

10/14/2014

# Chesapeake Urban Tree Canopy Summit

A Meeting Summary



# Chesapeake Urban Tree Canopy Summit

---

Over the last 10 years, the Chesapeake region has seen significant strides made in advancing the development of urban tree assessments and tree canopy goals and integrating them with community and water quality goals.

New local initiatives like stormwater fees developed to meet the Chesapeake's federally mandated water pollution reductions and new tools for promoting urban tree canopy (UTC) in stormwater rules are poised to keep UTC as a key strategy to enhancing the environment and sustaining communities.

At just past the ten-year anniversary of the Chesapeake Bay Program's first urban tree canopy directive, 75 policy makers, program managers and local tree advocates gathered at the Chesapeake Urban Tree Canopy Summit. The Summit kicked-off a process to develop a Chesapeake Bay management strategy and state action plans to meet the urban tree canopy goal in the new Chesapeake Bay Agreement. This Summit was sponsored by the Chesapeake Bay Program Forestry Workgroup, with funding support from the Environmental Protection Agency, and hosted by the State of Maryland and the Alliance for the Chesapeake Bay.

Participants identified and discussed successful policies, programs, and approaches that can be transferred across the region. These discussions covered the importance of local leadership, integration of tree canopy programs into other key local government goals like water quality, and the value of broad partnerships.

It is hoped that this meeting summary will be helpful to local governments as they plan the next decade of UTC development. This publication provides an overview of the insight provided by speakers at the Summit. You can also find recordings of the presentations on our website at <http://forests.allianceforthebay.org>.

# Contents

---

- Our Challenge – Opening Remarks ..... 4
- Meeting Our Goals** ..... 5
- Chesapeake UTC Goals and Progress ..... 6
- Putting UTC Assessments into Action ..... 8
- Finding the Bright Spots: Key State Strategies** ..... 9
- Maryland ..... 10
- Virginia ..... 10
- West Virginia ..... 11
- Pennsylvania..... 12
- District of Columbia..... 12
- Other States ..... 13
- Integrating Urban Tree Canopy into Water Quality Goals**..... 14
- Green Infrastructure ..... 15
- Chesapeake Bay Total Maximum Daily Load ..... 15
- Stormwater ..... 16
- Local Innovations in UTC Implementation** ..... 17
- Partnerships ..... 18
- Outreach..... 18
- Maintenance and Health..... 19
- Local Stewardship of Existing Trees ..... 19
- Topic Area and State Breakout Sessions** ..... 20

## Our Challenge – Opening Remarks

*Joe Gill, Maryland Secretary of Natural Resources*

*Jacqueline Goodall, Mayor of Forest Heights, MD*

The 2014 Chesapeake Bay Watershed Agreement calls for a net gain of 2,400 acres of urban tree canopy by 2025. Maryland Secretary of Natural Resources, Joe Gill, noted that this goal is doable, but in order to reach it local governments, citizens, businesses and other stakeholders must work together--collaboration will be the key to success. We must also work to ensure that our tree planting programs benefit everyone and not just affluent sections of our towns.

Meeting our UTC goals are also achievable because local governments are increasingly turning to tree planting to meet multiple city goals. Built on the top of 47 streams, Forest Heights, Maryland is now dealing with major stormwater management problems. With almost zero money to fix these problems, Mayor Jacqueline Goodall turned to tree planting as part of a green infrastructure approach to their crumbling infrastructure. Planting trees with grant funding and partners has helped Forest Heights meet its environmental and community goals much more cheaply than if they relied on traditional approaches alone. Developing collaborations with non-governmental agencies and foundations has helped Forest Heights meet its goal of planting 1,500 trees and is now working to meet its new goal of 6,000 trees.

As the rest of document lays out, the tools, funding, and partners are available to meet our goals. Our challenge is to work together and begin planting trees and keep our existing urban tree canopies healthy.

