Photo Credit: Zoe Gensheimer, Bluewater Baltimore.

Nature in the City

People and Nature

Nature for Nature's Sake

Trees and Forests

Water in the Environment

Green Infrastructure

15 LIFE ON LAND

17 PARTNERSHIPS FOR THE GOALS

nature in the city:
People and Nature

Baltimore's green and "wild" spaces enrich the health and well-being of all.

THE BIG PICTURE

Connecting to nature can stimulate our imaginations, rejuvenate us, and refresh our spirits. Nature activates our senses—we can see, hear, smell, and touch the natural world. In cities, contact with nature can range from the view of a few trees through a window to a stroll through a large, wooded park. People may not consciously hear or see nature, but it is everywhere. As Carolyn Finney explains, if you "get down and put your ear to the ground... you can hear the soil, the water, the roots of trees, the insects, the plants, the energy bursting forth, connecting us to ourselves and the places in which we live." [1] Raising awareness about the important role of nature, and fostering the connection between people and nature, requires us to value ourselves and one another. Love for every human, plant, animal, and insect, along with an understanding of the history that has shaped access and orientation to these assets, will lead us to protect our natural systems and ensure they can be enjoyed by all.

IN BALTIMORE

Connecting people to nature in our neighborhoods, parks, and open spaces can lead toward increased quality of life for all.

In Baltimore, we have nearly 6,000 acres of parkland with 260 public parks and 11 city farms. The landscape is defined by three stream valleys, augmented by a growing number of green schoolyards and lots where vacant buildings are coming down. Over the years, our natural systems of streams, forests, and wildlife have been altered as the city has developed. They have also been improved through stream restorations, riparian buffer plantings, living shoreline projects, habitat creation, and care of forests. We also are actively creating and linking green spaces to each other, for both people and wildlife. When open spaces are designed and maintained in partnership with neighbors, ensuring equitable access and avoiding resident displacement, they offer opportunities for relaxation, recreation, and emotional rejuvenation—and can help to build a more resilient city.

Many of Baltimore's residents are confronted with daily trauma and stress. Our children are facing a rise in childhood chronic diseases such as obesity. In this

1.   *"Ode to New York: A Performance Piece,"* Carolyn Finney, published in Humans and Nature. https://www.humansandnature.org/urban-land-ethic-carolyn-finney

context, green and open spaces can be vital assets for health. Nature has powerful therapeutic aspects. Developing an awareness of nature, becoming attuned to plants and wildlife, and spending time in parks, gardens, forests, and waterfronts are all experiences that foster wonder, creativity, compassion and gratitude—and get people out of doors and moving their bodies. The emotional, physical, intellectual, and psychological benefits are significant.[2] As we plant more trees and transform vacant land into nurtured gardens, quiet natural places, and inviting play spaces, we will improve our connections to nature while strengthening our communities.

STRATEGIES & ACTION

1. Increase community connections to nature. Ensure it is done in culturally competent ways with early and frequent engagement.[3]

Action 1:
Provide opportunities for residents to define and shape concepts of nature and incorporate them into plans and programs.

Action 2:
Reconnect youth and families to the concepts and places of nature by co-creating programs to expose people to gardens, farms, green school yards, parks, and forests. These programs will have the added benefit of providing places of calm and relaxation. For example, increase youth-centered nature programming at Carrie Murray Nature Center.

Action 3:
Connect with residents on ways to take action to support a diversity of species while healing ourselves and the nature around us. Examples include installing bat houses, removing grass and planting native gardens in yards, eliminating herbicide and pesticide use, preventing window strikes by birds, and safely disposing of home garden products containing neonicotinoids (a class of insecticide which is highly toxic to bees, and which is now illegal).

2. Build stronger neighborhoods and stronger social connections.

Action 1:
Develop high quality nature immersion programs for young children as a coping tool for trauma and stress.

Action 2:
Expand the Docs in the Parks program by increasing the number of participating local medical professionals and developing a park locator map to show what features and amenities are accessible to patients.

Action 3:
Expand nature programming and support organizations that provide experiences to promote biodiversity, such as increased programming at the Carrie Murray Nature Center and the annual Bioblitz.[4]

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2. https://naturalearning.org/wp-content/uploads/2017/09/Benefits-of-Connecting-Children-with-Nature_InfoSheet.pdf
3. *Cultural competence is the ability of individuals and systems to respond respectfully and effectively to people of all cultures, classes, races, ethnic backgrounds, sexual orientations, and faiths or religions in a manner that recognizes, affirms, and values the worth of individuals, families, tribes, and communities, and protects and preserves the dignity of each.*
4. *A BioBlitz is an all-day event during which scientists, naturalists, students, teachers, families, and other volunteers work together to identify and record as many living organisms as they can find.*

Photo Credit: Filbert Street Gardens

3. Improve and grow our natural systems and support increased management of them by residents, communities, organizations, and city government.

Action 1:
Develop a clear process for those seeking to enhance, transform and maintain city owned open space for short and long term greening. This should prioritize funding for projects led by people of color and located in neighborhoods with an abundance of vacant lots to help stabilize neighborhoods rather than displace residents.

