

City of Baltimore
2014 ANNUAL SUSTAINABILITY REPORT



STEPHANIE RAWLINGS-BLAKE
MAYOR



SUSTAINABILITY: meeting the current *environmental, social, and economic needs* of our community without compromising the ability of future generations to meet these needs.

CONTENTS

EXECUTIVE SUMMARY.....	4
SUSTAINABLE STRATEGIES IMPLEMENTATION.....	6

SPOTLIGHTS AND SUCCESS STORIES

Neighborhood Spotlight: Patterson Park.....	30
Partner Spotlight: Baltimore Green Space.....	34
Community Volunteer Story: Andrew Smith and Oscar Baltodano.....	37
Community Volunteer Story: Regina Hammond and Samontra Brightful	38
Success Story: Green Tracks	39
Success Story: Growing Green Initiative	41
Success Story: Homegrown Baltimore Employee Wellness CSA Program	45
Success Story: Youth Environmental Leadership	47
Success Story: Masonville SWAP	49
Success Story: Youth Environmental Leadership	51
Success Story: Make A Plan. Build a Kit. Help Each Other.	53
Success Story: International Green Construction Code.....	54
Success Story: Baltimore Energy Initiative.....	56
Success Story: Details Deconstruction.....	58
Success Story: Baltimore's Turtle	60
Success Story: Star Community Rating System.....	62
Success Story: Floodplain Planning	64
Success Story: Office of Sustainable Energy	66
Success Story: Baltimore Bicycle Project	68

DATA AND INDICATORS

CLEANLINESS	70
POLLUTION PREVENTION	73
RESOURCE CONSERVATION	77
GREENING	80
TRANSPORTATION	82
EDUCATION & AWARENESS	85
GREEN ECONOMY	87

BALTIMORE NEIGHBORHOOD INDICATORS ALLIANCE VITAL SIGNS

Baltimore City Maps	90
STEPS YOU CAN TAKE	99
PARTNERS LIST	103

EXECUTIVE SUMMARY

THE BALTIMORE SUSTAINABILITY PLAN, adopted as a City Council Ordinance on March 2, 2009, was developed as a direct result of the vision, hard work, and creativity of over 1,000 Baltimore citizens and organizations. The Plan offers a broad, community-responsive sustainability agenda that articulates the type of community Baltimore wants to be – a community that invests in the quality of life of its people, the health and resilience of its environment, and the long-term success of its economy.

We are pleased to report that in 2014, Baltimore – the City government, businesses, institutions, community organizations and citizens – made important progress towards our Sustainability Plan goals. The annual report that follows provides specific measurements for and stories about our 29 Plan goals and 131 Plan strategies.

Some key points in this year's report are the following:

Residential and industrial and commercial electricity usage, across the City decreased in 2014, compared to 2013 usage. There was an increase in natural gas usage in both the residential and industrial and commercial sectors, and this increase was likely caused by the extremely cold winter temperatures. Weather extremes, both hot and cold, are becoming more common and underscore the importance of supporting energy efficiency programs to contain costs and increase the resiliency of our energy supply system. City government saw reductions in both electricity and natural gas usage. City schools reduced their electricity usage, but saw an increase in natural gas consumption. This follows the trend that we saw in our city-wide data. The increase in natural gas usage at City schools confirms and continues to reinforce that greater energy efficiency as part of the new school construction program needs to be a priority. Savings from energy efficiency in the schools can work toward achieving our City's energy reduction goals and our greenhouse gas emission reduction goals and will provide crucial monetary savings for the school system.

Youth engagement in the City around sustainability continues to be a focus of our

efforts, and in 2014 we saw an increase in our participation numbers. The "Baltimore City Schools Green, Healthy, Smart Challenge" engaged over 2000 youth in 2014. The City also saw an increase in the number of Certified Green Schools – with 31 schools now certified under the Maryland Association for Environmental and Outdoor Education Green Schools program. In order to reach our sustainability goals, we need to ensure that our youth are educated about and involved in activities that focus on the principles of sustainability and resilience.

In 2014, the Office of Sustainability led the planning effort for the City's "Green Tracks" program. This program aims to reduce blight and strengthen the neighborhoods that are adjacent to Amtrak's Northeast Corridor. Green Tracks will combine green space, public art, and trees to create visually appealing and welcoming spaces that can be seen from the rail line and enjoyed by residents. The Details Deconstruction project also took place in 2014 and is a follow-up to the successful deconstruction pilot in Greater Greenmount, which was highlighted in 2010. The Details Deconstruction project is a partnership between the Office of Sustainability, Humanim, and Baltimore Housing. In 2014, 35 vacant homes in the Milton-Montford neighborhood were deconstructed. This project not only captures value from waste but also provides needed job training and jobs. The site where the deconstruction took place is the first site that will be greened under the Green Tracks program. This is an excellent example of multiple programs, projects and agencies working in concert to create a growing, sustainable and resilient City.

The Annual Report's detailed "Strategy Implementation" tracker for each of our plans – Sustainability Plan, Climate Action Plan, Disaster Preparedness Project & Plan (DP3), and Homegrown Baltimore – will give you a snapshot of the implementation progress for each plan - which strategies are in mid-stages, implemented and ongoing, as well as actions that that are not yet underway.

In 2014, The Commission on Sustainability created a Waste Workgroup, which focused on the Sustainability Plan's Cleanliness goal number one – to eliminate litter throughout the City. A clean city is a more sustainable and resilient city, a city that can help strengthen neighborhoods, spur growth, and most importantly create healthy environments for our residents. This group spent 2014 working with agency partners such as the Department of Public Works and the Department of Housing and Community Development, and meeting in a range of community settings to find out what is working and what needs to happen to improve the cleanliness of our streets and waterways. Based on this yearlong effort, the Waste Workgroup and Commission on Sustainability developed a list of recommendations to present to Mayor Rawlings-Blake and citizens on steps we need to take to eliminate litter in the City. The three goal areas of the recommendations are:

Goal 1 – Help Neighborhoods Help Themselves

Goal 2 – Make it Easier to Recycle and Dispose of Trash Properly

Goal 3 – Improve Existing Systems to Achieve a Clean City

It takes action, support and engagement from everyone to achieve these ambitious goals and the goals in all of our plans. The Office of Sustainability and Commission on Sustainability

cannot do this alone, and we count on many partners to help us achieve our goals. To find out how you can become involved, visit the "Partners List" at the end of the report, which provides clear information on how to become involved and who to contact. We urge you to become involved today. To schedule a community clean-up you can contact the Department of Public Works; The Baltimore Energy Challenge provides free in-home energy saving installations; TreeBaltimore provides free trees to plant in your yard or on your street; and Blue Water Baltimore can help you organize a neighborhood storm drain painting project. These are just a few examples of the many ways you can get involved.

While the 2014 report continues to tell Baltimore City's progress in sustainability, we recognize that what is contained within is only the beginning. There are many additional organizations accomplishing valuable work throughout Baltimore, and we look forward to recognizing those efforts. We encourage everyone in Baltimore to share their success stories of how they help to achieve the City's sustainability goals at our website www.baltimoresustainability.org or find us on Facebook and Twitter.

Thank you to the countless individuals and organizations that took action this past year



to improve the quality of life and sustainability in Baltimore. We look forward to continuing our work with you to make Baltimore a sustainable and resilient city.



CHERYL CASCIANI
CHAIR, COMMISSION ON SUSTAINABILITY



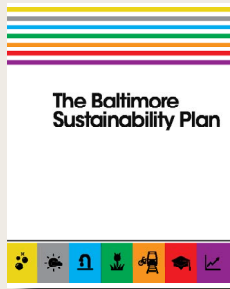
MAYOR STEPHANIE
RAWLINGS-BLAKE



THOMAS J. STOSUR, DIRECTOR
DEPARTMENT OF PLANNING

SUSTAINABLE STRATEGIES IMPLEMENTATION

The charts below will allow you the opportunity to re-visit the strategies, and easily get an idea of where we are in implementation. The color red indicates that a strategy is "still pending," and the teal check mark indicates that the strategy has been "implemented and/or is ongoing." Or a strategy may fall somewhere in between, and will be noted by orange, yellow, light green, and green. We will update this feature every year, and hope to see progress. New for the 2014 Annual Report, the City will also be reporting on the progress of the Climate Action Plan (CAP), Disaster Preparedness Project and Plan (DP3), and Homegrown Baltimore, Urban Agriculture Plan.



The **Baltimore City Sustainability Plan** addresses all three legs of the sustainability stool – people, planet, and prosperity. The Plan was designed to lay out a broad, inclusive, and community responsive sustainability agenda. The Plan is comprised of seven theme chapters: Cleanliness, Pollution Prevention, Resource Conservation, Greening, Transportation, Education & Awareness, and Green Economy. Each chapter contains three to five goals, for a combined total of 29 goals in the Plan. Each goal is accompanied by a non-exhaustive list of recommended strategies. There are 132 strategies listed in the Plan, we report on the implementation status of each strategy.

CLEANLINESS

		Still Pending	Very Early Stages	Early Stages	Mid-Stages	Advanced Stages	Implemented/Ongoing
C1 	Eliminate litter throughout the City						
A	Educate residents and businesses about proper trash storage and disposal	○	○	○	●	○	✓
B	Expand existing programs to maximize public trash and recycling bin use	○	○	○	●	○	✓
C	Launch a public education campaign to change the public's attitude toward litter	○	○	●	○	○	✓
D	Issue every household a large municipal trash can	○	○	○	●	○	✓
E	Improve the enforcement of current sanitation code	○	○	○	○	○	✓
C2 	Sustain a clean and maintained appearance of public land						
A	Establish city-wide maintenance standards for publicly owned land	○	○	●	○	○	✓
B	Build capacity of existing city maintenance staff through training and education	○	●	○	○	○	✓
C	Expand adoption and community stewardship of public land	○	○	○	○	○	✓
C3 	Transform vacant lots from liabilities to assets that provide social and environmental benefits						
A	Strengthen enforcement of dumping and litter laws	○	○	○	○	●	✓
B	Increase participation in community maintenance and stewardship efforts	○	○	○	○	●	✓
C	Create and sustain a land trust to support community-managed open space	○	○	○	○	○	✓
D	Return abandoned properties to productive use	○	○	○	○	○	✓
E	Establish a new fee schedule charged to absentee property owners	○	○	○	●	○	✓



POLLUTION PREVENTION

PP1 | Reduce Baltimore's greenhouse gas emissions by 15% by 2015

		Still Pending	Very Early Stages	Early Stages	Mid-Stages	Advanced Stages	Implemented/Ongoing
A	Create a Climate Action Plan for the City of Baltimore	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
B	Implement Climate Action Plan for the City of Baltimore	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

PP2 | Improve Baltimore's air quality and eliminate Code Red days

A	Add an air quality and climate change implication evaluation to all government-funded projects	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
B	Create Code Red/Orange day policies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
C	Explore options for more efficient fleet conversion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
D	Institute and enforce a City-wide no-idling policy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

PP3 | Ensure that Baltimore water bodies are fishable and swimmable

A	Implement recommendations in the City County Watershed Agreement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
B	Study creation of a stormwater utility or other new funding sources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
C	Reduce amount of impervious surfaces and increase on-site stormwater treatment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
D	Protect and restore Baltimore's stream corridors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
E	Create watershed-based natural resource management plans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
F	Increase actions by individual property owners to treat stormwater	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>

PP4 | Reduce risks from hazardous materials

A	Adopt the "Precautionary Principle" as the underlying policy standard	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
B	Adopt a policy and plan for elimination of pesticide use and other toxic chemicals	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
C	Comply with the <i>Maryland Integrated Pest Management (IPM) in Schools</i> mandate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
D	Enact an ordinance prohibiting the use of known toxins in health care delivery settings	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
E	Aggressively promote the redevelopment of Brownfield sites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

PP5 | Improve the health of indoor environments

A	Use green cleaning products in schools, government offices, and businesses	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
B	Explore the feasibility of making all Baltimore multi-family dwellings smoke-free by 2010	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
C	Increase and coordinate all healthy housing efforts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
D	Ensure coordination among weatherization, lead remediation, and healthy homes activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>



RESOURCE CONSERVATION

RC1 | Reduce Baltimore's energy use by 15% by 2015

		Still Pending	Very Early Stages	Early Stages	Mid-Stages	Advanced Stages	Implemented/ Ongoing
A	Require aggressive energy efficiency standards as part of the Baltimore Green Building standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
B	Improve the energy efficiency of existing homes and buildings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
C	Increase renewable energy generation in Baltimore City	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
D	Mandate efficiency upgrades to homes at point of sale	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
E	Increase energy conservation by residents, City government, businesses, and institutions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
F	Dedicate resources to assist Baltimore in leveraging state and federal funds for energy efficiency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
G	Investigate a "Lights Out" policy for appropriate areas of Baltimore City	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

RC2 | Reduce Baltimore's water use while supporting system maintenance

A	Conduct public education program on reducing water consumption	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
B	Study methods to fund the construction and maintenance of Baltimore's water supply system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
C	Maintain a comprehensive water facilities master plan	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

RC3 | Minimize the production of waste

A	Distribute information on waste-reducing purchasing policies	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
B	Establish Baltimore City Green Purchasing guidelines	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
C	Educate consumers about product life-cycle analysis	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
D	Link industrial and commercial users to close waste loops	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
E	Expand Baltimore's composting program and opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
F	Develop and implement local legislation related to waste minimization	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

RC4 | Maximize reuse and recycling of materials

A	Increase recycling opportunities throughout the City	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
B	Increase resident and business participation in the single-stream recycling program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
C	Expand types of materials accepted by the single-stream recycling program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
D	Preserve, reuse, and recycle buildings and related material	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
E	Institute once-weekly recycling and once-weekly trash pick up service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>



GREENING

G1 | Double Baltimore's Tree Canopy by 2037

		Still Pending	Very Early Stages	Early Stages	Mid-Stages	Advanced Stages	Implemented/Ongoing
A	Assess current urban forest cover	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
B	Protect our existing trees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	✓
C	Build communication and cooperation among City agencies to support Baltimore's trees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	✓
D	Develop a City-wide education program about the values of trees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
E	Develop and strengthen innovative public-private partnerships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
F	Identify and pursue opportunities for increasing trees planted on private property	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	✓
G	Increase tree plantings in sidewalks, medians and other public right-of-ways	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓

G2 | Establish Baltimore as a leader in sustainable, local food systems

A	Increase the percentage of land under cultivation for agricultural purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
B	Improve the quantity and quality of food available at food outlets	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
C	Increase demand for locally-produced, healthy foods by schools, institutions, supermarkets, and citizens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	✓
D	Develop an urban agriculture plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
E	Implement Baltimore Food Policy Task Force recommendations related to sustainability and food	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	✓
F	Compile local and regional data on various components of the food system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓

G3 | Provide safe, well-maintained public recreational space within 1/4 mile of all residents

A	Conduct an inventory and assessment of existing and potential outdoor spaces for recreation	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
B	Develop a plan with recommendations for increasing the quantity, quality, and use of recreation spaces	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
C	Create an inclusive organizational system to support stewardship of public spaces	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓

G4 | Protect Baltimore's ecology and biodiversity

A	Manage Baltimore City land to restore, conserve, and create habitat for native species and eliminate invasive plant species	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
B	Implement sustainable landscape maintenance practices throughout the City	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
C	Develop and implement a system to regenerate soil health in Baltimore City	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
D	Build community support to conserve and restore Baltimore's urban stream ecosystem	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	✓
E	Support and develop native plant nurseries in the City	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓



TRANSPORTATION

T1 | Improve public transit services

		Still Pending	Very Early Stages	Early Stages	Mid-Stages	Advanced Stages	Implemented/ Ongoing
A	Make software upgrades to allow for transit signal priority	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
B	Implement an integrated system of downtown shuttle and trolley routes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
C	Work with the MTA to expand QuickBuses to more high-volume transit corridors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
D	Bring the Red Line Transit project to Baltimore	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
E	Work with the MTA to develop and implement an ideal transit service profile for MTA routes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

T2 | Make Baltimore bicycle and pedestrian friendly

A	Implement the Baltimore Bicycle Master Plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
B	Develop a Bike to Work program for Baltimore	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
C	Evaluate the creation of a bicycle sharing service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
D	Expand the Safe Routes to Schools program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
E	Implement "Sunday Streets" recreational street closure program	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
F	Improve public infrastructure for cyclists and pedestrians	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

T3 | Facilitate shared-vehicle usage

A	Establish a Baltimore CarShare program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
B	Expand the CityCommute Rideshare program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
C	Leverage new Baltimore Green Building Standards to increase shared-vehicle use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

T4 | Measure and improve the equity of transportation

A	Track the disparity of transportation costs by neighborhood relative to income	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
B	Identify strategies to reduce the disparity in cost of transportation relative to income	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
C	Work with the MTA to measure the quality of transit service in Baltimore neighborhoods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

T5 | Increase transportation funding for sustainable modes of travel

A	Advocate for more funding for transit and sustainable transportation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
B	Implement goals of Mayor's Transportation Investment Commission (TIC) report	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
C	Explore options for a new regional transit funding source and a larger local role in managing the MTA	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
D	Expand eligible expense under sustainable transportation programs	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
E	Advocate shifting funding from roadway capacity expansion to transit, bicycling, and walking projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>



EDUCATION & AWARENESS

EA1 | Turn every school in Baltimore City into a green school

		Still Pending	Very Early Stages	Early Stages	Mid-Stages	Advanced Stages	Implemented/ Ongoing
A	Incorporate sustainability into curriculum and activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
B	Build and retrofit green school buildings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
C	Adopt a green facilities management guide for school operations	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
D	Implement a teacher training and certification program for sustainability	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
E	Recognize schools making strides in sustainability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

EA2 | Ensure all city youth have access to environmental stewardship programs and information

A	Develop a sustainability education and community service program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
B	Create a website devoted to the youth perspective on the environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
C	Create a Youth Ambassador Team to educate their peers about sustainability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

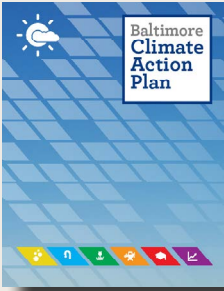
EA3 | Raise the environmental awareness of the Baltimore community

A	Utilize a Sustainability Ambassador network for community outreach	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
B	Coordinate a Year-Long Baltimore Sustainability Calendar	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
C	Increase public knowledge of alternative transportation options	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
D	Launch City-wide sustainability challenges to a variety of audiences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
E	Engage membership organizations to develop and disseminate targeted sustainability information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

EA4 | Expand access to informational resources on sustainability

A	Develop an interactive website for the Baltimore Office of Sustainability (BOS)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
B	Create local Green Pages as resources guide	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
C	Utilize existing community centers to distribute sustainability information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
D	Support innovative resources on sustainability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

GREEN ECONOMY		Still Pending	Very Early Stages	Early Stages	Mid-Stages	Advanced Stages	Implemented/ Ongoing
GE1 	Create green jobs and prepare City residents for these jobs						
A	Add clean technology to Baltimore's targeted growth sectors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
B	Conduct needs assessment of green job demand	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
C	Link existing job training programs to the information provided in the green jobs needs assessment (above)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	✓
D	Encourage employment of Baltimore's residents in City clean energy projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	✓
E	Convene Green Collar Summit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
F	Develop a strategy to secure available funding	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
GE2 	Make Baltimore a center for green business						
A	Leverage Baltimore's natural amenities attractive to green technology businesses and market them	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
B	Establish and market creative financing strategies for local green businesses	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
C	Encourage construction industry to use "green" building practices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
D	Identify sectors and products for a sustainability-related manufacturing niche in Baltimore	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	✓
GE3 	Support local Baltimore Business						
A	Educate Baltimore City residents on the importance of supporting local businesses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	✓
B	Develop tools to connect local suppliers to businesses, consumers, and government	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
C	Increase local government purchasing of local products	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
GE4 	Raise Baltimore's profile as a forward thinking, green city						
A	Create a brand for Baltimore's Sustainability initiative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	✓
B	Attract sustainability-related conventions and events to Baltimore	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
C	Target the tourism industry to promote Baltimore as a green city	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
D	Support innovative an pilot projects and technologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	✓



There are 29 goals in the **Climate Action Plan (CAP)**. Each goal is accompanied by a non-exhaustive list of recommended strategies. The strategies are divided across three sectors: Energy Savings and Supply (ESS), Land Use and Transportation (LUT), and Growing a Green City (GGC). The plan's 37 measures and seven additional actions illustrate how the City will achieve those strategies.

In the 2014 Annual Report, the City will begin reporting on the implementation status of each CAP strategy.

CAP ESS | ENERGY SAVINGS & SUPPLY

ESS 1 | Reduce energy consumption of existing buildings

		Still Pending	Very Early Stages	Early Stages	Mid-Stages	Advanced Stages	Implemented/ Ongoing
1.A	Disclose residential energy bills and energy efficiency improvements at the beginning of the sale or rental process	●	○	○	○	○	✓
1.B	Benchmark and disclose energy performance and improvements of city-owned and privately-owned commercial, industrial and institutional buildings	○	○	○	●	○	✓
1.C.a	Require energy audits for city-owned and privately-owned, commercial, industrial and institutional buildings over 10,000 sq. ft.	●	○	○	○	○	✓
1.C.b	Require retro-commissioning for city-owned and privately-owned, commercial, industrial and institutional buildings over 10,000 sq. ft.	●	○	○	○	○	✓
1.D	Conduct commercial and residential energy efficiency outreach	○	○	○	○	○	✓
1.E	Encourage model green lease provisions	●	○	○	○	○	✓
1.F	Conduct outreach programs in schools	○	○	○	○	○	✓
1.G	Retrofit Baltimore's street lights for more efficient energy usage	○	○	○	○	●	✓
1.H	Encourage switch from heating oil to natural gas	○	○	○	○	○	✓
1.I	Promote cool roof installations and other roofing technologies	○	○	○	●	○	✓

ESS 2 | Promote generation of renewable energy

2.A	Standardize permitting for renewable energy installations	○	○	○	●	○	✓
2.B	Conduct outreach for solar installations, to achieve 30 MW of PV installed in total, across all sectors (government, commercial, institutional, multifamily, and residential) by 2020	○	○	●	○	○	✓
2.C	Encourage State to increase Renewable Portfolio Standard to 26% by 2022	○	○	○	●	○	✓

ESS 3 | Expand and upgrade energy performance for major renovation and new construction

3.A	Adopt green building standards for new residential construction and major renovation	○	●	○	○	○	✓
3.B	Modify existing new homeowner and rehabilitation tax credit to include energy efficiency standards based on the Energy Star home certification program	●	○	○	○	○	✓

ESS 4 | Promote efficient community energy districts

4.A	Encourage new facilities to consider connecting to existing, proximate, co-generation facilities	○	●	○	○	○	✓
4.B	Encourage co-generation installation for replacing inefficient boiler plants	○	●	○	○	○	✓

Baltimore Sustainability Plan Quantification Energy Savings and Supply Activities

>>	Savings due to Baltimore City Green Building Standards (commercial and multifamily)						
>>	Domestic appliance upgrades						
>>	Smart grid roll-out						

CAP LUT | LAND USE & TRANSPORTATION**LUT 1 | Promote mixed-use development near transit**

		Still Pending	Very Early Stages	Early Stages	Mid-Stages	Advanced Stages	Implemented/Ongoing
1.A	Create high-quality pedestrian- and transit-oriented neighborhoods						
1.B	Support mixed-use neighborhoods to increase access to goods and services						

LUT 2 | Support alternative commutes

2.A	Develop and promote incentives for individual transportation choices						
2.B	Promote establishment of qualified bike commute reimbursement programs						

LUT 3 | Explore parking strategy options

3.A	Explore the creation of a parking plan for city-owned parking						
3.B	Provide alternatives to monthly parking passes						
3.C	Reduce off-street parking requirements						

ESS 4 | Increase walking and biking

4.A	Develop a pedestrian master plan						
4.B	Support Safe Routes to Schools						
4.C	Expand and improve bicycle infrastructure						

ESS 5 | Increase efficiency in city fleet

5.A	Implement a centralized fueling program and route optimization software						
-----	---	--	--	--	--	--	--

ESS 6 | Support cleaner vehicles

6.A	Support alternative-fuel infrastructure and encourage adoption of alternative-fuel vehicles						
6.B	Promote Fuel Efficient cargo handling in the Port of Baltimore						

CAP GGC | GROWING A GREEN CITY

GGC 1 | Divert waste from landfills

	Still Pending	Very Early Stages	Early Stages	Mid-Stages	Advanced Stages	Implemented/ Ongoing
1.A Develop a comprehensive recycling plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
1.B Reduce construction and demolition waste	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
1.C Compost organic material	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

GGC 2 | Improve water efficiency

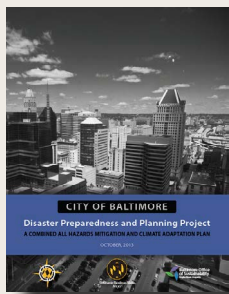
2.A Repair water supply infrastructure	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
2.B Improve water efficiency in existing small residential buildings	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
2.C Improve water efficiency for new construction and major renovations of small residential buildings	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

GGC 3 | Enhance the Urban Forest

3.A Increase the number of trees planted	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
--	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-------------------------------------

Baltimore Sustainability Plan Quantification Growing a Green City Activities

>> Water appliance upgrades from new commercial building due to Baltimore City Green Building Standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
>> Climate appropriate planting and irrigation retrofits from existing landscaping and new landscaping requirements	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
>> Landscape waste diversion improvements	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
>> Water appliance upgrades during commercial building retrofits	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>



The **Disaster Preparedness Project and Plan (DP3)** was approved in 2014. There are four primary sectors— Infrastructure (IN), Buildings (BL), Natural Systems (NS), and Public Services (PS)—that provide the structure for the plan's 50 strategies and 231 additional actions.

In the 2014 Annual Report, the City will begin reporting on the implementation status of each DP3 action.

