

annual report

2016-2018



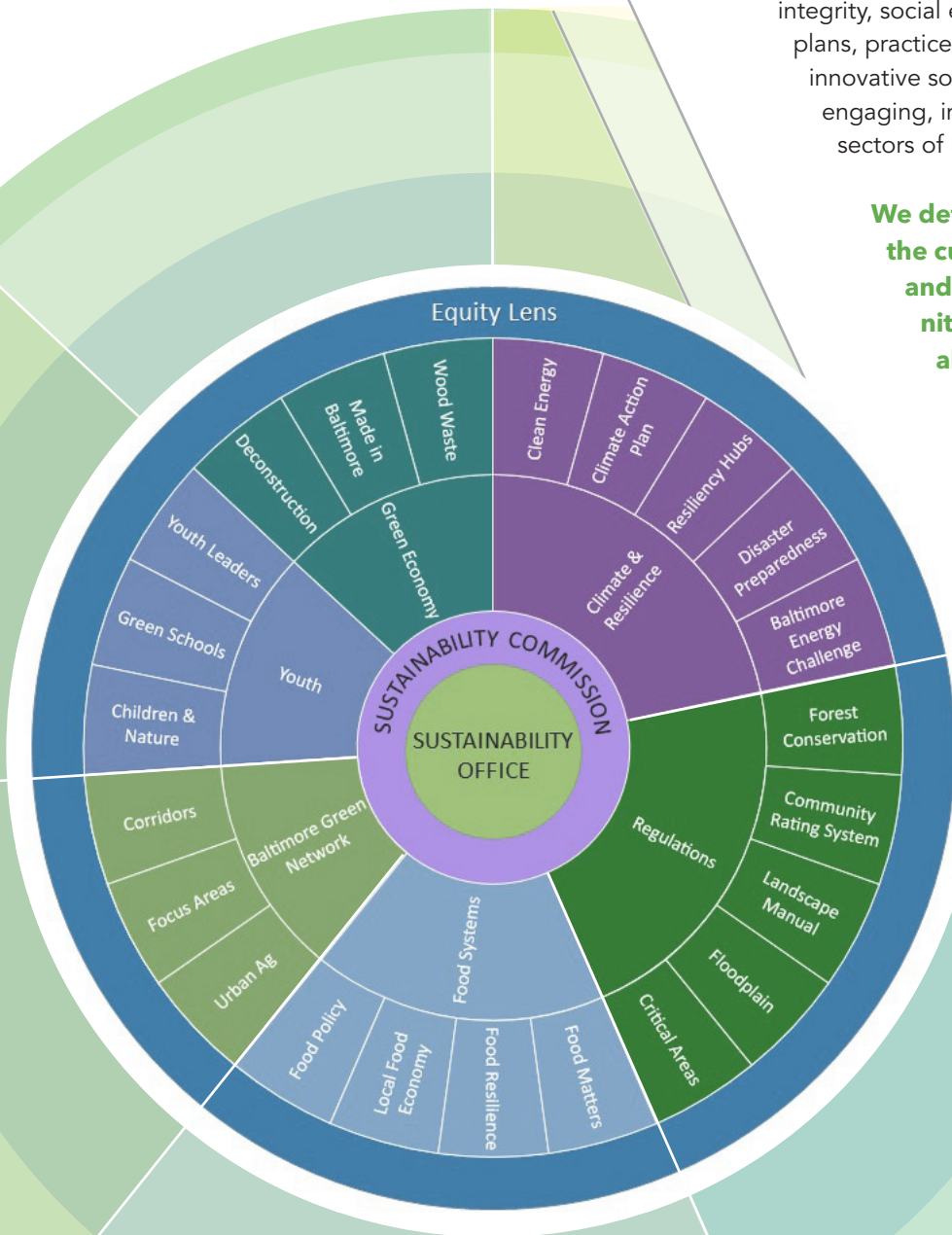
**Baltimore Office
of Sustainability**
People • Planet • Prosperity

About

The Baltimore Office of Sustainability acts as a resource, catalyst, and an advocate in creating an equitable and resilient Baltimore. We integrate environmental integrity, social equity, and economic prosperity into plans, practices, and policies. Our aim is to provide innovative solutions to our city’s challenges while engaging, inspiring and collaborating with all sectors of Baltimore.

We define sustainability as “meeting the current environmental, social, and economic needs of our community without compromising the ability of future generations to meet these needs”.

As we begin implementing the 2019 Sustainability Plan, we will look to expand our expertise and collaborate even more deeply with government, community, non-profit and institutional partners and make sure that implementation is inclusive, equitable and innovative.



Introduction

Let’s roll up our sleeves and commit to a more sustainable and equitable Baltimore.

On March 18, 2019, the Baltimore City Council unanimously voted to adopt the 2019 Sustainability Plan. With that approval comes the expectation of reporting “on the state of the Sustainability Plan’s implementation, goal achievements, and other effects.”

As we move from planning to doing, this 2016-2018 Annual Report serves to recognize some of the accomplishments that were made while the Plan was being developed. In addition to providing details on the major plans that guide the work of the Baltimore Commission on Sustainability and the Office of Sustainability, this Report offers stories and data on major milestones. It shares the framework from the 2019 Plan, with sections for Equity, Community, Human-Made Systems, Climate and Resilience, Nature in the City, and Economy. It also includes highlights from some of our many partners who share common goals and work to make Baltimore better every day.

It is important to celebrate successes, and Baltimore has many in the last three years, including:

- Establishment of an urban agriculture tax credit
- Adoption of a new Complete Streets ordinance focused on safety
- Achieving a Class 5 CRS rating for our flood mitigation work
- Increasing the tree canopy to 28% (a gain of 200 acres)
- Launching the Made in Baltimore program
- Creating an Equity Assistance Fund and an Equity Assessment Program

Enjoy reading about these and other milestones – and let’s get started on the stories and successes for next year’s report!

Sustainability Plan Framework



The Baltimore Sustainability Plan

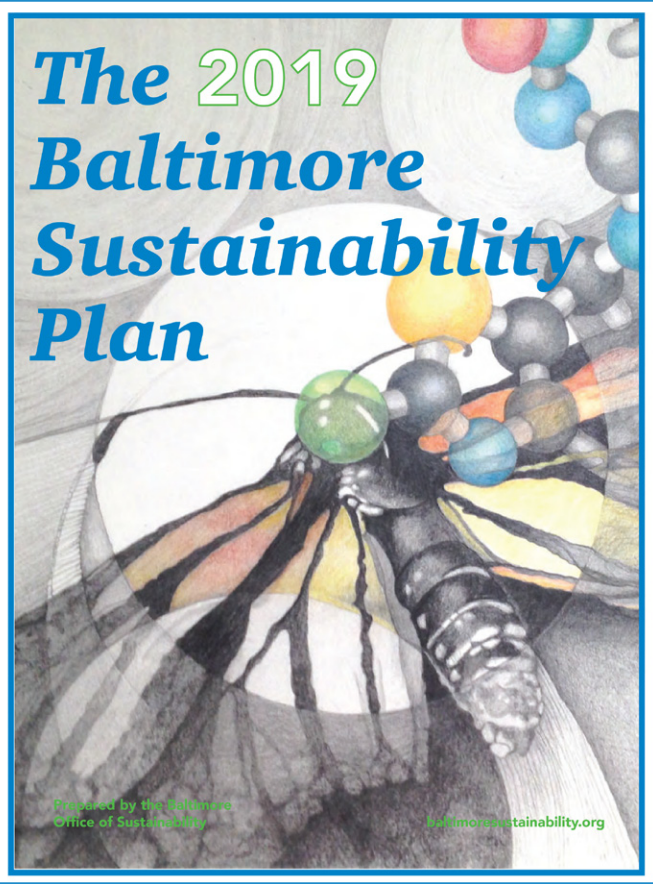
The 2019 Sustainability Plan Articulates a Vision for a Future Where We All Do Better

In Baltimore, we need to repair, heal, and re-thread the fabric of our community. Weaving a new framework will lead to a different future where we can collectively create the conditions for each of us to heal ourselves, each other, and the earth, and generate a healthy future for us all.