Action 2:
Identify creative methods for increasing conservation easements, such as incentives for new easements, partnerships, or land swaps. Also continue to support land trusts in protecting Community Managed Open Spaces [5] and natural areas on private land.

Action 3:
Implement the Baltimore Green Network, continuing to create a collective vision with communities to link green corridors and connections between green spaces for people and wildlife.

Photo Credit: Mary Hardcastle.

Action 4:
Explore the development of a management plan that would identify existing and future threats to our natural resources to increase the resilience, adaptability, and biological integrity of our natural areas. Assess vulnerabilities by considering current and potential impacts of climate change and delineate strategic actions to protect and enhance natural resource resilience.

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5.   Community Managed Open Spaces include community gardens, pocket parks and other open spaces managed by residents.

how we'll measure success:

\#   Number of residents reached annually through organized programs; specifically track youth exposure and engagement

\#   Number and distribution of natural areas, lots, and acres of land that are transformed into well-maintained gathering spaces, gardens, parks, quiet places, and play spaces

\#   Number of acres and distribution of land conserved (including easements, land trusts, parks, and Community Managed Open Spaces) and maintained both publicly and privately

15 LIFE ON LAND

nature in the city
Nature for Nature's Sake
Biological diversity makes our ecosystems more resilient.

THE BIG PICTURE

A natural system is a collection of interdependent organisms existing together. A forest, for example, is a natural system, as all of the trees, plants, animals, and other organisms live and interact together. What affects one, can affect all. A diversity of trees, shrubs, and flowers are necessary for birds, butterflies, and other wildlife for food, shelter, and breeding.

In cities, natural environments are fragmented into many small patches or mosaics. Human activity creates more patches of habitat that are smaller in size; the length of the "edge" of each patch is also greater than in undisturbed areas, which benefits species that thrive at edges, like white-tailed deer and invasive vines, but harms certain birds, native plants, and other species that require larger interior habitats. As human activities create a more fragmented environment, it becomes increasingly important to create linkages between natural areas. Preserving forests and creating gardens can help. Even small green spaces, when planted with native species, can support biodiversity.

This work of creating green space can, however, be a gentrifying force. An equity lens calls for connections and interactions between people and nature to be made with the intentional integration of sustainability and social justice. [1] When visions and plans for greening are done in partnership with local communities—and better yet, employing or transferring some local economic benefit to residents—robust buy-in and long lasting outcomes can improve quality of life for everyone, including our natural systems.

IN BALTIMORE

Protecting the plant and animal species in Baltimore is necessary for the health of our ecosystems.

Baltimore is teeming with wildlife. Nearly 100 species of birds have been be spotted in and near our waterways, as well as in our forested areas. The city is part of a unique collection of ecosystems that includes four watersheds (Gwynns Falls, Jones Falls, Herring Run, and Back River) and the Chesapeake Bay. These ecosystems support wildlife and pollination, and provide flood control and air filtration. It is critical that we protect and enhance the entirety of species that keeps these systems healthy, as represented by our beloved black-eyed susans, orioles, and blue crabs. A vital part of protecting these systems is creating, managing, and protecting habitat, with an emphasis on managing the invasive species [2] that threaten local plants and animals.

Urban farms and native gardens are springing up across the city, which can be a positive step toward habitat protection. But as the number of healthy, quality green spaces grows, potentially regenerating neighborhoods, we must actively avoid physical and cultural displacement, particularly around large-scale projects. A regional partnership of public, private, and nonprofit organizations connects people to green spaces and promotes equity, discovery, biodiversity, and resilience. Continuing to open the dialogue

FAST FACT:
Masonville Cove Environmental Education Center is a restored saltwater tidal wetland and environmental education center in South Baltimore. It contains 70 acres of water, 54 acres of wetlands, and a protected bird sanctuary. It was designated as the first Urban Wildlife Refuge Partnership in the country.

by bringing in more voices who have different perspectives will provide significant opportunities to shape our concepts of nature.

STRATEGIES & ACTION

1. Increase restoration, creation, and maintenance of habitat for native species on public and private land; ensure it is done in culturally competent ways with early and frequent engagement.

Action 1:
Expand habitat for pollinators and other wildlife such as aquatic wildlife, soil invertebrates and more, by creating, restoring, and maintaining natural areas, recognizing that one third of our food supply relies on pollinators. For example, create meadows with large plantings that support pollinators [3] and explore creating a policy to permit intentionally growing grass.

Action 2:
Acquire and maintain permanent green spaces. Use the Develop policies to eliminate pollinator-harming insecticides (especially the class of "neonicotinoids") from City property maintenance procedures. Likewise, avoid mosquito spraying in favor of non-toxic practices.

Action 3:
Link natural systems within the city and to the regional network in order to improve the overall capacity of these systems to support flood control, air filtration, and other services.

2. Encourage and increase sustainable land management policies and practices on public and private land, taking into account the context of surrounding neighborhoods and the impacts to residents.

