



Baltimore

QUICK FACTS

WHO

Baltimore City Department of Recreation and Parks
Forestry Division

STAFF

23 staff members, including a city arborist, six urban foresters, volunteer and community outreach staff, office and administrative staff, in-house tree pruning and removal crews; plus five contracted tree maintenance crews

CANOPY

Almost three million trees, including woodland forest trees; approximately 125,000 street trees in developed parklands

KEY FORESTRY TASKS

Tree maintenance, emergency services, tree planting, permitting

PARTNERS

Department of Public Works, Department of Planning, Department of Transportation, Department of General Services, U.S. Forest Service, Parks & People Foundation, Blue Water Baltimore, Baltimore Tree Trust, Downtown Partnership, Midtown Partnership, The Baltimore Orchard Project, Southeast Community Development Corporation and other community and greening organizations





KEY TOPICS

- Neighborhood Improvement Projects
- Public-Private Partnership
- Public-Public Partnership
- Stormwater and Watershed Management
- Tree Giveaways
- Urban Forest Management Plan

BALTIMORE, Maryland, is comprised of more than 225 distinct and unique neighborhoods.¹ In fact, Baltimoreans often call it a “city of neighborhoods.”² Over the years, these neighborhoods have experienced their share of racial tension and strife. But for many environmental advocates, these neighborhoods also represent a way to bring the city together for a common cause: the city’s urban forest.

TreeBaltimore
planting event



© TREEBALTIMORE

COMMUNITY GREENING EFFORTS

In 2011, Baltimore Mayor Stephanie Rawlings-Blake unveiled Baltimore's Cities of Service Plan, titled "stepUP! Baltimore: Volunteers for Change." Rawlings-Blake writes in the plan that "in each person and in every corner of our city, from the least to the most likely of places, we are the agents of change. We are the ones who give back, who help, who volunteer. Together, we can make our city better, safer and stronger." By engaging and creating a dedicated, proactive volunteer network in the city, the plan hopes to address three top concerns in Baltimore: drug addiction, crime and urban blight. And when it comes to urban blight, the plan identifies urban forestry as a solution.³

→ KEY POINT

Through its community forestry efforts, Parks & People engages residents in projects involving tree planting, restoration of vacant lots and landscaping, teaching them skills they can use to take on other projects on their own.

The stepUP! plan established Power in Dirt, an initiative designed to revitalize vacant lots in some of Baltimore's most blighted areas. Approximately 14,000 vacant lots exist in the city, and Power in Dirt helps cut through much of the red tape associated with transforming those lots. It identifies lots available for greening, provides legal access to these spaces, ensures no development will occur on the land for at least five years, identifies a clear process for obtaining water for the lot, and supplies resources and information on ways the lots can be transformed.⁴

One of the program's partners is the nonprofit Parks & People Foundation. "There are so many

opportunities to green communities in Baltimore," says Jackie Carrera, president and CEO of Parks & People. "We see firsthand, every day, that when neighbors come together around greenspaces, roll up their sleeves and work cooperatively, they're not only restoring that piece of their natural environment, that small part of the urban forest, they're also building relationships with one another and improving the social fabric of the city. These connections allow them to be better able to tackle some of the larger issues that they confront in their urban communities."

Parks & People was founded by former-Mayor William Donald Schaefer in 1984 to build public-

private partnerships to improve the city's urban recreation and parks system. By the late 1980s and early 1990s, it evolved into an organization focused on improving the quality of life in Baltimore's neighborhoods through community forestry and youth programs.⁵

Through its community forestry efforts, Parks & People engages residents in projects involving tree planting, restoration of vacant lots and landscaping, teaching them skills that they can then use to take on other projects on their own. "All the stuff we do has been about building up the community's capacity," says Guy Hager, senior director of the Parks & People Foundation's Great Parks, Clean Streams & Green Communities program. "It's about getting the residents in those neighborhoods interested in this approach, and we think that by organizing themselves around something specific that's doable — tree planting, vacant lot restoration — their capacity building expands to other areas. We see that happen all the time." Over the last 20 years, the foundation has planted trees in 45 different inner-city neighborhoods.

Parks & People also works with the Baltimore Public School System to improve public school lots. Since 2006, Parks & People's Schoolyard Greening initiative has removed approximately 20 acres of asphalt from inner-city schools to create new green space. With the help of the students, the asphalt has been replaced with gardens, trees and other greenery. The nonprofit is also using this approach for public housing locations. "We're doing the same kind of thing on public housing sites in the city that have struggled to maintain trees and landscape over the last 25 years with youth teams recruited from public housing developments," Hager says.

Newer nonprofit Baltimore Tree Trust, formed in 2009, is also hoping to focus on communities as the key to improving

Baltimore's urban forest. Inspired by a program in New York City called Trees for Public Health, which is targeting tree planting in six neighborhoods with low tree canopies and high childhood asthma rates, the trust is focused on specific neighborhoods that are most in need of new trees. "Working with neighborhoods is our approach," says Jill Jonnes, founder of Baltimore Tree Trust, "and people have really embraced it."