Updating the Sustainability Plan afforded us the opportunity to hear a large number of personal stories and voices, and to identify steps to resolve unjust practices and create new sustainable ones. It was an opportunity to highlight and convey the message that every story in our city—and everyone in our city—counts.

In order to include many voices, 125 residents signed on as Sustainability Ambassadors. Together, we developed a survey that reached 1,200 neighbors, friends, and family. Interviews afforded the opportunity for neighbors to talk to one another about their ideas, needs, and visions for our future. While Ambassadors fanned out to conduct interviews at bus stops, markets, churches, schools, stoops, and kitchen tables, Sustainability Commissioners and Office of Sustainability staff engaged over 500 experts. Leaders from areas such as energy, racial equity, food and farming, business, transportation, waste, neighborhoods and workforce—offered their visions for a more sustainable Baltimore. Residents provided input on the Plan at public meetings and as part of working groups. More than 1,000 comments were received on our website alone: participants added ideas, as well as reviewed and responded to others’ comments.

The 2019 Sustainability Plan has 5 main categories: Community, Human-Made Systems, Climate and Resiliency, Nature in the City, and Economy, and, 23 topics ranging from Food to Affordable Housing to Neighbors. With 70 strategies, 244 actions, and 78 measures of success. It sets an ambitious but achievable agenda.



Further, the Plan is globally inspired! As part of the USA Sustainable Cities Initiative (USA-SCI), Baltimore was selected to be one of three U.S. cities to pilot localizing the Sustainable Development Goals (SDGs), the ambitious vision adopted by the United Nations (UN) to address the most pressing global challenges of our time. The SDGs permeate the work.

At least every three years, the Commission on Sustainability and the Office of Sustainability will update strategies, set new benchmarks, and identify new or refined metrics. When we do, we will be seeking your ideas.

Disaster Preparedness

Baltimore’s DP3 Offers Actions to Reduce Vulnerability to the Impacts of Severe Climate Events

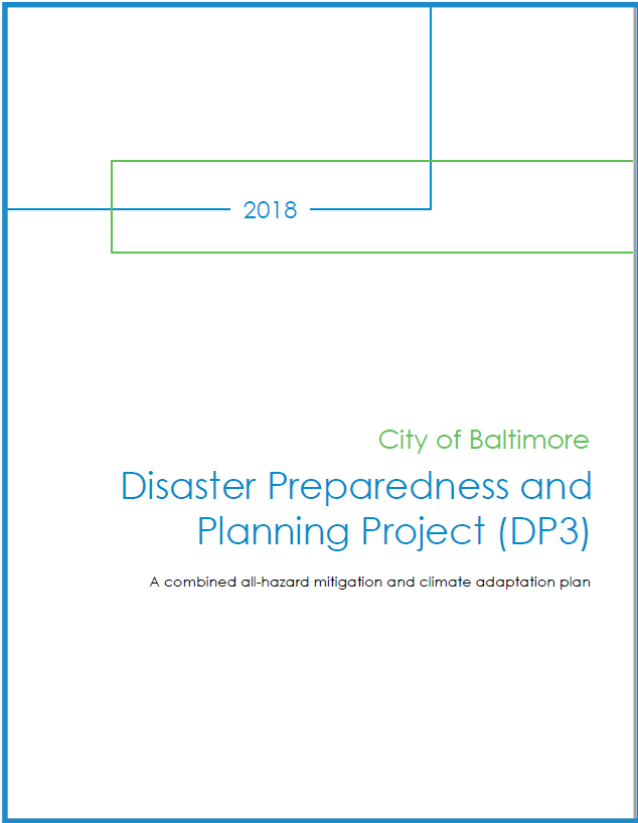
Baltimore is prone to flooding, precipitation variability and coastal hazards such as sea level rise, storm surge, winter storms, extreme wind events, extreme heat, and earthquakes and sinkholes. These events are expected to increase in frequency, intensity, and unpredictability. Thus, adaption and hazard mitigation planning is a continuous process for the City of Baltimore.

The Office of Sustainability’s, Baltimore’s Disaster Preparedness and Planning Project (DP3) addresses hazards due to these increasingly frequent, severe, and unpredictable impacts of climate change.

It addresses the need to increase resilience – both on the community and individual level – to disasters and uses a comprehensive approach to All-Hazard Mitigation Planning. The DP3 fulfills a federal mandate requiring local governments to have an approved plan, making the City eligible to receive grant assistance for hazard mitigation and disaster recovery projects.

In 2018, the DP3 was updated to incorporate the latest climate science and new hazard and vulnerability assessments. To guide the update an Advisory Committees was formed and community input was received through interviews and an online survey. The 2018 DP3 provides a vision for incorporating man-made hazards, addressing equity at a deeper level, and, offering a stronger focus on (1) food resilience, (2) community resiliency planning, and (3) hazard mitigation planning for the city’s historic resources.

The DP3 update was approved at the local (Planning Commission and Sustainability Commission), state (MEMA) and federal (FEMA) levels prior to final adoption on December 20, 2018.



Climate Action Plan

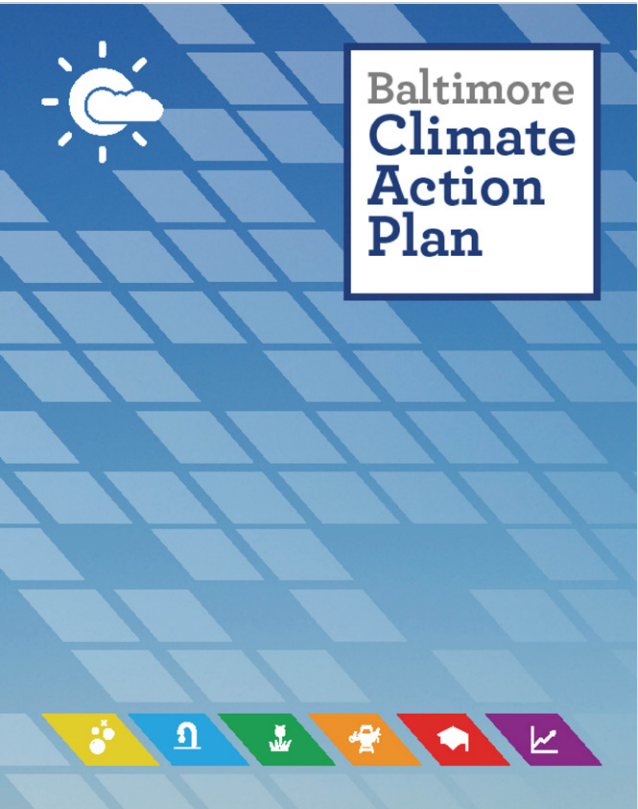
Our Goal: Reduce Greenhouse Gases 25% by 2020 and 35% by 2025

Baltimore’s Climate Action Plan (CAP) (2012) set a strategic approach to reducing greenhouse gas emissions (GHGs) and promoting a lower-carbon economy. Guided by a 22-member Advisory Committee and multiple working groups, emission reduction goals and related strategies were developed. On the global level, GHG accumulation in the Earth’s atmosphere is the core cause of climate change, the impacts of which are being seen in Baltimore.

Some accomplishments:

- Baltimore signed the ‘We Are Still In’ Pledge and has been active in the Climate Mayors’ network supporting the Clean Power Plan and strong auto efficiency standards.
- The City Zoning Code (2016) added standards for renewable energy uses and reduced off street parking requirements.
- Safe Routes to School was instituted at schools across the city and most recently as part of the INSPIRE program at 21st century schools.
- Leased electric vehicles were rotated across city agencies to test use, interest and comfort.
- A centralized fueling program with route optimization software was installed by city government.
- The Port of Baltimore expanded fuel-efficiency programs and reduced GHG emissions associated with operations.
- The City participates annually in the Carbon Disclosure Project, an emissions reporting platform to transparently disclose, track, and manage our environmental impacts.