Action 1:
Complete Forest Management Plans for the largest forested parks, with an emphasis on choosing a diversity of trees, plants, and shrubs that feed pollinators and wildlife through the seasons. Also identify additional natural systems areas for future management plans. Ensure early and frequent engagement from local communities.

Action 2:
Implement invasive species management for both plants and animals in and outside of parks. Consider adopting an ordinance requiring control of listed priority invasive species, and/or enact a preferred plant ordinance for public and private landscaping. Species of concern include English ivy and white tailed deer.

Action 3:
Develop and implement organic land care policies and/or plans, requiring the use of safer, non-chemical alternatives to chemical fertilizers, pesticides, and herbicides, and increasing use of organic land care. Adopt and follow the Precautionary Principle.[4]

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1. https://theecologist.org/2017/jul/11/special-report-growing-importance-urban-biodiversity
2. *Invasive species can be any kind of living organism—plant, insect, fish, fungus, bacteria, or even an organism's seeds or eggs—that is not native to an ecosystem, and that causes harm. They can harm the environment, the economy, and human health.*
3. *Honeybees and many wild bees are "bloom specific," and so need large areas of the same species of plant for food. Pollinator-friendly gardens are pesticide-free and provide food, cover, and habitat for honeybees, native bees, and monarch butterflies. More than 85 percent of flowering plants require an insect for pollination (and, accordingly, for the survival of the species).*
4. *The Precautionary Principle states that policies and actions should protect people and nature from harm by requiring the safety of any product to be proven before it is used or handled (rather than removing a product after is proven).*

3. Increase the acreage of maintained and protected land.

Action 1:
Develop workforce training programs for residents to restore and protect natural resources that lead to resident employment while actively avoiding community displacement.

Action 2:
Identify mechanisms to ensure protection and maintenance of habitat areas on public and private lands, in perpetuity.

Action 3:
Assess the potential for requiring natural spaces and onsite quality-of-life amenities in development plans. Requirements may include the creation of parks, trails, and open spaces, as well as payments into an account used to create and maintain open spaces.
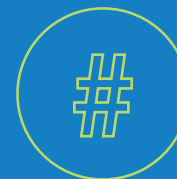

how we'll measure success:

Acres of habitat restored, created, and maintained

New policies and/or plans to require use of safer, non-chemical alternatives to chemical fertilizers, pesticides, and herbicides and to increase use of organic land care

Number of natural areas that are a) located in areas with demand for redevelopment and b) protected through the development review process