# Meeting Our Goals

---



## Chesapeake UTC Goals and Progress

Julie Mawhorter, Mid-Atlantic Urban and Community Forestry Coordinator, USDA Forest Service, [jmawhorter@fs.fed.us](mailto:jmawhorter@fs.fed.us)

The Chesapeake Bay Program partners first recognized and set goals related to urban tree canopy in the 2003 Chesapeake Executive Council Directive (03-01) on Expended Riparian Forest Buffer Goals:

...WE FURTHER RECOGNIZE THAT URBAN TREE CANOPY COVER offers stormwater control and water quality benefits for municipalities in the Chesapeake Bay watershed and can extend many riparian forest buffer functions to urban settings.

...WE COMMIT TO THE ADOPTION OF AN EXPANDED SET OF GOALS:

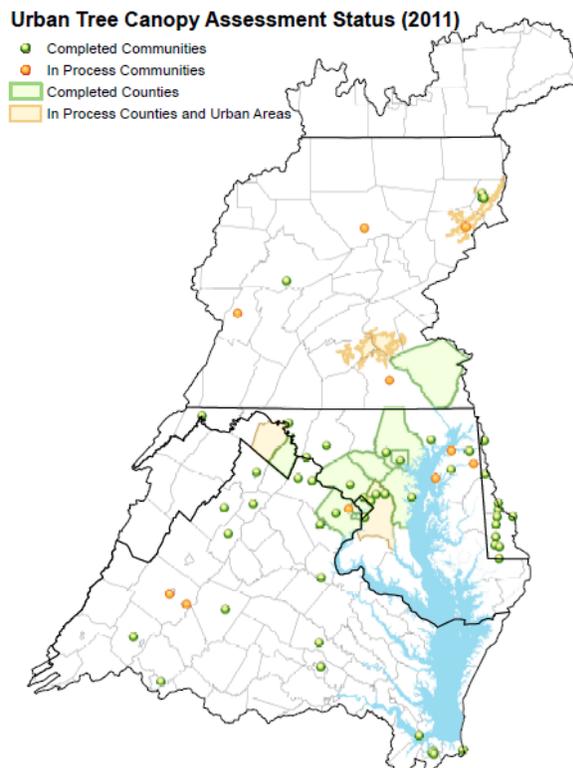
- By 2010, work with at least 5 local jurisdictions and communities in each state to complete an assessment of urban forests, adopt a local goal to increase urban tree canopy cover and encourage measures to attain the established goals in order to enhance and extend forest buffer functions in urban areas.

Since then, through the combined efforts of local, state, and federal resources, there has been a steady progression in the use of high-resolution urban tree canopy assessments to set canopy goals and inform tree planting efforts in communities. These efforts were aided by a 2006 workshop and resulting guidance document, *Urban Tree Canopy Goal Setting: A Guide for Chesapeake Bay Communities*. Figure 1 shows a map of the over 70 communities and nine counties that have conducted assessments in the Bay watershed. About 40 localities have used the assessments to set UTC goals and around 20 have developed implementation plans for how to achieve goals at the local level.

Despite these achievements, relatively little information exists on the progress communities have made in increasing tree canopy through planting, protection, and maintenance efforts.

The 2014 Chesapeake Bay Agreement builds on past progress by setting a quantitative outcome for increasing Urban Tree Canopy and tasking Chesapeake Bay partners with creating a management strategy to assist communities with achieving their goals. The Strategy will be developed by the Forestry

**Figure 1. UTC Assessments in Bay watershed**



Workgroup with stakeholder input over the next few months and released for public input by March 2015.