DP3 INFRASTRUCTURE

IN 1 | Protect and enhance the resiliency and redundancy of electricity system

		Still Pending	Very Early Stages	Early Stages	Mid-Stages	Advanced Stages	Implemented/Ongoing
1	Work with the Maryland Public Service Commission (PSC) to minimize power outages from the local electric utility during extreme weather events by identifying and protecting critical energy facilities and located within the City	○	●	○	○	○	✓
2	Evaluate the City of Baltimore utility distribution system, and identify "underground utility districts" using BGE's May 2014 short term reliability improvement plan	○	●	○	○	○	✓
3	Support BGE's collaboration with the Maryland Public Service Commission to implement various smart grid solutions that will provide the City with real-time access to data during events	○	●	○	○	○	✓
4	Identify, harden, and water seal critical infrastructure relative to electrical, heating, and ventilation hardware within the flood plain	○	●	○	○	○	✓
5	Increase resiliency in our energy generation system by encouraging the development of decentralized power generation and developing fuel flexibility capabilities	○	●	○	○	○	✓
6	Develop a comprehensive maintenance and training program for City employees at facilities with backup generators to ensure proper placement, hook-up and function during hazard events.	●	○	○	○	○	✓
7	Install external generator hookups for critical City facilities that depend on mobile generators for backup power	●	○	○	○	○	✓
8	Partner with utility to evaluate protecting power and utility lines from all hazards	○	○	●	○	○	✓
9	Determine low-laying substation vulnerability and outline options for adaptation and mitigation	○	○	●	○	○	✓
10	Evaluate and protect low laying infrastructure - switching vaults, conduit and transformers	○	●	○	○	○	✓

IN 2 | Increase energy conservation efforts

1	Increase energy efficiency across all sectors through education, efficiency retrofits, and building management systems	○	○	○	○	○	✓
2	Encourage critical facilities and institutions to connect to existing cogeneration systems, or develop new cogeneration systems	○	●	○	○	○	✓
3	Continue the City's electricity demand-response program during peak usage or pre-blackout periods	○	○	○	○	○	✓

IN 3 | Ensure backup power generation for critical facilities and identified key infrastructure during power outages

1	Investigate off-grid, on-site renewable energy systems, generators, and technologies for critical facilities to ensure redundancy of energy systems	○	○	○	●	○	✓
2	Seek funding to purchase and install generators for all city building designated as critical to agency functions	○	●	○	○	○	✓

3	Develop Combined Heat and Power (CHP) co-generation plants at identified critical facilities	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
4	Evaluate and ensure backup power generation is available to healthcare facilities (nursing homes, critical care facilities, hospitals, etc.)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓

IN 4 | Protect and manage compressed liquefied natural gas sites and (city) fueling stations before and during hazard events during power outages

1	Work with BGE to ensure existing preparedness plans for Spring Gardens liquefied natural gas site incorporate its vulnerability to present and predicted flooding, storm surge and sea level rise	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
2	Adopt building code that requires anchoring of 50 gallon storage tanks or larger	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
3	Support the Maryland Public Service Commission's effort to accelerate replacement of aging natural gas infrastructure which will harden the system against flooding	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓

IN 5 | Evaluate and improve resiliency of liquid fuels infrastructure

1	Design and implement a generator program that assists private gas stations in securing backup generators, especially those stations along major evacuation routes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
2	Increase and ensure fuel availability during distribution disruptions	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
3	Ensure fuel for generators and delivery priority is given to critical facilities and emergency responders.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓

IN 6 | Evaluate and improve resiliency of communication systems that are in place for sudden extreme weather events

1	Utilize new technologies such as fiber optics, external hook-ups, and mobile generators to improve resiliency	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
2	Build redundancy into all public and inter-agency warning and communication systems	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
3	Identify best practices for the installation and management of flood proofing of all communications infrastructure at risk of water damage	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
4	Implement additional nurse triage phone lines and community health centers to reduce medical surge on hospitals	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
5	Evaluate and improve early warning systems for hazard events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	✓
6	Ensure continued operation of city governments various computer mainframes for email, control systems, and internet service by having stand-by batteries for each with a capacity sufficient for backup generation to operate	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
7	Identify shared communication technology for emergency responders and government agencies to ensure continued and coordinated communication during emergency events	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓

IN 7 | Integrate climate change into transportation design, building and maintenance

1	Determine the coastal storm vulnerability and complete an exposure assessment of City transportation assets	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
2	Improve stormwater management, operations and maintenance for stream flooding that erodes away bridge supports	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
3	Incorporate compliance with earthquake standards to withstand a magnitude eight earthquake for all new, improved and rebuilt bridges	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
4	Design bridges expansion joints for longer periods of high heat and develop a more robust inspection and maintenance process	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓
5	Research utilizing existing and new rating systems for all new infrastructure and road projects	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	✓

6	Identify, investigate, and incorporate Best Management Practices as they relate to transportation design, construction and maintenance	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
7	Require that backup solar powered street lights and signals be integrated along evacuation routes and high traffic areas	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

IN 8 | Identify additional alternative routes and modes for effective transport and evacuation efforts during emergency situations

1	Evaluate existing systems and develop a comprehensive evacuation plan	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
2	Coordinate evacuation plans with regional partners	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
3	Develop and prioritize clearance of specified transportation routes for delivery of emergency response supplies	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
4	Educate the public on the dangers of driving through flooded roads	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
5	Make available a network of dedicated pedestrian and bicycle transportation routes leading into and throughout the City	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
6	Identify and collaborate with bicycle groups and repair shops to assist in emergency response and accommodate alternate transportation needs	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

IN 9 | Alter transportation systems in flood-prone areas in order to effectively manage stormwater

1	Prioritize infrastructure upgrades for roads identified at risk of flooding through the use of elevation data and Sea, Lake and Overland Surges from Hurricanes (SLOSH) model results	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
2	Raise streets in identified flood prone areas as they are redeveloped	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
3	Encourage development of Green Streets in flood prone areas and throughout the City	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
4	Encourage use of permeable pavement in non-critical areas – low-use roadways, sidewalks, parking lots and alleys where soils permit proper drainage	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
5	Add pumps or other mitigation alternatives to streets as they are redeveloped (if needed)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
6	Assess need for new culvert capacity and identify where upgrades are needed	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
7	Conduct an in-depth analysis of the impacts of drain fields that feed the harbor	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
8	Expand and reinforce existing stormwater education programs	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
9	Design and implement floodgates and barriers in transportation tunnels	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
10	Encourage Federal and State Government to design and install floodgates and barriers at vulnerable transportation tunnels	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
11	Upgrade existing floodgate hardware and mechanisms to control rise rate of water into all city tunnels	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

IN 10 | Ensure structural stability of all transportation tunnels to reduce impact from seismic activity

1	Repair cracks and leaks in all tunnels to reduce impact of seismic activity	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
2	Follow Federal, State and Local criteria for the stabilization of Historic transportation tunnels (e.g. Howard Street)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
3	Install a seismically resistant fire standpipe, air monitoring, and automatic valve system in all tunnels to provide a fully automated and monitored fire suppression system	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

IN 11 | Evaluate changes to road maintenance and construction materials based on anticipated changes in climate

1	Implement a repaving strategy that reduces heat-related damage to asphalt and incorporates maintenance and operations that extend the life of the road surface	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
---	--	----------------------------------	-----------------------	-----------------------	-----------------------	-----------------------	-------------------------------------

2	Develop a reconstruction and repair strategy that reduces damage to concrete and incorporates better maintenance and operations	●	○	○	○	○	✓
3	Develop deicing strategies and materials that are effective in extreme cold temperatures and prolonged events to stabilize roadway and bridge surfaces	○	●	○	○	○	✓
4	Design pavement sections and materials that withstand longer periods of extreme heat events	●	○	○	○	○	✓

IN 12 | Enhance the resiliency of the City's waterfront to better adapt to impacts from hazard events and climate change

1	Raise bulkhead height along shoreline areas most at risk	●	○	○	○	○	✓
2	Utilize vegetation and stone to stabilize and armor unprotected shorelines	○	●	○	○	○	✓
3	Encourage the development of integrated flood protection systems that use structural (engineering) and non-structural (wetlands) measures	○	○	●	○	○	✓
4	Review and enhance coastal area design guidelines to better mitigate the impacts of flooding	○	○	●	○	○	✓
5	Enhance and strengthen waterfront zoning and permitting	○	●	○	○	○	✓

IN 13 | Increase the resilience of all wastewater systems and protect them from current and projected extreme weather events

1	Ensure all water and wastewater pumping stations have off-grid, on-site energy sources and/or reliable backup power sources by increasing the number of backups and pulling electricity from different grids	○	●	○	○	○	✓
2	Evaluate the sewer system to identify and develop key areas for prevention of raw sewage overflows	○	●	○	○	○	✓
3	Develop and adopt increased level of protection for construction, redevelopment, and design of all water and wastewater facilities that incorporate future climate projections	●	○	○	○	○	✓
4	Retrofit and harden low-laying pumping stations and treatment plants in flood hazard areas	●	○	○	○	○	✓
5	Ensure effective operations and security for wastewater treatment plants if facilities are overwhelmed by hazard event	●	○	○	○	○	✓
6	Establish the capability of wastewater treatment plants to function during large storm events and establish protocols for storms that overwhelm the system	●	○	○	○	○	✓
7	Increase stormwater recharge areas and quantity management to prevent flooding from overflows	○	●	○	○	○	✓
8	Conduct an assessment of the City's current water system to identify age, condition of infrastructure, capacity, weaknesses and areas for priority upgrades	○	●	○	○	○	✓
9	Conduct and utilize a detailed risk assessment to determine vulnerability of the sewage treatment plant to prevent overflows from extreme storm events	●	○	○	○	○	✓
10	Determine the elevation of sewage treatment buildings, tank construction details, and if the plant is at risk of back flow, for improvements to withstand coastal storm events	○	●	○	○	○	✓
11	Retrofit wastewater treatment facility and methane gas storage system to withstand seismic activity to protect against earthquakes. Design facility to exceed current building codes	●	○	○	○	○	✓

IN 14 | Integrate resiliency, redundancy, and structural stability into the City's drinking and water system to ensure safe and reliable water storage and distribution

1	Repair leaks and improve connection from all City reservoirs and the Susquehanna River	○	●	○	○	○	✓
2	Provide water conservation education, and continue to protect our watersheds to assist in maintaining water quality	○	●	○	○	○	✓

3	Ensure dam emergency plans account for impacts of climate change						
4	Identify and document post damage responsibilities in memorandums of understanding as addendums to Reservoir Watershed Management Agreement						
5	Review dam capacity, load and failure points and review them against 1,000 year and 10,000 year precipitation events						
6	Conduct a study to determine seismic design standards and seismic resiliency of drinking water distribution system (tunnels, piping, clean water pump stations, dams, shafts, and tanks)						
7	Increase stormwater recharge areas and quantity management						
8	Evaluate the impacts of sediment loading on reservoir capacity						
9	Manage watershed forests to provide maximum benefits for water quality and to maintain resiliency during extreme weather events						
10	Adopt new policies on salt application to prevent high salinization on drinking water supplies						
11	Establish a structured Farming Program to maintain adequate storage and water quality in the source-water reservoirs during drought conditions						
12	Maintain appropriate agreements with Susquehanna River Basin Commission (SRBC) and the Exelon Power Company to ensure adequate water withdraws from the Susquehanna River during drought emergency						

IN 15 | Conduct an assessment that evaluates and improves all pipes' ability to withstand extreme heat and cold

1	Replace old and malfunctioning pipes with new pipes or retrofit existing pipes with new lining						
2	Evaluate and utilize new technology that allows for greater flexibility in pipes as they are replaced						

IN 16 | Enhance and expand stormwater infrastructure and systems

1	Implement the requirements of Baltimore's MS4 (separate stormwater and sewer system) permit						
2	Prioritize storm drain upgrades and replacement in areas with reoccurring flooding						
3	Install backflow-prevention devices or other appropriate technology along waterfront to reduce flood risk						
4	Preserve and protect natural drainage corridors						
5	Review and revise storm drain design on a continuous basis, to accommodate projected changes in intense rainfall						

IN 17 | Modify urban landscaping requirements and increase permeable surfaces to reduce stormwater runoff

1	Support existing stormwater requirements and continue to evaluate and improve Best Management Practices						
2	Encourage urban landscaping requirements and permeable surfaces into community managed open spaces						
3	Utilize water conservation elements such as green roofs, rain gardens, cisterns, and bioswales on residential, commercial, industrial, and City-owned properties to capture stormwater						
4	Encourage permeable paving on low-use pathways						

IN 18 | Evaluate and support DPW's stream maintenance program

1	Review and improve status of standing maintenance requirements						
2	Ensure adequate funding is in place to support stream maintenance						
3	Identify opportunities where stream restoration efforts will off-set maintenance costs						
4	Identify interdependencies and benefits of stream maintenance with other transportation programs						
5	Clear streams on a regular basis, prioritize dredging the stream beds, and increase inspection and cleaning of culverts and storm drains to prevent flooding						

IN 19 | Support and increase coordination and information sharing across jurisdictions to better enable mitigation of cross-border impacts on the regions watersheds (e.g., understanding flood conditions upstream in the County)

1	Partner with local counties to evaluate major tributaries in all watersheds to determine best management practices for capturing run-off and slowly releasing it (stormwater quantity management)						
2	Encourage information sharing within the Chesapeake Bay community to assist in developing best management practices						

IN 20 | Reevaluate and support a comprehensive debris management plan for hazard events

1	Investigate best practices for managing and disposing of downed trees, yard waste, building debris, as well as additional household garbage						
2	Expand and integrate existing programs to reduce or intercept debris before it gets into the streams and harbor						
3	Develop and promote solid waste management actions for citizens to implement before a hazard event						

IN 21 | Encourage the integration of climate change and natural hazards into private and State planning documents, systems, operations, and maintenance

1	Incorporate consideration of hazards and climate adaptation efforts into all plans, systems, operations, and maintenance						
2	Ensure Red Line planning incorporates adaptation strategies						
3	Ensure hazard scenarios, utilized in vulnerability assessments, are at a minimum 25% greater in intensity and impact than historical record events to date						
4	Develop guidelines for hospital, health care facilities and other institutional entities (e.g. Universities)						
5	Partner with regional air quality institutions to integrate air quality measures and messaging into City climate change policy efforts						

IN 22 | Develop City policy which requires new city government capital improvement projects to incorporate hazard mitigation principles

1	Discourage new public projects in hazard-prone areas such as floodplains or the coastal high hazard areas						
2	Utilize hazard mitigation design requirements that exceed minimum standards for critical facilities						
3	Use comprehensive infrastructure assessments to identify infrastructure in need of replacement and prioritize funding for those projects						

DP3 BUILDINGS**BL 1 | Develop and implement hazard protections for critical facilities including hospitals, fire stations, police stations, hazardous material storage sites, etc.**

		Still Pending	Very Early Stages	Early Stages	Mid-Stages	Advanced Stages	Implemented/ Ongoing
1	Conduct educational outreach for city-owned, residential, commercial, and industrial buildings about proper storage and disposal of hazardous materials and heating oil	●	○	○	○	○	✓
2	Require hazardous materials stored in city-owned, residential, commercial, and industrial buildings within the floodplain to be elevated a minimum of three feet above the freeboard	○	○	○	○	○	✓
3	Require new critical facilities to be designed with redundant operating systems	○	○	●	○	○	✓
4	Require pre-wiring for generators at all facilities designated critical to agency operations and hazard response	●	○	○	○	○	✓
5	Develop stricter flood regulations for critical facilities	○	○	○	○	○	✓
6	Develop partnership with private fueling stations to provide backup generators in exchange for a commitment to fueling emergency response vehicles during a hazard event	●	○	○	○	○	✓
7	Ensure storage of and access to fuel for generators in critical facilities	●	○	○	○	○	✓

BL 2 | Enhance City building codes that regulate building within a floodplain or near the waterfront

1	Design new projects to be resilient to a mid-century sea level rise projection and adaptable to longer-term impacts	○	●	○	○	○	✓
2	Incorporate climate change and coastal hazard considerations into building codes by increasing freeboard requirements to two feet as buildings are redeveloped and renovated	○	○	○	○	○	✓
3	Continue to regulate to the existing tidal floodplain delineation as adopted 2 February, 2012	○	○	○	○	○	✓
4	Incorporate outfall elevation regulations	○	●	○	○	○	✓
5	Develop Construction Best Practices for development within floodplains	○	○	●	○	○	✓
6	Train all code enforcement and building inspectors about flood proofing techniques and the local floodplain ordinance	○	○	●	○	○	✓
7	Encourage green roof installations to include vegetative and reflective technologies for all new commercial, industrial, multifamily, and city-owned development	●	○	○	○	○	✓

BL 3 | Strengthen City zoning, floodplain and construction codes to integrate anticipated changes in climate

1	Review zoning and strengthen language (where necessary) in order to better protect citizens and increase resiliency in buildings	○	○	●	○	○	✓
2	Review and amend existing building and floodplain regulations to require more flood resistant new and existing structures when located in the floodplain	○	○	○	○	○	✓
3	Utilize open space category in zoning code to protect sensitive areas (e.g. stormwater sites, steep slopes, floodways, etc.)	○	○	○	○	●	✓
4	Review and increase Flood Protection Elevation (Base Flood Elevation + Freeboard) standards to the highest available State, Federal or local elevation level	○	○	○	○	○	✓
5	Evaluate and update stormwater management regulations to avoid increases in downstream flooding	○	○	●	○	○	✓
6	Adopt design requirements that include wet and dry flood proofing techniques	○	○	○	●	○	✓
7	Review and consider adoption of the International Green Construction code	○	○	○	○	○	✓

BL 4 | Update a list of flood prone and repetitive loss buildings to consider for acquisition

1	Continue to acquire property (including repetitive loss properties) in the special flood hazard areas where feasible and appropriate						
2	Prioritize Hazard Mitigation Assistance funding for mitigation of repetitive loss properties and severe repetitive loss properties						
3	Develop a creative financing program for flood resiliency in industrial buildings						

BL 5 | Improve wind resiliency of new and existing structures

1	Review local building codes to determine if revisions are needed to improve the structures ability to withstand greater wind velocities and storm impacts						
2	Retrofit emergency shelter windows to withstand winds associated with coastal storm events						

BL 6 | Evaluate various seismic design enhancements using prototypical Baltimore City building types

1	Determine engineering effectiveness and cost-benefit of various earthquake mitigation measures using computer modeling						
---	--	--	--	--	--	--	--

BL 7 | Retrofit existing buildings in the designated Flood Area to increase resiliency

1	Target and encourage flood resiliency retrofits for buildings in the designated Flood Area						
2	Prioritize retrofitting and increasing resiliency of Public Housing units in the designated Flood Area and other high risk areas						
3	Educate building owners within the floodplain to ensure that all electrical, mechanical, and key building systems are above the base flood elevation and meet existing codes						

BL 8 | Improve resource conservation practices in all city owned buildings

1	Install energy-efficient and low-water-use equipment during renovations in all City-owned buildings						
2	Support energy efficiency and weatherization as part of Baltimore City schools ten-year plan						
3	Update Baltimore green building standards by offering multiple compliance paths for new and substantially renovated construction						

BL 9 | Conduct educational outreach to increase resource conservation practices in private buildings

1	Conduct educational outreach and provide information about savings related to reduced water use						
2	Educate and provide resources and information about utility rebate programs						
3	Provide energy efficiency education to include information on conserving electrical power. Emphasize reductions during summer peak demand hours						

BL 10 | Use HAZUS-MH computer modeling to determine losses generated by coastal storms

1	Utilize engineering studies and cost-benefit analyses to identify additional mitigation needs and actions						
2	Evaluate various building design enhancements to reduce losses generated by earthquakes, floods, and storm surge						

DP3 NATURAL SYSTEMS**NS 1 | Utilize green corridors and parks to help protect surrounding communities from the impacts of hazard events**

		Still Pending	Very Early Stages	Early Stages	Mid-Stages	Advanced Stages	Implemented/ Ongoing
1	Evaluate green corridors and parks for possible improvements for floodplain management	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
2	Increase the resiliency of park facilities and buildings	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

NS 2 | Increase and enhance the resilience and health of Baltimore's urban forest

1	Anticipate the impacts of future changes in temperature and weather on the urban forest by developing a comprehensive list of plant and tree species known to have a broad range of environmental tolerances	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
2	Establish and routinely update a comprehensive tree inventory to anticipate insect and forest structural impacts of climate change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
3	Establish a comprehensive maintenance program that includes pruning for sound structure and the removal of hazardous limbs and trees. First focus on areas where vulnerable infrastructure is nearby such as energy supply and roads	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
4	Continually adjust and modify planting details and specifications to assure the health and longevity of trees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
5	Increase the urban tree canopy and target areas with urban heat island impacts	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

NS 3 | Create an interconnected network of green spaces to support biodiversity and watershed based water quality management

1	Utilize the Growing Green Initiative to increase green spaces in areas where there is available vacant land in order to reduce the heat island effect	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
2	Convert vacant land and row houses into meaningful and connected open space	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
3	Complete a habitat analysis and plan for the City	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
4	Create a strategic plan that identifies areas of focus for tree planting, stormwater management, and forest preservation	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
5	Certify Baltimore as a Community Wildlife Habitat through the National Wildlife Foundation (NWF)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

NS 4 | Expand, protect and restore riparian areas in the city

1	Conduct regular maintenance of stream restoration projects and stormwater quality facilities	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
2	Evaluate current regulations regarding stream buffers and floodplains and modify them (if appropriate) to assure they adequately protect perennial stream corridors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

NS 5 | Preserve and create new coastal buffer efforts and support creating more wetlands and soft shoreline along coastal areas

1	Integrate natural buffer requirements, such as wetlands and soft shorelines, into new development or redevelopment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
2	Complete stream restoration projects in Baltimore City and County stream valleys that lead into the coastal wetlands so as to increase habitat and reduce sedimentation	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
3	Identify and evaluate areas in the Critical Area buffer to prioritize ecological buffer restoration efforts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

NS 6 | Require the City's drought management plan to account for changes in climate

1	Map drought risks and water availability via climate change scenarios	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
---	---	----------------------------------	-----------------------	-----------------------	-----------------------	-----------------------	-------------------------------------

2	Update drought management plans to recognize changing conditions						
---	--	--	--	--	--	--	--

NS 7 | Integrate climate change and natural hazards planning into small watershed action plans (SWAPs)

1	Review existing watershed management plans and identify future actions to address climate impacts						
---	---	--	--	--	--	--	--

NS 8 | Conduct detailed ongoing analysis of climate information, trends in storm events and hydrology to support policy changes responding to climate change

1	Expand the use of climate information (e.g. seasonal forecasts) in water resources planning and management.						
2	Research and actively monitor trends in storm events, stream flow and other conditions affecting hydrology and water						
3	Update flood maps to reflect changing risk associated with climate change.						
4	Continuously improve and enhance flood vulnerability data.						

DP3 PUBLIC SERVICES

PS 1 | Strengthen emergency preparedness coordination between local government, NGOs, and private entities by updates to the City Emergency Operations Plan (EOP) and related Emergency Support Functions (ESF)

		Still Pending	Very Early Stages	Early Stages	Mid-Stages	Advanced Stages	Implemented/ Ongoing
1	Identify and develop a common database that all city government agencies and departments should utilize for hazard information, preparedness and response						
2	Ensure consistency and integration with existing and future response plans within and between agencies						
3	Continue to identify and improve coordination with Key Partners including private sector, State partners, Federal partners, community, universities and industry leaders through Local Emergency Planning Committee						
4	Coordinate outreach efforts of the Mayor's Office of Emergency Management, Mayor's Office of Neighborhood and Constituent Services and Baltimore City Health Department to leverage messages related to all-hazards emergency preparedness						
5	Develop strong working relationships with local experts to provide technical assistance to refine and improve city government emergency preparation						
6	Review and improve specific response plans contained in the EOP and related ESFs that relate to extreme weather events (snow, heat, flood, wind, electrical outages, and other hazard events)						
7	Ensure equipment purchases and communication systems are compatible across agencies and jurisdictions						
8	Encourage all animal rescue and care shelters to further develop their internal plans for animal's health and safety during and after a hazard event						
9	Ensure all animal rescue and care shelters located within the floodplain are provided the support to apply for and obtain funds to relocate						
10	Develop and implement a case study of hospital-based practices that foster community resilience to climate change						

PS 2 | Develop a Hazard Awareness Program

1	Create a standardized early warning system for members of the public						
2	Evaluate and improve community health center strategies for communicating with patients during an emergency						

3	Educate citizens about the existing early warning systems and actions they should take when alarms sound	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
4	Prepare and integrate occupational health and safety messages and instructions for first responders	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
5	Hold climate specific seminars, in partnership with MDH2E and MHA, for hospital emergency and sustainability managers	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

PS 3 | Designate community leaders and organizations that can assist and provide support during hazard events

1	Prior to a hazard event, identify lead contacts serving vulnerable populations and coordinate actions to maximize safety and information sharing	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
2	Develop a community group coordination plan and implementation guide	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
3	Identify and evaluate plans already in place and work to improve utilization of community based leaders to assist in preparedness and response	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

PS 4 | Integrate climate change and natural hazards planning into all City and community plans

1	Develop guidelines to include proactive resilience planning into plan development process	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
2	Incorporate language that strengthens the ability of city government officials to enforce rules and restrictions that support public health, safety and welfare related to hazard events and conditions	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
3	Partner with Maryland Department of Health and Mental Hygiene or other pertinent entity to develop institutional checklist and materials for health care specific resilience plans	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

PS 5 | Better equip emergency workers for natural hazards.

1	Research and identify personal protective equipment (PPE) needs based on specific hazards	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
---	---	-----------------------	----------------------------------	-----------------------	-----------------------	-----------------------	-------------------------------------

PS 6 | Anticipate and address potential disease outbreaks caused by extreme weather events and changing climatic conditions

1	Support studies of heat and flood related vector borne diseases in the Baltimore the region based on changing temperature and moisture	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
2	Evaluate existing programs that detect disease outbreaks to determine their flexibility to respond to new conditions	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

PS 7 | Protect Baltimore residents from the effects of hazard events and plan for more frequent hazard instances

1	Re-evaluate and update existing heat alerts, advisories, and updates to healthcare and emergency service providers	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
2	Ensure that residents and visitors have access and transportation to cooling centers during extreme heat events	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
3	Evaluate code red plans to ensure all agencies adequately protect their own workers	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
4	Consider extending hours for public wading pools during extreme heat events	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
5	Include information about Code Red in the event permitting process, and incorporate language that allows BCHD to cancel outdoor events	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
6	Work with Regional, State and Local partners to improve air quality and reduce respiratory illnesses	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
7	Create and implement programs to manage combined health impacts of heat and air pollution	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

PS 8 | Conduct climate, resiliency, and emergency planning education and outreach

1	Incorporate environmental health and climate change into curriculum at schools, universities and health care facilities	●	○	○	○	○	✓
2	Educate communities on how city agencies respond to hazard events, their role in an event, and how agencies work together	○	○	●	○	○	✓
3	Educate and train community groups to participate in responding to hazards	○	○	○	●	○	✓
4	Generate a comprehensive community-specific all hazards outreach campaign	○	○	●	○	○	✓
5	Develop and communicate a simplified process for Baltimore residents to follow after a hazard event	○	●	○	○	○	✓
6	Create curriculum for hospitals to teach communities about climate change as part of hospital community benefits programs	●	○	○	○	○	✓
7	Utilize existing preparedness messaging to include information on universal precautions to insect-borne and other infectious diseases	○	●	○	○	○	✓

PS 9 | Improve awareness and education about the importance of flood insurance and preparation for Baltimore citizens

1	Create an educational program centered on flood hazards, coastal construction practices and evacuation procedures	○	○	●	○	○	✓
2	Encourage owners of properties to purchase flood insurance and improve policyholder awareness at time of sale or renewal	○	○	○	●	○	✓
3	Inform property owners who have paid off their mortgage that flood insurance is still necessary	○	○	●	○	○	✓
4	Identify programs and grants that assist citizens in purchasing flood insurance and making flood proofing changes	○	●	○	○	○	✓
5	Develop an annual newsletter to inform and remind owners of property in the floodplain about flood insurance and flood proofing activities they should undertake	○	●	○	○	○	✓
6	Provide information on how to file for reimbursement for impacts of hazards	○	●	○	○	○	✓
7	Require a flood disclosure form, and educational information as part of lease agreements for commercial and residential properties	●	○	○	○	○	✓
8	Develop floodplain awareness information for rental tenants and ensure distribution as tenants change	●	○	○	○	○	✓

PS 10 | Increase Baltimore's Food Security

1	Double the size and number of food producing community gardens by 2025	○	○	●	○	○	✓
2	Link Jessup, Maryland Food Hub, and regional/local food producers to local distributors	○	●	○	○	○	✓
3	Incorporate Baltimore's food policy initiative into planning efforts	○	○	●	○	○	✓
4	Develop a food security plan for Baltimore	○	○	●	○	○	✓
5	Increase land under cultivation for commercial urban agriculture	○	○	●	○	○	✓

HOMEGROWN BALTIMORE

LAND

		Still Pending	Very Early Stages	Early Stages	Mid-Stages	Advanced Stages	Implemented/ Ongoing
1	Develop Automatic Notification of License Renewal	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
2	Streamline Community Managed Open Space Process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
3	Incorporate Community Farms Into Existing Land Trust	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
4	Approve Direct Land Purchasing	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
5	Improve Land Leasing Initiative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
6	Strengthen Tenure of Adopt-a-Lot program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
7	Support Incentives for Commercial Farms on Privately-Owned Vacant Land	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>

WATER

1	Improve Payment Process for Water Access Program	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
2	Develop Options for Winter Water Access	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
3	Provide Resources for Sites without a Water Meter Pit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
4	Preserve Existing Water Infrastructure	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
5	Support the Development of Rainwater Capture Systems	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

SOIL

1	Increase Equipment Availability	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
2	Develop Soil Standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
3	Provide Soil Testing	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
4	Support Composting at All Levels	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

CAPITAL

1	Funding Assistance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
2	Support Garden Irrigation Fund	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>

SUPPORT

1	Designate DHCD Staff Position	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
2	Create and Support Staff Positions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
3	Support Farm Incubator Development	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
4	Assess New Zoning Code's Permit Process	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
5	Assess Animal Regulations	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
6	Explore Liability Insurance Options	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
7	Ensure Citizen Education and Engagement	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

SPOTLIGHTS AND SUCCESS STORIES

The following pages highlight efforts by some of the many partners that work to advance the goals of the Sustainability Plan.

“*Act as if what you do makes a difference.*
IT DOES.”

-William James



NEIGHBORHOOD SPOTLIGHT: PATTERSON PARK



The Patterson Park Neighborhood Association is a community-based nonprofit volunteer organization that is committed to improving residents' quality of life. One of the most important ways they improve quality of life is through community-based greening initiatives, including tree planting, storm-water management, beautification, and energy conservation. A small band of neighborhood leaders initiated the first large-scale tree plantings in 2003. By 2009, PPNA had grown sufficiently to establish a Greening Committee, whose mission was to implement a sustainable future for the neighborhood. This committee's accomplishments were unrivaled in Baltimore, engaging hundreds of neighborhood residents, planting hundreds of trees, increasing energy conservation, increasing stormwater management, beautifying streets, winning awards and broad media coverage. In 2014, PPNA reorganized its committee structures, creating the Patterson Park Greening Partnership (PPGP) to build on the great work that had been started all those years before.

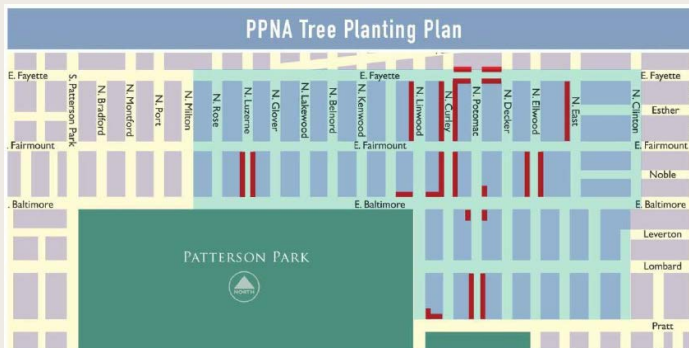
In 2001, the Baltimore Neighborhood Indicators Alliance (BNIA) estimated the urban tree canopy (UTC) of Patterson Park North & East at just 1%. In 2003, responding to residents' desire for more trees, PPNA launched an initiative called "Project 500", whose goal was to plant 500 new street trees within five years. This project was conceived and implemented by residents Sabine Pauyo Tucker, Brad Parker and Robbyn Lewis.

When Project 500 began, resources in the city's Forestry Division were tight and response times slow, so PPNA residents became urban guerrilla green warriors, employing tactics used by other southeast neighborhoods. Using a community greening approach, PPNA carried out basic organizing tactics, raising awareness, mobilizing volunteers, raising funds to buy their own trees. They rented jackhammers, excavated hundreds of pounds of solid concrete to create tree pits, and carefully planted trees. Their strategy of organizing community tree plantings was not only effective for getting lots of trees in the ground, it also strengthened social ties

between residents. Within the first few years of the project, nearly 100 trees were planted.