One of the neighborhoods the group identified as most in need of greening is McElderry Park. Under the McElderry Park Trees for Public Health Project, Baltimore Tree Trust — along with its partners, including TreeBaltimore, a mayoral tree planting initiative, and Baltimore City Forestry Board, a board of volunteers appointed by the Maryland Department of Natural Resources Forest Service, alongside other community and neighborhood groups — hopes to plant 800 trees across 48 blocks of the neighborhood during the five-year project and is also training the residents to be tree stewards.

"We see firsthand, every day, that when neighbors come together around greenspaces ... they're not only restoring that piece of their natural environment ... they're also building relationships with one another and improving the social fabric of the city."

JACKIE CARRERA
President and CEO
Parks & People Foundation

A volunteer teaches Project BLUE Civic Justice Corp students how to identify macroinvertebrates.



PARIS & PEOPLE FOUNDATION



A Baltimore neighborhood

Parks & People's Carrera relates that approaching community associations is often a good way to begin the conversation about getting neighborhoods involved in expanding and taking care of the urban forest. "Community associations as a vehicle to get involved are really important," she says. Over the years, the foundation has fostered relationships with and among park "friends" groups through its Partnership for Parks program in cooperation with Baltimore City Department of Recreation and Parks.

With Baltimore's ambitious canopy goals — 40 percent by 2037 — creating and maintaining these cooperative efforts between communities, organizations and the city will be critical to a healthy urban forest. "The agencies in city government right now are really in need of partnerships," Carrera adds. "Communities need and do in many cases come together to partner with agencies to solve and address some of the agency's goals and objectives because they're shared goals and objectives."

THE BENEFITS OF BALTIMORE'S URBAN FOREST

The Baltimore metropolitan area has about 2.8 million trees, but about one-fourth of the city's trees are distressed, dead or dying, according to an analysis by the U.S. Forest Service. To reach its 40 percent tree canopy goal, the city must plant approximately 750,000 trees — about 25,000 to 30,000 each year. Currently, about 7,500 are planted per year.⁶

Nevertheless, Steve Koehn, Maryland's state forester, believes the city can reach its ambitious goal. "Forty percent of tree cover has a lot of value, and it's an achievable goal. It's a good number to strive for," he says. "That can be achieved in any number of ways, through parks, street trees, what have you."

TreeBaltimore, a city-led partnership funded in part by corporate donations, is working to achieve this tree planting goal.⁷The initiative

was established in 2007 and is spearheaded by the Baltimore City Department of Recreation and Parks Forestry Division. TreeBaltimore plants trees along streets and in parks, maintains existing trees, encourages natural regeneration and fosters a sense of stewardship among residents.⁸

"The program was started five years ago, and the whole purpose was to increase the tree canopy," explains Charles Murphy, TreeBaltimore's operations manager. "Forty percent is a very high

→ KEY POINT

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number. When we started, we were only at 27 percent. With a city the size of Baltimore, you're talking about planting more than a million trees in 30 years with little budget set up to do it. So it's very ambitious to say the least." And they're having to do this with fewer resources than in the past. Baltimore's urban forestry program suffered a setback in 2010, when budget cuts forced the Forestry Division to eliminate many positions and focus primarily on emergency pruning and removing dead trees.⁹

Since more than half the land available for tree planting in Baltimore is privately owned, enlisting the help of private landowners, both residential and commercial, is particularly important. To encourage residents to get involved with planting trees in their neighborhoods, every spring and fall TreeBaltimore offers free one-gallon trees for homes and businesses. The city gives away the trees at farmers' markets, local events and parks.¹⁰

The city stands to gain in a number of ways from ratcheting up its tree planting and tree-care efforts. According to TreeBaltimore, a single tree provides about \$57,000 in economic and environmental benefits over its lifetime. The urban canopy as a whole provides \$3.3 million

a year in energy savings by shading buildings from the summer sun and blocking winter winds; \$3.8 million a year by removing 700 metric tons of air pollution; \$1.6 million a year by removing 244 metric tons of ozone; and \$10.7 million a year by storing 527 tons of carbon.¹¹

"The way to mitigate the negative effects of an urban environment is to embed as much green infrastructure in that landscape as you can," Koehn says. "There is a tremendous amount of environmental services associated with it."

Adds Parks & People's Carrera, "That economic benefit goes largely unrecognized. This is an infrastructure asset, and we need to recognize the value of urban forests in cities, to understand that just like any other asset that you have, it requires an investment of resources to be sure that you're not losing value in that asset over time."

One of the key infrastructure functions an urban forest can serve is to filter and slow down stormwater runoff, and in Baltimore, stormwater can directly affect a larger, region-wide effort to restore the Chesapeake Bay.

\$57,000

the amount of economic and environmental benefits a single Baltimore tree provides over its lifetime

Federal Hill neighborhood





Baltimore
Inner Harbor

JAMES CRIBLAND

WATERSHED DEMONSTRATIONS

As part of the Chesapeake Bay watershed — one of the most ecologically and economically important watersheds in the country — Baltimore is home to several watershed-focused initiatives.