An update to the CAP is coming soon. Stakeholders will be engaged, a new GHG emissions inventory will be conducted, new climate change scenario projections will be developed, and ambitious emissions targets will be set - renewing momentum around GHG emissions reduction in the city.



Success Story: Walking School Bus

The Department of Planning, Transportation and Recreation and Parks partner together to ensure that students and community members have safe, attractive pedestrian access to school.



Improvements are made to primary walking routes: side-walks are repaired, crosswalks are added or repainted, routes are marked, trees are planted and pruned and vacant lots are maintained. At Frederick Elementary, under adult supervision, school children walk to and from school

together while playing games, singing songs and learning tips on safely crossing the street.

Baltimore Green Network

Green Network Pilot Projects Advance

The Baltimore Green Network (BGN), adopted in 2018, is a collective, bold vision for re-imaging vacant properties and transforming them into community assets. BGN offers a blueprint for revitalizing areas into open space, parks, gardens and future development sites. By strategically transforming liabilities such as vacant lots into green spaces, we can create access to nature and recreation throughout the city, while supporting neighborhoods most in need of investment. BGN is focused on creating healthy, well-maintained spaces which lead to stronger connections in and between neighborhoods as well as connect people with parks, river valleys, major institutions and the waterfront.



A primary focus for creating new green nodes has been through pilot projects identified with the BGN Focus Area communities as part of the planning process. Concept plans have been developed for two sites: Rachel Wilson Memorial Park in Boyd-Booth, and Harlem Park Inner Block Q112 in Harlem Park, and work has begun to procure pre-construction drawings and permitting for these sites. BGN is working with residents in Sandtown-Winchester and Druid Heights to develop concept plans for Smithson Street Park and Druid Square. The BGN has also worked with Baltimore City Recreation and Parks and the New Broadway East Community Association to complete a pocket park in Broadway East and with the Pimlico Community Merchants Association and Pimlico Community Association to create a pocket park in Park Heights.

Examples of green corridors envisioned through the BGN include tree-lined boulevards connecting parks and open-spaces to schools and neighborhood retail districts, improved stream corridors providing habitat for wildlife and creating healthier waterways, and shaded corridors with attractive plantings, and green features connecting residents to one another and to nature. BGN has been working with DOT and other partners to advance priority bike and pedestrian improvements that support this vision. Initial projects include:

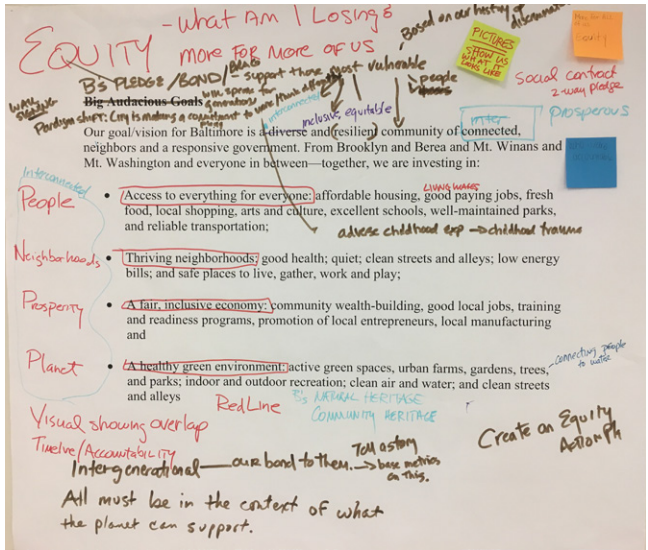
- The 35 Mile Greenway Trail Loop
- Martin Luther King Blvd to the West Baltimore MARC Station Bike and Pedestrian Improvements
- Middle Branch Area Bike and Pedestrian Improvements
- West Druid Hill Park On-Street Bike and Pedestrian Improvements

equity

Equity:

“The condition that would be achieved if identities assigned to historically oppressed groups no longer acted as the most powerful predictors of how one fares.”

Baltimore Racial Justice Action



Equity Engagement Process

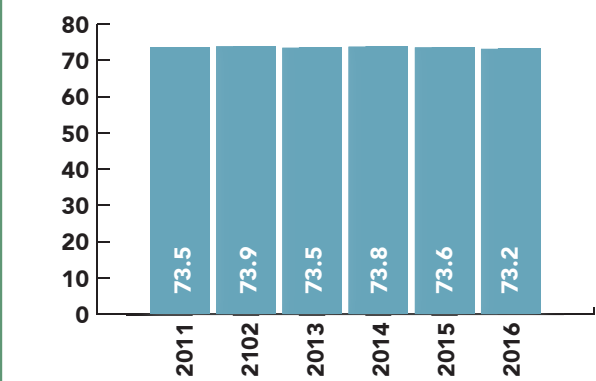
as a companion to the Sustainability Plan. Its purpose is to assist those who are implementing the Plan to do the work more equitably. It provides a framework to incorporate equity considerations during design, planning, decision-making, and implementation processes, and to encourage accountability. The equity considerations include attention to an implementation effort’s purpose and intent, budget and work planning, data and information gathering, inclusive community engagement, equitable impacts analysis, and accountability.

2019 Sustainability Plan Guidance for Equitable Implementation

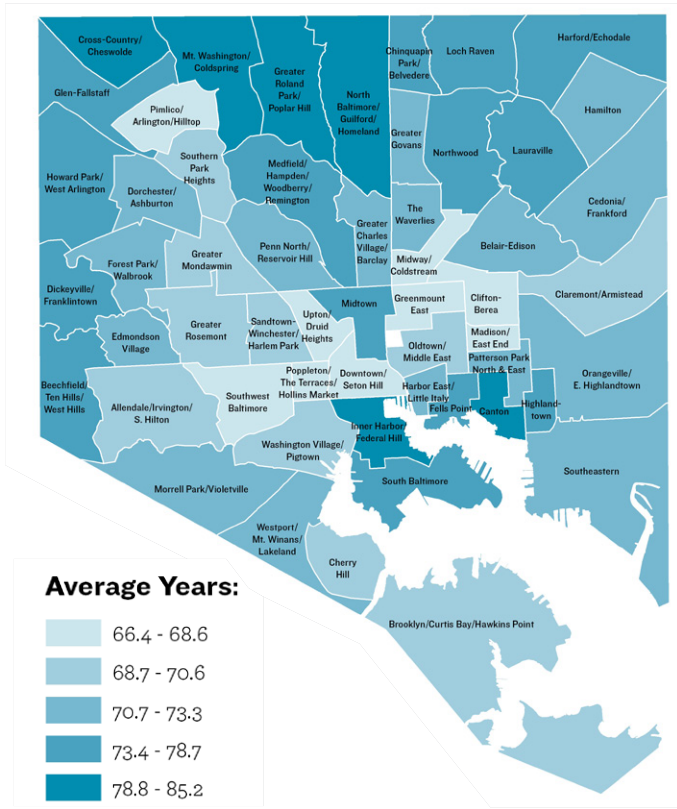
As part of the 2019 Sustainability Plan, the Commission on Sustainability and the Office of Sustainability are committed to more intentionally addressing implicit bias and removing barriers for racial and other marginalized groups. Our goal is to help eliminate the forces that create and sustain institutional and structural racism and other entrenched inequities in Baltimore. When discussing, creating, and implementing policy, projects, and programs, we commit to using our power to achieve racial equity.