Project 500 catalyzed the greening movement in their neighborhood. It raised expectations about what could be accomplished in the realm of beautification and environmental improvement. It altered resident perspectives about community action to improve the environment, transformed many streets from urban deserts into urban oases, and developed a cadre of “green leaders” who continue to contribute.

The overarching mission of the PPNA Greening Committee established in 2009, was to use community greening principles to make and make Patterson Park the greenest in Baltimore. To accomplish this, they had three strategic objectives: 1) increase their tree canopy, or greening; 2) beautify their streets with flower plantings; and 3) increase their sustainability, in line with the city's Sustainability Plan.



With an agenda this ambitious, greening leaders knew they would have to raise significant funding. For the first time in its history, PPNA aggressively pursued grant funds, raising more than \$65,000 from Chesapeake Bay Trust, Healthy Neighborhoods Inc., Baltimore Neighborhood Energy Challenge, Parks & People Foundation, Maryland Urban & Community Forestry Committee, Baltimore Community Foundation, and Baltimore Office of Promotion & the Arts. All of these funds were spent to green, beautify and increase sustainability.

Large grants from the Chesapeake Bay Trust and Healthy Neighborhoods Inc. were instrumental in enabling them to think big, and to plan for the future. Before beginning tree planting, they conducted a comprehensive, block-by-block street tree inventory of the neighborhood. In order to learn more about our neighborhood tree canopy, the PPNA Greening Committee carried out a baseline tree inventory in November 2009, which assessed number of trees; tree species; tree health, and tree pit size.

They counted nearly 578 existing street trees within their boundaries. Of these, 498 trees were relatively healthy; 80 were found to be dead or dying. Then, between December 2010 and May 2011, they successfully planted 130 street trees on 12 blocks in our neighborhood, thereby increasing their tree canopy by 21%.

And, perhaps most importantly, during this time they codified their vision for the future in their 2012 Green Master Plan, or “Greenprint”, which is still used as the basis for project design and planning to this day.

The PPNA Greening Committee worked hard to achieve a number of other accomplishments during this period, including:

- Held community-wide charrette to develop green master plan
- Completed Green Master Plan, with technical assistance from Neighborhood Design Center
- Planted 130 trees on 12 blocks within 18 months, increasing our urban tree canopy (UTC) by 20%
- Removed 4747 square feet of concrete sidewalk
- Invented and implemented “Bloom Your Block”, Distributed ~ 100 yellow recycling cans with lids by means of Clean up/ Recycling projects on three blocks with

BCF funding (entailed cleaning 3 alleys, doing education, and having cook-outs)

- PPNA participated in city-wide Baltimore Energy Challenge program to reduce household energy consumption, mobilizing 250 households to participate.
- PPNA selected as project site by Blue Water Baltimore for the “Blue Alley’s project
- Mentored 11 Tree Captains, who organized their blocks for tree planting and maintenance
- Mentored ~ 8 Energy Captains, who did door-to-door registrations and education for BNEC

In 2014, PPNA rebranded the Greening Committee as the Patterson Park Neighborhood Greening Partnership (PPNGP) and a new group of greening leaders took up the mantle built by those who came before. They were awarded the Chesapeake Bay Trust (CBT) Green Streets, Green Jobs, Green Towns (G3) grant to implement several projects, including tree plantings, promoting

trash reduction and recycling through education and distribution of receptacles, Audubon educational workshops, alley greening, and green jobs.

Their work directly aligns with local watershed, stormwater, and planning targets. Specifically, the PPNA’s GreenPrint (2012), Baltimore City’s Sustainability Plan (2009), Pollution Source Reduction in the Harris Creek Watershed (2013), Harris Creek Small Watershed Action Plan (2010), and others in the last ten years.

Here are a few exciting greening and cleaning efforts happening now in Patterson Park:

- Partnered with Living Classroom’s, Fresh Start program to build planters and plant native plants in a large alley that accumulated a lot of trash because of its size. Blue Water Baltimore (BWB) removed 3,002 square feet of concrete by expanding or creating 119 tree pits. In addition, we planted eighty eight street trees.
- BWB will conduct rain barrel workshops and install up to 50 rain barrels on homes and businesses in the neighborhood.
- CityScapes, LLC. will design a bioretention bump-out to promote traffic calming, clean the stormwater runoff, and remove impervious surface.
- Audubon will conduct four wildlife gardening workshops, in different neighborhoods adjacent to the Patterson Park neighborhood.
- An innovative Patterson Park Greening “App” will be developed to supplement the existing greening and neighborhood communication efforts. The app will geo-reference existing and future projects. In addition, the app will allow mobile user sharing to promote Patterson Park greening communication.



- Container Gardens - Large pots that contain bulbs, perennials, mini evergreens, and some annuals will provide greening and some stormwater management to blocks that are too narrow to plant trees.
- Create a series of flyers to educate neighbors on proper trash habits verses bad trash habits.
- Distribute trash and recycle cans during neighborhood activities and promote better trash management in the neighborhood.
- An intensive and targeted receptacle distribution, education and cleanup will take place on selected streets. Waterfront Partnership, Banner Neighborhoods, and Johns Hopkins University are partnering with us to create best practices for trash reduction.
- Partnering with neighbors, businesses, and City organizations, such as our collaborator Banner Neighborhoods, to create a Patterson Park Trash and Recycle Resource Guide that will be a one-stop document online and print to answer trash questions like how to arrange Bulk Pickup or report a dirty alley.

As hard as it may be to believe, those are just projects funded in 2014. Patterson Park neighbors continue to have block and alley cleanups organized by neighbors on a street by street basis. PPNA four times a year with a roll-off dumpster and participate in the Mayor's clean up each April. In addition, greening events such as, Bloom your Block and Berries for Birdies, are held each year

with a focus on greening our city blocks and providing education in a fun, interactive setting. The neighborhood is very active in maintaining our existing green areas, such as the routine native plant landscaping, weeding, watering, and mulching at the Patterson Park entrance as well as the routine maintenance of the Potomac Street Pocket Park, and future routine maintenance for the planned stormwater low impact development practices in the neighborhood.



SUCCESS STORIES

The Patterson Park neighborhood is an excellent example for ways to grow your community association by starting small, planning, coordinating and partnering with local organizations, and organizing the neighborhood association to accomplish green goals together. Call or email them for more information. If you live in the Patterson Park neighborhood, get involved today for a clean, green neighborhood. They will be out on their stoops taking in the evening sun and smelling their native potted plants.



To learn more about Patterson Park's renewal, check out:

<http://www.ilovepattersonpark.com>



PARTNER SPOTLIGHT: BALTIMORE GREEN SPACE



Baltimore Green Space, founded in 2007, is a land trust that partners with communities to preserve and support community gardens, forest patches, pocket parks, and other community-managed open spaces. Baltimore's residents create social, environmental, and economic benefits in their neighborhoods by investing time, money and hard work into these community spaces. Baltimore Green Space aims to support them through land preservation and advocacy for policies that support community greening.

Baltimore Green Space protects land through acquisition – it owns the land on behalf of the community that cares for it. There are three main benefits to neighborhoods: 1) the land will not be sold for redevelopment; 2) liability insurance, and 3) the site receives technical assistance from Baltimore Green Space.

Baltimore Green Space currently protects six sites: three vegetable gardens, two sitting parks, and one horseshoe pit. The Duncan Street Miracle Garden, for example, is a half-acre food garden. Vegetables, berries and fruit trees grow on the formerly vacant lot

that was the site of substantial dumping as well as violent crime. About half of the food is donated to food pantries and soup kitchens. Brentwood Commons, by contrast, is a sitting garden that replaced a burnt-out truck garage. It provides a back yard for houses along North Avenue, a front yard for alley houses, and a place of beauty and peace for all who pass by. An additional five sites are in the application and acquisition phases.

Baltimore Green Spaces accepts applications from residents who maintain projects that have been established for at least five years. Staff works with the communities to guide them through the application phase and perform due diligence. This includes making sure that the site is well cared for and has enough volunteers to thrive; that it benefits the larger community; and that there is a reasonable match between the activities at the site and the state of the soil. If all goes well, Baltimore Green Space seeks to acquire the land either from Baltimore City or from the private owner. Once the land trust takes title to the land, it enters into an agreement with the volunteer site manager and the community

partner organization, and provides liability insurance and technical assistance.








Until 2012, Baltimore Green Space limited its work to community-managed open spaces. Then it heard from residents of Wilson Park, who were concerned that a new neighbor was going to clear nearly 5,000 square feet of a beloved forested area behind residents' houses. The land trust wondered whether such a "forest patch" was unusual – and learned through its research that 20% of the city's tree canopy is in patches of at least 10,000 square feet of canopy, outside parks. To date, Baltimore Green Space has identified 50 species of native trees and 61 bird species – including several "forest specialist" birds – in forest patches throughout Baltimore. Unfortunately, many patches are endangered by invasive plants such as English Ivy. In addition, the regulatory framework does not do enough to protect small-scale forest patches.

Baltimore Green Space founded the Forest Stewardship Network to assist residents who want to care for neighborhood forest patches. The network connects residents with experts from organizations such as the

Maryland Natural History Society, Parks & People, and the U.S. Forest Service. This year Baltimore Green Space published Forest Patches 1st Aid, a booklet for residents. The Network helps residents meet their goals for neighborhood forest patches – from invasive removal, to hosting a foraging workshop, to bird walks, to figuring out how best to approach a potential developer to educate him about the regulatory hurdles to development – before the first tree comes down.

For example, in the Wilson Park Woods residents have saved dozens of trees that were threatened by ivy. They have removed other invasive species from the forest floor, allowing new willow oak seedlings to emerge. This forest patch includes a large American elm, a surprising find. At the Govans Urban Forest, Baltimore Green Space counseled the York Road Partnership on the role it could take in stewarding the forest, and has provided technical support. The Loyola rugby team removed dumpsters of trash, including heavy concrete pipes. The residents have cut back the ivy from trees and the forest floor, and have created a beautiful pathway through the tiny forest.

Sites Protected by Baltimore Green Space:

- | | |
|--|----------------------------|
|  500 N. Block Duncan Street Community Garden | 502 N. Duncan Street |
|  Brentwood Commons | 1816 Brentwood Avenue |
|  Charles M. Halcott Square | 104 South Duncan Street |
|  Suncan Street Miracle Garden | 1800-1843 N. Duncan Street |
|  Pigtown Horseshoe Pit | 1217 Bayard Street |
|  Remington Village Green | 2812-2822 Fox Street |
|  UFPIA Community Garden | 1827 E. Pratt Street |

If you are interested in protecting a community-managed open space in your neighborhood, contact Baltimore Green Space at 443-996-3811 or info@baltimoregreenspace.org



Baltimore Green Space frequently partners with the Office of Sustainability:

- Baltimore Green Space assisted the Office of Sustainability to develop criteria and a process for the transfer of land in community use to qualified land trusts for \$1 per lot. This was adopted by the Baltimore City Board of Estimates.
- The Office of Sustainability advised and provided technical assistance for Baltimore Green Space's study of forest patches.
- Baltimore Green Space regularly brings issues of concern to "greeners" to the Office of Sustainability – from water access, to trash pick-up for gardens and forests, to land security. The organization also provides feedback related to community-managed open spaces and forest patches for planning documents, such as the Green Pattern Book.
- Miriam Avins, the executive director, has served on the Commission on Sustainability since 2013.



COMMUNITY VOLUNTEERS SPOTLIGHT: ANDREW SMITH & OSCAR BALTODANO



In 2010, Andrew Smith and Oscar Baltodano moved to Mt. Vernon and had two large dead trees on their block. It is because of those trees that Oscar and Andy started advocating for tree plantings in the Mt. Vernon Belvedere neighborhood. They looked at the tree canopy conditions and in 2012 noted that there were 60 dead trees and 180 stumps in the neighborhood. Their first volunteer event consisted of them distributing flyers in the neighborhood with staff from the Midtown Community Benefits District.

Due to their dedication and persistence, since Andrew and Oscar took over as Tree and Greening committee chairs in 2012, they have organized two to three tree plantings each season, and two to three pruning events each winter. They have over 30 volunteers participate at each event, and have grown their volunteer list to include over 350 members. Their efforts can be seen as one drives through the neighborhood, where they have planted just under 300 trees since 2012.



If you would like to organize tree planting efforts in your neighborhood, contact TreeBaltimore at 410-458-7888



COMMUNITY VOLUNTEERS SPOTLIGHT: REGINA HAMMOND & SAMONTRA BRIGHTFUL



In 2014, Regina Hammond and Samontra Brightful became Energy Captains with the Baltimore Energy Challenge. Ms. Hammond is a Johnston Square resident who received weatherization services and became involved after realizing the energy saving benefits of the service. Ms. Brightful is part of the Evergreen Community Association and received the Baltimore Energy Challenge Energy Efficiency program at her home, and was so impressed with the level of service that she wanted to share the information with her friends and family.

They work as a team to help spread the word and educate their neighbors

on energy efficiency steps that can be taken in their home. They often will visit with neighbors both before and after the Baltimore Energy Challenge has completed installation services, and will take pictures of their neighbors and homes showing the efficiency upgrades, and neighbors in action taking energy saving steps. They are so excited to be volunteering their time, that they have created a scrapbook of their photos that they use as an education piece when getting neighbors to sign the Energy Pledge and join the Energy Challenge. Together they have helped more than 50 neighbors sign the pledge and save energy!

If you are interested in volunteering as an Energy Captain in your neighborhood, contact the Baltimore Energy Challenge at 443-869-2914



SUCCESS STORY: GREEN TRACKS



In November 2014, Mayor Stephanie Rawlings-Blake launched the Baltimore Green Tracks project, which aims to eliminate blight to strengthen neighborhoods and improve the image of Baltimore as seen by millions of passengers along Amtrak's Northeast Corridor. Green space, public art, and trees will replace blocks of vacant houses and abandoned lots along a one mile stretch of the Amtrak rail line from Milton Avenue to Bond Street.

The vision for the Green Tracks corridor begins with addressing concentrated areas of blight, to strengthen the community and set the stage for additional greening and reinvestment. Green Tracks includes portions of the Oliver, Broadway East, Middle East, and Milton-Montford neighborhoods in addition to the East Baltimore Development, Inc.'s redevelopment area and Biddle Street. The idea for the strategy originated with the Greater Baltimore Committee. The Office of Sustainability led the planning effort, which included the Mayor's Office and the City's Department of Housing and Community Development. Local architecture and

planning firm Ayers Saint Gross also contributed to the project planning. As a result of the collaborative planning, Green Tracks is supported by two Baltimore City initiatives: the Growing Green Initiative (GGI) and the mayor's Vacants to Value program.

To make Green Tracks a reality Baltimore City will strategically demolish blocks of vacant houses along the corridor and establish them as "Clean and Green" lots. Some of the lots are part of planned redevelopment, while others will be targeted for enhanced greening projects as part of the GGI. Green Tracks will connect green space to current and planned revitalization projects, such as the proposed Food Hub, the Henderson-Hopkins School, and homes that are being rehabilitated by the Historic East Baltimore Community Action Coalition (HEBCAC) and The Reinvestment Fund.

The first project taking shape as a result of Green Tracks is the demolition of vacant buildings and subsequent greening of the north side of the 2400-2500 blocks of East Eager Street. The buildings were deconstructed



through a project by DETAILS, a program of Humanim which provides job training and recovers building materials for reuse. The City's Department of Transportation will contribute to the greening of the site by planting 200 trees as part of their mitigation

requirements for the Central Avenue reconstruction project. HEBACAC will adopt and maintain the site as a community open space featuring gathering areas, seating, sculpture, and stormwater management.





SUCCESS STORY: GROWING GREEN INITIATIVE



In May 2014, Mayor Stephanie Rawlings-Blake joined the Planning Department's Office of Sustainability to officially launch the Growing Green Initiative at Humanim – The American Brewery Building. The Growing Green Initiative (GGi) is a City-led effort to use sustainable, innovative, and cost-effective practices for:

- Stabilizing and holding land for redevelopment
- Reusing vacant land to green neighborhoods
- Reducing storm water runoff
- Growing food
- Creating community spaces that mitigate the negative impacts of vacant properties.

As part of the Growing Green Initiative, the Mayor was also joined by EPA Regional Administrator, Shawn Garvin, to announce an exciting design competition to identify creative ideas for transforming vacant lots in Baltimore City. The Baltimore Growing Green Design Competition: Vacant Lots

Transformed, is a partnership between the City of Baltimore, U.S. Environmental Protection Agency, and the Chesapeake Bay Trust. Goals of the competition are to foster partnerships between community groups, design firms, non-profits, and private organizations, test the newly released Green Pattern Book, and reduce and treat stormwater.

The Green Pattern Book, a design guide for City agencies, NGOs, community-based



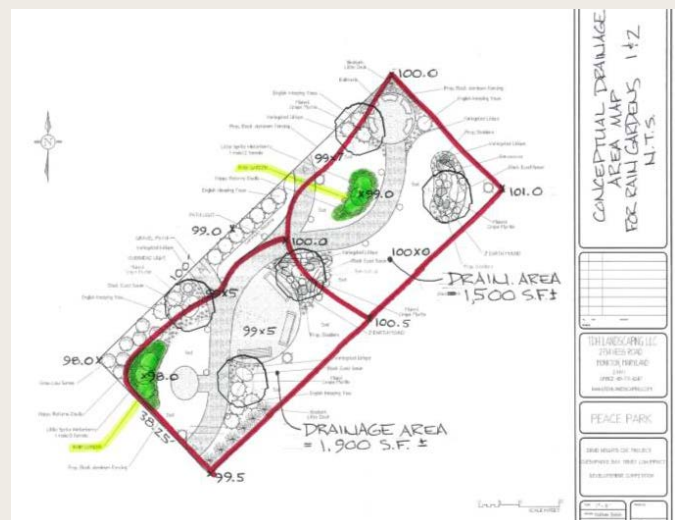
organizations, and individual residents to green vacant land, features eight green project types or patterns, including:

- Clean and Green
- Urban Agriculture
- Community-Managed Open Space
- Storm Water Management
- Green Parking
- Urban Forest and Buffer
- Neighborhood Park
- Mixed Greens (a combination of the patterns)

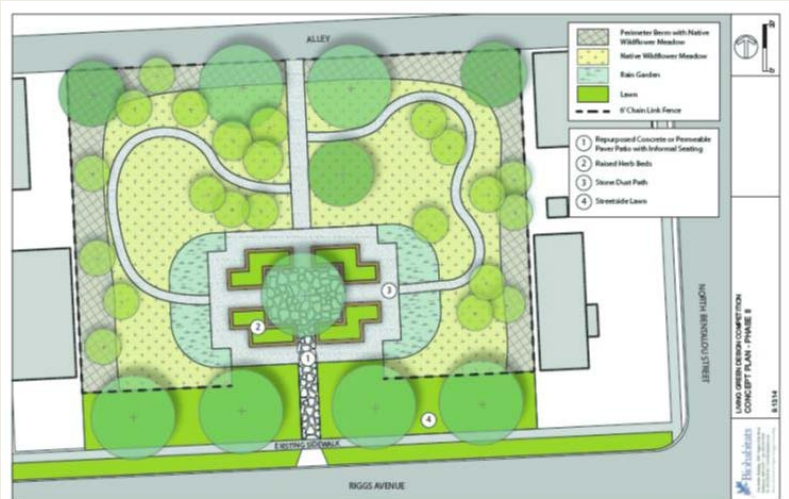
It is intended to spur creative ideas while also helping to manage expectations and to help different groups understand how they can effectively partner with each other to transform and green vacant lots.

In September 2014, the winners of the Baltimore Growing Green Design Competition were announced at a reception held at the Vollmer Center at Cylburn Arboretum. Thanks to the sponsors - the Department of Public Works, U.S. Environmental Protection Agency, Department of Planning, and the Chesapeake Bay Trust - \$300,000 was awarded to seven different teams to implement their designs.

Peace Park (2033 Druid Hill Ave) will create a dynamic space that takes into account the past, present and future of Druid Heights, while providing a vibrant and functional area for people of all ages.



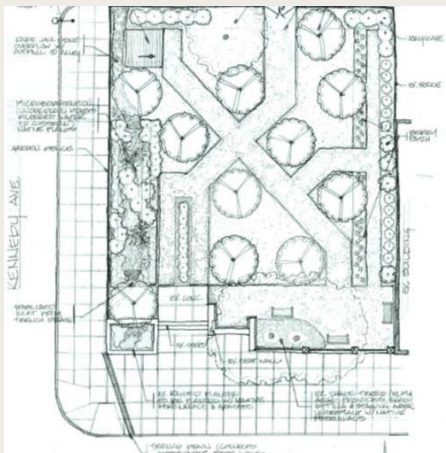
The Bridgeview/Greenlawn Community Enhancement Project (2306 Riggs Ave) will remove a large amount of existing impervious surface to create a community managed open space that treats stormwater with a large rain garden.



The Flower Factory at Broadway East (1400 N Gay St) will be a production flower farm and during the spring, summer, and fall months, tidy rows of vibrant blooms will grace the center of the sloped lot, creating a fantastic visual display.



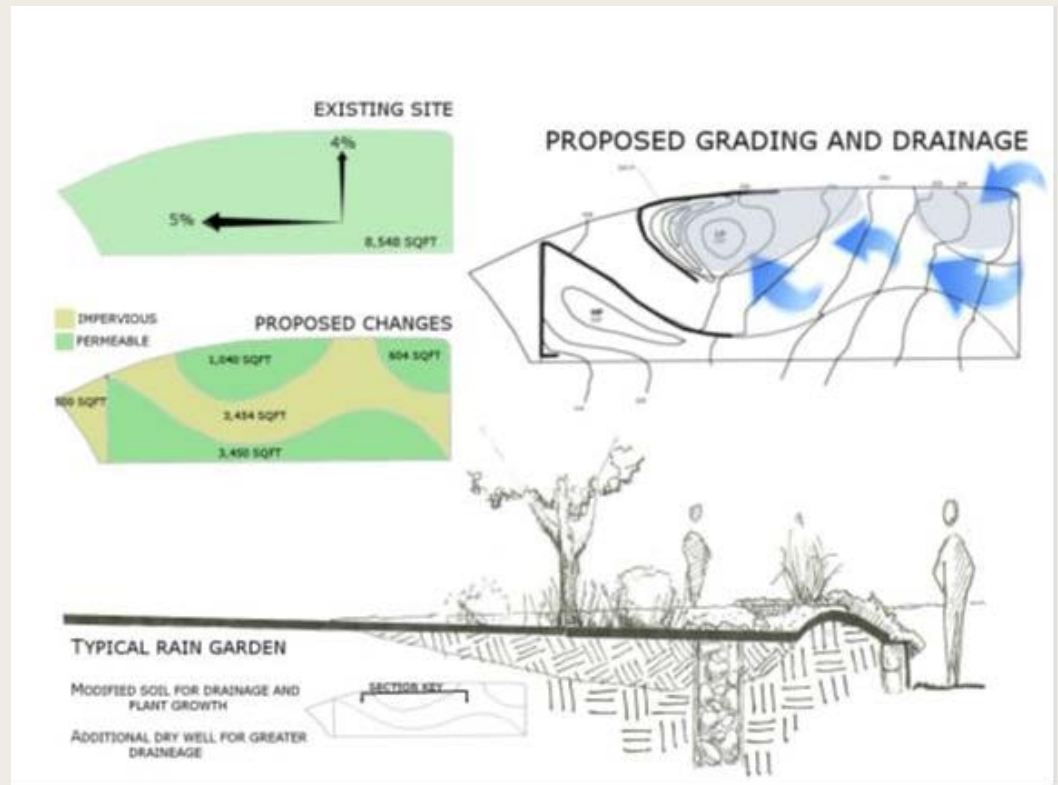
The A-MAZE-N Recovery Fruit Garden (1100 North Ave) will serve as a metaphor for the recovery process. The garden will be designed as a maze that will provide multiple pathways to find the fruit, and will enable visitors to have the autonomy to choose their own path.



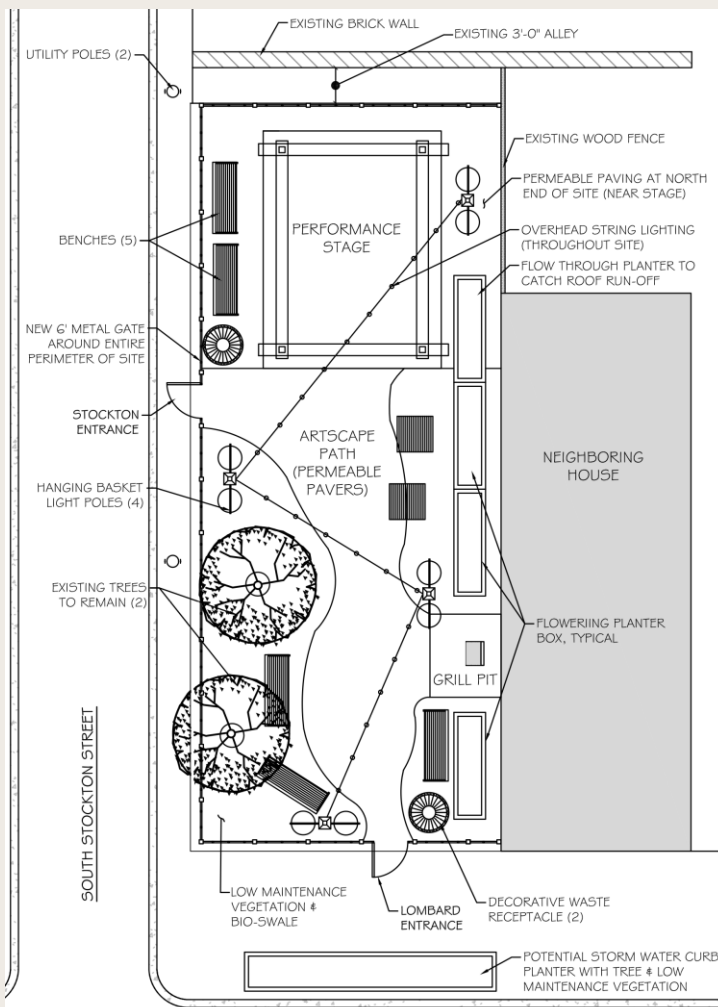
The Dayspring Green Parking Garden Project (1101 N Bradford St) has been designed to achieve net zero runoff. The site will consist of roughly 10 angled parking spaces created from grass paver grids. The grids will be designed in the shape of large olive leaves, creating a sense of movement and peacefulness that will be visible to the women and children in the upper residential floors of the Dayspring building.



The Gateway Garden's (32nd St & Harford Rd) goal is to create an inviting green space that serves as a gateway into the community and improves the area aesthetically as well as ecologically.



SUCCESS STORIES



Lots of Art (1218 W Lombard St) will be a community managed open space that provides passive recreation space and a site for public arts and entertainment that simultaneously addresses stormwater management on site





SUCCESS STORY: HOMEGROWN BALTIMORE EMPLOYEE WELLNESS CSA PROGRAM



In 2014 Baltimore City launched its own community supported agriculture (CSA) program for City employees. The program delivers fresh, local produce available directly to participating City offices. With the support of the City's labor unions, Baltimore is the first city in the country to offer a union-incentivized CSA wellness program to employees.

Mayor Rawlings-Blake celebrated the inaugural year of the Homegrown Baltimore Employee Wellness CSA with a press event in City Hall, saying, "Five years ago the Food Policy Taskforce laid out a goal to 'Expand Community Supported Agriculture.' I'm proud to say that today we can wholeheartedly put a check next to that goal."



A CSA share is a pre-paid box of vegetables and fruits delivered directly from a local farm. Produce drop-offs took place at seven office sites across Baltimore from June to November. Each week, participants received a box of eight items ranging from lettuce to tomatoes to strawberries.

The Homegrown Baltimore Employee Wellness CSA builds upon Change to Grow, the Mayor's ten-year financial plan, by continuing to expand the City's wellness and disease management initiatives, and by improving the health of Baltimore City employees through increased fruit and vegetable consumption.

Said one CSA participant, "Because the produce was readily available without having to go to the store or market I found myself eating more vegetables than normal. Sometimes I'd make entire meals just using different items from the CSA. Somewhere along the line I lost 10 pounds - with no other life changes, it had to be the CSA!"

The CSA program supports Baltimore City Food Policy Taskforce Recommendation #2: To promote and expand community supported agriculture. It supports each of the three components of the Homegrown Baltimore Initiative:

Baltimore City was able to enact a policy change to make a significant impact on increasing the vegetable and fruit consumption of City employees. In March of 2014, Managerial and Professional Society of Baltimore, Inc. (MAPS) began to include CSA programs in its existing health reimbursement plan. MAPS employees can now obtain reimbursement for up to \$250 of the cost of a CSA share, significantly reducing the cost of fresh produce. MAPS is the first of the City's labor unions to incentivize participation in a CSA program.

The Homegrown Baltimore Employee Wellness CSA will launch its second season in March, 2015. One Straw Farm will continue to provide the majority of the CSA shares, and Real Food Farm, located in Clifton Park, will provide City-grown produce to certain sites. In years to come, this program hopes to build a new market for Baltimore farmers and to create a scalable model for increased fruit and vegetable consumption for all Baltimoreans. This program has been a successful collaboration between the Mayor's Office, the Office of Sustainability, the Office of the Labor Commissioner, and the Department of Human Resources.

Grow Local: The program features Maryland-grown produce from regional and city farms. As a program of Homegrown Baltimore, there will always be at least one urban farm as part of the program.

Buy Local: City employees directly pay Maryland farmers for a weekly delivery of vegetables and fruits.

Eat Local: The CSA model encourages members to eat locally grown food by reducing barriers through pre-payment and delivery directly to the workplace.



