth were considered failures, but miraculously the deadly fungus was found killing gypsy moth in Connecticut in 1989. The fungus is sensitive to environmental conditions – especially rainfall – and, until recently, has flourished during the wet New England springs, naturally suppressing gypsy moth populations by turning the latestage caterpillars into bags of fungal spores. Read the full story.

Growing on Trees

New Report: Why Count Trees: Assessing Volunteer Motivations in Participating in New York City's 2015 Tree Census



Figure 1: TreesCount! Advertisements: (a) bus stop in Queens, (b) phone booth in Queens, (c) subway card design. Courtesy NYC Parks.

In 2015-2016 the city of New York conducted a TreesCount! tree census using volunteers. Over 2,400 volunteers signed up for, attended training, and participated in census-taking events. This was a massive effort to collect information on 666,134 street trees. Participants walked a collective 11,000 miles gathering tree information.

The data is the basis for the city's internal street tree management and for creating a <u>public-facing map</u> of street trees. Researchers from the USDA Forest Service were interested in what motivated volunteers to sign up for this endeavor, and they have recently released a report of their findings from a survey they conducted in 2015-2016. With a 27.2% response rate they found that:

- Respondents learned about the survey effort by subway or bus ads
- Over half of the respondents attended TreesCount! events alone
- There were many reasons respondents participated: "the work aligned with their values, appealed to their sense of community, satisfied a desire to learn and self-educate, and that it was thought to be fun way to meet people and experience the outdoors."
- More than half of respondents reported that they had taken care of trees in the past.

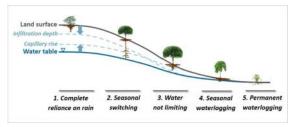
Learn more about the motivations of volunteers and read the full report at: https://www.fs.usda.gov/treesearch/pubs/54659.

Gleanings

Deep Roots in Plants Driven By Soil Hydrology

Searching for water, some tree roots probe hundreds of feet deep and many trees send roots through cracks in rocks, according to a new study led by a Rutgers University-New Brunswick professor. Moreover, the depth of plant roots, which varies between species and soil conditions, will play a key role in plants' adaptation to climate change, said Ying Fan Reinfelder, a professor in the Department of Earth and Planetary Sciences and Department of Environmental Sciences.

"Charles Darwin once wrote, in effect, that the tips of plant roots are like the brains of plants," Reinfelder said. "Roots sense the envi-



Tree and plant root depths vary, depending on climate, soil and water conditions, including rainwater infiltration and ground water levels. Credit: Ying Fan Reinfelder/Rutgers University-New Brunswick

ronment. They sense the water, where there's more nutrients, and they go for these resources. Roots are the smartest part of the plant." Reinfelder and colleagues published their findings online today in the *Proceedings of the National Academy of Sciences*. The study demonstrated the relationship between plant roots and water availability. It shows, through observations and modeling, that soil hydrology is the key force driving local and global patterns of root depths. Read the full story at Phys.org.

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Gleanings

From the Alliance for Community Trees Baltimore Sees Uptick in Tree Cover

By Conni Kunzler | September 11, 2017



Source: Erik Dihle and Morgan Grove, "Preserving Baltimore's trees requires coordination, cooperation," *Baltimore Sun*; Rachel Dovey, "City Arborist Explains What to Read into Baltimore Tree Gains," *Next City*.

September 5, 2017 – Baltimore City's tree cover increased from 27 percent to 28 percent between 2007 and 2015, based on data analyzed by the U.S. Forest Service and in collaboration with City of Baltimore and the University of Vermont. Baltimore's I percent net gain equates to an additional 200 acres of tree coverage for the city.

Tree canopy coverage for cities in the United States ranges from less than 20 percent to upwards of 40, with several cities, including Detroit and coastal Los Angeles, experiencing a loss during the same time period.