15 LIFE ON LAND

17 PARTNERSHIPS FOR THE GOALS
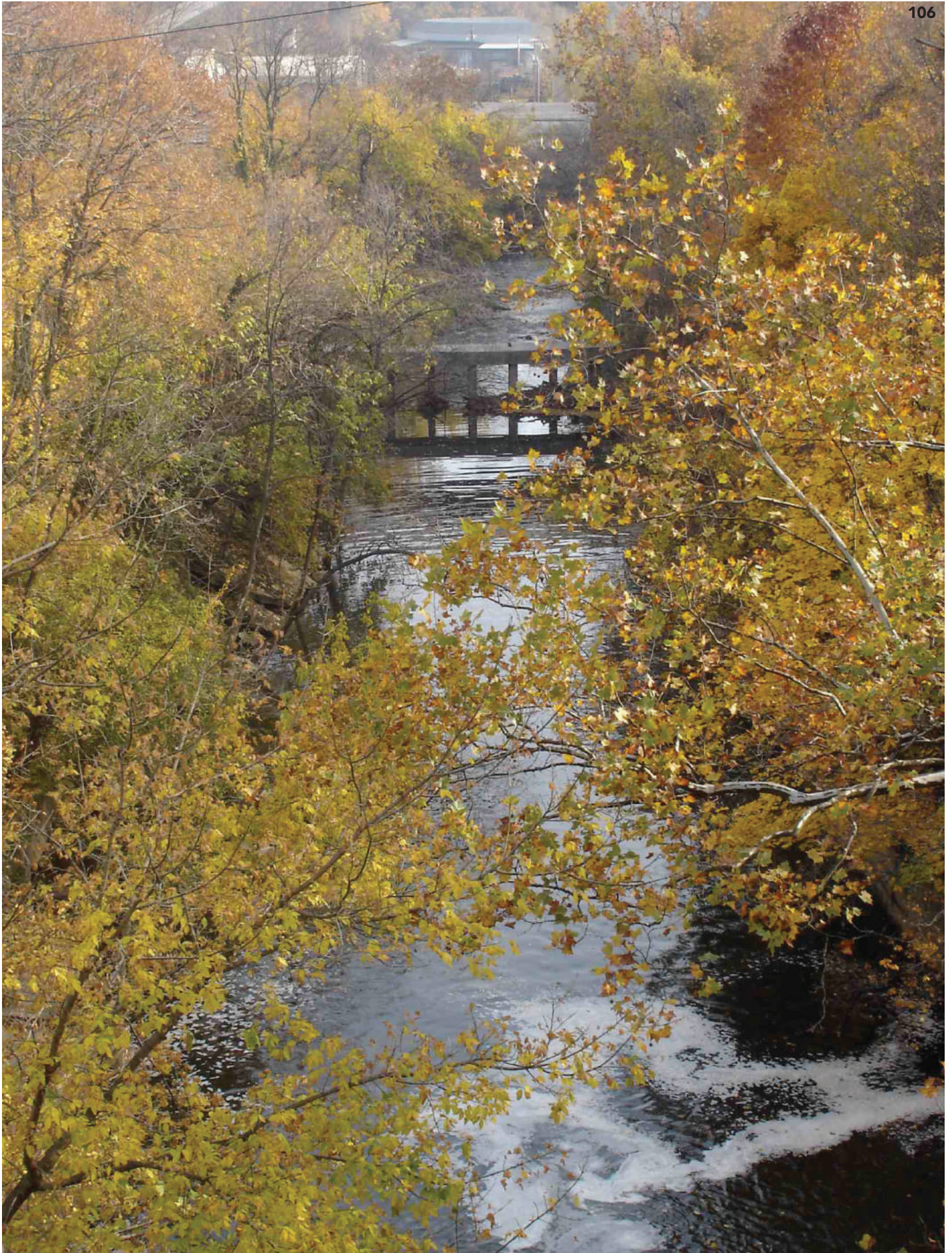
nature in the city:
Trees and Forests

A city filled with tree-lined streets throughout all neighborhoods.

THE BIG PICTURE

Trees are essential to healthy, vibrant communities. Trees heal: simply looking at trees reduces stress levels, even in the middle of a bustling city. Trees buffer noise, soften hard edges, provide shade in the summer and a buffer against wind in the winter, and even reduce incidences of crime. They can also provide food, in the form of fruits and nuts. A leafy, green canopy acts as an air conditioner for the city, as their shade counteracts the "heat island" effect of concrete surfaces absorbing sunlight. Trees help clean the air by absorbing odors and pollutant gases, and their root systems play a crucial role in slowing and absorbing stormwater. Trees contribute toward strengthening neighborhoods and the economy. For all of these reasons, an abundance of well-maintained trees contributes to improving our quality of life—while importantly, providing habitat for wildlife that might not otherwise be in our urban environment.

> *Please plant trees if possible — the block looks so bad without trees, and I am doing everything to help the block and Baltimore look better.*
>
> *- Resident of Southwest Baltimore*

IN BALTIMORE

We need to protect Baltimore's existing trees and greatly increase their number to make our neighborhoods more comfortable, livable, and sustainable.

Baltimore's tree canopy—a measure of the proportion of the city shaded by trees—recently increased from 27 percent to 28 percent. That's an increase of 2,000 acres, although it remains well below Baltimore's citywide goal of 40 percent tree canopy coverage. In many low-income neighborhoods densely populated by African-American and Spanish-speaking residents, the tree canopy is closer to six percent, while it reaches nearly 50 percent in more affluent neighborhoods. This disparity in tree canopy impacts quality of life: areas with fewer trees have more surface area covered by concrete and other hard surfaces, which contribute to higher summer temperatures associated with adverse health impacts. TreeBaltimore, a city-led, public-private partnership, calls everyone to plant and care for trees and supports efforts to expand our canopy. With the help of engaged volunteers and committed research partners, nonprofits, and businesses, TreeBaltimore is beautifying all of Baltimore while focusing on neighborhoods with the fewest trees, and addressing vital public health issues in the process[1].

1 https://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/washington/outside-our-doors-report.pdf

STRATEGIES & ACTION

1. Plant and establish more trees ensuring equitable planting distribution.

Action 1:
Continue prioritizing, planting, and caring for trees. Create more tree wells. Ensure that existing and new tree wells are as large as the sidewalk allows while meeting the current four-foot-by-eight-foot size standard, and expand the standard.

Action 2:
Expand the call-to-action to plant and care for trees. Under the umbrella of TreeBaltimore, engage more residents and local organizations into a unified advocacy platform that reaches residents, politicians, and funders. Deepen and expand partnerships with residents and organizations in neighborhoods with the fewest trees to gain support and guide the process.

Action 3:
Insure a diversity of tree species. Emphasize the use of native plants and planting "the Right Tree, in the Right Place." Consider future climate conditions in plantings.

Action 4:
Create a workforce development program employing residents to plant and care for trees and forests. Train and hire neighborhood residents and engage employers in hiring graduates of these programs for jobs that pay a living wage and provide a career ladder for advancement.

2. Assess and manage the city's tree canopy for long-term health.

Action 1:
Assess forests in all large parks and utilize the street tree inventory and tree canopy change data as a management tool to proactively plan, prioritize, and track plantings and tree care.

Action 2:
Create and implement plans to reduce harm to trees from invasive plant and animal threats, like the emerald ash borer and white tail deer, as well as from climate change.

Action 3:
Develop unified, long-term strategies to increase support and funding for managing forests and forest patches, and for planting and caring for trees.