SUCCESS STORY: YOUTH ENVIRONMENTAL LEADERSHIP



Youth leaders were an active and vibrant part of Baltimore's environmental movement in 2014. In classrooms, downtown, and organizing in neighborhoods, Baltimore youth made major strides in bringing health and environment-related issues to the forefront of the consciousness of their communities. Two visible youth groups that have been a part of this work are the Student Environmental Leadership Action Team and Free Your Voice.

The Student Environmental Leadership Action Team (SELAT) is an arm of the Baltimore Green Schools Network, an extensive network of partners working to increase sustainability in Baltimore City Public Schools and increase schools' capacities to be greener, healthier environments that build environmental literacy. SELAT was formed in 2011 as a way to give students a greater voice in creating a greener school system for Baltimore City. More than 60 students have participated in the group since then, from elementary/middle school students to recent high school graduates. A roughly equal number of parents, teachers, and other supporters have

also attended the group meetings during that time.

For the past three years running, student SELAT members have been advocates in a range of ways, presenting at School Board meetings and to the Commission on Sustainability, meeting with City School officials and experts, and playing a role in organizing GreenScape, the city's annual Green Schools celebration. This year, SELAT is working with student organizations focused on art such as the Baltimore City-Wide Youth Poetry Team, is starting to include additional cluster meetings of student Green Teams throughout the city, and is integrating service learning opportunities such as a river clean up.

Another youth group taking a major leadership role on environmental issues in Baltimore is Free Your Voice. Free Your Voice is a human rights arm of United Workers, made up primarily of students from the Curtis Bay and Brooklyn neighborhoods of South Baltimore. For three years running, Free Your Voice has been mobilizing community members, advocates,

teachers, and peers to stop the construction of a proposed incinerator in Fairfield/Curtis Bay, a community that currently has the worst air quality in the state of Maryland.

The proposed incinerator would be the nation's largest trash burning facility and was to be built within a mile of two south Baltimore schools – Benjamin Franklin High School and Curtis Bay Elementary/Middle School. The student members of Free Your Voice framed this as an issue of fair development, environmental quality, and community health, and focused on spreading awareness, engaging neighbors, holding information sessions and strategic dialogues,

and persuading major organizations to divest from the proposed incinerator. As of today, the Baltimore City Board of Estimates, Baltimore City Public Schools, and the Baltimore Regional Cooperative Purchasing Committee have all agreed to end their purchasing agreement with the incinerator project.

Students have made huge strides in growing the environmental movement in Baltimore. With Green Teams at more than 50 schools throughout the school district, and with successful advocacy under their belts, their impact is poised to continue to grow.

If you work with youth that are interested in environmental advocacy and making change in Baltimore, please contact Andrea Calderon, the Office of Sustainability Green Schools Assistant who helps organize SELAT meetings, at andrea.calderon@baltimorecity.gov.





SUCCESS STORY: MASONVILLE SWAP



North of Brooklyn and Curtis Bay is a beautiful waterfront with poor water quality: Masonville Cove. Stormwater runoff from Brooklyn and Curtis Bay and areas in Anne Arundel County dump into Masonville Cove, which feeds into the Patapsco River. To help improve the water quality, the National Aquarium led an effort in 2014 to develop the Masonville Cove Small Watershed Action Plan (SWAP) for Brooklyn and Curtis Bay. The SWAP is a watershed-based plan to guide restoration activities that will contribute to improved water and environmental quality. The creation of watershed-based plans is one of the strategies in the Baltimore Sustainability Plan to help achieve the goal of fishable swimmable water bodies.

One goal of the SWAP process was to “prioritize projects and efforts that would have strong support by the local community and a high potential for the greatest impact on local water quality” according to the plan document. Staff from the National Aquarium, Center for Watershed Protection (CWP), and members of the SWAP steering committee led community stakeholder meetings,

participated in field assessments to identify potential projects, and documented trash hotspots in the neighborhoods. The CWP provided technical expertise in identifying locations in the neighborhoods for potential restoration activities and conducting analysis to determine which projects could provide the greatest benefits.



Improving the water quality at Masonville Cove will take a combination of infrastructure investments and community efforts. The primary recommendations from the SWAP, which was released in late 2014, include:

- The implementation of a Bioretention Project at Farring Baybrook Park that has the capacity to treat 7.6 acres of stormwater runoff.
- The implementation of a Regenerative Stormwater Conveyance Project near the Rec Center at Farring Baybrook Park that has the capacity to treat 9.5 acres of stormwater runoff.
- The development of a comprehensive education/outreach/stewardship plan around reducing litter in the Brooklyn and Curtis Bay communities.

The SWAP has been beneficial to the City in addressing requirements by the State of Maryland to develop a watershed implementation plan and reduce TMDL load allocations in the watersheds. The requirements stem from the most recent MS4 Permit for separate storm and sewage pipe systems that the City of Baltimore received from the State. As a result the City developed a draft plan, the Baltimore City MS4 Restoration and TMDL Watershed Implementation Plan, which was released December 2014. It drew from input by City agencies, environmental non-profits, businesses, and community members. The primary recommendations and other projects in the SWAP were included in the draft plan, which means that they are under consideration for implementation in the next several years to meet the City's MS4 Permit requirements.



Read Entire Small Watershed Action Plan:
<http://aqua.org/care/conservation-initiatives/masonville-cove>



SUCCESS STORY: YOUTH ENVIRONMENTAL LEADERSHIP



As of 2014, Baltimore City has twenty-eight certified Maryland Green Schools, of which twenty-two are part of the Baltimore City Public School System and six are independent schools. Green Schools are places where students learn about their environment in an integrated, hands-on way, in a setting where the whole school staff are aware of and committed to the principles of environmental stewardship. This sort of learning, based on

getting outside and investigating practical issues, has a proven positive effect on academic achievement and also comes with a host of other benefits.

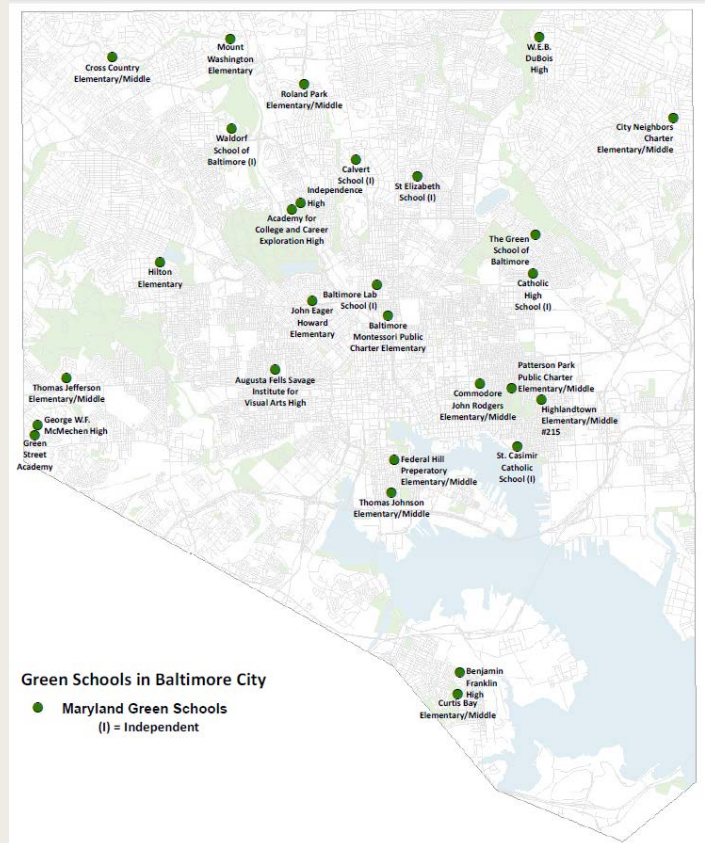
The Maryland Green Schools Award Program is administered by the Maryland Association for Environmental and Outdoor Education (MAEOE). Formed in 1984, MAEOE supports providers of environmental education in schools, nature centers, and informal settings throughout the state. The Green Schools program, launched in 1999, is a nationally recognized model for creating sustainable schools. A study of schools before and after certification showed increases in test scores across grade levels and subjects.

Becoming a certified Green School is a rigorous process. Schools must show that they have 1) integrated environmental instruction into every grade level, 2) at least 10% of their staff with in-depth professional development about the environment, 3) completed at least eight student-led sustainability practices within the school and/or community, 4) maintained outside partnerships to support



their environmental activities, and 5) made the entire school body aware of their focus on going green. The goal is a lasting, whole-school culture shift. Schools must re-certify every four years to maintain their Green School status, ensuring that this designation remains relevant.

In 2009, a full decade after the launch of the Maryland Green Schools program, only ten Baltimore City Public Schools were certified Green Schools. At that time, the Baltimore Sustainability Plan was adopted. Education & Awareness Goal #1 of the Plan is to “Turn every school in Baltimore City into a green school.” The Maryland Green Schools program was chosen as a strong, established local model to use as our standard for what it means to be a green school in Baltimore City. In 2010, we launched the Green, Healthy, Smart Challenge, a small grant program that provides funds for the sorts of hands-on, student-led environmental projects that are core to the Green School model. Office of Sustainability staff work closely with schools around the city to help them access these funds and other resources to fulfill the requirements of the Green School program. In 2013, the first Green Schools Assistant was hired at the Office just to work with schools.



In 2014 alone, five city public schools became Maryland Green Schools for the first time, and another five successfully re-certified. There are now more than twice as many public Green Schools in Baltimore City as there were just five years ago, and more continue to get on board!

You can find the full list of schools, as well as other info on what students are doing to go green in Baltimore City, at <http://baltimoresustainability.org/youth-zone>.





Make sure your family has a plan in case of an emergency. Sit down together and decide how you will get in contact with each other, where you will go and what you will do in an emergency. Keep a copy of this plan in your emergency supply kit or another safe place where you can access it in the event of a disaster.

SUCCESS STORY: MAKE A PLAN. BUILD A KIT. HELP EACH OTHER.



Baltimore is vulnerable to a wide range of natural hazard. The most common impacts we currently see are floods (including both rain events and coastal flooding), severe storms (which include high wind and precipitation), and extreme temperatures. Climate change will exacerbate these extreme weather events, increasing both the frequency of events as well as the magnitude of impacts.

In order to reduce resident's vulnerability and better prepare for natural hazard events, the Baltimore Office of Sustainability

launched the "Make a Plan. Build a Kit. Help Each Other" campaign on Earth Day, 2014. The campaign increases neighborhood awareness and understanding of risks while also increasing resident's ability to respond on their own and assist their neighbors.

The campaign is structured around face-to-face interaction and engagement. Office of Sustainability staff visit communities and begin by engaging residents about hazard events they've experienced in the past and gaining a better understanding of how those hazards impacted their lives. Staff then share information about climate change and explain how extreme weather events are likely to increase in frequency and magnitude. Together, residents and city staff map out community assets, such as cooling centers and community centers with access to food and water, and community shortcomings, such as repetitive infrastructure failures that impact mobility.

After working on asset mapping and discussing historic, current and anticipated climate events, sustainability staff works with



residents to develop an emergency plan. Emergency plans help residents and their family members proactively prepare for a hazard event and reduce unnecessary pressures so that residents can focus on staying safe. Emergency plans include elements such as identifying an out-of-area contact, the nearest emergency shelter, neighbors to check-in on, and also include important medical information and contact information. Staff also works with residents to create buddy systems for seniors or residents in need of additional assistance and to identify possible evacuation routes.

Once emergency plans are made, planners then present on which items are part of an emergency kit and how to use those items effectively. This includes a description of the City's "Help-Safe" card which residents are encouraged to place in their windows after a hazard event. If they need help or assistance, the orange Help side faces toward the street and if they are safe, the green Safe side is directed toward the street. These signs are used as a backup method of communication since many people no longer have land lines

and cell phone towers are often negatively impacted in extreme weather events.

Instead of providing residents with already made kits, each resident is encouraged to build their own kit and learn more about the items and how to use them. Baltimore City, with funding from the Town Creek foundation, provides emergency kits free of charge that include the following items: battery powered hand-crank radio, flashlight with batteries, water carrier, first aid kit, sanitary wipes, small fan with batteries, face masks, help-safe sign, sanitary bags, and whistle. Residents are encouraged to add non-perishable food, extra clothes, blankets and backup supplies such as eye glasses or diapers once they arrive home.

Within the past year, over 1250 emergency plans and emergency kits have been made with residents. The Office of Sustainability hope to enhance and expand these efforts by collaborating with the Mayor's Office of Emergency Management (MOEM) and the Baltimore City Health Department (BCHD) in the upcoming year.





SUCCESS STORY: INTERNATIONAL GREEN CONSTRUCTION CODE



On November 16, 2014 the Baltimore City Council adopted the International Green Construction Code (IgCC) as the standard for green building in the City of Baltimore. The IgCC which takes effect in 2015, will replace the Baltimore City Green Building Standards which were adopted in 2009. The Baltimore Green Building Standards required new buildings over 10,000 square feet to have met LEED Silver or the equivalent under the Baltimore Green Building Standards custom ratings system. Council Bill 14-0413 which adopts the IgCC, expands requirements to include all new construction, and to existing buildings that undergo any repairs, additions, or alterations, as well as changes in occupancy.

The IgCC is a building code, and will be incorporated into Baltimore City's family of adopted building codes and is used to regulate the construction of new and existing commercial buildings. The City of Baltimore adopts the family of International Code Council model codes, and the IgCC will function as an overlay to these codes. The IgCC is a "green" code with a goal to decrease energy usage, improve indoor air quality, reduce water usage, and address stormwater management. The Baltimore adopted version of the IgCC also includes a provision requiring buildings to integrate renewable energy systems.

The IgCC supports the City's Sustainability Plan, Climate Action Plan, and Disaster Preparedness Project & Plan (DP3) and adopting the IgCC continues to have the City of Baltimore be a leader in green building standards.



For more information on the International Green Construction Code, contact the City of Baltimore Department of Housing and Community Development at GreenBuildingStandards@baltimorecity.gov



SUCCESS STORY: BALTIMORE ENERGY INITIATIVE



In September of 2014, Baltimore Mayor Stephanie Rawlings-Blake announced the Baltimore Energy Initiative (BEI), a multi-agency, city-wide program to expand and streamline the City's energy conservation programs and education and outreach efforts.

On February 17, 2012, the Maryland Public Service Commission (PSC) conditionally approved the merger of Exelon Corporation (Exelon), Constellation Energy Group (CEG), Baltimore Gas & Electric (BGE) and Exelon Energy Delivery Company, LLC. Included in the more than 40 conditions associated with the merger, was the requirement that the new company create a \$113.5 million Customer Investment Fund (CIF) to invest in energy efficiency and low-income energy assistance.

Funded by a \$52 million grant from the Public Service Commission of Maryland under the Customer Investment Fund created in 2012, BEI will support a number of existing City programs.

1. BEC is the City's energy conservation resource program that teaches residents, businesses, and nonprofits low- to no-cost ways to save energy through grassroots efforts in neighborhoods, businesses and schools. Participants sign a pledge committing to reduce their energy use through changes in behavior. As a thank you, participants receive an energy saving kit. Consistent energy saving behavior, along with these products, have helped communities reduce their energy usage by as much as 13%! More info:

443-869-2614

or

Info@

BaltimoreEnergyChallenge.org

2. Baltimore Energy Initiative (BEI) Loan Program is making low-interest loans available to non-profits and small businesses in Baltimore City. The loans help organizations afford energy projects that save on energy bills, reduce waste, and reduce their carbon footprint. To learn more about the Baltimore Energy Initiative Loan Program, visit www.EnergyLoansBEI.org

3. The City's Energy Assistance Office utilizes 5 Community Action Centers across Baltimore to serve 17,000 energy assistance customers per year. If you or someone you know is in need of assistance to pay utility bills, please visit one of our Community Action Centers today to find out how we can help.

Community Action Centers: Southeast CAC: 3411 Bank Street; Eastern CAC: 1400 E. Federal Street; Northwest District CAC: 3939 Reisterstown Rd; Southern CAC: 606 Cherry Hill Road; Northern CAC: 5225 York Road

4. Baltimore Energy Challenge Energy Efficiency Program: offers Baltimore City residents free in-home installation of energy and water conservation equipment, such as programmable thermostats, water-saving fixtures, pipe wraps, power strips, CO2 and smoke detectors, and energy-efficient light bulbs: Low income customers with significant energy usage require in-home energy conservation and education to help reduce utility bills and progress towards energy affordability. Call today to start saving money and energy! More info: 443-869-2614 or EEP@BaltimoreEnergyChallenge.org

5. For income-eligible families, the Baltimore Housing Residential Energy Home Improvement program delivers federal and state EmPower Maryland weatherization

services and new BEI funded services for roofing, heating systems and healthy home improvements. BEI will fund oil-to-natural gas heating system conversions for moderate income families. Loan programs are available for energy efficiency and housing rehab. For more info and to see if you qualify: 443-984-1066 or Nicole.Hart@BaltimoreCity.gov or BaltimoreHousing.org

6. Baltimore Energy Challenge Cool Roof Program will promote the cooling of Baltimore's rooftops by providing residents and businesses with info on the benefits of installing reflective surfaces on their buildings. Doing so helps reduce cooling costs, cuts energy usage, lowers the city's greenhouse gas emissions, and reduces the urban heat island effect. This program is available on a first-come-first-served basis until funds are exhausted. To receive up to \$2000 toward a new installation contact 443-869-2614 or CoolRoofs@BaltimoreEnergyChallenge.org

7. TreeBaltimore coordinates all of the city's tree plantings. Trees provide benefits to an urban system by saving energy, improving health, reducing rain-water runoff, providing aesthetic value, and strengthening communities. Trees lower air temperatures and can reduce residential energy cost by 15-35%. In partnership with city agencies and NGOs, Visit TreeBaltimore.org for more information.

Baltimore City will use this funding to preserve homeownership, promote economic development, reduce health costs and provide long-term savings, while supporting a strong and growing future for Baltimore.

An investment in energy efficiency results in affordable comfort, and new equipment that will pay for itself with energy savings. Strategic energy efficiency investments are your hedge against the certainty of higher utility bills





SUCCESS STORY: DETAILS DECONSTRUCTION

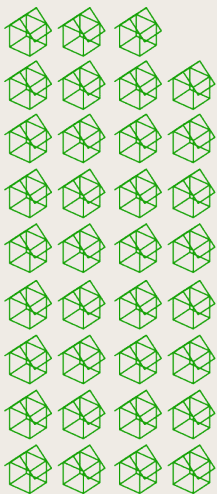


SUCCESS STORIES

In the fall of 2014, 35 vacant houses were deconstructed in the Milton-Montford neighborhood by a company called DETAILS, a social enterprise of the workforce development non-profit Humanim. This pilot deconstruction project was formed out of a partnership between Humanim,

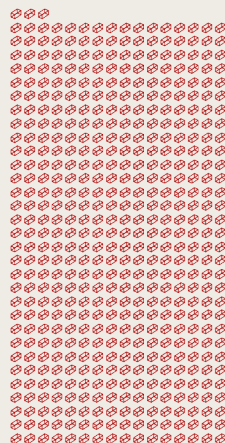
the Office of Sustainability, and Baltimore Housing, in an effort to address blight while also creating jobs and capturing value from the deconstructed materials. Not only does deconstruction capture value, but it also diverts waste from the landfill. Construction and demolition debris is equivalent to roughly

35



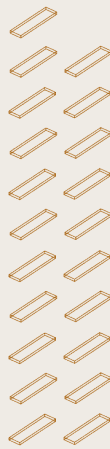
Houses Deconstructed

115



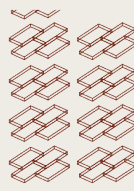
Thousands of Bricks Recovered

21



Thousands of Lumber Recovered

8.2



Thousands of Square Feet of Wood Flooring Recovered

24



Jobs Created

3.26



Hundreds of Tons of Materials Salvaged for Reuse

21



Hundreds of Tons of waste diverted from Landfill

40% of all other solid waste generated in the City of Baltimore. That's a huge amount of waste! But when buildings are deconstructed instead of demolished, nearly 90% of the materials can be re-used or recycled. By promoting deconstruction over demolition, Baltimore City is addressing the Sustainability Plan's Resource Conservation Goal 3, Strategy D: Preserve, reuse, and recycle buildings and related material.

What makes the DETAILS project so impressive, however, is that it addresses so many goals at once. Not only has it increased our waste diversion rates, tackled neighborhood blight, and grown Baltimore's green re-use economy, but it is also purposefully combatting socio-economic inequality. By leveraging the labor intensive nature of deconstruction and the low barriers to participation, DETAILS is creating an economically viable way to alleviate poverty in Baltimore City. Many of DETAILS employees are ex-offenders who

face severe barriers to employment. Without a job, ex-offenders run a higher risk of returning to prison. Without a good job, they stand little chance of moving up the socio-economic ladder. In order to help overcome these barriers, DETAILS employees are paid a living wage with full health benefits, life insurance, paid time off, tuition reimbursement, flexible spending accounts, access to an employee assistance program and financial literacy training.

The Eager Street Deconstruction project was the first deconstruction contract issued by the City of Baltimore to a private company for the removal of vacant buildings. The success of this project paves the way for more deconstructions instead of demolitions being used to attain the Mayor's goal of 400 vacant and blighted houses removed each year. Details deconstruction contract has already been renewed for another 50 houses in 2015, and more are likely on the way.





SUCCESS STORY: BALTIMORE'S TURTLE



Turtle is the Baltimore Office of Sustainability's full-time messenger. Turtle's mission is to make Baltimore a more sustainable and resilient city by encouraging residents and businesses to take action. Turtle educates Baltimoreans about ways to make the City a better place to live by providing residents and businesses with tips for their homes, work, travel and lifestyle that can help save money, reduce greenhouse gas emissions, enhance our built infrastructure and beautify the City.

Turtle was born in Baltimore and officially started with the Office of Sustainability in 2014. Since then, turtle has been traveling around the city to promote sustainable practices and resiliency. Turtle's official duties include attending press conferences with the Mayor, posing for pictures with excited residents, being the face of sustainability campaigns, and representing the Office of Sustainability at events.

Turtle likes to attend the JFX farmers market on Sundays; rides to work when weather permits; uses public transportation to visit family; supports local businesses; and attends City events such as Greenscape and the Annual Sustainability Town Hall. One of Turtle's fondest memories was meeting Mayor Stephanie Rawlings-Blake for the first time and shaking her hand on Earth Day, 2014.



You can
follow
Baltimore's
Turtle on:

[Facebook](#)

[Instagram](#)



Photo courtesy of Skye Cam Productions

SUCCESS STORY: STAR COMMUNITY RATING SYSTEM



In January 2014 the Baltimore Office of Sustainability (BoS) began its yearlong application process to the STAR Community Rating System. The STAR Community Rating System is the nation's first comprehensive framework and certification program for evaluating local sustainability, encompassing economic, environmental and social performance measures. STAR was developed by nearly 200 volunteers representing 50 cities and counties, state and federal agencies, nonprofit organizations, national associations, universities, utilities and private corporations. Baltimore will be able to use the rating system's evaluation measures to assess

our current level of sustainability, set targets for moving ahead, and measure progress along the way.

The data-driven rating system encompasses economic, environmental and social performance measures for both local government and the broader community. The application process includes an online application detailing our City's achievements across seven goal areas, 44 sustainability objectives, and 526 different measurable indicators.

The STAR Community Rating System seven thematic Goal Areas include:

GOAL AREA	PURPOSE & INTENT
Built Environment	Achieve livability, choice, and access for all where people live, work and play
Climate & Energy	Reduce Climate impacts through adaptation and mitigation efforts and increase resource efficiency
Education, Arts & Community	Empower vibrant, educated, connected, and diverse communities
Economy & Jobs	Create equitably shared prosperity and access to quality jobs
Equity & Empowerment	Ensure equity, inclusion, and access to opportunity for all citizens
Health & Safety	Strengthen communities to be healthy, resilient and safe places for residents and citizens
Natural Systems	Protect and restore the natural resource base upon which life depends

An eighth category, Innovation & Process, allows Baltimore to get extra credit in areas where we excel and propose new credits to support the evolution of sustainability practice.

The following chart shows the structure of the STAR Goals & Objectives:

Built Environment	Climate & Energy	Economy & Jobs	Education, Arts & Community	Equity & Empowerment	Health & Safety	Natural Systems
Ambient Noise & Light	Climate Adaptation	Business Retention & Development	Arts & Culture	Civic Engagement	Active Living	Green Infrastructure
Community Water Systems	Greenhouse Gas Mitigation	Green Market Development	Community Cohesion	Civil & Human Rights	Community Health & Health System	Invasive Species
Compact & Complete Communities	Greening the Energy Supply	Local Economy	Educational Opportunity & Attainment	Environmental Justice	Emergency Prevention & Response	Natural Resource Protection
Housing Affordability	Industrial Sector Resource Efficiency	Quality Jobs & Living Wages	Historic Preservation	Equitable Services & Access	Food Access & Nutrition	Outdoor Air Quality
Infill & Redevelopment	Resource Efficient Buildings	Targeted Industry Development	Social & Cultural Diversity	Human Services	Indoor Air Quality	Water in the Environment
Public Spaces	Resource Efficient Public Infrastructure	Workforce Readiness		Poverty Prevention & Alleviation	Natural & Human Hazards	Working Lands
Transportation Choices	Waste Minimization				Safe Communities	

This robust framework helps Baltimore credibly track our progress toward overall sustainability objectives and allows us to compare progress with other municipalities. Baltimore will receive its final STAR sustainability score based on the number of points achieved across the menu-based rating system.

The STAR Community Rating System includes three certification levels based on the number of points acquired by a community. A 3-STAR Community is recognized for sustainability leadership; a 4-STAR Community

is recognized for national excellence; and a 5-STAR Community is recognized as a top tier achiever in national sustainability. As of December 2014, 90 communities are engaged with STAR, representing more than 40 million people. Of those, only two have achieved a 5-STAR rating.

A STAR Community Rating lasts for 3 years after the certification date. This reinforces the core value that sustainability is not an end state, but a process of continuous improvement.



SUSTAINABILITY TOOLS FOR ASSESSING & RATING COMMUNITIES



For more information, please visit the STAR website at: <http://www.starcommunities.org/>



SUCCESS STORY: FLOODPLAIN PLANNING



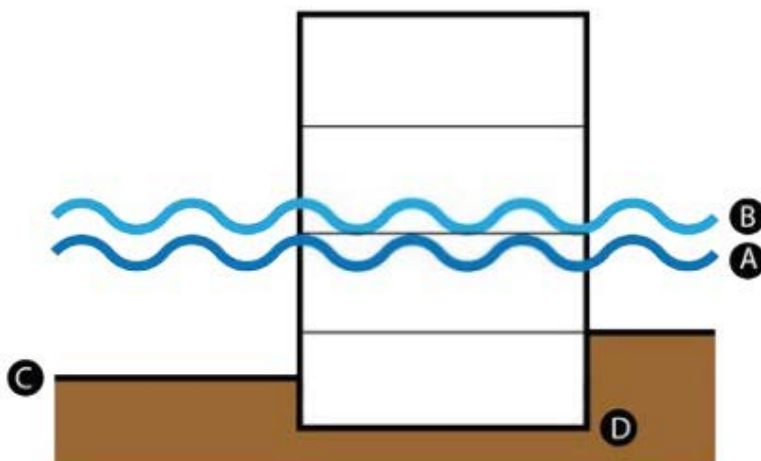
BACKGROUND

Baltimore City is built at the mouth of the Patapsco River, which empties directly into the Chesapeake Bay. Presently, the City's regulated floodplain is 5,136 acres and contains over 2,800 buildings. Baltimore City floodplain management is a program of corrective and preventative measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works, and floodplain management regulations. Floodplain

regulations are meant to protect life, health and property; minimize rescue and relief efforts; minimize business interruptions; minimize damage to public facilities; minimize the occurrence of future flood blight areas; minimize public expenditures for costly flood control projects; and prevent increases in the regional flooding.

Twice each month (during new and full moons), the combined gravitational pull of the sun and moon creates tides that rise slightly higher than normal. Today most

- A** Base Flood Elevation (BFE)
- B** Design Flood Elevation (DFE)
= BFE + Freeboard
- C** Lowest Adjacent Grade Elevation
- D** Lowest Floor Elevation



tidal flooding events in Baltimore are minor, disrupting local transportation and daily life for brief periods of time. According to a report released by the Union of Concern Scientists, due to anticipated sea level rise, Baltimore is expected to increase from 17 tidal flooding events per year to 227 tidal flooding events per year by 2045.

CHANGES

With anticipated rises in sea levels and precipitation events, in April, 2014 the City of Baltimore adopted two bills that keep the City in compliance with the National Flood Insurance Program (NFIP) and set the stage for the City's application to the NFIP's Community Rating System (CRS), a flood insurance discount program that reduces the cost of flood insurance for structures at a higher risk for flooding.

The City's code has four major changes that were a direct result of the Disaster Preparedness Project and Plan (DP3) risk assessment and support the City becoming more resilient. They include:

1. Development of the Flood Resilience Area (a tidal area that regulates to a higher extent and base flood height)
2. Regulating to the extent of the 0.2% chance flood citywide, including non-tidal areas
3. Increasing the city's freeboard (factor of safety) to two feet citywide
4. Integrating ASCE-24 which has stricter requirements for critical facilities

These changes reduce vulnerability of both people and property in the regulated

floodplain and make Baltimore more resilient. These changes also help Baltimore in its CRS application process.