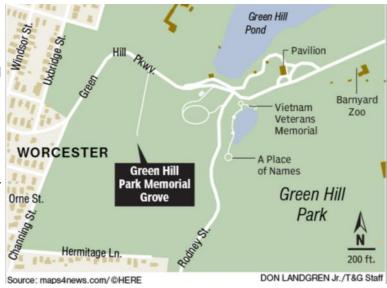
Baltimore's I percent net gain of tree coverage for the city provides residents with a continued increase in benefits, such as a reduction in utility bills and storm water runoff. This is great news for Baltimore. Despite challenges in the years to come from exotic

insects and increasingly violent storms, the U.S. Forest Service and the city's Tree Baltimore Program will continue efforts to reach a goal of 40 percent cover. Read the full story at <u>actreesnews.org</u>.

From the Worcester Tree Initiative: Memorial Grove at Green Hill Park Another Successful Partnership Planting

Starting in the spring of 2016, the Worcester Tree Initiative (WTI) teamed up with the Green Hill Park Coalition to help restore a living World War I memorial, Memorial Grove in Green Hill Park in Worcester. This grove was designed to honor the 380 soldiers and two nurses from Worcester who lost their lives in the 'War to end all Wars.'

Our final large planting at the WWI Memorial Tree Grove in Green Hill Park was another illustration of a wonderful multi-partnership project. Forty trees were provided by the Department of Conservation and Recreation (DCR). The Massachusetts Sierra Club coordinated volunteers who helped plant, water, and mulch the trees. The Green Hill Park Coalition & Worcester Tree Initiative provided trained volunteers who led teams in properly planting trees. Our goal of replacing all of the trees in the grove that had died over the



years since the establishment of the grove in 1919 has almost been realized. The Green Hill Park Coalition and WTI will work throughout 2018 to water, maintain, and regularly assess these trees, so that the living memorial will be ready for the 100-year celebration of Armistice Day on November 11, 2018. Adapted from *The HeartWood*, the newsletter of the Worcester Tree Initiative. Read more about the Memorial Grove at Telegram.com.

News

Growth of Private Tree Regulation Spurs Fear of Backlash By Mindy Fetterman

September 25, 2017— Austin, TX — Cities have long regulated what can be done to trees in parks, along public streets, or on government property, deciding when they can be trimmed, treated for disease, or removed. In recent years, an increasing number of cities also have started regulating what happens to trees on private property — on land owned by either developers or homeowners, including trees in their yards. Faced with booming populations, these cities are treating trees as a key part of urban planning and green infrastructure. The idea is that even trees on private property serve the public good by soaking up stormwater, filtering water for lakes and rivers, cleaning the air, and cooling buildings to cut down on energy consumption. But a recent tangle over the regulation of trees on private land in Texas has some urban tree advocates bracing for a backlash. Read the full story at HuffPost.

This 1,000-Year-Old Oak Tree Survived Hurricane Harvey By Ellen Airhart

September I, 2017—Hurricane Harvey first made landfall in the town of Rockport, Texas last Friday night. The 108 mph winds and more than 40 inches of rain destroyed houses, churches, and schools. But a I,100-year-old oak tree was left standing at Goose Island State Park. "This is not the first hurricane it's sat through," says David Appel, a plant pathologist at Texas A&M University.

The "Big Tree" has a diameter of II feet and a circumference of more than 35 feet. The community of Rockport has appreciated the tree for more than a hundred years, calling in experts like Appel to help care for it. And it's not the only tree that survived—many younger, less remarkable live oaks survived the hurricane. And, with the way the climate is changing, some of them may thrive there for another I,000 years. Read the full story at Popular Science.