Chesapeake Urban Tree Canopy Outcome:

*Continually increase urban tree canopy capacity to provide air quality, water quality and habitat benefits throughout the watershed. Expand urban tree canopy by 2,400 acres by 2025.*

It is important to note that this goal is intended to reflect a *net gain* in acreage of tree canopy, after accounting for canopy losses due to various factors such as development, storms, pests/diseases, and natural mortality. Meeting the goal requires protecting as much of our existing tree canopy as possible and planting enough to both mitigate losses and expand the tree canopy cover by 2,400 acres. It is anticipated that future tracking of this outcome will involve a combination of counting tree planting (100 trees=1 acre) for the Chesapeake Bay model/TMDL and conducting periodic (e.g. 3-5 year) canopy cover assessments to determine that a net gain is being achieved.

Within the Chesapeake Total Maximum Daily Load (TMDL) requirements, urban tree planting is a Best Management Practice that can be reported for pollution reduction credit towards meeting local and state targets. On average, urban tree planting gets credit for reducing pollutant loading from around 12 lb/acre/year total nitrogen to 4 lb/acre/year, though the specific credit varies based on location in the watershed. A new Urban Tree Canopy land use layer is being developed with the aim of better crediting existing tree canopy in the Chesapeake Bay model. Due to the lack of well-developed tracking databases and tools for tree planting, very few acres have been reported for the Chesapeake TMDL. Supporting local governments in tracking and getting credit for their tree planting will be a significant focus of the new Chesapeake UTC management strategy.

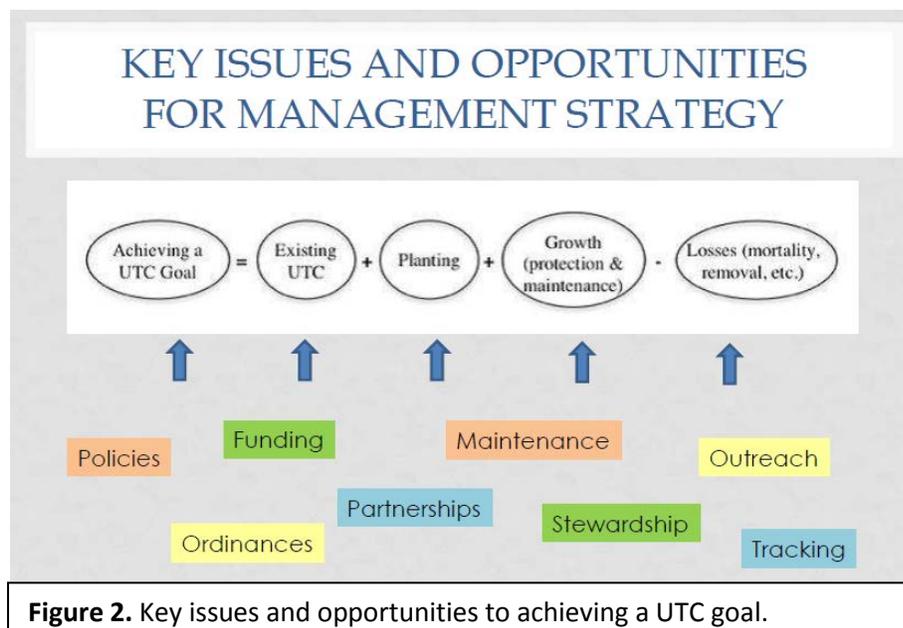


Figure 2 shows a range of issues and opportunities that will be considered in the Management Strategy to address the key elements of the UTC equation, from protecting existing canopy, to planting new trees, to addressing survival and maintenance needs of what is planted.

**Figure 2.** Key issues and opportunities to achieving a UTC goal.

## Putting UTC Assessments into Action

*Morgan Grove, Research Scientist and Team Leader, Baltimore Field Station/Baltimore Ecosystem Study, USDA Forest Service, [morgangrove@fs.fed.us](mailto:morgangrove@fs.fed.us)*

Over the past several years a suite of tools have been developed to help local partners develop tree canopy assessments and put them into action. These open source, freely available tools help communities complete the equation in Figure 2 by assessing their current canopy coverage, prioritize key planting and conservation areas, target messages to different communities, and track and assess change over time.