Action 4:
Develop and implement policy to manage parks to ensure tree-protective language is placed in all contracts and plans, and include best management practices and standards for invasive management, reforestation, and restoration.

3. Preserve the city's existing tree canopy.

Action 1:
Classify trees and forests as public infrastructure, similar to (and as valued as) sidewalks and street lights.

Action 2:
Adopt a tree ordinance to preserve trees and forests on public and private property.

Action 3:
Investigate the creation of a forest land-banking credit program and other methods for supporting and promoting forest preservation, such as land trusts and permanent easements.

Action 4:
Investigate a mechanism for monitoring long-term forest protection on public and private property to preserve and improve the health of forests.

Action 5:

Prioritize the Proactive Neighborhood Pruning Program, utilizing the tree inventory and basing rank on maintenance need. The goal is that every neighborhood receives tree maintenance on a five-to-seven-year rotation, and every tree above five inches circumference is pruned or removed to ensure trees remain healthy.
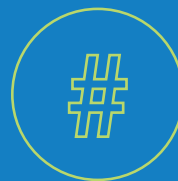

how we'll measure success:

%

Active management of 75 percent of forests and trees by 2030

#

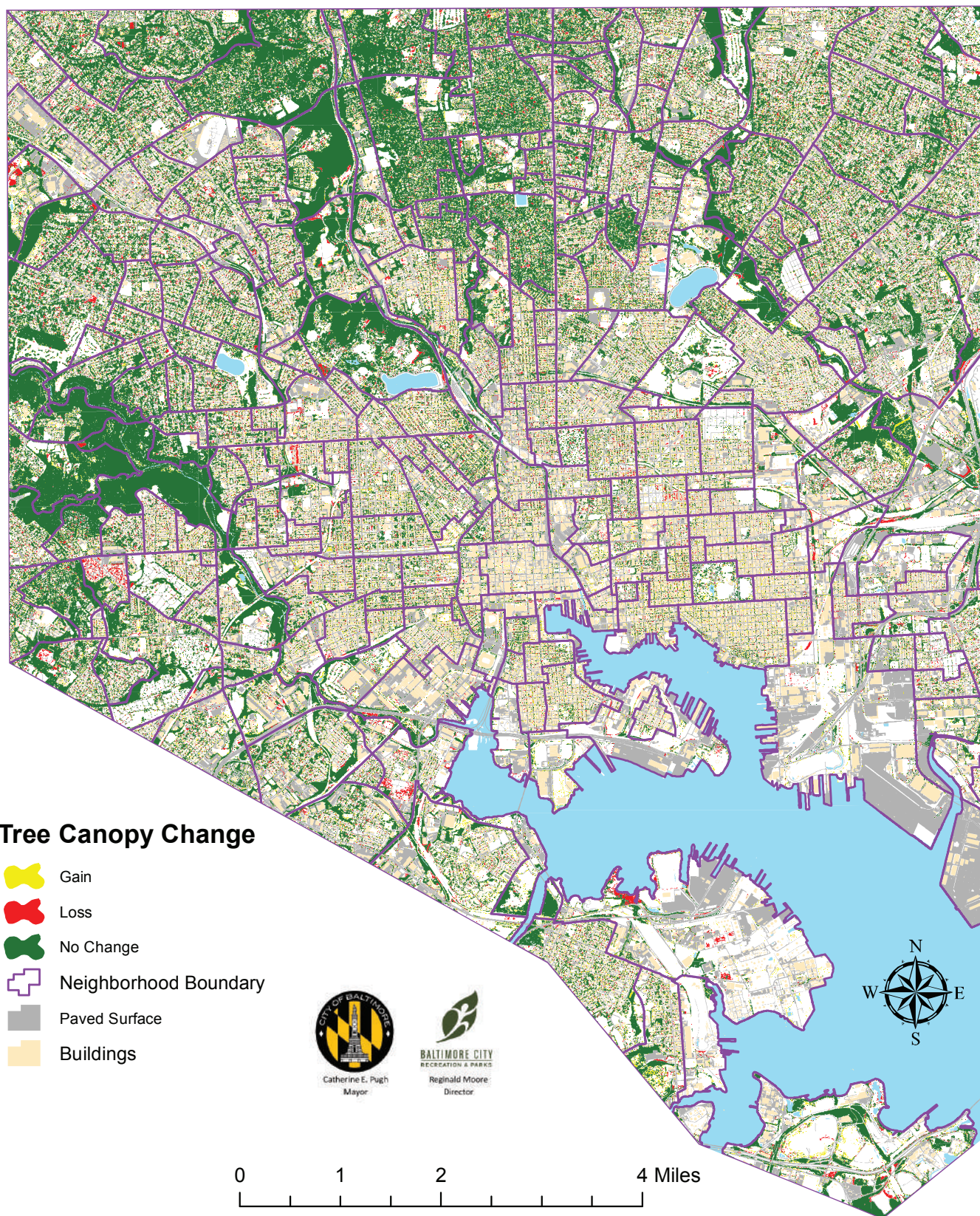**Number of acres of controlled invasive species management and subsequent reforestation**

#

Number of trees planted by neighborhood and percent of trees maintained for two years

%

Percent of area covered by trees

Tree Canopy Change 2007 - 2015

Tree Canopy Change

- Gain
- Loss
- No Change
- Neighborhood Boundary
- Paved Surface
- Buildings

CITY OF BALTIMORE

Catherine E. Pugh
Mayor

BALTIMORE CITY
RECREATION & PARKS

Reginald Moore
Director

N
W E
S

0   1   2   4 Miles

14 LIFE BELOW WATER

nature in the city:
Water in the Environment

Clean water is a foundation for a flourishing, prosperous city.