On October 3, 2013 the City of Baltimore Planning Commission adopted the Disaster Preparedness Project and Plan (DP3). This Plan is the City's effort to address existing natural hazards while simultaneously preparing for the impacts of climate change. The DP3 extensive mapping and risk assessment provided the City with an opportunity to assess existing and predicted impacts and determine effective mitigation and adaptation recommendations for Baltimore. The floodplain changes directly support the recommendations made in the DP3.

COMMUNITY RATING SYSTEM (CRS)

One of the six goals in the City's Disaster Preparedness Project and Plan (DP3) is to become a CRS certified community. CRS is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. In exchange for a community's proactive efforts to reduce flood risk, policyholders can receive reduced flood insurance premiums for buildings in the community. These reduced premiums reflect the reduced flood risk resulting from community efforts toward achieving the three CRS goals:

1. Reduce flood damage to insurable property
2. Strengthen and support the insurance aspects of the NFIP
3. Encourage a comprehensive approach to floodplain management

For more information about City of Baltimore floodplain management visit:

www.baltimoresustainability.org/floodplain



SUCCESS STORY: OFFICE OF SUSTAINABLE ENERGY



ENERGY RUNS POLICE CARS, MOVES WATER, HEATS FIRE STATIONS AND LIGHTS CITY STREETS

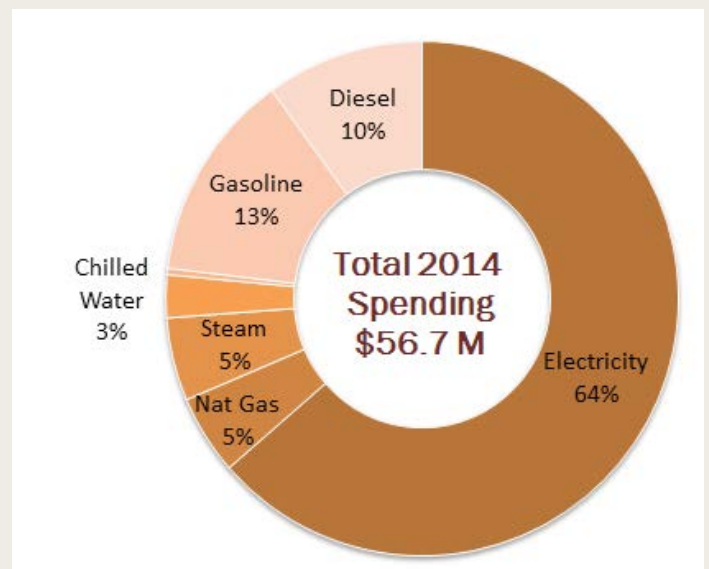
In November 2014, the Baltimore City Department of Public Works (DPW) announced that the City's Energy Office became a division of DPW, creating the Office of Sustainable Energy. The Office of Sustainable Energy (OSE) assists the City of Baltimore and DPW focus on buying energy more wisely, using less of it, and generating its own energy.

Baltimore City government energy spending for 2014 was 56.7 million (Figure 1). The City purchases electricity, natural gas, steam, chilled water, heating oil, and vehicle fuel. This spending ensures that energy is available to 1,100 City facilities and 5,000 vehicles and pieces of equipment.

The largest electricity user among City agencies is the Department of Public Works (DPW), accounting for over 40% of all electricity spending. DPW operates two waste water treatment plants, three water filtration plants and over twenty water pumping stations. Everyday, this infrastructure

provides fresh water to 1.8 million residents and businesses in the Baltimore Metropolitan Area and processes up to 250 million gallons of waste water. These services require significant amounts of energy— Back River Wastewater Treatment plant alone uses 18% of all City government's electricity.

Not surprisingly, the Police Department is the biggest user of gasoline. DPW trash trucks



and street sweepers are the top users of diesel fuel.

In 2014, the Office of Sustainable Energy (OSE) collaborated with Healthy Neighborhoods, Inc. to provide 94 energy efficiency measures, in 26 facilities, operated by 11 nonprofits that serve the homeless. The award of \$998,789 from the Maryland Energy Administration's EmPOWER Clean Energy Communities Low to Moderate Income grant leveraged \$254,104.45 in matching funds from the Baltimore Energy Initiative and \$157,472.33 in utility rebates from BGE's Smart Energy Savers Program. Building envelopes were tightened, lighting and equipment were updated. Instead of using scarce funding to pay electricity bills, they were diverted back to their missions.

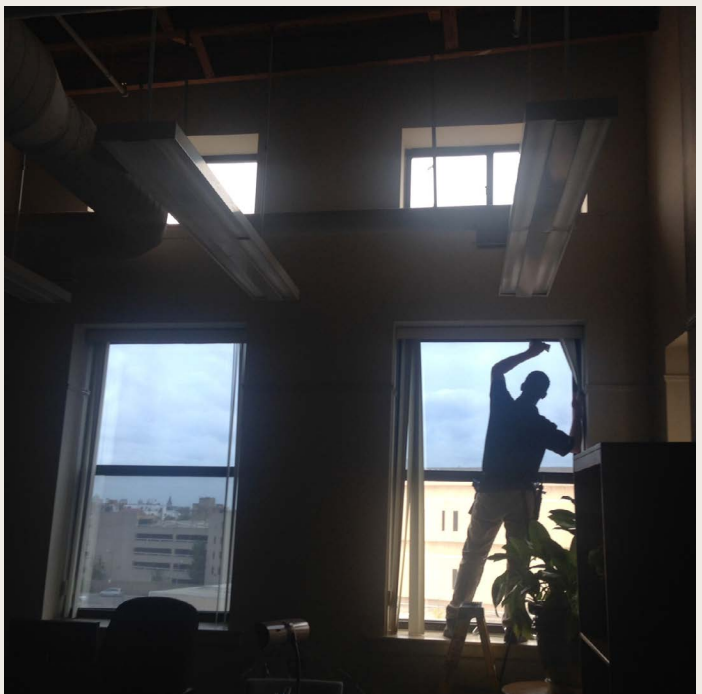
A snapshot of the impact of the grant is as follows:

- 22 energy assessments completed
- 94 energy conservation measures completed
- \$313 in annual energy savings projected
- 2,770 low to moderate income persons benefitted
- 53 contracts awarded to 30 contractors
- 10.7 year average payback

In June 2014, the OSE completed installation of 63 energy upgrades in 54 City buildings from Curtis Bay to Park Heights. Of the \$879,000 investment, \$491,901 was grant funding from Maryland Energy Administration's Smart Energy Communities program. The grant was supplemented by BGE's EmPOWER program and Baltimore Energy Initiative funding. Lighting upgrades in 33 Recreation and Parks buildings were the first focus; improving the quality of the light resulting in a better environment for children and families while saving valuable City dollars.



Baltimore City changed more than 11,000 street lights to LEDs. This project is saving 6 million kWh – or more than half a million dollars in energy costs alone! Baltimore City is planning to replace all street lights over the next few years. And we're not stopping at street lights. In 2014, the City began identifying opportunities to use energy efficient lighting in parks, City buildings – and even to illuminate monuments.





SUCCESS STORY: BALTIMORE BICYCLE PROJECT



The Baltimore Bike Experience (BBX) is a non-profit working towards a vibrant Baltimore where the bicycle activates equitable, sustainable city life. BBX mission is to utilize the bicycle as a multi-dimensional medium for empowerment, job skills, creative customization, and self-expression.

One of the keystone projects of the Baltimore Bike Experience is to promote youth cycling through workshops that focus on group cohesion, mechanics, employment opportunities, customizing, and bike rides. Through a partnership BBX successfully revamped the programming

at Digital Harbor High School Bike Club, promoting skills in both the administration and the students, which led to a sustainable curriculum for riding and mechanics programs. It is through this program that they received a Baltimore Social Innovation award through the Warnock Foundation.

It is their future to help schools, community groups, and other organizations start their own bike projects. Through these programs BBX will help refurbish bicycles that would otherwise be discarded into safe, practical vehicles that fill people's dreams.



<https://www.facebook.com/baltimorebikeexperience>

<http://baltimorebikeexperience.com/>

Twitter & Instagram: @BaltimoreBikes



DATA AND INDICATORS

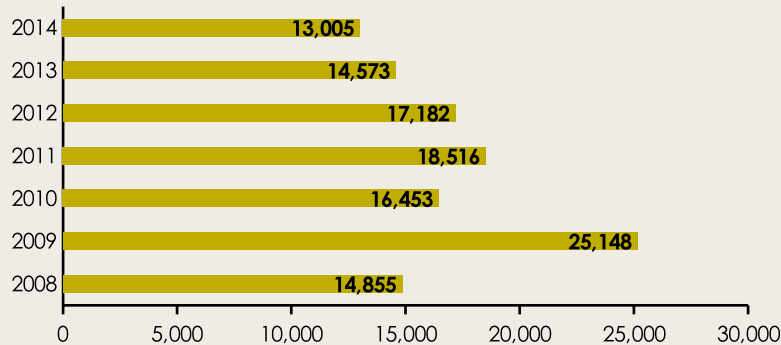
“*The proper use of science is not to conquer nature but to live in it.*”
-Barry Commoner



CLEANLINESS

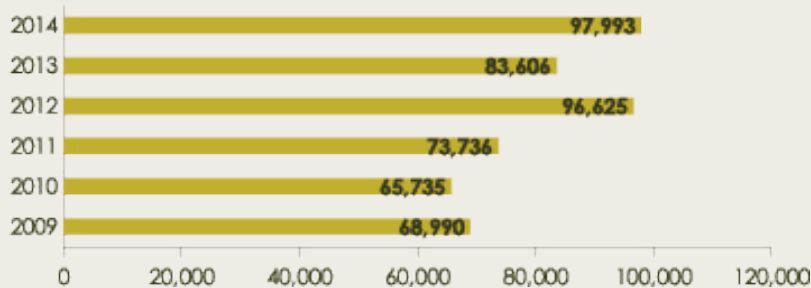
CLEAN STREETS

NUMBER OF SERVICE CALLS FOR DIRTY STREETS



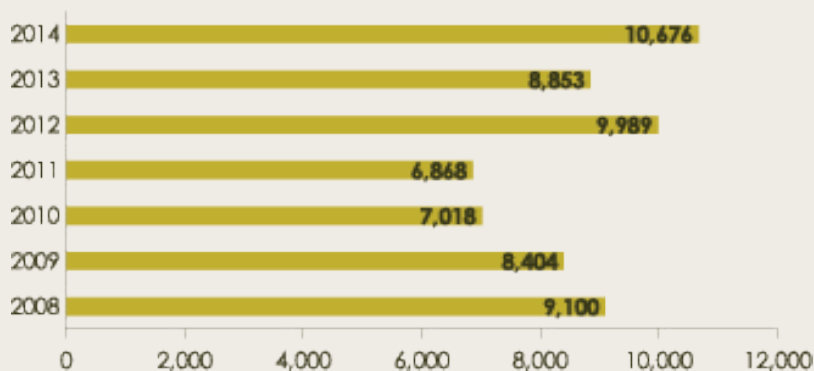
As noted in the Sustainability Plan, litter in the streets, neighborhoods, public spaces, and stormdrains of Baltimore is a significant challenge. Efforts have been made to improve enforcement of the sanitation code, but the city also relies on residents to place calls and alert officials to issues in their community. In 2014, there were 13,005 calls made, fewer than in 2013.

MILES OF STREETS SWEEPED



While there was only a slight increase in the tonnage collected from street sweeping in Baltimore, there was a significant increase in the number of miles that were swept. 97,993 miles of streets were swept in 2014.

TONNAGE COLLECTED FROM STREET SWEEPING



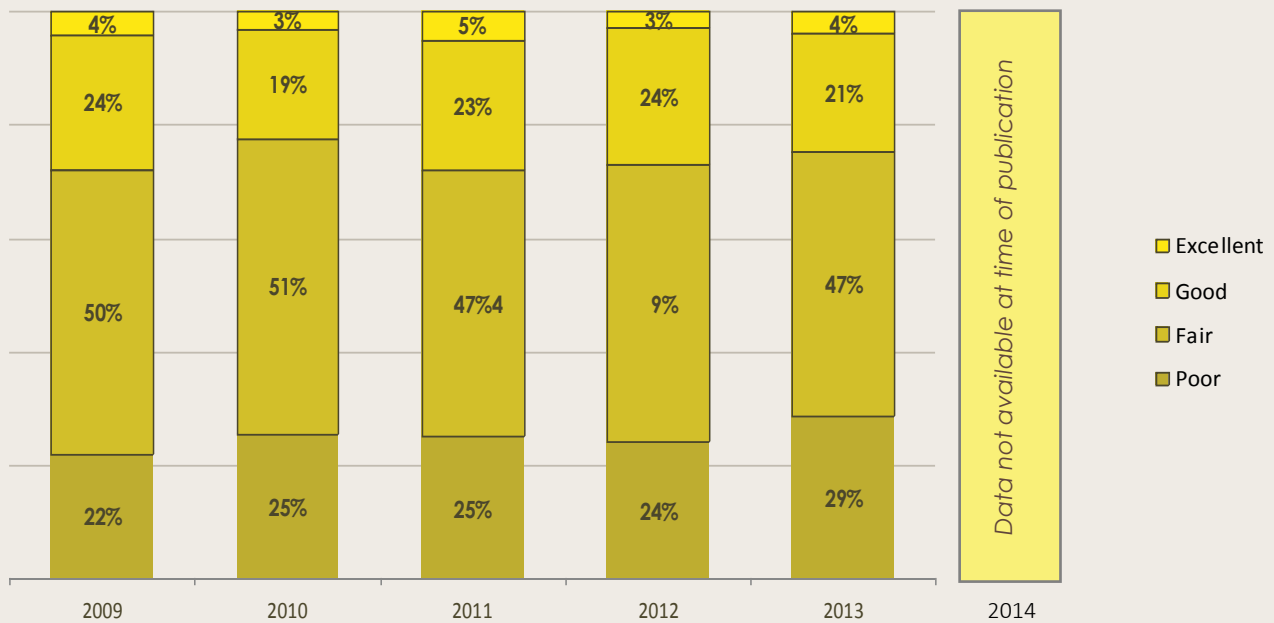
In 2014, there was an increase in the tonnage collected from street sweeping. Over 10,000 tons of trash was collected from the streets of Baltimore.

CLEANLINESS

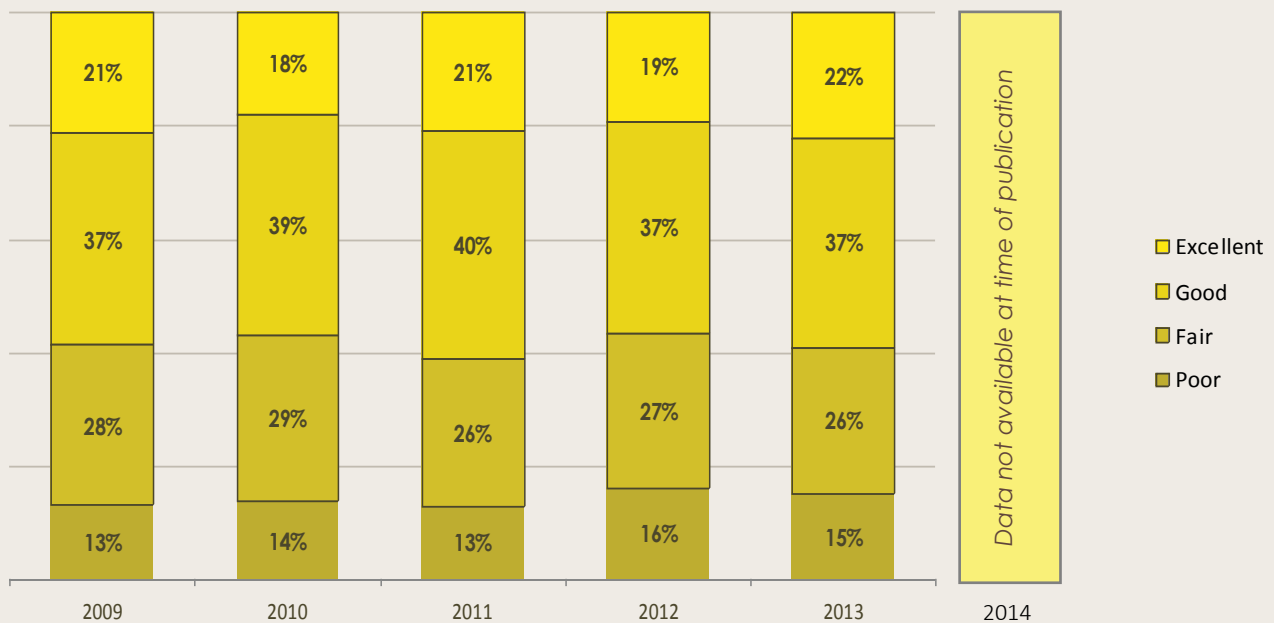


PERCEPTION OF CLEANLINESS

PERCEIVED CLEANLINESS OF THE CITY



PERCEIVED CLEANLINESS OF "MY" NEIGHBORHOOD

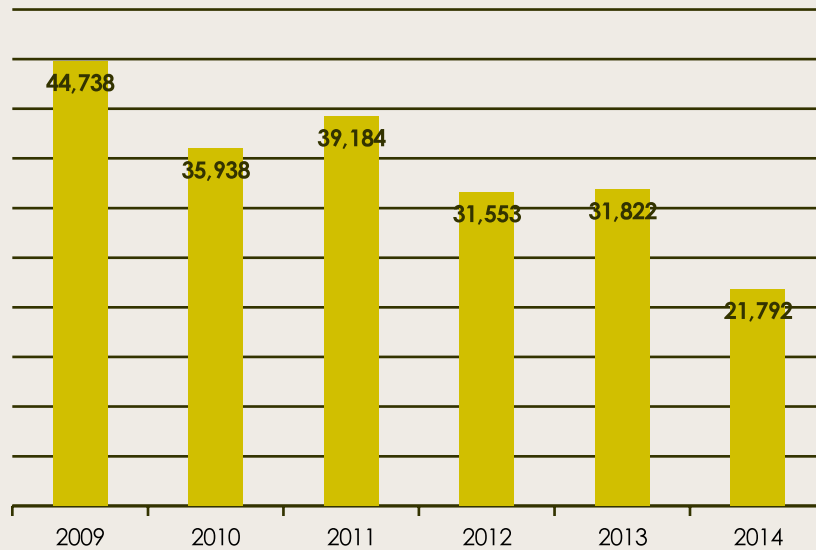


The Baltimore Citizens Survey is conducted every year by the City's Finance Department. Citizens respond to a variety of questions, including their perception of cleanliness, both citywide (top), and for their own neighborhood (bottom). Residents typically believe their own neighborhoods to be cleaner than the City as a whole. In 2014, 23% reported that they felt their neighborhood's cleanliness was excellent, the highest since 2009. At the same time, 29% of respondents rated their overall perception of cleanliness for the entire city as being poor, the highest yet.



CLEANLINESS

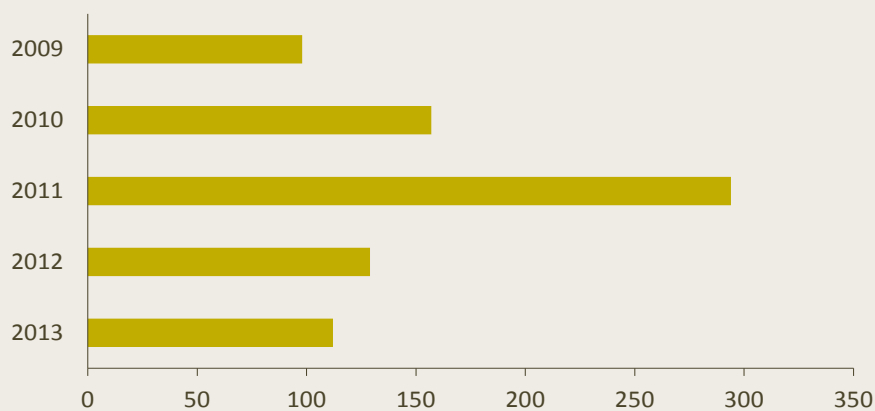
HCD ISSUED TRASH RELATED CITATIONS



The Housing and Community Development Code Enforcement Division continues to focus substantial resources on enforcing sanitation codes involving trash and litter. In addition to the use of citations, DHCD also maintains 26 cameras located at sites with a history of illegal dumping. Individuals caught on camera dumping are prosecuted by DHCD under the State Litter Control Law.

ADOPT-A-LOT LICENSES

NUMBER OF LOTS ADOPTED



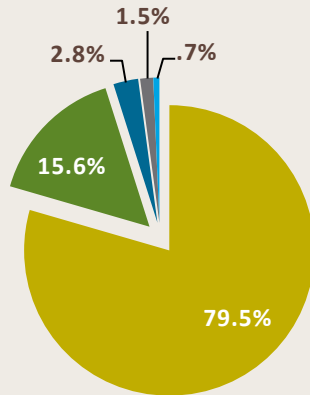
The City of Baltimore's Adopt-A-Lot program is specifically designed for community gardens and neighborhood beautification. Residents and neighborhood organizations can complete an Adopt-A-Lot License Agreement, and transform vacant lots into assets for their communities. In 2011, the City partnered with the Water Department to provide access to water for adopted lots for a low fixed rate, making it easier to maintain these beautified spaces. For information on available lots in your neighborhood, or for an application, call 410-396-4111, email V2V@baltimorecity.gov, or visit http://www.baltimorehousing.org/vtov_adopt

POLLUTION PREVENTION

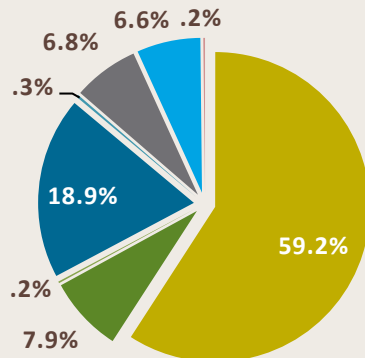


GREENHOUSE GAS EMISSIONS INVENTORY

BALTIMORE COMMUNITY-WIDE GREENHOUSE GAS EMISSIONS INVENTORY, 2010 BASELINE



BALTIMORE CITY GOVERNMENT GREENHOUSE GAS EMISSIONS INVENTORY, 2010 BASELINE

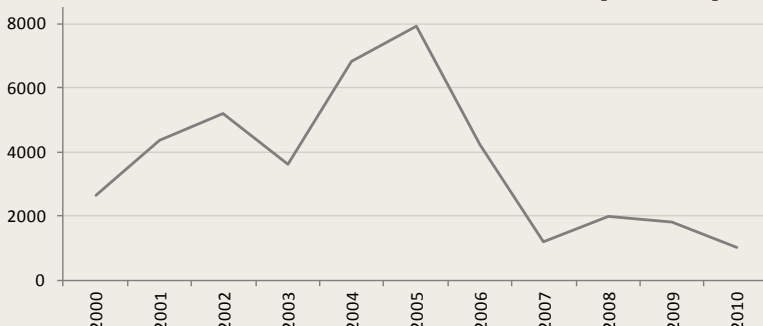


These charts remain unchanged since 2010, when Baltimore completed its Greenhouse Gas Emissions inventory for the City's Community-Wide data. The City of Baltimore Greenhouse Gas Emissions Inventory update occurred as part of the Climate Action Plan development that occurred in 2012. The City's consultant, AECOM, also completed a peer review of the data and assisted in analysis. The 2010 Greenhouse Gas Emissions inventory for the City's Community-Wide data, showed total emissions of 7,579,144 MT CO₂e/yr. Total emissions for City Government were 588,170 MT CO₂e/yr. The 2010 Greenhouse Gas Emissions Inventory will now serve as the baseline inventory for the City of Baltimore. With the development of the City's Climate Action Plan, we expect to see reductions as measures are implemented. The next emissions inventory will take place in 2014.

- Buildings & Facilities
- Streetlights & Traffic Lights
- Water Delivery Facilities
- Wastewater Facilities
- Solid Waste Facilities
- Vehicle Fleet
- Employee Commute
- Transit Fleet

STORM DRAIN AND INLET CLEANING

AMOUNT OF DEBRIS REMOVED (in Tons)



An important aspect of ensuring that our water bodies are swimmable and fishable is keeping trash and debris from entering the stormwater system.

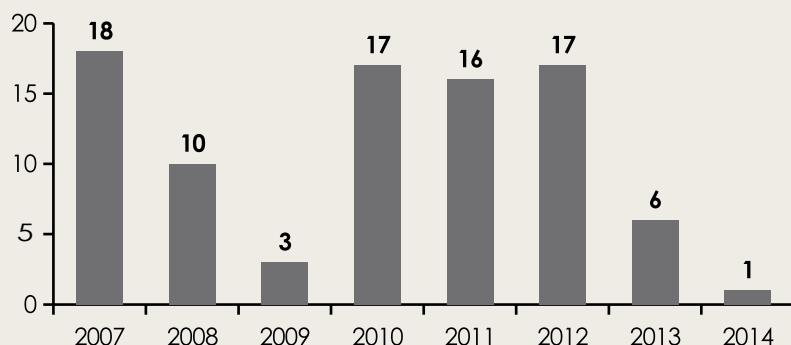
At the time of publication, storm drain and inlet cleaning data for 2014 was not yet available. Updates to the data, when available, will be made available online.



POLLUTION PREVENTION

CODE RED DAYS IN BALTIMORE CITY

EXCESSIVE HEAT CODE RED DAYS



The Health Department has established the Code Red declaration criteria based on historical information, climatological norms, and guidance documents from other jurisdictions. The City Health Commissioner declares a Code Red Heat Alert during periods of extreme heat.

AIR QUALITY CODE RED DAYS

	Number of days					
	2009	2010	2011	2012	2013	2014
Very Unhealthy	0	0	0	0	0	0
Unhealthy	1	6	5	2	0	0
Unhealthy for Sensitive Groups	10	30	19	20	7	4
Moderate	58	66	53	60	136	169
Good	252	259	286	284	222	192

The Air Quality Index (AQI) is used to forecast and report on daily air quality for Metro Baltimore. The AQI utilizes a numerical, and color coded scale to report on the air quality, and it is calculated on the presence of the following five air pollutants: particulate matter, ozone, carbon monoxide, sulfur dioxide, and nitrogen oxide. In 2013, we see a large jump in the number of Moderate AQI days. It's important to recognize, however, that values of recent years are preliminary data and are subject to revision.

POLLUTION PREVENTION



PREVENTION PROGRAMS IN BALTIMORE

GREEN & HEALTHY HOMES INITIATIVE

	2009	2010	2011	2012	2013	2014
Properties receiving lead hazard reduction interventions	323	165	121	139	53	73
Properties receiving Healthy Homes interventions to reduce indoor allergens and safety hazards	261	201	123	127	102	116
Tenants provided with tenant's rights assistance to repair lead hazards in their home	414	152	153	3,093	195	120
Families receiving relocation assistance from lead hazardous housing to lead certified housing	213	62	43	35	33	37
Properties receiving weatherization and energy efficiency interventions	New for 2013				283	185

While not exhaustive, these figures illustrate examples of ongoing efforts in Baltimore to improve the health of indoor environments. Educating home owners on the risks of lead and indoor environmental hazards is crucial to help abate the problems that exist in Baltimore.

HEALTH DEPARTMENT INDOOR ENVIRONMENT IMPROVEMENT PROGRAMS

	2009	2010	2011	2012	2013	2014
People trained in home environmental asthma	N/A	368	365	455	359	Data not available at time of print
People trained in lead and healthy home interventions	1,580	1,058	400	378	268	Data not available at time of print
People trained on integrated pest management/bed bugs	N/A	1,750	N/A	556	360	Data not available at time of print
Families provided with a comprehensive home visit to assess conditions	2,633	1,108	600	502	553	Data not available at time of print
People who received lead and healthy homes materials and outreach at health fairs	37,269	39,229	N/A	10,000*	8,425*	Data not available at time of print

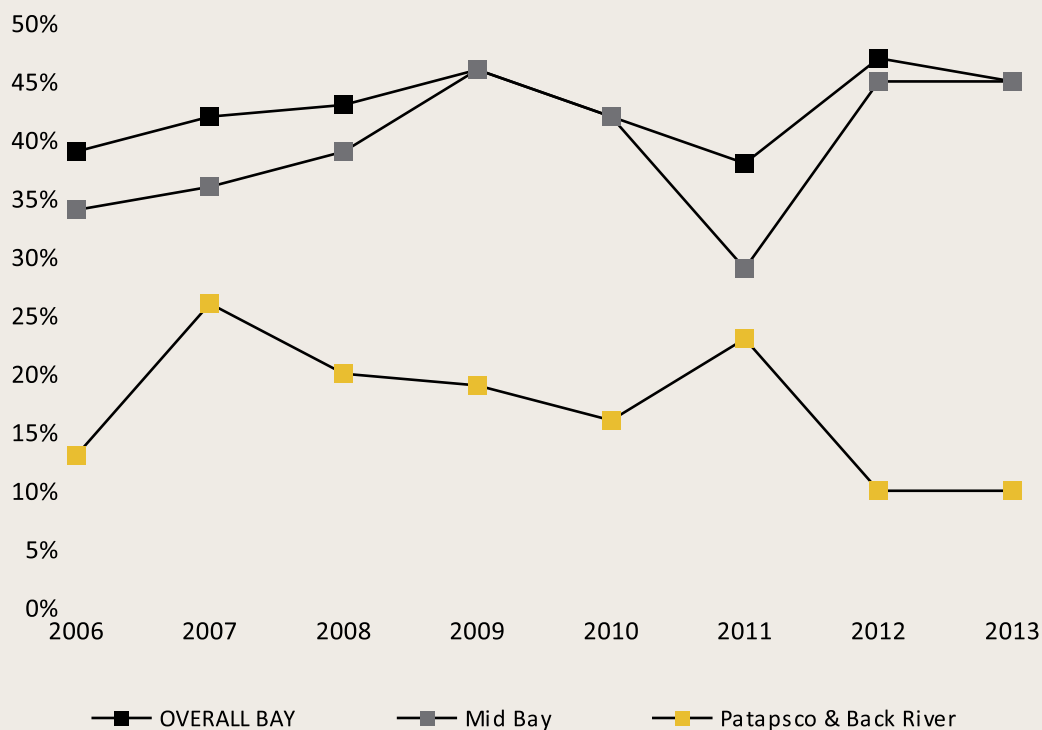
*Approximate

Effective education and outreach by City government and non-profit partners has helped combat lead poisoning cases in the City of Baltimore. The City and its non-profit partners are committed to lowering the number of ER visits related to asthma by offering comprehensive education programs geared towards asthma management. Integrated Pest Management (IPM) is an effective approach to pest management that is environmentally friendly and cost effective. In 2012, the CDC revised the level of concern for lead exposure from 10ug/dL to 5ug/dL. The City is offering a voluntary program to residents to address the concerns around low level lead exposure.