The first step to implanting an urban tree canopy goal is to know how much canopy currently exists. New high-resolution data and land classification methods make it easier for communities to do this assessment. With this data in hand, communities are beginning to tease out other important considerations like identifying how can new tree plantings can benefit other city goals like public health and which neighborhoods lack adequate canopy cover.

Baltimore City and the USDA Forest Service took this prioritization a step further and queried various stakeholders like the Department of Public Works and local conservation groups to determine how their varied interests overlapped geographically in the City. While motivations differed, the exercise helped to develop a common set of priority planting areas for the City.

Using the initial tree canopy assessment, the City worked with a social marketing firm to develop messages and strategies that could help increase tree canopy in the priority areas (See Lou Etgen's presentation in Section 5).

As Figure 2 demonstrates, tree plantings are only one part of achieving tree canopy goals. Tree growth, protection from loss, and replacement of dead trees are just as important. The Baltimore City partnership has developed a "green registry" to track planting and maintenance across the city. The registry is allowing the City to evaluate changes in the spatial distribution of tree canopy, rates of change, and force conditions like changes in zoning or new tree planting programs.

# Finding the Bright Spots: Key State Strategies

---



## Maryland

*Marian Honeczy, State Urban Forestry Coordinator, Maryland Dept. of Natural Resources, Forest Service, [marian.honeczy@maryland.gov](mailto:marian.honeczy@maryland.gov)*

Maryland has adopted a number of policies over the past two decades aimed at conserving the state's tree canopy. For example, the Forest Conservation Act, originally passed in 1991, which regulates the clearing of trees during development projects and requires some amount of mitigation (replanting) to offset tree loss. Other relevant policies include the Reforestation Law covering state highway projects, the Critical Area Act covering tidal riparian areas, and the Roadside Tree Law. Despite these important policies, Maryland continues to lose forest cover each year and recently passed the Forest Preservation Law of 2013, adopting a "no net loss" goal to sustain its 40% statewide tree canopy cover.

Several tree planting incentive programs have been developed during recent years through various initiatives of the Governor. Through the "Marylanders Plant Trees" campaign, citizens were provided coupons to assist with the purchase of trees, and over 100,000 trees were planted and registered by citizens from 2009-2013. The new Lawn to Woodland program will be piloted in select counties over the next few years, assisting landowners in replanting excess lawn areas back to forest cover. Maryland has also used a Backyard Buffers program and the Governor's Stream Restoration Challenge grants to promote tree plantings in riparian areas.

A number of challenges to achieving urban tree canopy goal, as well as potential solutions were put forward by partners throughout the state at the recent Governor's Roundtable on Urban Tree Canopy, held in May 2014. Some of these challenges include finding available land and willing landowners for tree planting, developing new funding sources, and engaging the public in tree planting and stewardship efforts. Many opportunities exist to reach out to new/nontraditional landowners and to build new and expand existing partnerships.

## Virginia

*Barbara White, State Urban Forestry Partnership Coordinator, Virginia Dept. of Forestry, [Barbara.White@dof.virginia.gov](mailto:Barbara.White@dof.virginia.gov)*

Virginia has provided assistance to many communities to get high resolution urban tree canopy assessments conducted through a partnership with Virginia Tech. Assessments have been completed for 26 localities in Virginia, 21 of which are in the Chesapeake Bay watershed. The state worked with Virginia Tech to create an online UTC mapping tool for communities to view the results of the assessments: <http://www.utcmapper.frec.vt.edu/>.

A key challenge has been helping communities move beyond doing an assessment and setting a canopy goal to developing a strategic implementation plan for making progress on the ground.

To this end, the state partnered with Virginia Tech and Plan-it Geo to provide workshops, online tools, and technical assistance to 4 pilot communities in developing a UTC implementation plan (Virginia Beach, Newport News, Woodstock, Lexington). The results of this work will soon be available in a new guidance document for communities on how to use UTC data to develop strategic implementation plans.