The Plan uses an equity lens to approach integrating social equity, the environment, the economy, resiliency, and regeneration. To continue this integration, a Guidance Document for Equitable Implementation is included

Data Snapshot: Life Expectancy
Source: Baltimore City Health Department/BNIA-JFI



Most of the issues closely related to current inequities in Baltimore are deeply tied to sustainability. Public health, for example, is an area where Baltimore has glaring disparities. These disparities are stark: The majority-white neighborhood of Roland Park has an average life expectancy that is 20 years longer than the majority-black neighborhoods of Harlem Park or Sandtown-Winchester. The Health Department has committed to reducing racial health disparities that are currently rampant in overdose deaths, youth homicides, obesity, cardiovascular disease, and infant mortality. This commitment is expressed in the City's "Healthy Baltimore 2020 Blueprint."



Resident Food Equity Advisors Share Expertise & Release Recommendations



2018 Resident Food Equity Advisor Group.

Formed in 2017, the Resident Food Equity Advisors program is part of the Office of Sustainability's Food Policy Initiative. Advisors with interest and experience in food access and healthy eating are financially compensated for attending meetings to learn and share their expertise related to the food environment. In 2018, with a focus on small food retail, Advisors received briefings and presentations from subject matter experts to equip them with an understanding of the state of small food retail and policy and programmatic tools. After an intensive process of learning, sharing and engaging, four key recommendations were generated and the Small Food Retail Recommendations were released to serve existing customers and also attract and encourage more residents to shop in their communities.

City Council Passes Equity Legislation

In 2018, the Baltimore City Council passed legislation and Baltimore voters subsequently supported a charter amendment to create an Equity Assistance Fund, to be used exclusively to assist efforts that reduce inequity based on race, gender and economic status. The City Council also passed legislation creating an Equity Assessment Program, which requires City agencies to assess existing and proposed policies and practices for disparate outcomes and proactively develop policies to prevent and redress those outcomes.

Equity in Planning Committee Accomplishments

In 2015, Office of Sustainability staff played an active role in the formation of an Equity in Planning Committee within the Department of Planning. The committee uses an equity lens to develop, revise, and evaluate City and department practices and policies, and increase dialog and connections between the department and historically underserved communities in Baltimore. The committee developed an Equity Action Plan, which guides its efforts. Some outcomes of this action plan include the creation of a new Assistant Director for Equity, Engagement, and Communications position within the Planning Department, the launch of the department's six-week Planning Academy course, and an equity analysis of City Capital Improvement Project (CIP) spending.



Fall 2018 Planning Academy Graduation

community



Homegrown Baltimore: Baltimore City's Urban Agriculture Plan



Homegrown Baltimore, adopted in 2013, is an ambitious plan to support and expand the production of locally grown food. It lays out current local urban agriculture efforts and policies; identifies challenges and provides recommendations for creating a more robust urban agriculture sector. All types of food production, from backyard gardening to commercial farming, are considered. The plan is currently being updated.

Homegrown Baltimore represents a commitment to:

- Provide equitable access to healthy foods for all residents
- Support Baltimore's gardeners, farmers and businesses
- Promote environmental sustainability
- Utilize vacant space productively.

Urban Agriculture Tax Credit Established

Office of Sustainability staff led a group of advocates, city agencies and City Council to craft an urban agriculture tax credit. The bill was a careful compromise providing farmers with a 90% credit on property taxes on parcels that are not used as residences, and that will be used for agriculture for five years.

Capital Project Support for Urban Farms on City-owned Lots

From 2016-2018, the Office supported farmers and gardeners at five City-owned sites and secured \$81,354 in capital bond funds for surveying, brush clearing, asphalt removal, roof repair, and water line installation.

Partner Success Story:
The Plantation Park Heights

The Plantation Park Heights was founded on two City-owned lots by resident, Richie Francis, a native of Trinidad & Tobago. Sandwiched between crumbling vacant houses, Richie started with a small raised-bed. He engaged neighbors including local children, and was able to grow lots of vegetables and distribute them for free. With support from the Office of Sustainability, the Planning Department and the Department of Housing and Community Development (HCD), adjacent lots were identified for expansion. Using funds from the City-administered Pimlico Community Development Authority, Mr. Francis and his team relocated to a much larger inner-block lot behind the original site and erected new raised beds, a large hoop house, and a tool shed. A five year lease for the farm is being developed as are long-term plans for transforming this block of Park Heights include a farm stand, a stage for community events, community art installations, and more.



Park Heights Plantation - photo by Richie Francis

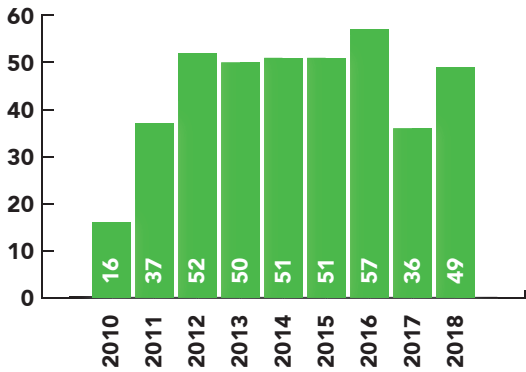
Over \$500,000 of Environmental
Projects Funded in 75% of City Schools

The Office of Sustainability kicked off the Green, Healthy, Smart Challenge grant in 2010 in partnership with the Baltimore Community Foundation, Baltimore Energy Challenge, and City Schools Additional funding has come from Exelon and Enterprise Partners. Grants are for student-led environmental projects at Baltimore City public schools. The Office of Sustainability works closely with teachers and students to support the development and implementation of successful projects:

- building schoolyard gardens and outdoor classrooms
- installing rain gardens
- growing plants and animals for conservation or agricultural purposes,
- planting trees,
- organizing community cleanups,
- participating in environmental field trips, and
- conducting awareness campaigns.

Data Snapshot: Baltimore City Schools
Participating in the Green, Healthy,
Smart Challenge

Source: Baltimore Office of Sustainability



As of the start of 2019, approximately \$266,494 has been distributed through the Green, Healthy, Smart Challenge to a total of 138 schools, engaging thousands of students in making hands-on improvements to their schools and communities.



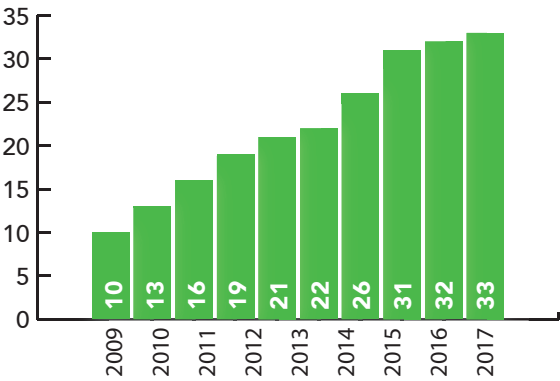
Hamilton Elementary / Middle School Garden

More City Public Schools Become
Certified Green Schools

The Office of Sustainability supports Maryland Green School certification requiring schools to engage in environmental instruction across subjects and grade levels, develop partnerships, and engage in student-led sustainability practices. Schools must recertify every four years.

Data Snapshot: Number of
Public Schools Certified as Green
Schools in Baltimore City

Source: Maryland Association of
Environmental & Outdoor Education



As of the end of 2018, 33 City Schools are certified as Maryland Green Schools.

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.

Youth Environmental Intern Achievements



Annapolis Lobby Day

In 2015, the Office of Sustainability developed the Youth Environmental Internship program. Using private funds, high school interns are paid, encouraged to identify environmental issues, and then develop plans for advocacy. Office of Sustainability staff provide training, team-building, access to resources, and all-around support. So far, we have employed fourteen students whose efforts have been wildly successful. Our interns won the Chesapeake Student of the Year award the last 3 years. And in 2018, two of our interns won the prestigious Brower Youth Award, given out to just seven young people across North America!