POLLUTION PREVENTION

BAY HEALTH INDEX SCORES



The Bay Health Index rates 15 reporting regions of the Bay using six indicators that are combined into a single overarching index of health. The 2013 Index is the most recent report available. Included are figures for Overall Bay, Mid Bay, and Patapsco and Back Rivers which flow through Baltimore.

EPA & BROWNFIELDS PROGRAMS

	2009	2010	2011	2012	2013	2014
EPA-funded Site Assessments	4	1	7	6	8	9
Baltimore Brownfields Tax Credits	4	0	1	8	0	7

Enacted in 1998, the Baltimore Brownfields Tax Credit is designed to encourage the cleanup and redevelopment of contaminated and often abandoned and/or underutilized properties in the City of Baltimore. This program offers a city property tax credit on the increased property taxes owed following the completion of eligible improvements (improved value). As part of the City's Brownfields Initiative, grant funding is available from the US Environmental Protection Agency on a first-come, first-served basis to developers that need to conduct Phase I and Phase II environmental site assessments on sites that are in the redevelopment process. Preference is given to properties that will be redeveloped in a timely fashion and that will generate new jobs and associated tax revenue for the City.

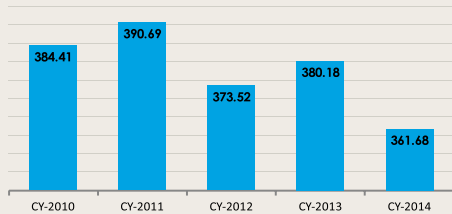
RESOURCE CONSERVATION



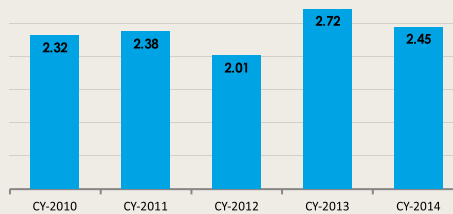
BALTIMORE CITY ENERGY USAGE

CITY GOVERNMENT ENERGY USAGE

Electric Usage (in millions of kWh)



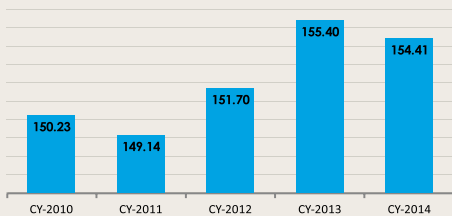
Natural Gas Usage (in millions of Therms)



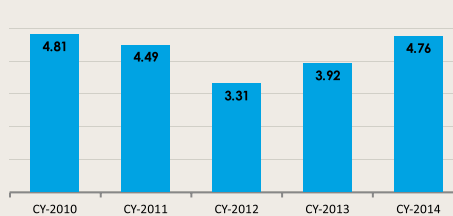
In 2014, City government realized reductions in both their electricity and natural gas usage. City Schools saw a reduction in electricity usage, but an increase in natural gas usage.

BALTIMORE CITY PUBLIC SCHOOLS ENERGY USAGE

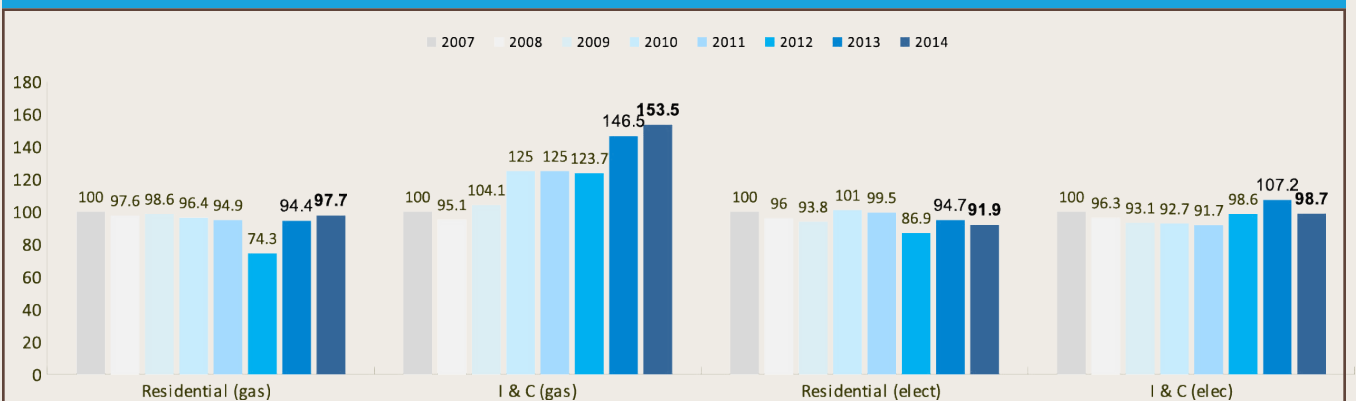
Electric Usage (in millions of kWh)



Natural Gas Usage (in millions of Therms)



ENERGY USE RELATIVE TO 2007 BASELINE



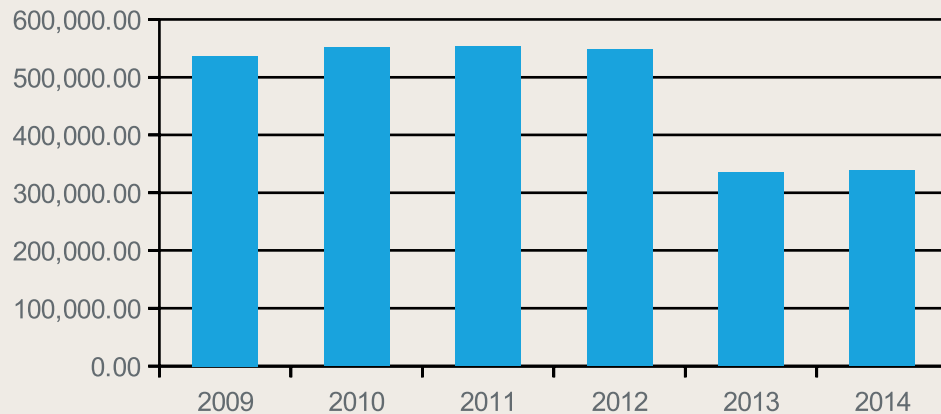
Changes in electricity and natural gas consumption are affected by a variety of factors including weather variations, behavior changes, economic health, technology, and population shifts.



RESOURCE CONSERVATION

QUARANTINE ROAD LANDFILL TONNAGE

TOTAL TONNAGE TAKEN TO LANDFILL



The City of Baltimore disposes of some municipal solid waste at the Quarantine Road Landfill. Over half of the tonnage per year disposed of at Quarantine Road, is the ash from Wheelabrator BRESKO waste-to-energy facility.

RECYCLING TONNAGE COLLECTED BY DPW



Recycling since 2009 has increased overall dramatically due to the introduction of Single Stream Recycling. In 2014, there was a decrease in the total recycling tonnage collected, dropping from 26,757 tons to 22,956 tons.

RESOURCE CONSERVATION

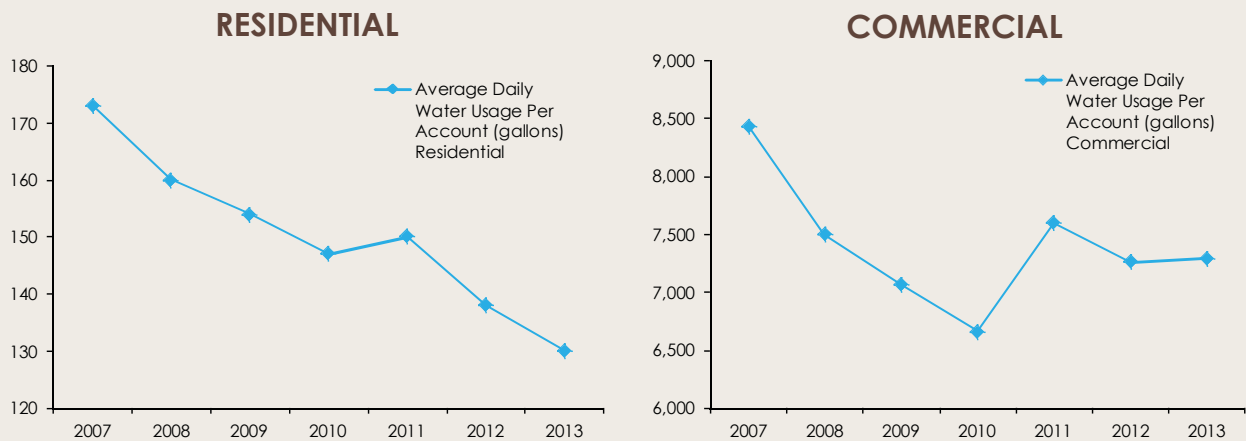


WHEELABRATOR BRESKO BALTIMORE TONNAGE

	2009	2010	2011	2012	2013	2014
January	17,176.40	14,102.40	12,459.26	13,806.20	14,391.64	16,132.50
February	15,055.20	10,348.14	13,855.96	12,701.31	11,950.75	12,423.86
March	14,885.81	17,328.57	16,924.04	11,488.27	13,672.89	13,302.09
April	19,935.24	18,586.33	16,845.42	13,332.49	14,744.39	15,277.62
May	21,697.62	16,618.95	17,412.99	17,280.10	15,176.43	16,455.53
June	21,882.62	16,725.41	14,291.52	15,243.21	15,644.08	13,841.85
July	20,417.32	17,695.03	14,277.79	16,564.85	16,006.2	14,693.84
August	17,451.42	16,987.97	16,978.73	18,613.11	16,116.69	14,111.95
September	17,527.79	16,669.13	16,913.47	15,410.25	11,189.43	13,133.37
October	16,647.44	16,373.14	14,293.77	15,604.60	14,207.74	14,723.28
November	17,242.22	16,321.13	16,319.69	15,122.22	13,611.02	13,597.60
December	16,868.13	16,314.38	16,711.82	13,692.94	15,660.59	16,132.50
TOTAL	216,787.21	194,070.58	187,284.46	178,859.55	172,371.85	175,839.99

The City of Baltimore diverts and disposes of most municipal solid waste to the Wheelabrator Baltimore (BRESKO) waste-to-energy facility. Since the implementation of the ONE Plus One program, the total tonnage of waste being diverted to BRESKO has declined. The facility can generate up to 60,000 kilowatts of electricity per day.

AVERAGE DAILY WATER USAGE



Under the Resource Conservation chapter of the Sustainability Plan, Goal 2 is to "Reduce Baltimore's water use while supporting system maintenance". Water consumption had declined steadily since 2007, but we did see an increase in usage in 2011, in both the Residential and Commercial sectors. Excessive water use depletes our freshwater sources, and requires significant energy use to treat and deliver. The City and its partners have several programs that promote water conservation through the use of low-flow faucets and showerheads, and toilet tank banks. Though commercial water use increased slightly in 2014, residential use continued to drop to an average of 130 gallons per day.



GREENING

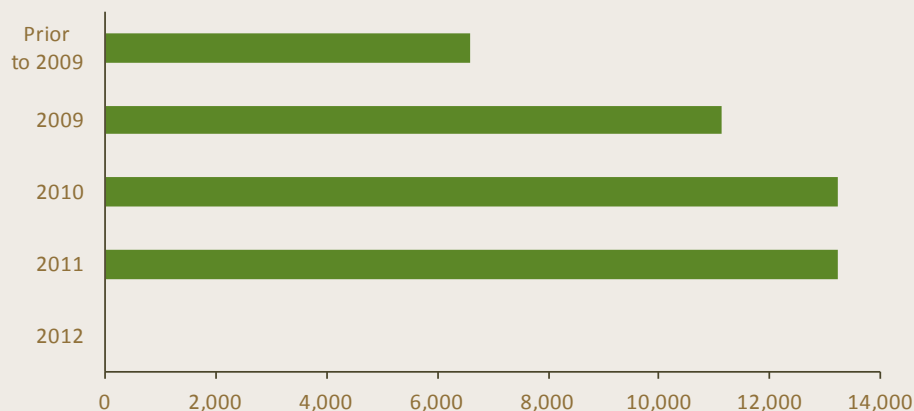
TREE CANOPY: NET GAINS AND LOSSES

	Number of Trees					
	2009	2010	2011	2012	2013	2014
Residential Plantings (1)	3,391	2,780	2,575	2,950	1,536	1600
School, Park & Community Plantings (2) (3)	852	2225	2,864	3,386	6,646	3256
City Street Tree Plantings (4)	1,800	900	485	1,285	1,292	1968
Road Reconstruction Plantings (5)	500	500	500	500	500	600
Trees Lost to Storms & Poor Health (6)	-2,750	-3,094	-4,259	-3,195	-2,549	-2784
Net Increase or Decrease (7)	3,793	3,311	2,165	4,926	7,425	4640
Running Total (8)	128,793	132,104	134,269	139,195	146,620	151260
Canopy Coverage (9)	27%	--	--	--	--	--

(1) TreeBaltimore donations to home owners to plant on Private Property. (2) Larger specimen trees from TreeBaltimore, planted in cooperation with NGO partners. (3) Reforestation plantings are excluded. They are considered zero net gain. (4) Large street tree specimens currently planted under contract with Urban Forestry Division. (5) Department of Transportation tree plantings (Estimate). (6) Based on tree losses reported to Urban Forestry through the city's CSR system. (7) Net increase for each year is conservative. (8) Based on tree inventory estimate for all city streets and developed parkland. (9) Based on satellite imagery provided by USDA Forest Service every three years.

STREAM RESTORATION

CUMULATIVE RESTORATION



At the time of publication, stream restoration data for 2014 was not yet available. Updates to the data, when available, will be made available online.

GREENING



BALTIMORE FOOD POLICY INITIATIVE

Metric	2010	2011	2012	2013	2014
Number of Participating Markets	3	7	7	9	8
Electronic Benefit Transfer Transactions	763	1,656	3,294	4,259	2695
Electronic Benefit Transfer Sales	\$15,113	\$27,664	\$54,948	\$71,511	\$51,383

The decrease in transactions in Baltimore City may be attributable to a new technology system implemented at the Baltimore Farmers Market and Bazaar that had a steep learning curve for customers and vendors. Additionally, SNAP benefits were cut at the end of 2013, resulting in reduced benefits for families in 2014, which could have contributed to the decrease.

Metric	2010	2011	2012	2013	2014
Number of Public Market Vendors with Healthy Carry-out Menus	0	4	24	34	34

Sources: Baltimore Office of Sustainability; MD Hunger Solutions

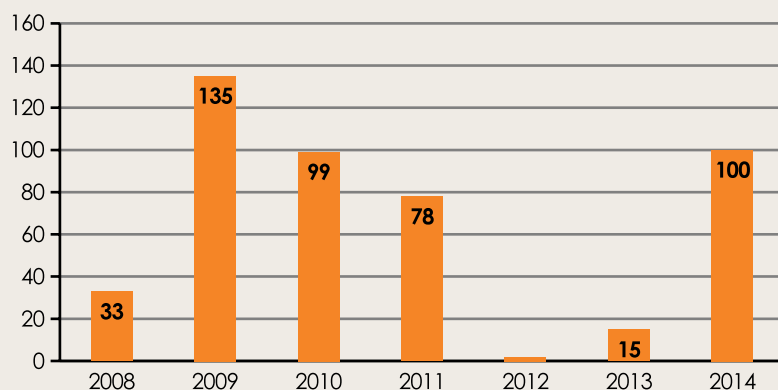
Maintained number of Healthy Carryout vendors, but expanded the programming to include Healthy Kids meals. Seven vendors at Lexington Market now have kids-sized portions that meet recommendations for calorie, fat and other nutrient levels. These meals come with water and a fruit or vegetable.



TRANSPORTATION

BICYCLING IN BALTIMORE

NUMBER OF BIKE RACKS INSTALLED

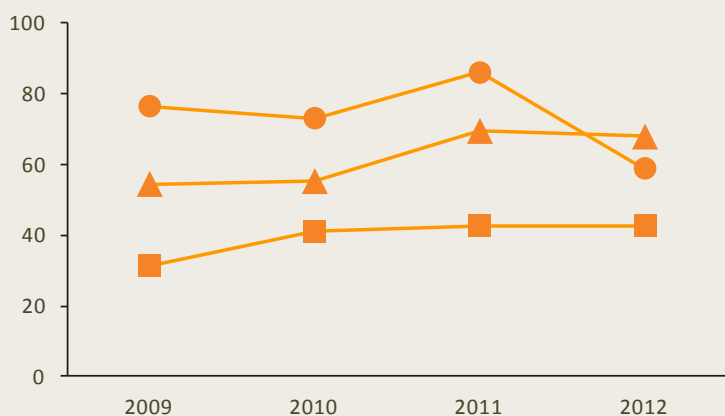


After the drastic decline in bike rack installations in 2012, we have seen an increase, with 100 racks installed in 2014. In 2014, The City removed minor privilege fees for bicycle rack installations. Businesses can buy and install bike racks without a yearly \$79 fee. Businesses can buy and install the bike racks themselves for a one-time fee of \$75 or have DOT install for them for a one-time fee of \$150.

LANE MILES OF NEW ON-STREET BIKE FACILITIES

Year	> 2006	2006	2007	2008	2009	2010	2011	2012	2013
Bike Lane	1.7	0.6	8.4	4.5	6.1	16.9	3.2	7.1	1.65
Contraflow	-	-	-	-	-	0.5	-	-	0
Shared Bike/ Bus Lane	-	-	-	-	1.5	0.5	-	-	0
Sharrow	0.6	-	7.1	13.4	0.9	21.2	-	2.7	0.5
Sidepath	-	-	-	0.3	-	0.1	-	-	3.75
Signed Route	2.7	-	14.2	-	-	6	1.6	-	0
Bike Boulevard	-	-	-	-	-	-	-	3.4	0
TOTAL	5	0.6	29.7	18.2	8.5	45	4.8	13.2	5.9

PERCENT CHANGE IN BIKE RIDERSHIP



At the time of publication, bicycle counts for 2014 were not available. Updates to the data, when available, will be made available online.

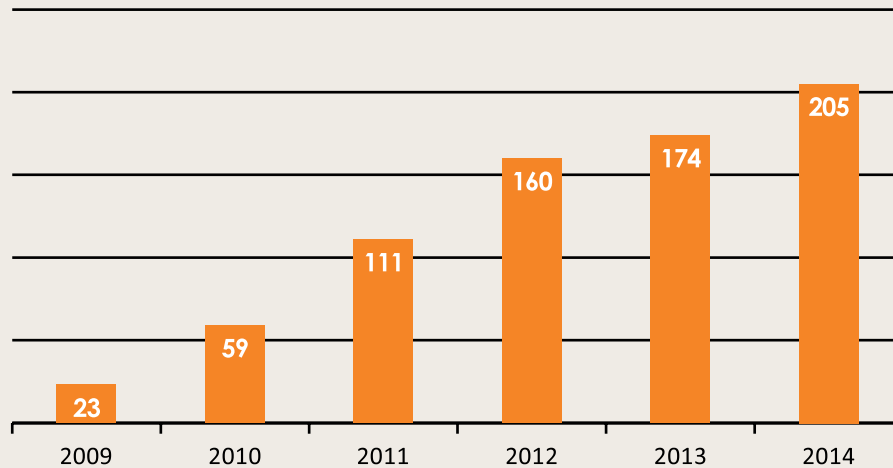
- Falls & Maryland
- ▲— Guilford & Mt. Royal
- Aliceanna & Boston

TRANSPORTATION



ZIPCARS

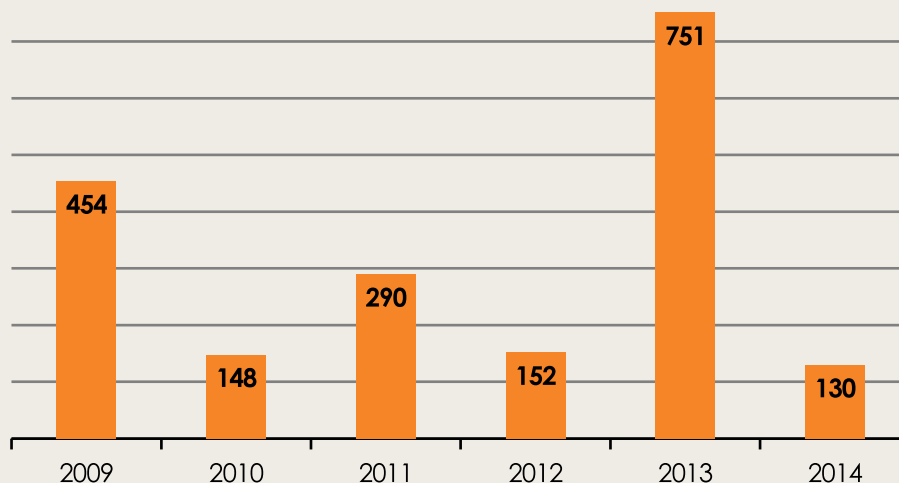
ZIPCARS AVAILABLE IN BALTIMORE



As more Baltimore City residents opt to use public transit, sell their personal vehicle, or forego purchasing an additional vehicle, we are seeing an increase in membership in Baltimore.

PEDESTRIAN SIGNALS

COUNTDOWN PEDESTRIAN SIGNAL UNITS INSTALLED

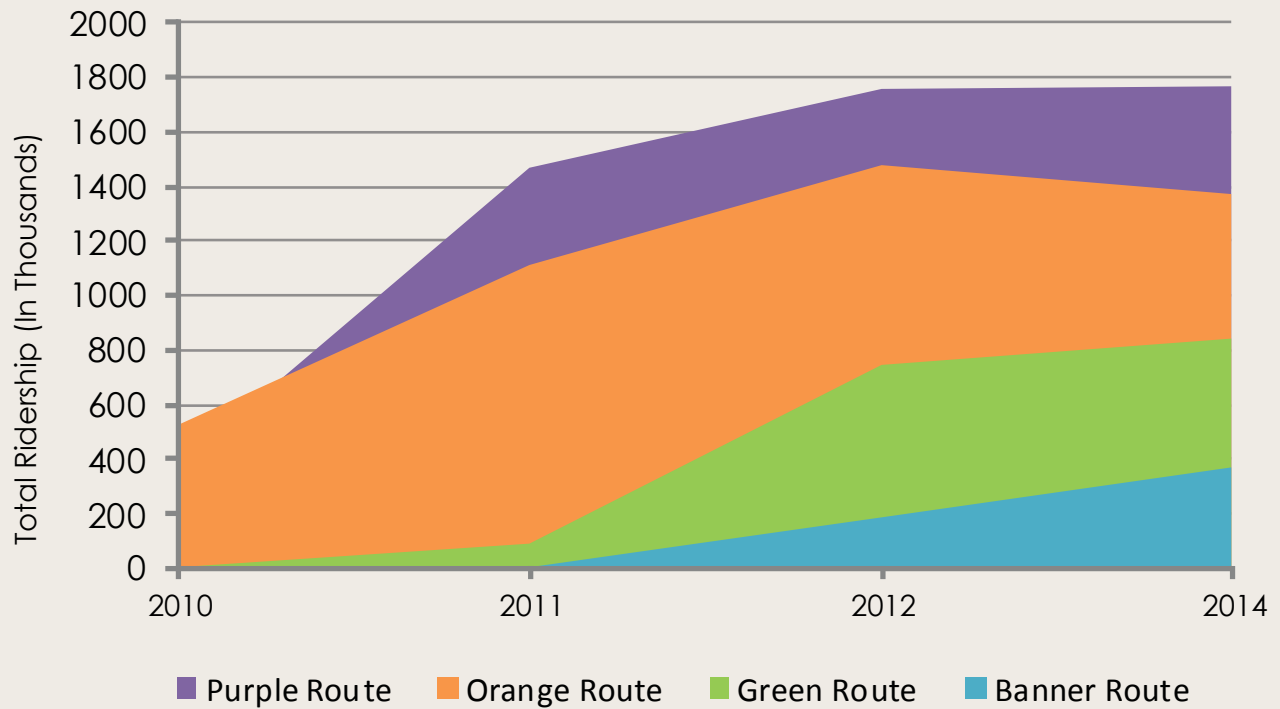


This metric is used to track improvements in pedestrian facilities. CPS units the Traffic Signal Construction & Maintenance Division has installed. It is not inclusive of the number of signal units installed by TEC contractors.



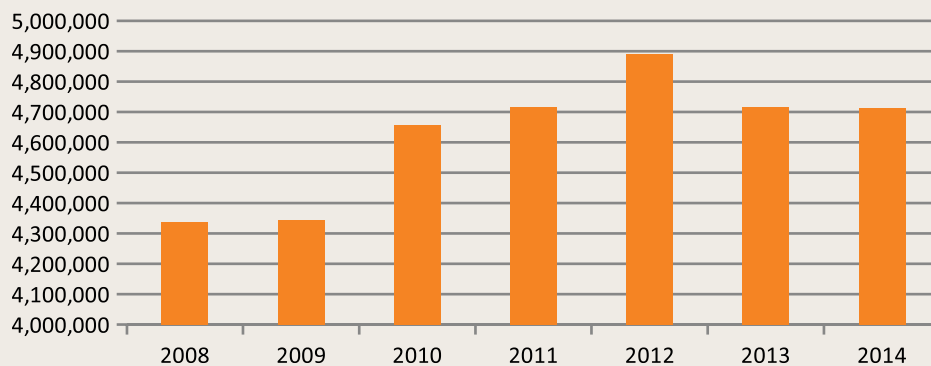
TRANSPORTATION

YEARLY CIRCULATOR RIDERSHIP



The Charm City Circulator, with Baltimore's first hybrid buses, provides free rides throughout the City on four different routes. In 2014, more than 4,000,000 riders took advantage of the Circulator routes.

MTA RIDERSHIP



This chart represents the average weekday ridership per year on MTA's various forms of public transit between 2008 and 2014.

EDUCATION & AWARENESS

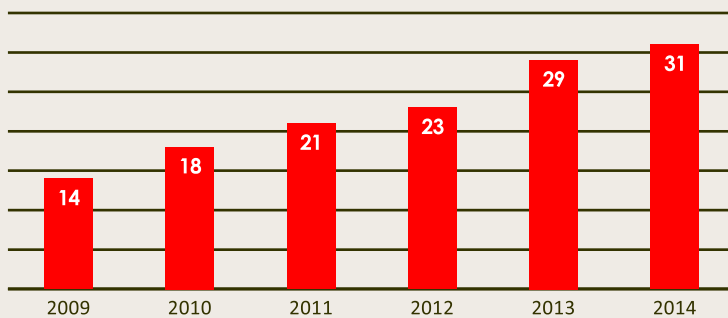


YOUTH PARTICIPATION IN ENVIRONMENTAL PROGRAMS

	2009	2010	2011	2012	2013	2014
Baltimore Conservation and Leadership Corps	32	30	30	36	33	42
Masonville Cove	1,143	1,500	1,200	1,700	2,250	4,555
Living Classrooms BUGS Program	75	75	60	60	60	60
Civic Justice Corps	240	250	250	120	207	250
Baltimore City Schools Green, Healthy, Smart Challenge	N/A	150	564	546	1,305	1,567
Parks and People Foundation	1,900	1,275	1,577	1,213	1,175	6,400
Holistic Life Foundation	350	425	650	725	-	
Real Food Farm	New for 2013				267	1,525
Patterson Park Audubon Center	New for 2013				6,114	5,804

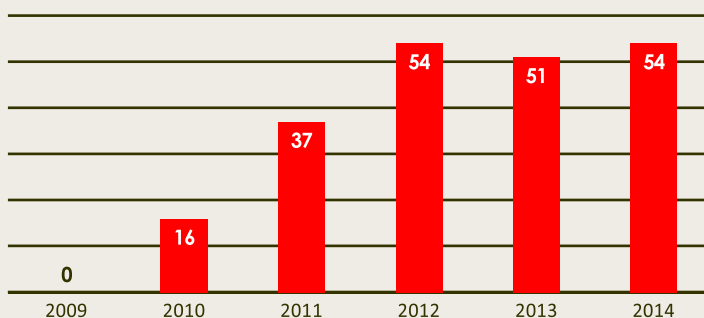
This is a sampling of community service projects, after-school groups, summer camps, and summer youth job training programs that have an environmental focus. The 2014 added two new programs.