Virginia has a well-developed network of tree canopy partners through the Virginia Urban Forest Council ([“Trees Virginia”](#), a non-profit organization) and its affiliated regional Urban Forestry Roundtable groups that meet regularly in northern Virginia and in the Hampton Roads region. In addition, the state supports a Tree Stewards training program that has helped spur local tree steward volunteer groups in 9 communities. (See Louise Seals presentation below).

Perhaps the biggest challenge to achieving UTC goals in Virginia is the lack of state and local funding sources to support tree planting.

## West Virginia

*Frank Rodgers, WV Chesapeake Urban Tree Canopy Coordinator, Cacapon Institute, [frodgers@cacaponinstitute.org](mailto:frodgers@cacaponinstitute.org)*

Partners in the Chesapeake Bay portion of West Virginia have been working together for several years to support communities with urban tree canopy efforts. Even though much of the West Virginia panhandle region is rural and forested, urban land growth rates in some portions are among the highest in the Chesapeake Bay watershed. In addition, the area ranks highly on the USDA National Priority Planting Index for factors such as low canopy cover per capita.

The West Virginia Division of Forestry and Cacapon Institute have collaborated on grants to do urban tree canopy assessments for Jefferson and Berkeley counties and the city of Martinsburg. Using the data, they have worked with a number of communities to set canopy goals and develop implementation plans for meeting the goals. The Cacapon Institute is also using iTree tools to conduct more targeted analyses for specific communities. A UTC assessment was completed for all the schools in the Potomac Basin, to help identify priorities and opportunities for planting.

West Virginia partners developed Project CommuniTree to promote tree planting and education on public land through volunteerism in the Potomac Headwaters of West Virginia (Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral, Morgan, & Pendleton counties). CommuniTree is a program of the WV Conservation Agency and the WV Chesapeake Bay Tributary Team that is engaged in on-the-ground actions throughout the Potomac headwaters. The program awards annual competitive grants providing various community groups with tree planting kits with all the materials needed for a successful tree planting project. A number of

these projects have assisted schools that have very low tree canopy to start planting trees on their grounds, in collaboration with teachers and students. Homeowners associations have also been identified as a key target audience for tree planting and green infrastructure stormwater strategies.

## Pennsylvania

*Christine Ticehurst, Community Greening/TreeVitalize Coordinator, Pennsylvania Dept. of Conservation and Natural Resources, Bureau of Forestry, [c-cticehur@pa.gov](mailto:c-cticehur@pa.gov)*

Pennsylvania supports urban tree canopy planting and stewardship efforts through the statewide [TreeVitalize](#) program. Since the program first started in southeastern Pennsylvania in 2004, over 390,000 trees have been planted through grants and other assistance to community groups, serving over 500 communities. The program has an annual grant application cycle to support community tree plantings and riparian buffer plantings. The state's urban forestry council, [Pennsylvania Community Forests](#), is a nonprofit organization that leverages various federal, state, and private sources of funding to support these goals.

A key component of TreeVitalize is the Tree Tenders® training program, offered to citizens in both workshop and webinar series format. Receiving this training is part of the requirements of tree planting grants, and over 6000 citizens have been trained across the state to date. Tree Tenders trainings and other educational workshops and technical assistance for communities are provided through a partnership with Penn State Extension's 5 urban forestry specialists who serve the different regions of the state.

Since 2009, the state has employed a UTC specialist to work with communities on the various stages of completing an urban tree canopy assessment, setting goals, developing an implementation plan, and integrating these efforts with stormwater management programs and goals. Through a US Forest Service competitive grant, Pennsylvania has been developing a Penn Tree Mapper tool to provide communities direct access to UTC data, analysis and planning support, tree tracker tools to report plantings and inventories, and tree benefits calculators linked to iTree. This suite of tools is scheduled to go online in 2015 and may have capabilities to be expanded or replicated in the Chesapeake Bay region.