Our interns founded Baltimore Beyond Plastic, engaging hundreds of students in local and state efforts to ban expanded polystyrene (aka Styrofoam). They were presented with certificates from the Baltimore City Board of School Commissioners, who voted to switch from foam to compostable trays in cafeterias. In April 2018, the Baltimore City Council passed a local foam ban bill and City Council President Jack Young, who had initially opposed the legislation, cited student advocacy as to what caused him to change his mind. The passage of the Baltimore bill helped tip the balance in the state, a fact that is played a major role in helping move the state legislature towards a first-in-the-nation statewide ban.

Partner Success Story: Academy for College & Career Exploration (ACCE)

With their 2018 Green, Healthy, Smart Challenge grant, the ACCE team built on past projects and spent the school year delving into lessons on pollinators and agricultural practices, waste management, alternative energy, and energy conservation. Students raised and released 15 monarch butterflies, harvested 50 4 oz. jars of honey from their own bees, and raised and cooked 20 tilapia. They also took trips to the Patapsco Wastewater Treatment Plant to learn about impacts of human waste on the environment and to the Chesapeake Bay Environmental Center for lessons on water quality and energy conservation. Applying their knowledge, they created 10 wind and solar powered model vehicles. The school capped off the year with their first successful recertification as a Maryland Green School!

Waste to Wealth Initiative: Advancing Recovery of Food, Forest and Construction Waste

Americans continue to landfill the majority of waste produced –roughly 60% for the US as a whole. Many materials that are recovered for recycling can be reprocessed and used again to obviate the need for virgin supplies of the same material. Waste to Wealth initiative led by the Office of Sustainability prioritizes three streams – food waste, urban forest waste, and construction and demolition. The ultimate goal of W2W is to determine the most efficient ways to manage these waste streams from environmental, economic, social justice, and job creation points of view. Waste can be viewed as an essential resource for building a more sustainable future.

Building Deconstruction is affiliated with the *Vacants to Value* program, which is removing abandoned homes to help improve neighborhoods. The key link between these two programs is **deconstruction instead of demolition**. Among many benefits is the recovery of valuable bricks and lumber which are otherwise likely to be disposed or simply piled up and forgotten. It takes more workers to pry apart a building than to operate a wrecking ball, but there are also more benefits. Although that makes deconstruction more expensive, creating additional jobs is appealing in a city where 23 percent of residents live in poverty. The Department of Housing and Community Development has regularly solicited contractors for deconstruction work since 2014. There have been about 200 deconstruction projects since it began.

For over 70 years **Camp Small** has been the City of Baltimore’s collection facility for removed and downed trees on public land. **The Urban Wood Utilization Initiative**, a partnership with the Office of Sustainability, Forestry, and the City’s Purchasing and Budget Bureaus began at Camp Small in 2016 with a \$98,000 loan from the City’s Innovation Fund. The program took off quickly and the loan was paid down within 2 years using sales revenue and cost savings.



Log Sorting - photo by Andy Cook

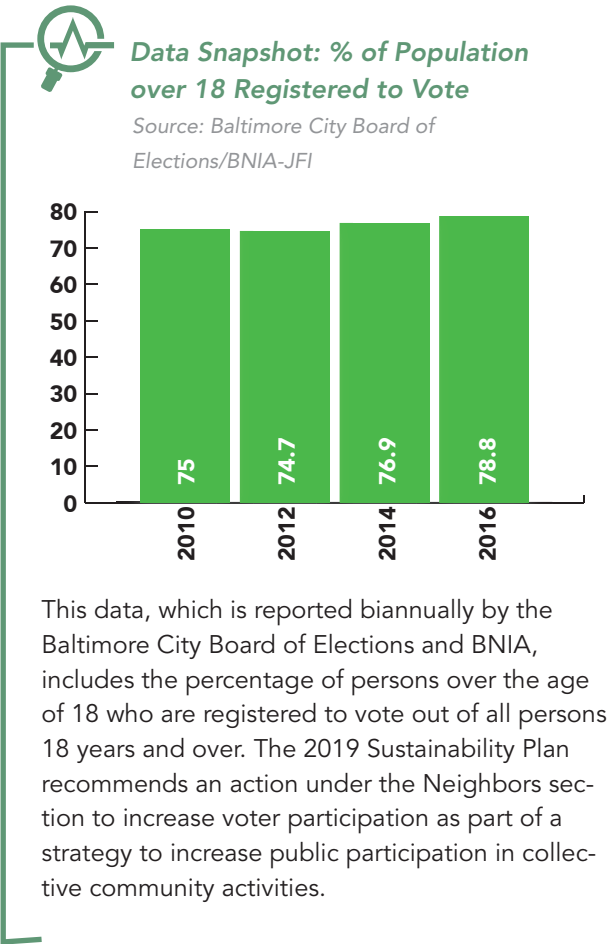
Camp Small has made big strides in repurposing city wood. The Department of Recreation and Parks’ new Cahill Recreation Center in west Baltimore will incorporate 130 large ash, walnut, and poplar logs from Camp Small. Logs have also been used in Baltimore’s first Nature Playspace, Francis Scott Key Elementary School’s new outdoor play-scape, as well as for seating play spaces, outdoor classrooms and community spaces. Tree stakes created from Camp Small logs cost the City 60% less per stake. And, American Forests award Camp Small a grant to purchase a portable band sawmill and a lumber kiln that supported the creation of a wood products



Camp Small - photo by Andy Cook

The Baltimore **Food Matters** program is a collaborative effort between the Natural Resource Defense Council (NRDC), the Rockefeller Foundation and the Office of Sustainability to advance food waste reduction, food rescue and food scarp recycling as detailed in Baltimore’s Food Waste and Recover Strategy. In Baltimore, at least 25% of all waste generated is food waste and one-third of the materials sent to our landfill and incinerator is compostable. At the same time, 138,150 people (22.2%) in Baltimore are food insecure.

The Office of Sustainability is implementing community-led solutions and programs, creating stronger linkages between food rescue stakeholders and food insecure residents, and providing capacity-building funds toward food waste reduction efforts. Our current projects include: 1) the implementation of a decentralized community composting program with multiple drop-off locations in the city, 2) the *Save the Food* Campaign designed to educate consumers about practices which prevent edible food from going to waste and 3) a food waste education series.



2019 Baltimore Office of Sustainability Staff



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Challenge Coordinator



Victor Ukpole Jr.,
Floodplain Manager



human systems



Maryland Ave Cycletrack - photo by Eli Pousson

Baltimore Takes a 'Big Jump' Toward Bicycle Infrastructure & Safety

Between 2015 and 2018, new infrastructure has been created to accelerate the use of walking, bicycling, and now scooters. These projects are stepping stones toward a network of paths connecting more neighborhoods, employment centers, and parks. Projects include:

- **The Maryland Avenue Cycletrack between Wyman Park and Pratt Street.** This 2.5 mile path is a protected bike and scooter path that runs north-south and provides access to a large concentration of jobs, four Universities, dense neighborhoods, many businesses and cultural institutions.
- **The Mt. Royal Street Streetscape Project** is a 0.6 mile protected bike and scooter path that will connect Bolton Hill and MICA with the University of Baltimore and Mt. Vernon.
- **The Big Jump** is a 0.9 mile, temporary protected facility for pedestrians, wheel chairs, joggers, scooters and bicyclists. It connects neighborhoods on both sides of the I-83 expressway and increases non-vehicular access to Druid Hill Park and retail in Remington.
- **The Jones Falls Trail Phase Final Phase.** This 2.5 leg of the trail will connect Cylburn Arboretum with Mt. Washington Village with a spur parallel to the Western Run to Pimlico Road. This final leg completes the 11 mile trail that begins at the Inner Harbor.
- **The Potomac Street Cycletrack between Patterson Park and Canton Waterfront Park.** This 0.6 mile bike and scooter facility will provide a connection between these two parks and O'Donnell Square through some of the city's densest neighborhoods.