BALTIMORE CITY SCHOOLS PARTICIPATING IN THE GREEN, HEALTHY, SMART CHALLENGE



The Green, Healthy, Smart Challenge (previously referred to in this report as the 'Sustainability Challenge') is a mini-grant program that supports student-led environmental projects such as DIY energy audits, recycling campaigns, rainwater recycling initiatives and schoolyard gardens. As of 2014, approximately \$182,000 has been distributed through the program to a total of 90 schools (out of 204 total in the district), engaging thousands of students in making hands-on improvements to their schools and communities.

CERTIFIED GREEN SCHOOLS IN BALTIMORE CITY



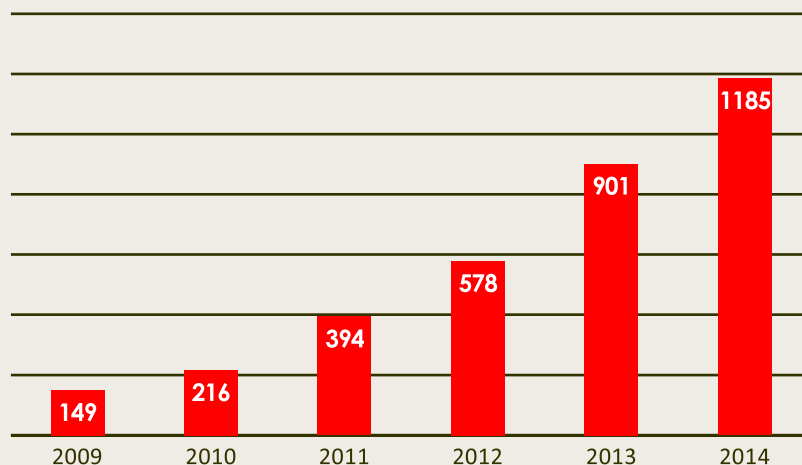
The Maryland Green School Awards program, run by the Maryland Association for Environmental and Outdoor Education, is a holistic, integrated approach to authentic learning that incorporates local environmental issue investigation and professional development with environmental best management practices and community stewardship. All Maryland schools pre K-12, public, charter and private are eligible.



EDUCATION & AWARENESS

SOCIAL MEDIA

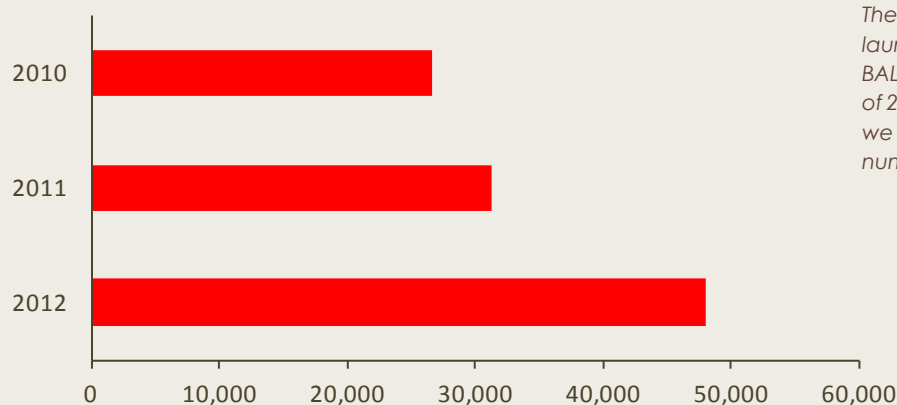
FOLLOWERS OF THE OFFICE OF SUSTAINABILITY FACEBOOK PAGE



The Office of Sustainability Facebook page was created in 2009. Since its creation, we have seen an increase in the number of followers. The total number of "likes" has nearly doubled each year, with the largest increase between 2010 and 2011. The Office posts regularly to the site, sharing a variety of information regarding sustainability initiatives in Baltimore. In recent years, the Office has placed additional focus on communications and outreach. As of December 31, 2014, there were 1,185 "likes."

Pssst! Have YOU liked us? <http://www.facebook.com/baltimoresustainability>

MONTHLY VISITS TO THE OFFICE OF SUSTAINABILITY WEBSITE



The Office of Sustainability Officially launched the new website WWW.BALTIMORESUSTAINABILITY.ORG in June of 2009. Since the launch of the website, we have seen a steady increase in the number of visits to the website.

TWITTER ACTIVITY	Year	Tweets	Twitter Followers
	2013	412	1,685
	2014	1,308	2,722

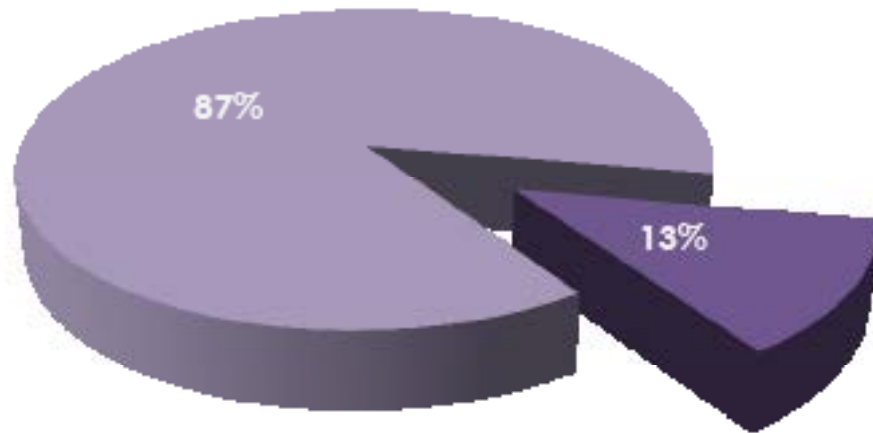
At the time of publication, the Office of Sustainability had 2,722 followers on Twitter and posted 1,308 "tweets".

GREEN ECONOMY



GREEN BUSINESSES

- Percentage of Baltimore Businesses
- Percentage of Non-Baltimore Businesses



The Maryland Green Registry is a voluntary, self-certification program offering tips and resources to help organizations set and meet their sustainability goals. There are 335 businesses participating state-wide, and 45 of those are located in the City of Baltimore. To find out more, or to register your business, visit: <http://mde.maryland.gov/MarylandGreen/Pages/Home.aspx>

WORKFORCE DEVELOPMENT

	2009	2010	2011	2012	2013	2014
Baltimore City Public Schools Graduation Rate (Based on 4-Year Adjusted Cohorts)	N/A*	61.46	65.80	66.49	68.50	69.65
Baltimore City YouthWorks - Green Jobs Youth Corps	360	360	300	300	N/A	N/A
Baltimore City Community College (BCCC) Degrees and Certificates Awarded (FY)	497	466	532	601	499	554
Civic Works Bmore Green Job Training	36	27	33	62	74	90

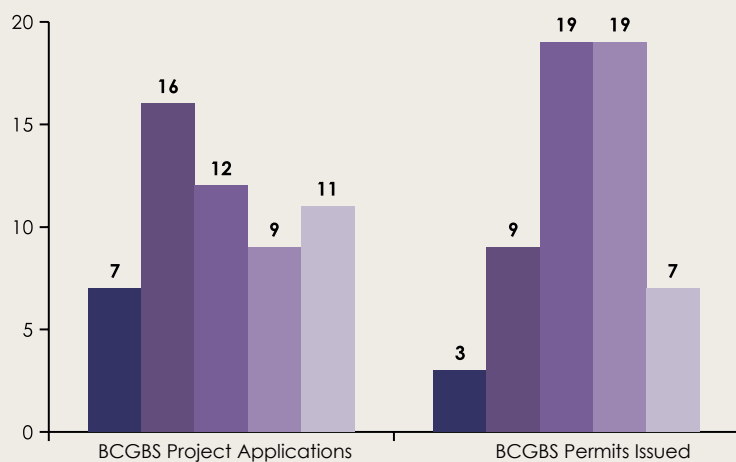
*The 4-Year Adjusted Cohort Graduation Rate was first published in 2010. Data for 2009 is unavailable. In the past, this report has published the BCPS Graduation Leaver Rate.

The preparation for employment begins with elementary and secondary education, and continues through higher education and certificate programs. Exposure to green jobs at a young age can encourage students to explore opportunities for their future. A broad educational background with varied skills can be utilized across many sectors, including green jobs. Since 2010, the Baltimore City Public Schools 4-year adjusted cohort graduation rate has continued to increase.

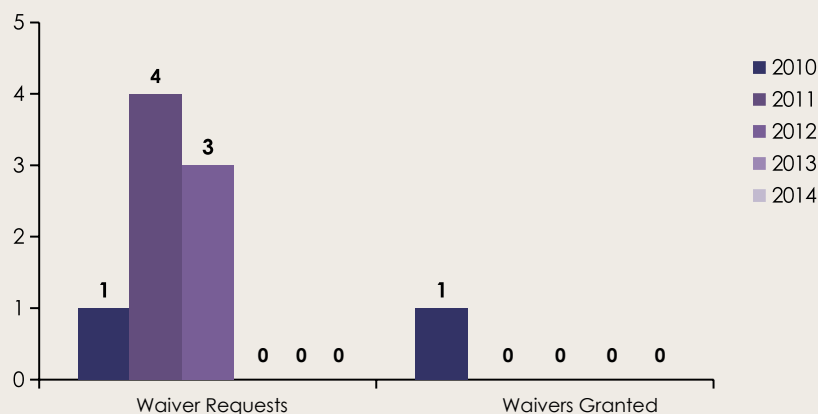
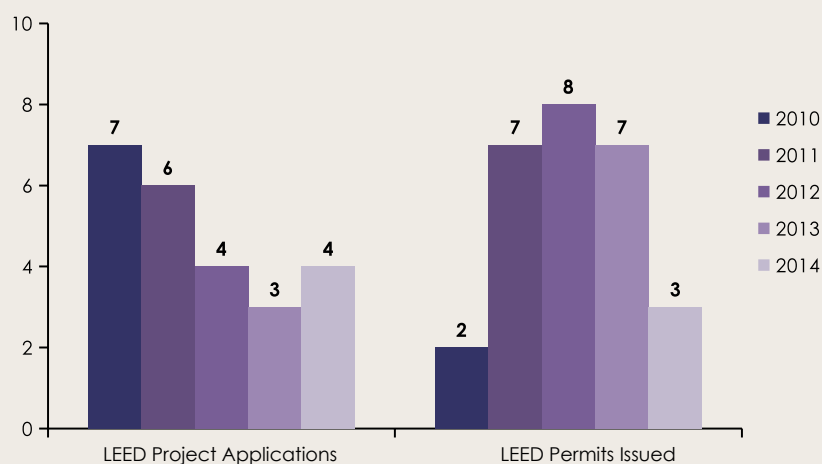


GREEN ECONOMY

GREEN BUILDING REQUIREMENTS



In August 2007, City Council passed a bill mandating the City establish Green Building Standards for commercial and multi-family residential buildings over 10,000 square feet being either newly constructed or extensively modified. The standards were created, and implemented in 2010. In 2014, a total of 7 BCGBS permits were issued.



BALTIMORE NEIGHBORHOOD INDICATORS ALLIANCE VITAL SIGNS

*“We do not inherit the earth from our ancestors,
we borrow it from our children.”*

- Native American Proverb



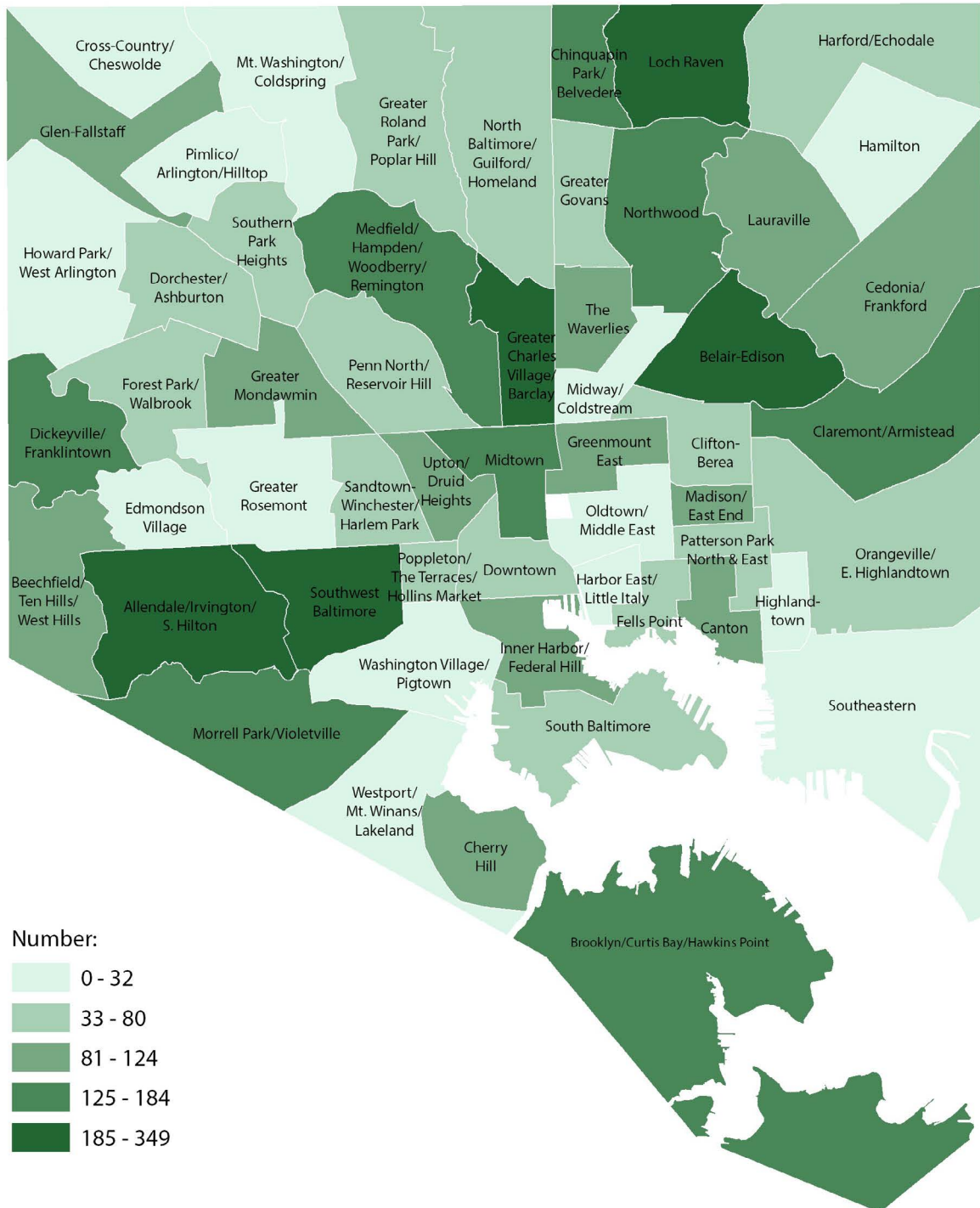
BALTIMORE CITY MAPS

For more than 10 years, the Baltimore Neighborhood Indicators Alliance-Jacob France Institute (BNIA-JFI) has been committed to enabling decision-making for neighborhood change, using accurate, relevant and accessible data and information for improving the quality of life in Baltimore neighborhoods. Along with an alliance of diverse organizations, BNIA-JFI empowers neighborhoods with measures and indicators to track success across common goals. BNIA-JFI produces an annual report called *Vital Signs* that “take the pulse” of Baltimore’s neighborhoods by measuring approximately 110 quality of life indicators for all 55 Community Statistical Areas (CSAs). These indicators were first established through a community-based visioning process in 2000 and revised through a strategic planning process in 2012. The 12th edition of *Vital Signs* was released in April 2015 includes a section dedicated to community-based sustainability indicators on sanitation,

transportation, green space, energy efficiency and community engagement. *Vital Signs* indicators are available online and have been used to track and monitor quality of life in neighborhoods as well as plan for the future, advocate for change, leverage funds through grant writing and community-based research.

The Office of Sustainability has partnered with BNIA-JFI to incorporate their community-based sustainability indicators into the Annual Sustainability Report. We feel that being able to look at critical issues on a community level help evaluate progress, as well as where more efforts are needed. We will continue to use these indicators in future years, and hope to expand indicators as we move forward.

Number of Trees Planted* By Community Statistical Area



Map created by BNIA-JFI, 2015
*Data from 2013

Source: Tree Baltimore

Total:

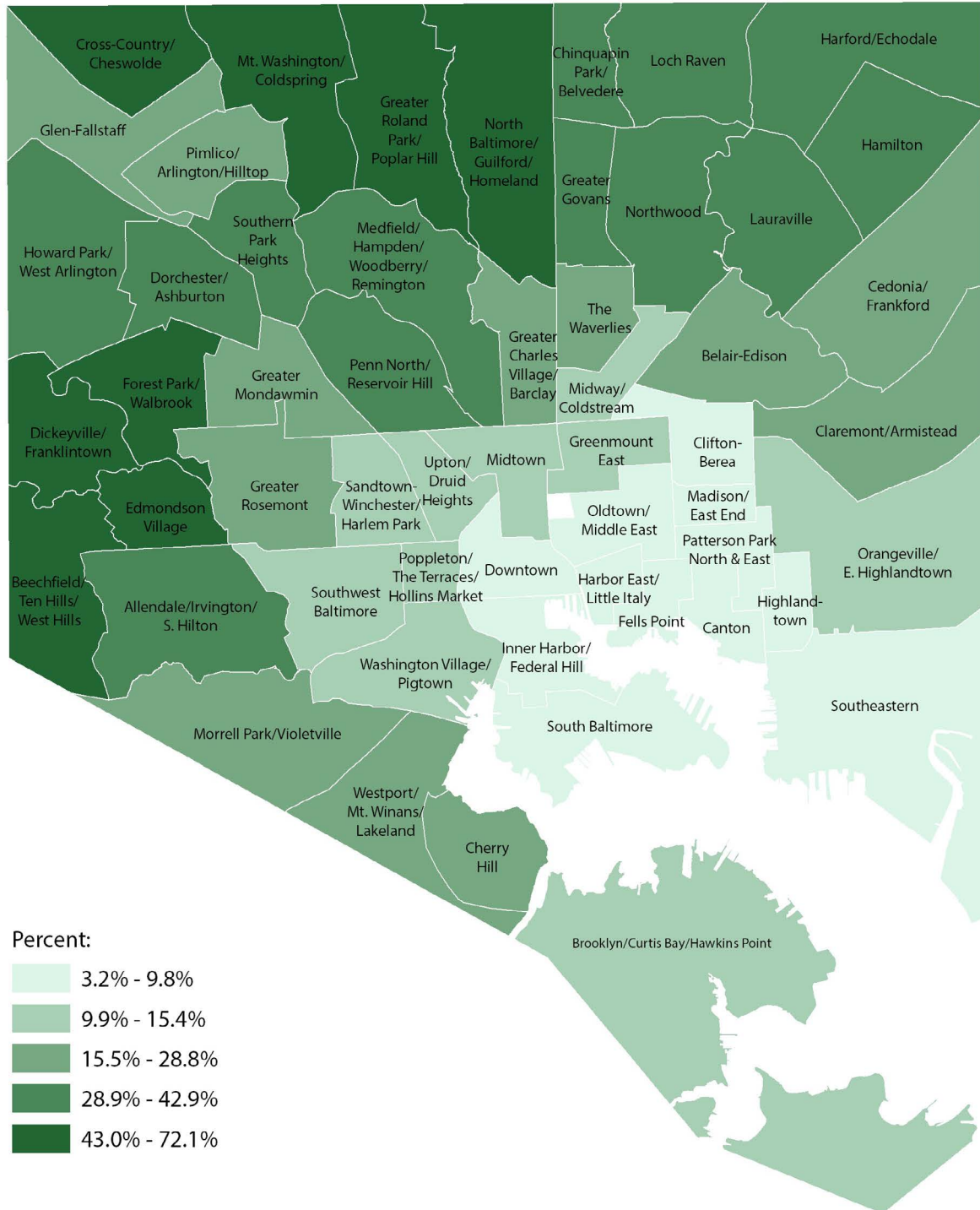
- 0 - 8
- 9 - 17
- 18 - 37
- 38 - 56
- 57 - 106

Sources: Baltimore Green Space, Center for a Livable Future, Power in Dirt, Parks and People, Baltimore Master Gardener

*Unchanged since 2012 Annual Report

Tree Canopy*

By Community Statistical Area

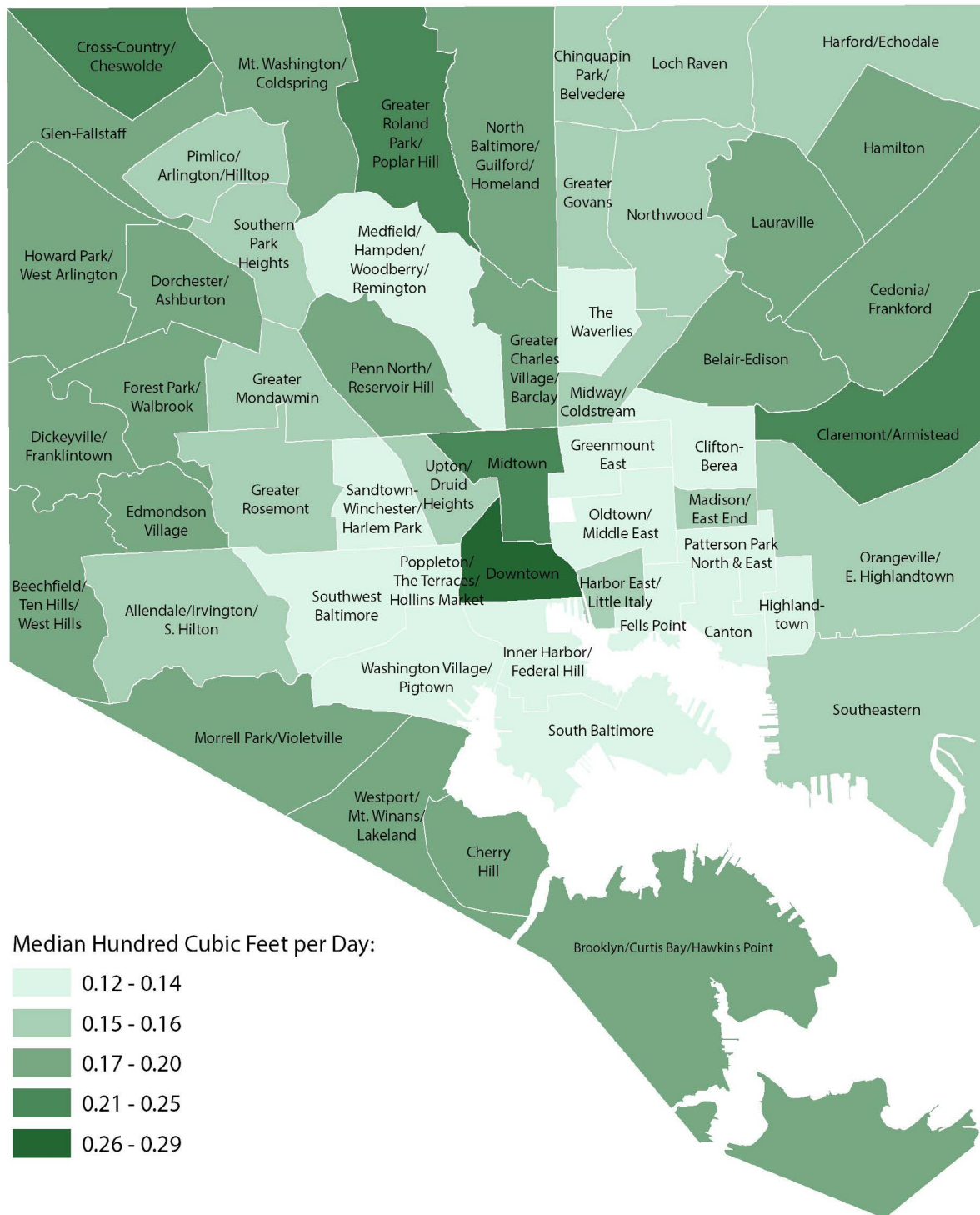


Map created by BNIA-JFI, 2015

Source: University of Vermont Spatial Analysis La

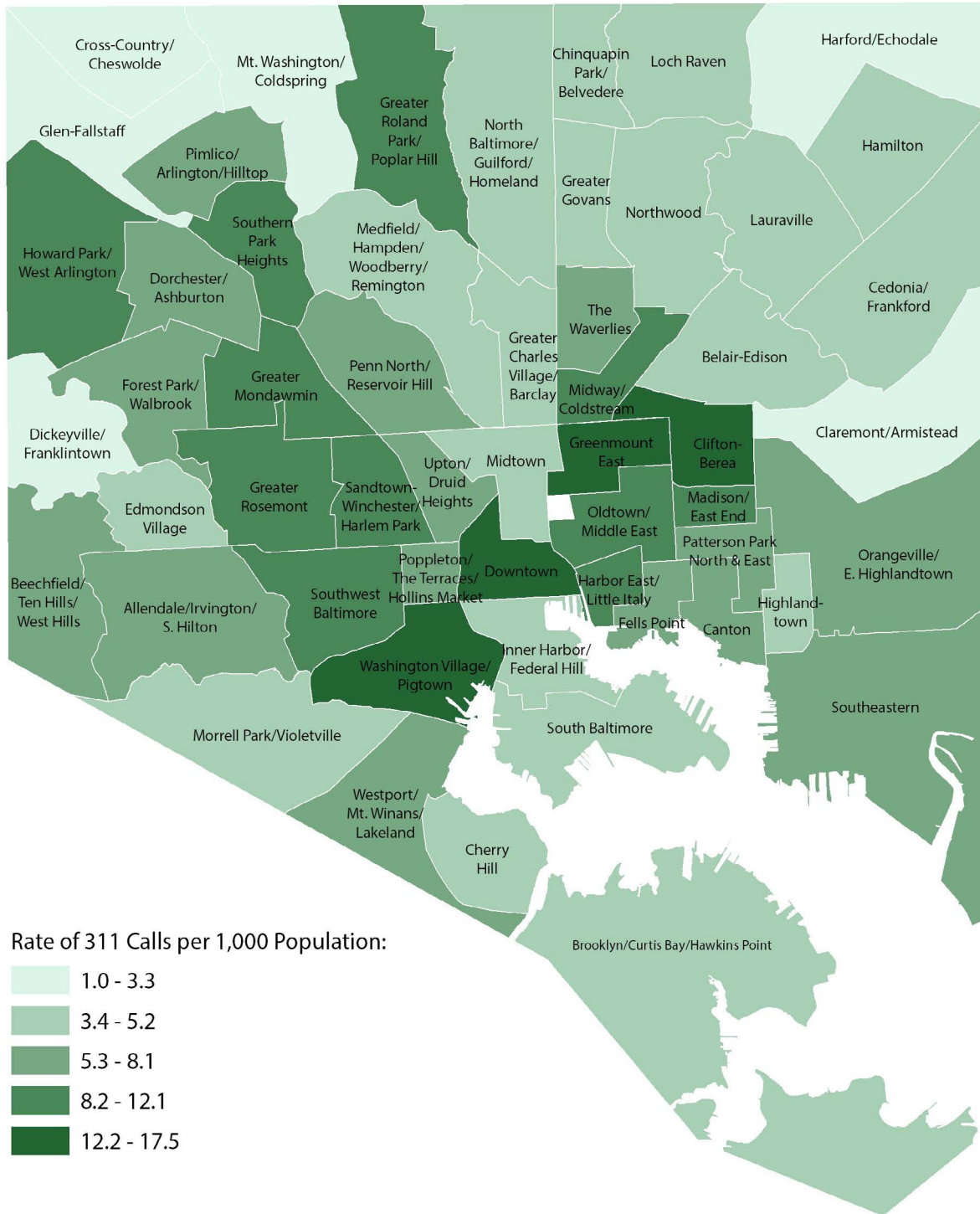
*Unchanged since 2012 Annual Report

Median Daily Average Water Consumption* By Community Statistical Area



*Unchanged since 2011

Rate of Clogged Storm Drains By Community Statistical Area



Average Score:

- 0 - 24 (Car Dependent - All errands require a car)
- 25 - 49 (Car Dependent - Some nearby amenities)
- 50 - 69 (Somewhat Walkable - More nearby amenities)
- 70 - 80 (Very Walkable - Most errands can be done on foot)
- 90 - 100 (Walker's Paradise - No car needed for errands)