## District of Columbia

*John Thomas, Urban Forestry Administration Director/State Forester, District Dept. of Transportation, [john.pthomas@dc.gov](mailto:john.pthomas@dc.gov)*

The District of Columbia (DC) has set a goal of 40% tree canopy by 2032. DC's Urban Forestry Administration (UFA), within the District Department of Transportation, is the lead agency managing the District's 133,500 street trees. UFA has a staff of 20 certified arborists in the field

each day, collecting data and supporting the public with tree planting, maintenance, and removal activity. UFA maintains a comprehensive inventory and makes interactive maps on planting and removal activity available to the public [on their website](#). In FY2015, over 7,445 trees were planted, exceeding the annual target of 4,150 trees set forth in DC's MS4 permit and Watershed Implementation Plan.

DC conducted high resolution UTC assessment in 2006 and 2011. The 2011 assessment estimated urban tree canopy at 37.1%, an increase of .9% since 2006. The tree canopy data have been analyzed for the different Wards that make up the District, with a range from 21% canopy in Ward 6 to 53% canopy in Ward 3. Canopy mapping tools are being used to help target tree plantings to areas with the greatest need and opportunity.

DC's tree planting goals are achieved in partnership with the District Dept. of Environment and nonprofit partners such as Casey Trees who deliver various tree planting incentive programs to homeowners (e.g. River smart Homes). The Urban Forestry Administration will be convening partner agencies and organizations, including federal land managers, to further build on strategic collaboration to meet urban tree canopy goals in the District.

## Other States

Delaware and New York were unable to present at the Chesapeake UTC Summit, but the urban forestry coordinators in those states are:

Delaware: Kyle Hoyed & Kasha Braun skill, Delaware Forest Service, [kyle.hoyd@state.de.us](mailto:kyle.hoyd@state.de.us), [kasha.braunskill@state.de.us](mailto:kasha.braunskill@state.de.us)

New York: Mary Kramarchyk, NY Dept. of Environment & Conservation, [mary.kramarchyk@dec.ny.gov](mailto:mary.kramarchyk@dec.ny.gov)

# Integrating Urban Tree Canopy into Water Quality Goals

---



Local governments are increasingly looking to urban tree plantings to help them meet a variety of community goals. Lancaster City, Pennsylvania; Baltimore County, Maryland; and Washington D.C. have all been leaders in developing strategies for how trees can help them meet federal water quality regulations.

The Chesapeake Bay and other local “total maximum daily loads” required under the Clean Water Act allow local governments to take credit for water pollutant reductions through tree plantings. Planting trees in an urban area is credited due to a change from a higher pollutant loading land use, urban pervious, to the lower polluting forest land use. Across the watershed, this change in land use averages to a 66% reduction in pollutants. Governments can take credit for an acre of urban tree planting for every 100 new trees planted.

Local governments are also developing tree planting tracking systems, implementing stormwater/impervious surface fees, and integrating tree planting into green infrastructure plans to meet and lower the cost of complying with Combined Sewer Overflow (CSO) and Municipal Separate Sewer Stormwater systems (MS4) requirements.

## Green Infrastructure

*Charlotte Katzenmoyer, Director of Public Works, Lancaster City*

Facing substantial fines for allowing too much polluted runoff to enter local streams, Lancaster City decided integrate green infrastructure into existing capital projects like traffic calming and other transportation projects, public park investments, and parking lot renovations. A green infrastructure approach was chosen over traditional approaches given the substantial cost-savings and associated social and public health benefits.

Through its green infrastructure plan, the City is working to achieve its urban tree canopy goal of 45%. The City has used grants from the State of Pennsylvania to assess its current urban tree canopy coverage (28%) and identify opportunities for new tree plantings.

A stormwater fee program is being implemented to support the plan. Businesses and residences pay a fee to support stormwater reduction projects. The program also allows businesses to lower their fees by implementing projects. A “credit” system has been set up to track progress.