News Headlines in Brief

New Wave of Caterpillars Defoliating Oak Trees in Western Rhode Island

Study: Genetic Diversity Low in Pittsburgh's Urban Forest

How Forest Forensics Could Prevent the Theft of Ancient Trees

'2017 Mayor's Tree of the Year' Named in Grand Rapids

Tree-Eating Beetles March Northward, Lured by Milder Winters

Arlington Residents Rally To Save Trees And Win — For Now

<u>Columnist Lilly Lombard: Celebrating the Oak Trees in Front of Forbes Library (Northampton)</u>

The Endicott Tree: National Treasure Hedged in by Time and Development

Secretary Perdue Administers Oath to Tony Tooke as New USDA Forest Service Chief

New Orleans Greenery Post-Katrina Reflects Social Demographics More Than Hurricane Impact

On the Horizon

| October | NeighborWoods Month | Nov 7 - Jan 30 Online Course: Urban Forest Adaptation Planning | | |
|------------------|---|--|--|--|
| Oct I | Deadline for Intent to Apply Form for DCR Urban and Community Forestry Challenge Grant | Nov 8 | and Practices Green Infrastructure Webcast, I:00 p.m. (Eastern), EPA | |
| Oct 3 Oct 1-3 | Deadline to register for <u>Tree Steward Training</u> New England Chapter ISA 51 st Annual Conference and Trade Show, Southbridge, <u>www.newenglandisa.org</u> | Nov 9 | Urban Forestry Today Webcast: Performing an Urban Site Assessment of Street Tree Planting Sites, 12:00 p.m. (Eastern). www.joinwebinar.com , access code 311-319-675 | |
| Oct 5 | Mass Green Careers Conference, Westborough, http://www.massgreencareers.org | Nov 13-14 | 4 Society of Municipal Arborists Annual Conference, Tulsa, OK, <u>www.urban-forestry.com</u> | |
| Oct 6 | MCA Exam, Wellesley, www.massarbor.org | Nov 15-16 Partners in Community Forestry Conference, | | |
| Oct 12 | EAB University Webcast: After EAB—Encouraging Regrowth of a Healthy Forest, 11:00 a.m. (Eastern) | Tulsa, OK, www.arborday.org/programs/pcf/ Nov 29-Dec 3 New England Grow, Boston, | | |
| Oct 13-14 | MA DCR Tree Steward Training, Harvard Forest, Petersham. More information. | Nov 30 | www.newenglandgrows.org TREE Fund Webinar: Drought Tolerance in Trees, 2:00 p.m. (Eastern), http://www.treefund.org/webinars | |
| Oct 15-20 | SMA's Municipal Forestry Institute, Cornwall, Ontario, Canada, www.urban-forestry.com | Dec 14 Urban Forestry Today Webcast: Pruning Practices to Manage Risk & Enhance Urban Wildlife, 12:00 p.m. | | |
| Oct 19 | EAB University Webcast: Thousand Cankers Disease, II:00 a.m. (Eastern) | | (Eastern) <u>www.joinwebinar.com</u> , access code: 491-732-747 | |
| Oct 19 | Southeastern Mass. Tree Wardens Dinner Meeting, Plymouth | Dec 31 | Deadline for Tree City, Tree Campus, and Tree Line USA Applications, | |
| Oct 24 | MAA Safety Saves and Dinner Meeting, Wellesley | | contact Mollie Freilicher | |
| | and Framingham, www.massarbor.org | Jan 9-10 | Mass. Tree Wardens' and Foresters' Assoc. Annual Conference, <u>www.masstreewardens.org</u> | |
| Nov I | Deadline for DCR Urban and Community Forestry Challenge Grant | | | |

The Citizen Forester is made possible through a grant from the USDA Forest Service Urban and

Community Forestry Program and the Massachusetts Department of Conservation and Recreation,

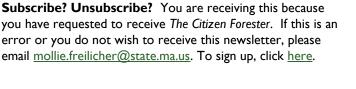
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www.mass.gov/dcr/urban-and-community-forestry

Charles D. Baker, Governor Karyn E. Polito, Lieutenant Governor Matthew A. Beaton, Secretary, Executive Office of Energy and Environmental Affairs Leo Roy, Commissioner, Department of Conservation and Recreation Peter Church, Director of Forest Stewardship, Department of Conservation and Recreation



If you have a topic you'd like to see covered or

(article, photo, event listing, etc.), contact Mol-

want to submit an item to The Citizen Forester

lie Freilicher or click here.



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