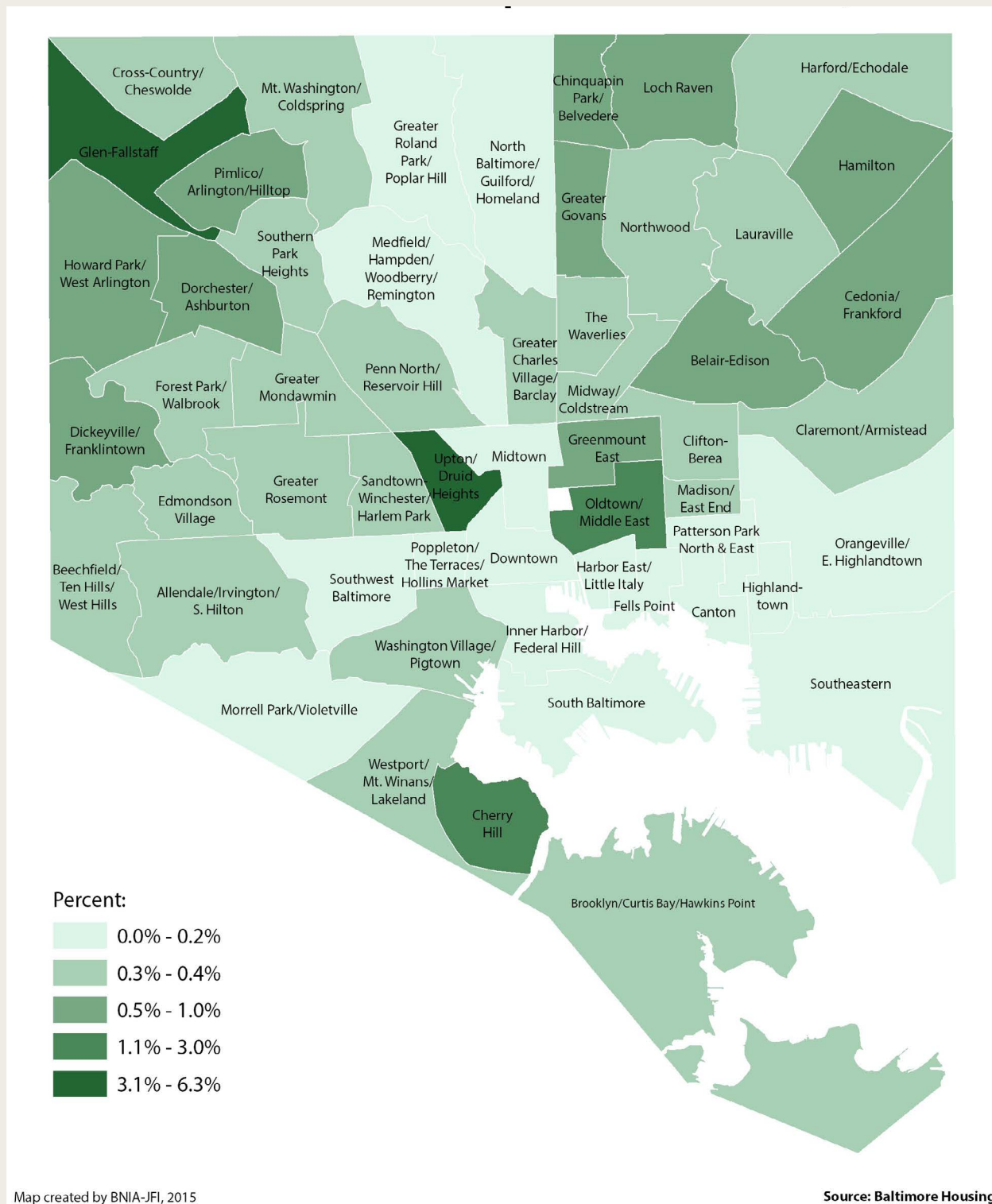
Source: WalkScore.com

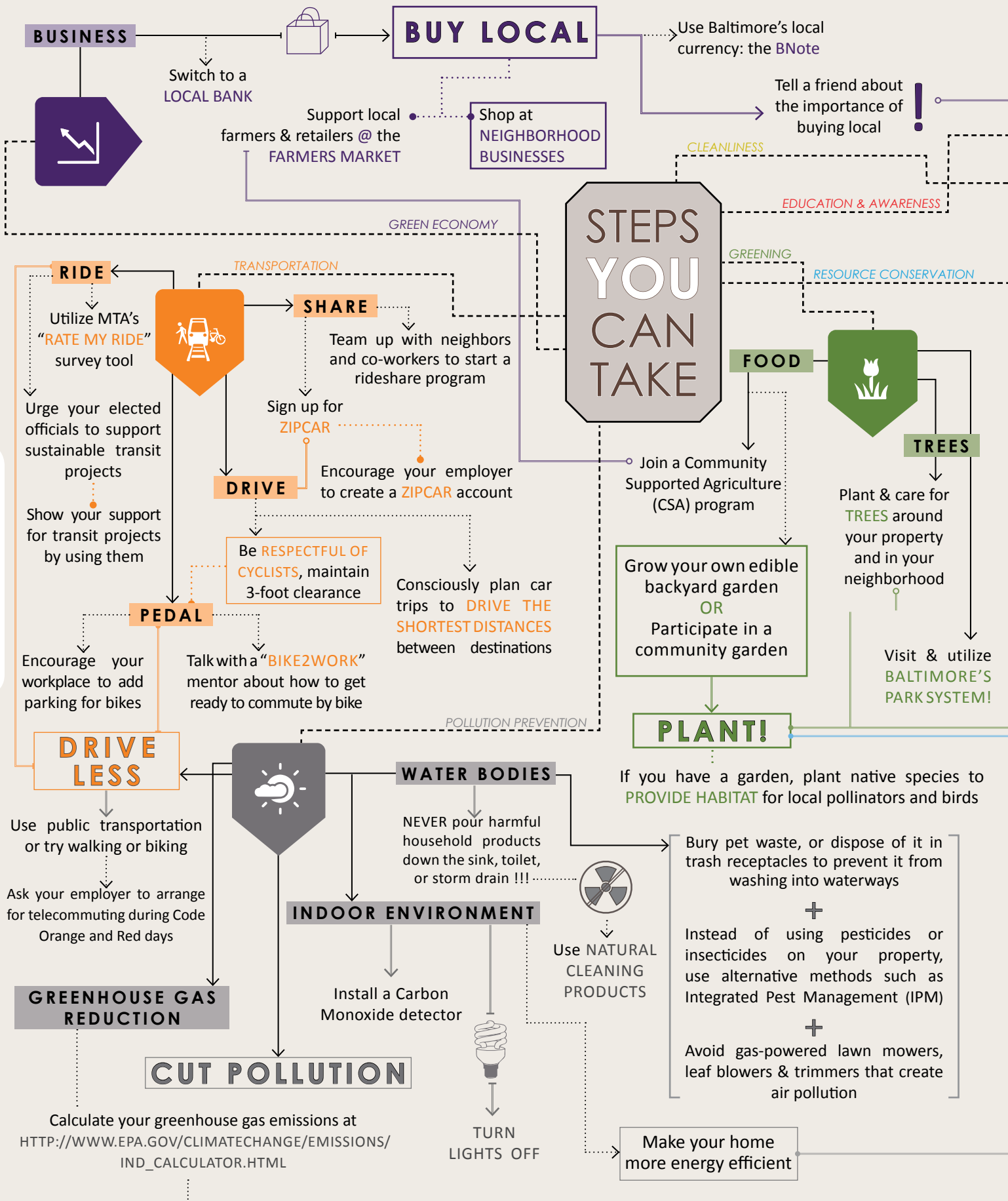
*Unchanged since 2012 Annual Report

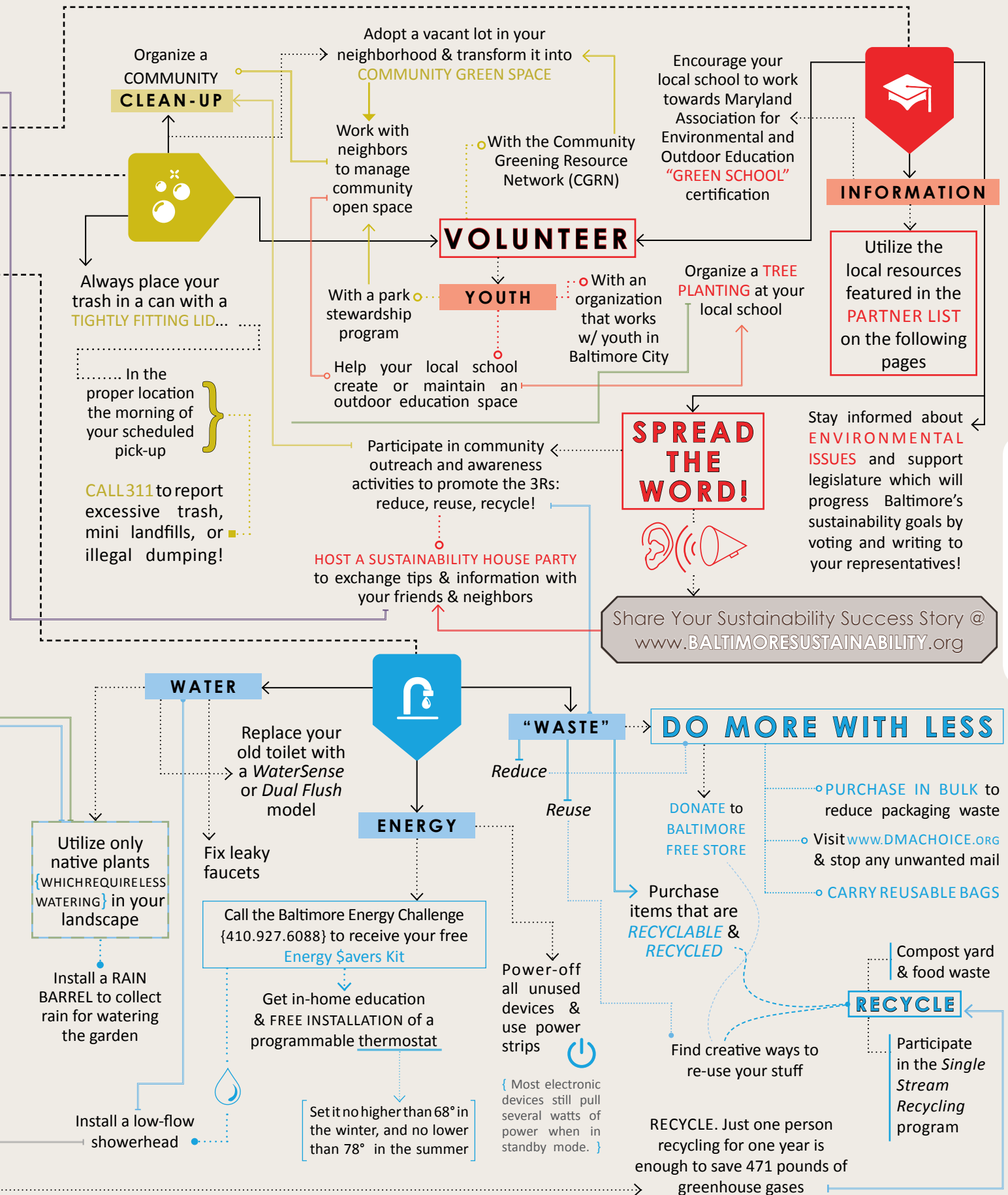
Rate of 311 Calls per 1,000 Population:

- 2.5 - 18.1
- 18.2 - 34.2
- 34.3 - 56.5
- 56.6 - 110.3
- 110.4 - 183.5

Percent of Residential Properties Weatherized By Community Statistical Area





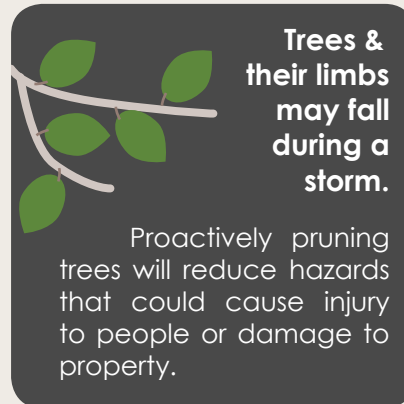


\$AVE \$70+ A YEAR on
your energy bills.

Replace the light bulbs in your
**5 MOST FREQUENTLY USED
FIXTURES** with ENERGY STAR®
qualified bulbs [EPA]



Stay hydrated
especially in
periods of
extreme
heat.



WEATHERIZE YOUR HOME.

Insulate walls & ceilings

+

Caulk & weatherstrip around
doors & windows, and

+

Wrap your water heater in an
insulating jacket

**Reduce up to
4,000 lbs CO₂
emissions a year!**
[EarthShare]



Plant a vegetable garden
on your property to produce
FREE & FRESH FOOD



Make a Plan

Reducing Baltimore's vulnerability begins
with its residents. Make sure that you
and your family are prepared with
your own emergency plan
before a disaster hits.

-
- ☒ MAKE A PLAN
 - ☐ BUILD A KIT
 - ☐ HELP EACH OTHER



Build a Kit

A disaster supply kit should include basic items that you and your family may need in the event of an emergency.



Water conservation lessens load on infrastructure, and rainwater capture strategies collect rainwater reserves for use during low-precipitation periods

Rain barrels can save most Mid-Atlantic homeowners **1,300 GALLONS OF WATER** during peak summer months.



[EPA]

Help Each Other



Know your neighbors & check in with each other regularly.



Walking and/or cycling provide redundancy in the transportation system in the event of an emergency or storm event, when public transit may be temporarily disrupted or vehicular access may be more difficult.

**Bike, walk,
or use public
transportation just
2 DAYS A WEEK.**



**1,590 lbs
CO₂
A YEAR**

SAVE UP TO 20% ON HEATING & COOLING COSTS



Improve home comfort with insulation & sealing. [EPA]


Know the warnings.


Understand Baltimore's early warning alert system so that you will be prepared when disaster strikes.



PARTNERS LIST

 1000 Friends of Maryland
www.friendsofmd.org
410.385.2910


 Altcar
www.altcar.org
410.814.3000

 Amtrak
www.amtrak.com
1.800.USA.RAIL


 Art Blocks
www.artblocks.org
410.243.3834

 B Corporation
www.bcorporation.net


 B-more Mobile
www.bmoremobile.org

 Back River Restoration Committee
www.savebackriver.org

 Baltimore Area Convention and Visitors Association
www.baltimore.org
877.225.8466

 Baltimore Biodiesel Coop
www.baltimorebiodiesel.org
410.889.6842


 Baltimore Business Journal
www.bizjournals.com/baltimore/
410.576.1161


 Baltimore Center for Green Careers
www.baltimoregreencareers.org
410.929.6120


 Baltimore City Commission for Historical & Architectural Preservation
www.baltimorecity.gov/Government/BoardsandCommissions/HistoricalArchitecturalPreservation.aspx

 Baltimore City Department of General Services
www.baltimorecity.gov
410.396.3704


 Baltimore City Department of Health (BCHD)
www.baltimorehealth.org
410.767.5300

 Baltimore City Department of Housing and Community Development (HCD)
www.baltimorehousing.org
410.514.7000

 Baltimore City Department of Planning (DOP)
www.baltimorecity.gov/Government/AgenciesDepartments/Planning.aspx
410.767.4500

 Baltimore City Department of Public Works (DPW)
publicworks.baltimorecity.gov
410.396.6070

 Baltimore City Department of Recreation and Parks (BCRP)
bcrp.baltimorecity.gov
410.396.7900

 Baltimore City Department of Transportation (DOT)
www.baltimorecity.gov/Government/AgenciesDepartments/Transportation.aspx
410.396.7665

 Baltimore City Mayors Office of Employment Development
www.oedworks.com
410.396.1910

 Baltimore Community Foundation
www.bcf.org
410.332-4171

 Baltimore Development Corporation
410.837.9305

 MAIN STREETS PROGRAM
baltimoredevelopment.com/
baltimore-main-streets


 BROWNFIELDS PROGRAM
www.baltimoredevelopment.com/brownfields

 Baltimore City Farms Program
bcrp.baltimorecity.gov/ProgramsandInitiatives/CityFarms.aspx
410.396.0181


 Baltimore City Food Policy Initiative
http://www.baltimorecity.gov/Government/AgenciesDepartments/Planning/BaltimoreFoodPolicyInitiative.aspx


 Baltimore City Forestry Board
www.baltimoreforestry.org


 Baltimore City Parking Authority
www.baltimorecity.gov/Government/QuasiAgencies/ParkingAuthority.aspx
443.573.2800


 Baltimore City Public School System
www.bcps.k12.md.us
443.984.2000

 Baltimore County Environmental Protection and Sustainability
www.baltimorecountymd.gov/Agencies/environment
410.887.3733

 Baltimore Ecosystem Study
www.beslter.org
410.448.5663 | ext. 125

 Baltimore Energy Challenge
www.baltimoreenergychallenge.org


 Baltimore Free Farm
www.baltimorefreefarm.org
410.575.4BFF (4233)

 Baltimore Gas & Electric Smart Energy Savers Program
www.bgesmartenergy.com/
1.877.685.SESP (7377)

 Baltimore Green Currency Association
www.baltimoregreencurrency.org

 Baltimore Green Forum
www.baltimoregreenforum.org


 Baltimore Green Map
www.baltimoregreenmap.org
410.235.0838


 Baltimore Green Space
www.baltimoregreenspace.org
443.695.7504

 Baltimore Green Works
www.baltimoregreenworks.com

 **Baltimore Heritage**
www.baltimoreheritage.org


 **Baltimore Metropolitan Council**
www.baltometro.org
410.732.0500

 **Baltimore Neighborhood Indicators Alliance**
www.bnica.org
410.837.6651

 **Baltimore Office of Promotion & the Arts**
www.bop.org
410.752.8632

 **Baltimore Orchard Project**
www.baltimoreorchard.org
410-695-3445


 **Baltimore Tree Trust**
www.baltimoretreetrust.org

 **Baltimore Running Festival**
www.thebaltimoremарathon.com
410.605.9381


 **Baltimore Workforce Investment Board**
www.Baltoworkforce.com
410.396.1910

 **Bethesda Green**
www.bethesdagreen.org
240.396.2440


 **Big City Farms**
www.bigcityfarms.com
443.890.3280


 **Bike Baltimore**
www.baltimorecity.gov/Government/AgenciesDepartments/Transportation/Planning/BikeBaltimore.aspx

 **Bike Maryland**
www.bikemd.org
410.960.6493


 **Biohabitats**
www.biohabitats.com
410.554.0156

 **Blue Water Baltimore**
www.bluewaterbaltimore.org
410.254.1577

 **BMore Streets for People**
www.facebook.com/pages/BMoreStreets-for-People/121281651312486

 **Boone Street Farm**
www.balimorediy.org

 **Butterbee Farm**
www.butterbeefarm.com

 **Carrie Murray Nature Center**
www.carriemurraynaturecenter.org
410.396.0808


 **CDM eCycling**
www.cdm4recycle.com


 **Center for Community Progress**
www.communityprogress.net
DC Office | 877.542.4842


 **Central Maryland Transportation Alliance**
www.cmtalliance.org
410.332.4172 | ext. 123

 **Charm City EcoVillage**
www.facebook.com/CharmCityEcoVillage

 **Cherry Hill People's Garden**
cherryhillpeoplesgarden.wordpress.com
410.704.2553


 **Chesapeake Bay Foundation**
www.cbf.org
1.800.SAVEBAY


 **Chesapeake Bay Trust**
www.cbtrust.org
410.974.2941


 **Chesapeake Climate Action Network**
www.chesapeakeclimate.org
+1.240.396.1981


 **Chesapeake Compost Works**
www.chesapeakecompost.com


 **Children in Nature Network**
www.childrenandnature.org

 **Citizens Planning & Housing Association**
www.cphabaltimore.org
410.539.1369


 **City Bizlist**
baltimore.citybizlist.com
443.562.9472

 **Civic Works**
www.civicworks.com
410.366.8533

 **CleanerGreener Baltimore Initiative**
www.cleanergreenerbaltimore.org
410.396.3835

 **College of Notre Dame**
www.ndm.edu
410.435.0100


 **Community Greening Resource Network**
www.parksandpeople.org/greening/resource-network/
410.448.5663

 **Commuter Connections | GUARANTEED RIDE HOME PROGRAM**
www.mwcog.org/commuter2/commuter/grh/index.html
1.800.745.RIDE (1.800.745.7433)

 **Constellation Energy**
www.constellation.com
1.866.237.7693

 **Construction and Energy Technologies Education Consortium**
www.cetecmd.org
443.840.4661

 **Coppin State College**
www.coppin.edu
410.951.3000


 **CSX Corporation**
www.csx.com
1.877.ShipCSX (1.877.744.7279)


 **East Coast Greenway**
www.greenway.org
+1.919.797.0619


 **Eat Fresh Maryland Network**
www.eatfreshmd.com
+1.301.891.7244

 **Eco-check**
www.eco-check.org
410.221.2005

 **EnviroEducation**
enviroeducation.com/states/Maryland

 **Environmental Justice Partnership**
www.environmentaljusticepartnership.org

 **The Environmental Literacy Council**
www.enviroliteracy.org
202.296.0390

 **The Farm Alliance of Baltimore City**
www.farmalliancebaltimore.org


 **Friends of...**
CARROLL PARK
www.friendsofcarrollpark.blogspot.com
DRUID HILL PARK
www.druidhillpark.org
443.469.8274
GWYNNS FALLS/LEAKIN PARK
www.friendsofgwynnsfalls.leakinpark.org
HERRING RUN PARKS
www.thefhrp.org
MARYLAND'S OLMSTED PARKS AND LANDSCAPES
www.olmstedmaryland.org
PATTERSON PARK
www.pattersonpark.com
410.276.3676
STONY RUN
www.stonyrunfriends.org/srcms/
WEST BALTIMORE SQUARES
www.westbaltimoresquares.org
WYMAN PARK DELL
www.wymanparkdell.org

 **Future Harvest**
www.futureharvestcasa.org

 **Gather Baltimore**
www.gatherbaltimore.org

 **Great Kids Farm**
www.baltimorecityschools.org/greatkidsfarm
443.642.3928


 **Great Kids Up Close**
www.greatkidsupclose.org
443.642.3954

 **Green & Healthy Homes Initiative**
www.greenandhealthyhomes.org
410.534.6447

 **Green Building Institute**
greenbuildingnetwork.groupsie.com/main/summary
443.733.1234

 **Green Jobs Network**
www.maryland.greenjobs.net

 **Greening Reservoir Hill**
rhicgreen.org
410.225.7547

 **Greenspring Energy**
www.greenspringenergy.com
443.322.7000


 **Hamilton Crop Circle**
www.facebook.com/HamiltonCropCircle?ref=ts
1.910.200.9181

 **Healthy Harbor Initiative**
www.healthyharborbaltimore.org

 **Hidden Harvest Farm**
facebook.com/groups/hiddenharvestfarm

 **Holistic Life Foundation**
www.hlfinc.org
410.669.0645


 **Housing and Transportation Affordability Index**
htaindex.cnt.org


 **Interfaith Power & Light**
interfaithpowerandlight.org/
+1.415.561.4891 [California]

 **Irvine Nature Center**
www.explorenature.org
443.738.9200

 **Johns Hopkins University**
www.jhu.edu
410.516.8000

 **Johns Hopkins Center for a Livable Future**
www.jhsph.edu/clf
410.502.7578

 **Johns Hopkins Sustainability Office**
www.sustainability.jhu.edu
410.516.5544


 **Johns Hopkins ZipCar**
www.zipcar.com/jhu
1.866.4ZIPCAR (1.866.494.7227)

 **Living Classrooms**
www.livingclassrooms.org
410.685.0295

 **The Loading Dock**
www.loadingdock.org
410.558.3625

 **Main Street Maryland**
www.neighborhoodrevitalization.org/programs/mainstreet/mainstreet.aspx

 **Maryland Association for Environmental and Outdoor Education**
www.maeoe.org
443.733.1220 | ext. 114

 **Maryland Clean Energy Center**
mdcleanenergy.org
443.949.8505

 **Maryland Department of Agriculture**
www.mda.state.md.us
410.841.5700

 **Maryland Department of Business & Economic Development**
www.choosemaryland.org
410.767.6300

 **Maryland Department of the Environment**
www.mde.state.md.us
410.537.3000

 **Maryland Department of Natural Resources**
www.dnr.state.md.us
1.877.620.8DNR (8367)

PROGRAM OPEN SPACE
www.dnr.state.md.us/land/landconservation.asp

TREE-MENDOUS MARYLAND
www.dnr.maryland.gov/forests/treemendous/

 **Maryland Department of Planning | SMART, GREEN & GROWING**
www.green.maryland.gov
410.260.8021


 **Maryland Division of Labor and Industry (DLLR)**
www.dllr.state.md.us/greenjobs/
410.230.6001

 **Maryland Energy Administration**
energy.maryland.gov

 **Maryland Farm-To-Table Produce**
www.mdfarmtotable.com/web/content/Home.aspx
443.762.1677

 **Maryland Green Registry**
www.mde.maryland.gov/MarylandGreen
410.537.3000

 **Maryland Hospitals for a Healthy Environment**
mdh2e.org

 **Maryland Institute College of Art (MICA)**
www.mica.edu
410.669.9200

 **Maryland Hunger Solutions**
www.mdhungersolutions.org
410.528.0021


 **Maryland League of Conservation Voters**
www.mdlcv.org
410.280.9855

 **Maryland Master Gardeners**
www.mastergardener.umd.edu
410.531.5556

 **Maryland Native Plant Society**
www.mdflora.org/chapters/baltimore/baltchapter.html


 **Maryland Pesticide Network**
www.mdpestnet.org

 **Maryland Port Administration**
www.mpa.maryland.gov

 **Maryland Sierra Club**
www.maryland.sierraclub.org
301.277.7111


 **Maryland Transit Administration**
mta.maryland.gov

 **Maryland Transportation Authority**
mdta.maryland.gov
410.537.1000

 **The Maryland Zoo in Baltimore**
www.marylandzoo.org
410.396.7102


 **Masonville Cove Environmental Education Center**
www.masonvillecove.org
410.246.0669

 **Morgan State University**
www.morgan.edu
443.885.3333

 **National Aquarium**
www.aqua.org
410.576.3800

 **Neighborhood Design Center**
www.ndc-md.org

 **Northeast Maryland Waste Disposal Authority**
www.nmwda.org
410.333-2730


 **Parks and People Foundation**
www.parksandpeople.org
410.448.5663

 **Patterson Park Audubon Center**
pattersonpark.audubon.org
410.558.2473


 **Pescatore Backyard Delicacies**
www.adamopescatore.com

 **Power in Dirt**
www.powerindirt.com

 **Real Food Farm**
www.realfoodfarm.org
443.531.8346

 **Rebuilding Together**
www.rtbaltimore.org
410.889.2710

 **Relay Foods**
www.relayfoods.com
202.618.6048


 **Retrofit Baltimore**
www.retrofitbaltimore.org
410.929.6139


 **The Samaritan Women Farm**
www.thesamaritanwomen.org


 **Second Chance**
www.secondchanceinc.org
410.385.1101

 **Sojourner-Douglass College**
www.sdc.edu
410.276.0306


 **Terracycle**
www.terracycle.com
609.393.4252

 **Transit Riders Action Council**
getontrack.org
410.837.0225


 **TreeBaltimore**
www.treebaltimore.org
410.458.7888

 **Under Armour**
www.underarmour.com
888.727.6687

 **Urban Farmhouse**
www.urbanfarmhouseonline.com
410.963.2712

 **US Green Building Council | Maryland**
www.usgbcmd.org
202.828.7422

 **Waste Neutral Group**
www.wasteneutral.com
443.838.1826


 **Waterfront Partnership of Baltimore**
www.waterfrontpartnership.org
410.528.1523

 **Walkscore**
www.walkscore.com/

 **Whitelock Community Farm**
www.whitelockfarm.org
410.205.OKRA (6572)

 **Youthworks**
www.oedworks.com/youthserv/summer.htm
410.545.1820

 **Zero Litter**
www.zerolitter.com
www.facebook.com/ZeroLitter

 **Zipcar**
www.zipcar.com/baltimore/find-cars
410.685.1867



You may view the Annual Sustainability Reports from previous years by clicking on the **RESOURCE CENTER** tab of the Baltimore Office of Sustainability Website. Or, by entering the following url into your browser:

<http://www.baltimoresustainability.org/resources>

The Resource Center is your go-to source for information on all things relating to sustainability in Baltimore. It offers a variety of downloadable content as well as links to outside resources.

At the Resource Center, you may view information on current **PROGRAMS** or download past **EDUCATIONAL PRESENTATIONS**—like those given at Commission on Sustainability meetings. Additionally, the site offers a number of downloadable **SUSTAINABILITY GUIDES**, including:

- *Baltimore's Eco-Friendly Holiday Guide*
- *Bicycle Commuter Resource Guide*
- *Energy Saving Tips and Resources*
- *Greening Neighborhoods Guide*
- *Guide to Composting in Baltimore*
- *Guide to Preserving Community Managed Open Spaces*
- *Guide to Turn Vacant Lots into Gardens*

In addition to the abovementioned resources, the site offers information on the Baltimore City Plastic Bag Reduction Program, Community Energy Savers Grant, School Programs, Urban Agriculture, and much more.

As of 2014, the Commission on Sustainability meets on the 3RD Tuesday of every month. Check the website for any changes.

ACKNOWLEDGEMENTS

BALTIMORE COMMISSION ON SUSTAINABILITY

Ted Atwood
Miriam Avins
Cheryl Casciani, *Chair*
John Ciekot
Dana Cooper
Peter Doo
Francis Flanigan
Lynn Heller
Earl Johnson
Sharon Middleton
Ruth Ann Norton
Gerie Okwesa
Cindy Parker
John Quinn
Scot Spencer
Thomas J. Stosur
Mary Washington
Edward Whalen

REPORT PREPARATION

Alice Kennedy
Annual Report Project Manager
Clara Hickman
Annual Report Editor & Graphic Designer

BALTIMORE OFFICE OF SUSTAINABILITY STAFF

Beth Strommen
Director
Alice Kennedy
Sustainability Coordinator
Kristin Baja
Climate and Resilience Planner
Amy Gilder-Busatti
Landscape Architect
Abby Cocke
Environmental Planner
Zane Hadzick
Environmental Planner
Andrea Calderon
Green Schools Assistant
Turtle
Sustainability and Resilience Messenger
Holly Freishtat
Baltimore City Food Policy Director
Sarah Buzogany
Food Access Coordinator
Alice Huang
Healthy Food Coordinator
Joanna Winkler
Homegrown Baltimore Coordinator



Baltimore City Office of Sustainability
417 East Fayette Street | 8th Floor
Baltimore, MD 21202

www.baltimoresustainability.org
sustainability@baltimorecity.gov

tel 410.396.4556
fax 410.244.7358



www.facebook.com/BaltimoreSustainability



[@SustainBmore](https://twitter.com/SustainBmore)