## Chesapeake Bay Total Maximum Daily Load

*Don Outen, Department of Environmental Protection and Sustainability, Baltimore County*

Baltimore County, Maryland has long been a champion of the benefits of urban tree canopies for its citizens. This experience led them to quickly identify the Chesapeake Bay TMDL as an opportunity to plant more trees and are one of the few jurisdictions in Maryland that have proposed to urban tree planting as a priority best management practice. Baltimore County has proposed to plant 1,500 acres of new trees by 2025 to help them meet these their water quality goals. These aggressive goals make up over half of the entire Chesapeake Bay Program’s urban tree canopy goal of 2,400 new acres by 2025.

To implement these goals, the County has been working with the facility management staff of the Baltimore County Schools System to identify places to plant trees. Traditionally, the school system had been wary of planting trees due to maintenance concerns, but through a series of conversations, the school system has integrated tree planting into an energy efficiency program, planted trees to lower their need for mowing lawns (currently, 3,000 acres per year), and eased the certification of many schools as “green schools.”

Recognizing that residential home lots offer the most opportunity for planting new trees, the County runs a “big tree” sale for homeowners annually. The County offers locally native trees at a discounted price in exchange for a landowner planting the tree in their yard and registering it with the County’s tracking system. The tracking system allows the County to take water quality credit under the Chesapeake Bay TMDL.

The County has also pioneered the use of hassle-free tree planting and maintenance programs for rural private landowners. After identifying the best tree planting sites through GIS analysis,

the County is conducting outreach and education to attract landowner interest in planting trees. The County then performs all site preparation and tree planting and the homeowner agrees to maintain the planting.

To support all of these efforts, the County is using a local stormwater fee, grants from federal agencies and private foundations, and their own operating budget.

## Stormwater

*John Thomas/District Department of Transportation and Steve Saari/District Department of the Environment*

Washington D.C. is the only Chesapeake MS4 community to include tree planting measures in their stormwater permit. In their permit, D.C. proposes to implement around 40 acres of new acres of trees by 2025. This target is also a part of their plan to implement the Chesapeake Bay TMDL.

The District is implementing its permit requirements through street tree planting and enhancements, developing planting plans for schools and parks, and planting trees on private lands. The District also regulates development so that green space be maintained or expanded during the development process.

On residential lands, the District manages programs that provide funding for tree plantings and other green infrastructure. Similar to Lancaster City, the District also provides rebates for commercial sites that implement tree plantings.

# Local Innovations in UTC Implementation

---



(Trey Ratcliff/Flickr)

Successful urban tree canopy programs depend on an investment by stakeholders in partnerships, outreach, maintenance, and long-term stewardship. Each of these key aspects are equal challenges for urban communities with limited resources to cultivate relationships with the public or partners. Local efforts in Washington D.C., the City of Baltimore, and Virginia highlight innovative, efficient and effective ways in which these communities excelled at addressing one or more of these key aspects.

## Partnerships

*Charlie Murphy, TreeBaltimore*

Local government investment in urban tree canopy is critical, but the most successful examples have demonstrated how to leverage strong public and private partnerships. TreeBaltimore, a program of the Baltimore City Department of Parks and Recreation, has cultivated strong partnerships with organizations operating in the City of Baltimore. TreeBaltimore works with partners to identify shared goals and to leverage strengths and resources.

In order to prioritize and focus efforts among partners, the TreeBaltimore Working Group conducts biannual meetings to identify and prevent duplicate efforts, to make maintenance commitments, and to develop a priority neighborhoods planning map in collaboration with the USDA Forest Service.

Outcomes of these collaborations include the Treekeepers maintenance program, a training program taught by seven different organizations, the planting of 8,000 to 10,000 trees a year in Baltimore, and a multifaceted funding campaign that pulls from social marketing, private, state and federal grants, and fundraising through private and non-profit organizations.