THE BIG PICTURE

Our cities were founded along navigable waterways that served as highways for commerce and connection. Today, clean water is still critical to local economies as well as to public health. Contaminated water can cause illness, and polluted water results in a loss of access and enjoyment of our waterways and lost revenue opportunities. Ultimately, improving water quality contributes to economic, environmental, and public health, and overall happiness. Feeling connected to water is a vital factor in how we interact with and care for our waterways.

IN BALTIMORE

Pollution in Baltimore's streams hurts our ecosystem and prevents us from enjoying these natural, historic parts of our city.

Historically, Baltimore was crisscrossed with an abundance of streams. Today, many of them are piped underground. Where they do flow above ground, public contact restrictions, pollution, and fish consumption advisories prevent residents and visitors from enjoying and interacting with them. Three main streams remain, each running through one of our big parks: the Herring Run, the Jones Falls, and the Gwynns Falls, but many of us are not even aware that these waterways exist.

Leaking pipes discharge untreated sewage into storm drains and streams. In addition, rainfall carries sediment, litter, and contaminants from roads, alleys, and parking lots into the City's storm drain system. These pollutants are not filtered out or treated—they discharge directly into Baltimore's streams and harbor.

There is good news. The City modified an agreement with regulators to prioritize repairs to old sewage infrastructure and eliminate releases of sewage into our waterways. Baltimore has more than 1,500 miles of sewage pipes to inspect, repair, improve or replace. Every bit of progress will help improve our streams and the harbor.

Our streams and rivers literally cross boundaries as they travel through the city. To protect and enhance these assets, we must cross boundaries, too—as representatives of neighborhoods, business, government, and nonprofits—to improve waterways for the benefit of our economic, social, environmental, and collective heath.

STRATEGIES & ACTION

1. Increase positive and safe connections to public waterways, along with awareness of how litter and other pollutants enter them.

Action 1:
Connect more people to water in safe ways via fishing, boating, and activities at the water's edge so they can relax, reduce stress, and enjoy nature. Identify and address concerns and barriers to achieving meaningful engagement with water bodies. These may include geographic, economic, historical, linguistic, cultural, institutional, or other barriers.

Action 2:
Increase education and pursue progressive actions to reduce pollutants entering our waterways. For example, consider an awareness campaign to reduce litter and pet waste and encourage proper disposal of fats, oils, and grease. Also expand efforts to train volunteers on reporting suspected sewage leaks.

Action 3:
Develop a combination of incentives and deterrents aimed at industrial, commercial, and institutional

property owners to reduce pollution impacts, such as promoting innovative financing mechanisms for investment in water quality, developing a recognition program, and proactively pursuing enforcement against "bad actors."

Action 4:
Foster cross-jurisdictional partnerships to address water quality, water access, and increased healthy habitat for fish and other aquatic life, and to coordinate meaningful engagement with residents.

2. Improve aquatic habitats by increasing riparian restoration and water quality monitoring, and creating policies to eliminate sources of pollution.

Action 1:
Increase restoration of riparian corridors, and pursue other innovative habitat restoration such as floating wetlands, living shorelines, and oyster gardens. Consider small-scale and block-level greening projects in tandem with educational, stewardship, and social fabric building activities.

Action 2:
Remove invasive species along waterway buffers, replant with native species, and increase resources for management and maintenance. Promote awareness in neighborhoods surrounding projects.

Action 3:
Identify, prioritize, and remediate sources of human fecal bacteria in waterways using the best available technology, including microbial source tracking techniques.

Action 4:

Develop and promote legislation and policy at the City and State level to reduce pollution of our waterways, including restricting the use of pesticides and herbicides and reducing the use of single-use plastics (such as plastic bags and beverage bottles).

3. Ensure access to safe and affordable drinking water.

Action 1:

Improve watershed management for the City's three raw water reservoirs, by developing and implementing a forest management plan for each. Work with surrounding jurisdictions to improve land-use controls and watershed management in the three watersheds.

Action 2:

Evaluate the potential for water re-use. Secure grant funding to identify potential incentives, and work with partners to implement a pilot incentive program to promote water re-use.

Action 3:

Promote assistance programs for low-income residents and seniors by connecting those needing assistance to programs providing water bill assistance.