New Complete Streets Ordinance Focuses on Safety

In 2018, Baltimore adopted a new Complete Streets Ordinance with the intent of changing the transportation landscape of the city. The Complete Streets approach prioritizes the safety of all people using the street over the speed of moving cars. Complete Streets often have slower speed limits, wide and maintained sidewalks and crosswalks, pedestrian focused lighting, protected bike lanes, bus lanes and bus shelters, and beautification elements such as trees and plantings. With 30 percent of Baltimoreans lacking access to a car and only a small percentage of the area's jobs easily accessible by public transportation, the passage of Complete Streets will result in roadway designs with more bicycle and bus lanes to make such modes of transportation more practical for more users.



Data Snapshot: Modal Share

Source: U.S. Bureau of the Census; American Community Survey/BNIA-JFI

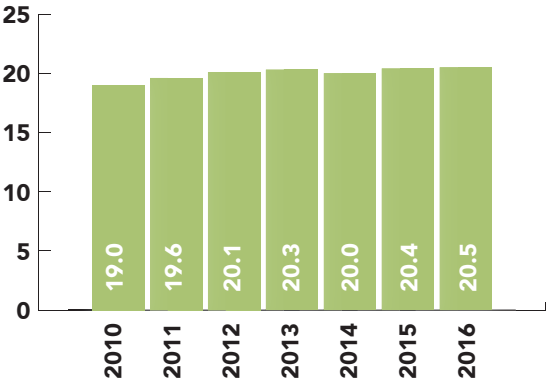
Year	Drive Alone	Public Transportation	Carpool	Walk	Other
2011	61.1	18.9	11.4	6.7	1.9
2012	61.3	18.8	11	6.7	2.3
2013	62.2	18.3	10.3	6.8	2.3
2014	62.1	18.7	10.1	6.9	2.2
2015	60.2	18.6	9.5	6.7	2.1
2016	59.8	18.4	9.2	6.7	2.2

Modal Share is the percentage of people using a particular type of transportation. Our single occupancy vehicle-centric system is responsible for almost 30 percent of the greenhouse gases we release into the air. A shift away from this dependence toward reliable, accessible public transit, connected to the region, along with safer routes for pedestrians, and bicyclists can be enormously positive for Baltimore’s economic mobility, prosperity, and safety.

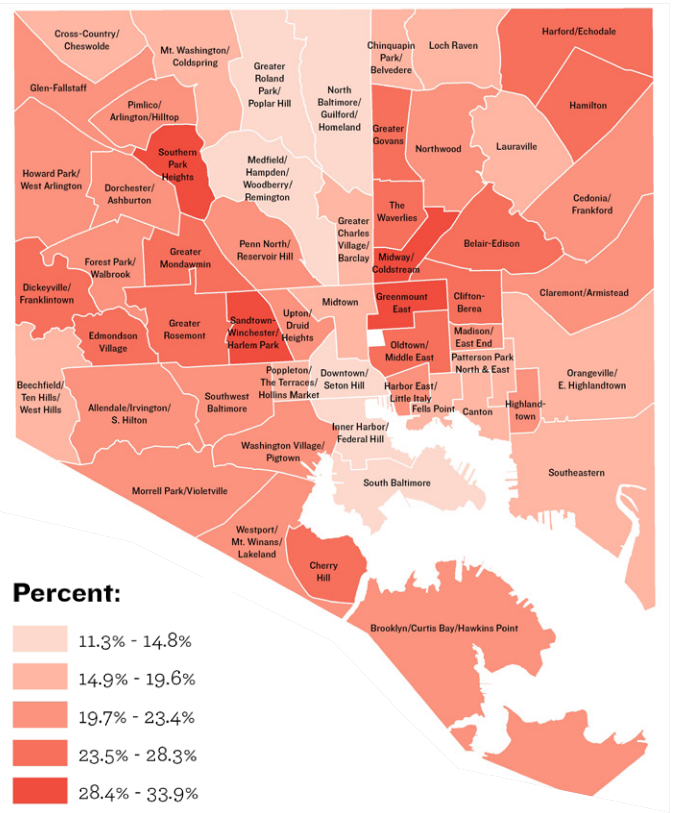


Data Snapshot: % of Employed Population with Travel Time to Work of 45 Minutes and Over

Source: U.S. Bureau of the Census; American Community Survey/BNIA-JFI



Car travel is not an option for everyone, including households without access to a car or ride-sharing technology, differently-abled people and older adults (who may also lack walking ability), and youth under legal driving age. Job markets (and employees) suffer when transportation is unreliable, and when commute times exceed 45 minutes.



Baltimore Energy Initiative Offers Ways to Reduce Energy Costs

The \$52 million dollar Baltimore Energy Initiative (BEI) has helped preserve homeownership, promote economic development, reduce health costs and provide long-term savings, while supporting a strong and growing future for Baltimore.

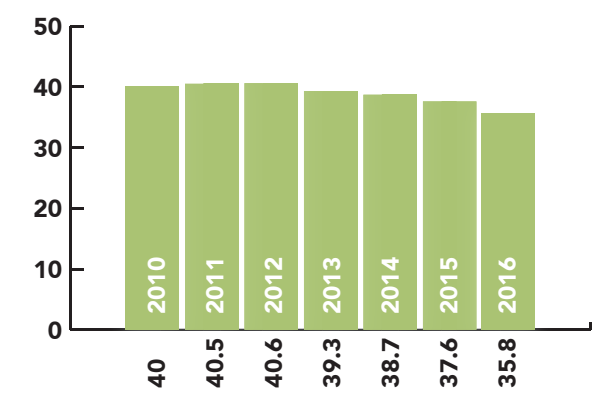
Baltimore Energy Initiative Loan Program offers low-interest loans to boost bottom line by financing efficiency and clean energy upgrades such as improving lighting efficiency, replacing “energy hog” boilers, hot water heaters and HVAC equipment, and converting to efficient kitchen appliances.

The City’s **Energy Assistance** Office utilized Community Action Centers to serve 17,000 energy assistance customers per year. These centers coordinate benefits, financial programming, and other human services to encourage self-sufficiency.

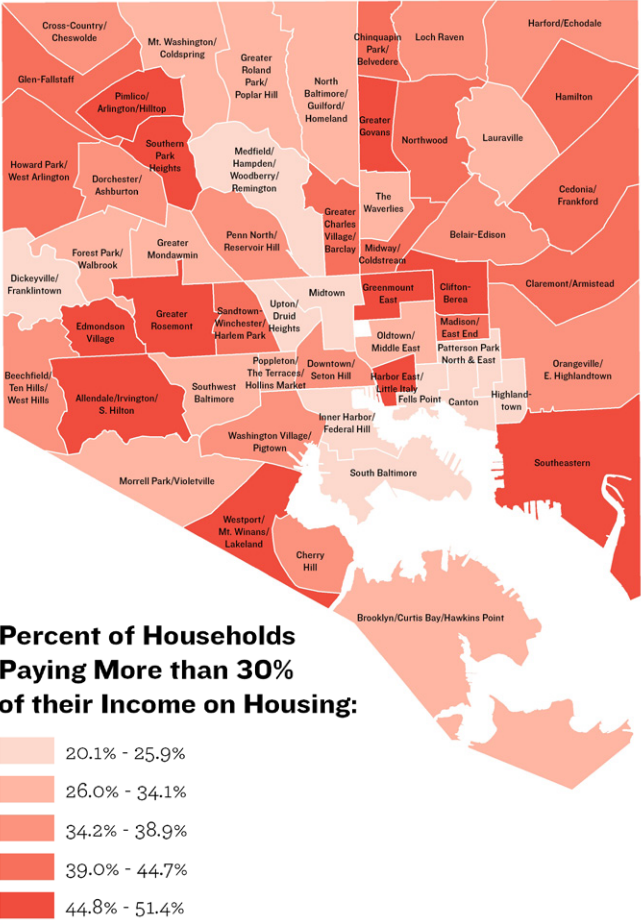
Baltimore City **Weatherization Services** provides income-eligible families, weatherization services and services for roofing, heating systems and healthy home improvements. Oil-to-natural gas heating system conversions were funded for moderate income families.