## Outreach

*Lou Etgen, Alliance for the Chesapeake Bay*

Stakeholders will need to reach beyond the traditional groups such as institutions and schools to meet urban tree canopy goals. A partnership between the Alliance for the Chesapeake Bay, Baltimore City Parks and Recreation, Blue Water Baltimore, and Parks and People Foundation has led to a shifted focus towards targeting non-traditional groups in Baltimore.

In 2009, this partnership invested in marketing research to identify the perceived barriers and benefits of planting native trees on private property in priority neighborhoods in Baltimore. From the survey, the perceived drawback of trees is that they attract crime, trash and rats. However, 71% of all people surveyed stated trees improve the quality of life in their neighborhood. Rather than a mindset about trees, the greatest barrier to motivating residents to plant trees is the time commitment and solitude. As an outcome, the partners concluded that they may best change behavior patterns in non-traditional groups when they make fun and ease a priority of tree planting events.

These partners now host a suite of creative tree planting events to engage this new audience by tapping in existing interest. A particularly successful program is “Tree Ups” - a free tree planting event in spaces people do not normally consider for tree planting. Previous Tree Ups included a Baltimore Ravens tailgate, Day of the Dead Tree Up, and at the Baltimore Book Fair.

The surveys also led to a revamp and reinvestment in existing outreach efforts. The TreeBaltimore website now offers a Plant a Tree in a Day and a Get a Free Tree programs. An assessment of the effectiveness of current outreach efforts will be conducted in spring 2015.

## Maintenance and Health

*Jessica Sanders, Casey Trees*

Washington, D.C. will need to plant 8,600 trees per year to achieve the stated 40% canopy goal by 2025. This growth assumes a 94% survivorship rate, a constant growth rate, and a constant canopy size. However, current scientific understanding of the factors driving urban tree mortality and health is limited.

An on-going study led by Jess Sanders at Casey Trees seeks to track the factors that drives urban tree survivorship in order to design establishment and maintenance systems that best maintain the ecosystem services of urban trees over time.

The study will follow the health of 59% of trees (4,466 trees) planted by Casey Trees from 2002-2011 over the trees' lifetimes. From this relatively small data set, Casey Trees already identified poor pre-planting planning and development as the primary drivers of tree mortality. Casey trees will coordinate with developers and D.C. partners to use these findings to develop tree planting and maintenance protocols to ensure the greatest odds of survivorship of existing and future urban trees.

## Local Stewardship of Existing Trees

*Louise Seals, Virginia Tree Stewards*

A strong force of tree stewards is key to achieving goals of effective urban tree maintenance and localized community outreach. The Virginia Tree Stewards program is composed entirely of extensively-trained volunteers who serve as the "boots-on-the-ground" in assessing tree survivorship and maintaining and improving tree health in urban areas throughout the state.

The Virginia Tree Stewards program operates under no specific governance model across cities, allowing each city's organization to tailor a program that most effectively engages their community and addresses the challenges facing local UTC maintenance.

This flexibility and localized approach has led to many innovative programs. The Charlottesville Tree Stewards operate their own tree nursery and sell local species at the farmer's market; the Richmond Tree Stewards lead tree walks around the city of Richmond and track and maintain 3,000 trees in the city; and the Arlington/Alexandria Tree Stewards, representing the largest volunteer stewards program in the state, have developed a tailored tree owner's manual and maintain and track 1,000 trees within Alexandria alone.

The Virginia Tree Stewards program continues to grow annually, spreading into new communities and training additional volunteers.

# Topic Area and State Breakout Sessions

---

The notes generated from the topic area and state break-outs will be posted at <http://forests.allianceforthebay.org> shortly.



*The Alliance for the Chesapeake Bay is devoted to protecting and restoring the lands and waters of the Chesapeake region through partner building and citizen stewardship. Learn more at <https://www.allianceforthebay.org>.*