Photo credit: Waterfront Partnership of Baltimore

how we'll measure success:

#

Number and demographic makeup of participants at programs on the water's edge

#

Total area of invasive species removal and native species plantings along waterways and shorelines

#

Amount of nutrients and sediment in waterways (using State-approved protocols)
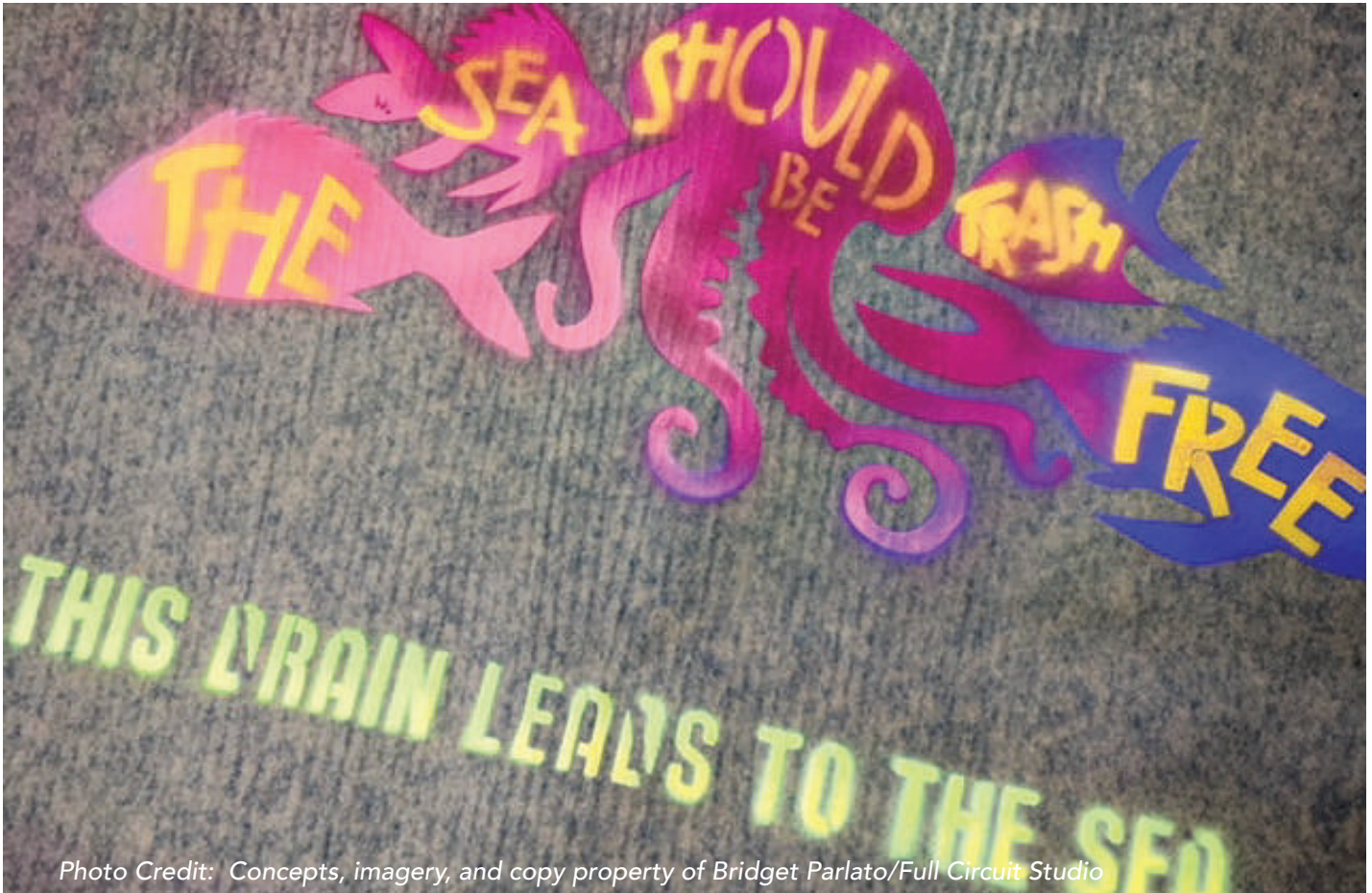
Photo credit: Mary Hardcastle

Photo Credit: Concepts, imagery, and copy property of Bridget Parlato/Full Circuit Studio

nature in the city:
Green Infrastructure

Open spaces that beautify neighborhoods, increase resident comfort, and contribute to healthy water ecosystems.

THE BIG PICTURE

Green infrastructure practices decrease noise and air pollution, cool down cities, and create opportunities for safe recreation and the corresponding jobs. And, seeing green actually makes people happier, improves their quality of life, and contributes to a greater sense of community.[1] Further, green infrastructure can contribute to stormwater management. When rain runs off impervious surfaces such as sidewalks, streets, and roofs, it collects a wide range of toxic pollutants, sediments and trash, which it carries, untreated, into local waterways. Green infrastructure is a way of cleaning and slowing down rainwater by planting trees and rain gardens, which also creates a diverse habitat for native birds, butterflies, and insects as well as humans. Green infrastructure also involves removing impervious surfaces like asphalt, concrete, and greening rooftops to reduce flooding and allow rain runoff to soak back into the soil. This approach to managing rain water protects, restores, or mimics the natural water cycle.