Trees lower air temperatures and can reduce residential energy cost by 15-35%. All of the city’s tree plantings are coordinated through **TreeBaltimore**. Trees provide benefits to an urban system by saving energy, improving health, reducing rain-water runoff, providing aesthetic value, and strengthening communities.

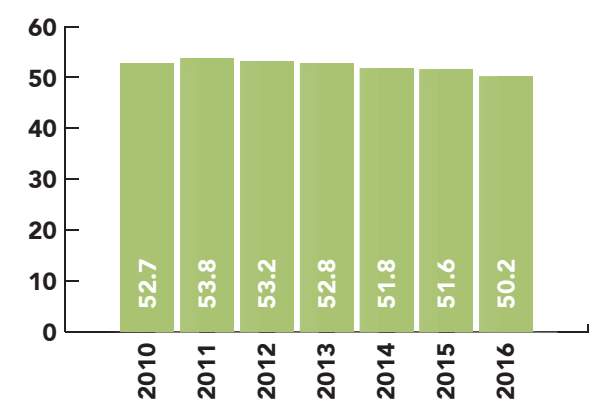
Data Snapshot: Housing Affordability
Affordability Index – Mortgage Source:
U.S. Bureau of the Census;
American Community Survey/BNIA-JFI



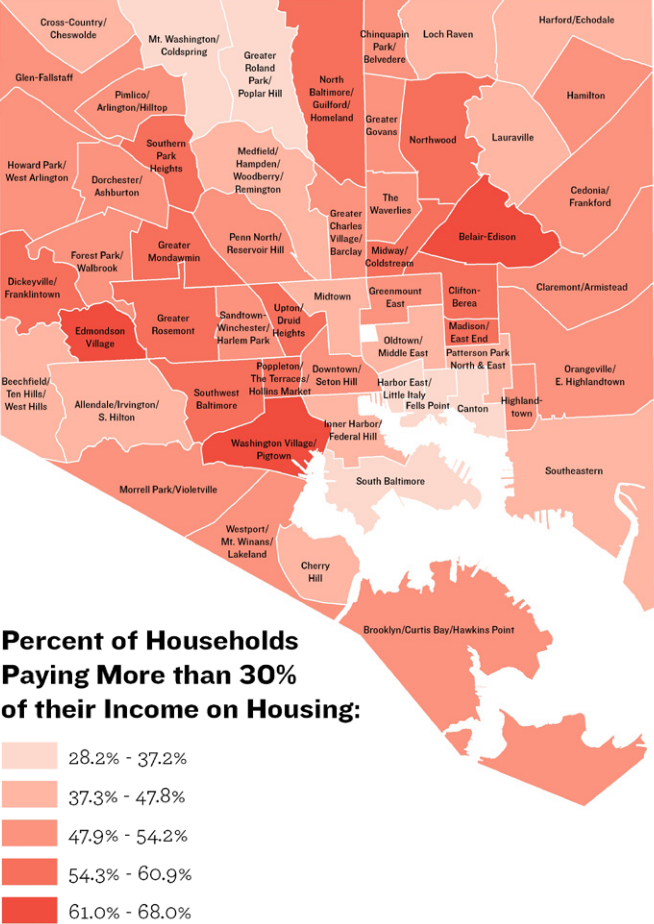
This data shows the percentage of households in Baltimore that pay more than 30% of their total household income on mortgage and other housing-related expenses. Housing is considered “affordable” when a household spends 30 percent or less of gross income on mortgage and related expenses (such as utilities). Households which pay more than 30 percent and may have difficulty affording necessities such as food, clothing, transportation and medical care are considered by the U.S. Department of Housing and Urban Development to be “cost burdened.”



Data Snapshot: Affordability Index – Rent
Source: U.S. Bureau of the Census;
American Community Survey/BNIA-JFI



This data shows the percentage of households in Baltimore that pay more than 30% of their total household income on rent and other housing-related expenses. Housing is considered “affordable” when a household spends 30 percent or less of gross income on rent and related expenses (such as utilities). Households which pay more than 30 percent and may have difficulty affording necessities such as food, clothing, transportation and medical care are considered by the U.S. Department of Housing and Urban Development to be “cost burdened.”



climate & resilience

Community Rating System Activities and New Maps Improve Baltimore's Floodplain Management



The City of Baltimore is part of the National Flood Insurance Program's (NFIP) Community Rating System (CRS). This voluntary program is administered by the Federal Emergency Management Administration (FEMA) and provides federally supported flood insurance to property owners and renters. The City also receives FEMA floodplain maps, flood studies, and other specialized flood risk products to use for decision making, code enforcement, and education.

The Community Rating System program is an incentive based program to encourage the adoption of higher floodplain regulations and implementation of enhanced flood mitigation activities. **The City's current CRS rating is a Class 5. This is the highest rating in the State of Maryland, and qualifies our property owners for up to 25% discounted federally supported flood insurance rates.** The City has successfully passed three annual FEMA re-certifications, and continues to maintain the 25% discount. In 2019, FEMA will conduct a more in depth audit of the CRS program. The audit will be an opportunity to increase flood insurance discounts by reporting additional CRS creditable activities.

Among the most important CRS activities are flood mitigation projects. On May 28, 2018, several communities along the Frederick Avenue in southwest Baltimore were impacted by severe riverine flooding. Over 100 townhomes and apartments were affected; 21 people were rescued from flood related dangers. As a result, our floodplain management staff have been coordinating with the Maryland Emergency Management Agency (MEMA) to obtain grant funds for three mitigation related projects. The advanced assistance project to conduct a flood study along in the Frederick Avenue area is being reviewed by FEMA. The remaining projects, installing flood sensors and building acquisitions, have been approved for review by the state of Maryland.

This year, we will be facilitating the adoption of new FEMA floodplain maps and studies. The public participation process for the adoption is already underway, and the Department of Planning will host two Open Houses starting in April 2019. A 90-day public comment period will end in July 2019, and the final map adoption is anticipated to occur in early to mid-2020.



Frederick Avenue, May 2018.

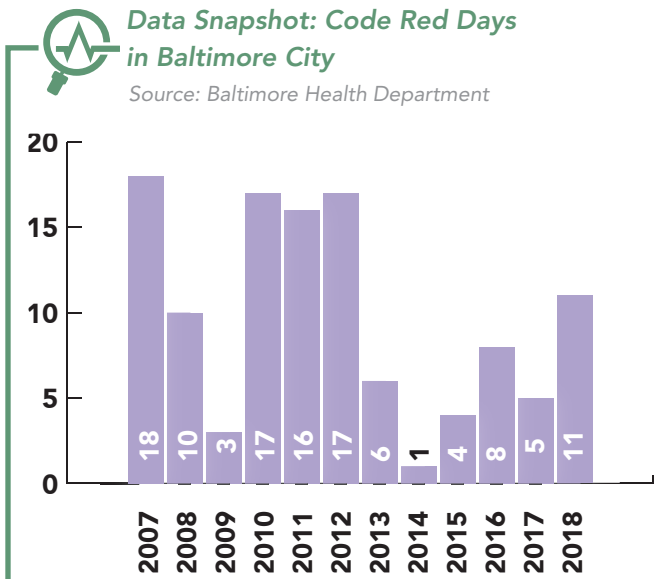
Six Resiliency Hubs Receive Training and Prepare for Activation

Baltimore is the first city in the country whose Resiliency Hub program is run by trusted, community-based organizations. Hub partners are community non-profits, willing to open their doors to nearby residents in the event of weather-related and other major emergencies. The Office of Sustainability, the Mayor's Office of Emergency Management, and the Health Department support Hubs by using grant funding to provide first-aid kits, snow shovels and blowers, water, charging stations, and solar and solar storage, where applicable. Hub leaders have a direct line of communication with the Mayor's Office of Emergency Management, and receive emergency response and Code Red training.