→ KEY POINT

Partnerships with the U.S. Forest Service created a national model for community forestry to address concerns like watershed management.

In the early 1990s, Parks & People entered into a long-term partnership with the U.S. Forest Service on a project called Revitalizing Baltimore. The goal of the project was to create a national model for community forestry in assisting with ecological concerns, like watershed management. For 10 years, the project focused on increasing the tree canopy in 45 Baltimore neighborhoods by planting street trees, riparian trees and woody plants.¹² As the modeling project came to end, Parks & People transitioned the work and lessons learned into a new watershed initiative.

The organization, working closely with the city's Department of Public Works, has begun a demonstration project called Watershed 263, which focuses on one watershed in the city "to

demonstrate measurable improvement in water quality and quality of life and hopefully to do it in a cost-effective manner such that can be replicated across the city and maybe other places," Hager says. Started in late 2004, Watershed 263 encompasses 12 west and southwest Baltimore neighborhoods across a 930-acre storm drain area. The plan for the project involves tree planting, vacant lot restoration, community gardens, schoolyard asphalt removals and more to reduce runoff into the Patapsco River.¹³

By focusing on a watershed boundary with the 263 project, Parks & People is able to expand its community forestry work beyond just one neighborhood. "We like watersheds because they're nested," Hager says. "We like them because

they can bring neighborhoods together and break up existing boundaries. Part of the problem in Baltimore has always been one neighborhood against another neighborhood. Through these watershed programs, we can get neighborhoods to work together on a common goal.”

Also focused on watershed issues is the newly formed nonprofit Blue Water Baltimore. Blue Water has only been around since 2011, but its roots go back much further — it’s the result of a merger between five different Baltimore-based water associations. The idea of merging Baltimore’s various watershed nonprofits was floating around for many years before active negotiations began in 2009 to create one voice to represent Baltimore’s watersheds during funding discussions and collaborative ecosystem projects.¹⁴

With the merge now complete, Blue Water Baltimore’s mission is to use “community-based restoration, education and advocacy to achieve clean water in Baltimore’s rivers, streams and harbor, so that citizens of the Baltimore region will enjoy a vibrant natural environment, livable neighborhoods and a healthy, thriving Inner Harbor and Chesapeake Bay.”¹⁵ To achieve that goal, the group mobilizes volunteers to patrol streams for pollution, organize trash cleanups and help property owners who want to reduce polluted runoff from their properties. It’s partnering with groups like TreeBaltimore and Parks & People on urban forestry projects that affect watersheds, such as vacant lot conversions and school-yard greening. And, like so many other urban forest groups in Baltimore, Blue Water is focused on connecting with individual residents and neighborhoods. Its Water Audit and Community Greening programs help homeowners and communities set up rain barrels, plant trees, create rain gardens and reduce impervious surfaces.

As Baltimore’s many urban forest advocates continue to develop programs, projects and networks to protect and enhance the city’s green

assets, the National Science Foundation (NSF) is funding research aimed at helping their efforts. The Baltimore Ecosystem Study, part of NSF’s Long-term Ecological Research Network, is studying how the city’s ecosystems change over time, ultimately providing data on its watersheds, biodiversity, soil, social ecology, urban and community planning and more.¹⁶

Under the program, spearheaded by the Cary Institute of Ecosystem Studies in Millbrook, New York, and supported by a long list of city, state and federal agencies, universities and organizations, researchers selected 200 plots around the city to monitor over time. The researchers first surveyed the plots in 2004, measuring the height and density of the trees and recording the species. Another survey is scheduled for 2014, which should provide needed insight into the effectiveness of some of the efforts underway in Baltimore. The study will help urban foresters understand how various stressors, such as pollution and root-cramping pavement, affect tree growth and which species are more resilient, among other things.¹⁷

Through this new research, ongoing demonstration projects, community outreach and cooperative efforts, and watershed activities, Baltimore is hoping to continue to move closer to its 40 percent canopy goal, which in turn will help the city move closer to its goals concerning urban blight and even reducing crime. A 2010 study published in the journal *Landscape and Urban Planning* revealed that just a 10 percent increase in tree canopy in Baltimore correlated with a 12 percent decrease in crime.¹⁸

“Where there are more green spaces, more trees, there is a decrease in the level of tension and the level of violence that’s exhibited,” Parks & People’s Carrera says. “So from a social perspective, trees and greenspace are important to keep civility alive in cities.”

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GUY HAGER
Senior Director
Parks & People Foundation

SPECIAL THANKS TO:

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Eric Greenfield, forester, U.S. Forest Service Northern Research Station

Guy Hager, senior director, Parks & People Foundation Great Parks, Clean Streams & Green Communities

Jill Jonnes, founder, Baltimore Tree Trust

Charles Murphy, operations manager, TreeBaltimore

David Nowak, research forester, U.S. Forest Service Northern Research Station

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