> *Further investment in West Baltimore...*
> *Demolish vacant buildings and put in*
> *more green spaces.*
>
> *- Resident of Hollins Market*

IN BALTIMORE

Baltimore can transform vacant lots into community green spaces that also help clean and protect our waterways.

As Baltimore has developed, our forests and fields have been replaced with hard surfaces like concrete and asphalt. This is typically more problematic in neighborhoods plagued by litter and dumping, and results in frequent reports of clogged storm drains.[2] Problems stemming from trash-filled storm drains, pollution, and flooding also compound in neighborhoods with fewer street trees and more infrastructure in need of repair. The installation of green infrastructure that is well-maintained can address economic, social, and environmental challenges by increasing both green space and job opportunities.

By law, Baltimore is required to remove pollutants and contaminants that stormwater picks up in our neighborhoods before it enters our waterways. To this end, the City adopted a revised Stormwater Management ordinance[3] with the goal of using Environmental Site Design[4] to the maximum extent practicable. The City also developed plans[5] which outline

FAST FACT:

The Baltimore Green Network Vision Map, available online, shows where neighborhood residents, the City, and public and private partnerships plan to create and maintain new green infrastructure projects.

Visit BaltimoreGreenNetwork.com to learn more.

steps to restore 20 percent of the City's impervious surface area to natural landscaping, by removing pavement or implementing treatments that absorb stormwater. Meeting this goal requires treating 4,291 acres of impervious surface—the equivalent of 2,000 row house blocks. In addition, the Baltimore Green Network [6] supports the implementation of green infrastructure on vacant lots created by the demolition of vacant buildings.

STRATEGIES & ACTION

1. Increase green infrastructure throughout the city, targeting neighborhoods with limited access to large parks and green spaces and high disparities in health outcomes.

Action 1:
Evaluate an Offsite Stormwater Mitigation Credit or Pay for Performance program, [7] determining interest, demand, and feasibility, and then establish programs as appropriate.

Action 2:
Create standard design specifications and a streamlined permitting process to implement green infrastructure practices particularly for projects under 5,000 square feet.

Action 3:
Support and expand programs to establish and maintain green infrastructure on private property, including incentives as well as free and/or reduced-cost materials.

Action 4:
Create a coordinating committee to evaluate and improve policies, processes, roles, and site evaluation for green infrastructure on public property. Ensure engagement from those who will be most impacted, and follow best practices in transparency for all processes of the committee.

2. Ensure green infrastructure is functional, proactively maintained, and an asset to neighborhoods.

Action 1:
Create a green infrastructure workforce development program based on a study of best practices. Recruit neighborhood residents to participate, providing jobs and encouraging neighborhood pride; engage employers to hire program graduates to living wage jobs.

Action 2:
Seek funding to develop stewardship models and recruit neighborhood residents to maintain and monitor projects using these models.

1. http://water.bniajfi.org/
2. https://publicworks.baltimorecity.gov/pw-bureaus/water-wastewater/stormwater
3. "Environmental site design" means using small-scale stormwater management practices, nonstructural techniques, and better site planning to mimic natural hydrologic runoff characteristics and minimize the impact of land development on water resources. https://definedterm.com/environmental_site_design
4. http://publicworks.baltimorecity.gov/sites/default/files/Baltimore-City-MS4-and-TMDL-WIP-Rev-August-2015.pdf
5. https://planning.baltimorecity.gov/green-network-plan
6. https://www.nrdc.org/sites/default/files/stormwater-credit-trading-programs-ib.pdf
7. https://www.enviroaccounting.com/payforperformance/Program/Home

Action 3:

Create a database of green infrastructure sites identifying all parties who are responsible for their funding and maintenance.

Action 4:

Create a standard agreement for green infrastructure to be sited on public property but maintained by non-City entities; create standards that those outside entities need to meet, to ensure all green infrastructure continues to function per its design.

Action 5:

Analyze displacement pressures that new green investments may have on low-income communities and include strategies to mitigate impacts.

3. Increase awareness of stormwater runoff and the benefits of green infrastructure.

Action 1:

Ensure design and location of green infrastructure practices are appropriate within the neighborhood context by engaging community members early in planning processes.

Action 2:

Create demonstration projects on public land, along with educational signage. Ensure that they are all continually maintained.

Action 3:

Create, maintain, and promote the use of educational mapping tools such as printed maps and brochures, mobile apps, presentations, and tours. These can provide locations and explain benefits of green infrastructure.

how we'll measure success:

Acres of impervious surface removed

Number and square feet of green infrastructure projects implemented

Amount and geographic distribution of funding provided for environmental stewardship and maintenance to public-private partnerships

Photo credit: National Wildlife Federation

Photo credit: Blue Water Baltimore