We are actively working with six Hubs. Currently, the City has signed Memorandums of Understanding (MOUs) with four Hubs, including First Mount Cavalry Baptist Church, Living Classroom's POWER House, The Door, and Empowerment Temple. In 2018, we identified two other Hubs, Stillmeadow Evangelical Church and Living Classrooms Foundation UA House. We are working with their community leaders to formalize the partnership and deliver the necessary supplies and resources. Our goal in 2019 is to solidify our partnerships with all six Hubs and hold a convening of leaders and community members to provide relevant training and run through Hub activation scenario exercises before 2020. In the next year we are expecting to activate Hubs on Code Red Extreme Heat days and evaluate their successes and shortcomings to inform program enhancement and expansion.



West. Baltimore Resiliency Hub CERT July 2017



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.

Your site for resources during weather-related and citywide emergencies:

Extreme Snow or Wind, Heavy Flooding, High Heat, Extreme Cold

BALTIMORE CITY
Resiliency
HUB

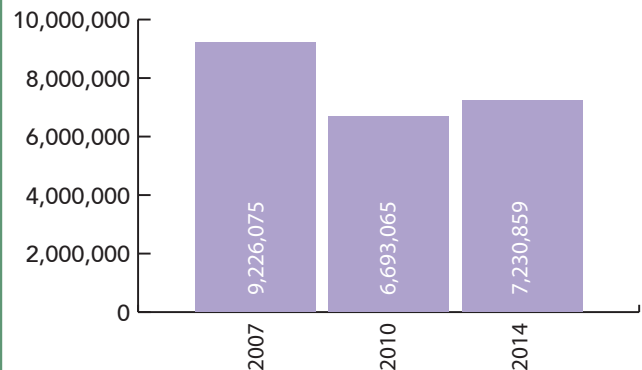
Resiliency is the positively adapt or thrive amid changing climate conditions or emergencies. ability to anticipate and

For information on becoming a Community Resiliency Hub, contact the Baltimore Office of Sustainability at (410) 396-4556



Data Snapshot:
Greenhouse Gas Emissions
(MMT CO₂e)

Source: City of Baltimore



The City of Baltimore has conducted three inventories of its greenhouse gas emissions. The 2010 and 2014 inventories have been done in conformance with ICLEI’s U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions (2012). The 2010 inventory has been updated since the 2015 Annual Report to reflect this new protocol and to only account for emissions from those trips that either originate or terminate within the boundaries of the city. The 2007 inventory did not use this protocol. The 2017 inventory is expected to be complete by the end of 2019.



Data Snapshot:
Sources of Emissions (2014)

Source: City of Baltimore

Sector	Greenhouse Gas Emissions (MMT CO ₂ e)
Residential Buildings	1,610,750
Commercial Buildings	1,684,370
Industry & Manufacturing	1,678,837
On-Road Transportation	2,175,541
Railways	34,942
Solid Waste	22,903
Wastewater	23,516

Baltimore Food Policy Initiative Accomplishments

The Baltimore Food Policy Initiative (BFPI) is an inter-agency collaboration of the Office of Sustainability, Health Department, and Baltimore Development Corporation, and includes the community engagement arms of Food PAC and Resident Food Equity Advisors. BFPI has conducted long-term food environment mapping in partnership with the Johns Hopkins Center for a Livable Future, releasing reports in 2015 and 2018. The 2018 Food Environment Report included a City Food Environment Brief, 14 Council District Briefs and 6 State Legislative District Briefs. Some of the policies that have been created because of this extensive mapping and engagement with policy makers include a tax credit for supermarkets and the “Personal Property Tax Credit – Food Desert Incentive Area” in 2016, which was amended in 2018 to better serve existing stores as a means of



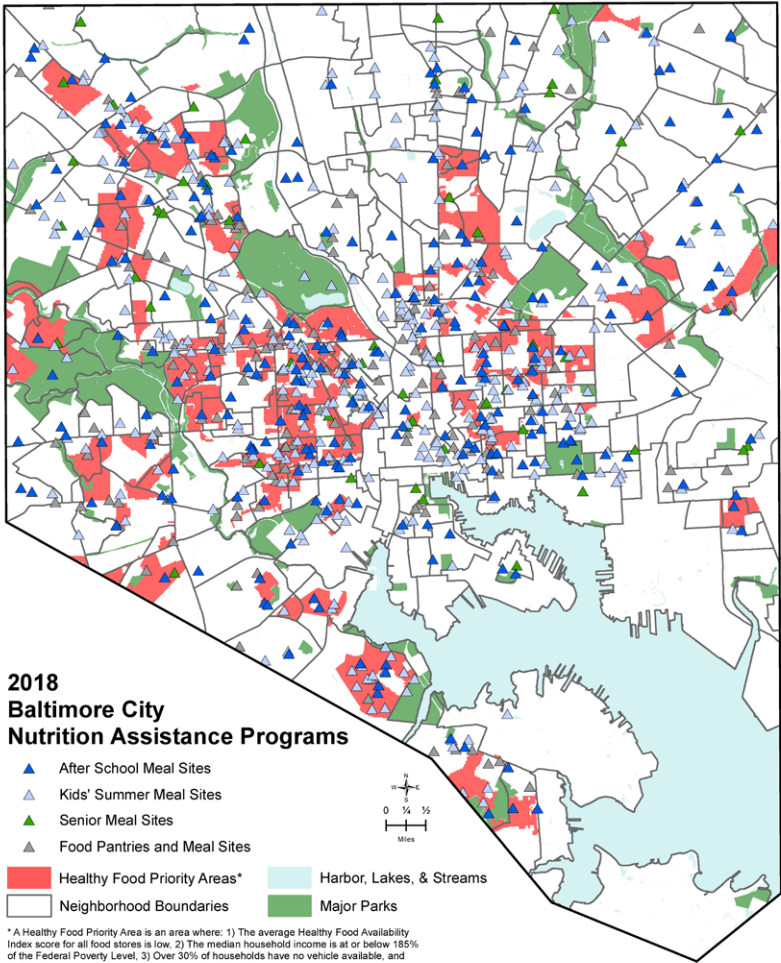
MILAN
URBAN
FOOD
POLICY
PACT

grocery store retention. Baltimore signed the Milan Urban Food Policy Pact (MUFPP) in 2015 as a formal international commitment to integrate food system priorities across government. In 2016, BFPI won the MUFPP award for Governance for its interagency collaboration, and presented internationally in 2017 on the accomplishments. BFPI continues to use the Milan framework and shares with other cities through the United States Conference of the Mayors Food Policy Taskforce.



SNAP Outreach

BFPI prioritizes strategically supporting food retailers concerning federal nutrition assistance benefits like SNAP (formerly food stamps) so that residents can use benefits in the retail setting that maximizes their impact. BFPI staff consistently provide SNAP technical assistance for vendors in public markets, farmers markets, and corner stores. In response to retailer concerns about SNAP benefit issuance dates causing extremely cyclical spending patterns, BFPI worked with the state to extend the SNAP disbursement period from 10 to 20 days in 2015 to smooth out retail cycles allowing for steadier sales and a less chaotic shopping experience. After years of advocacy and lifting up Baltimore’s Virtual Supermarket Program, online SNAP benefits were included in the Farm Bill and Baltimore will be one of the first pilot cities.



2018
Baltimore City
Nutrition Assistance Programs

- ▲ After School Meal Sites
- ▲ Kids' Summer Meal Sites
- ▲ Senior Meal Sites
- ▲ Food Pantries and Meal Sites
- Healthy Food Priority Areas*
- Harbor, Lakes, & Streams
- Major Parks
- Neighborhood Boundaries

* A Healthy Food Priority Area is an area where: 1) The average Healthy Food Availability Index score for all food stores is low, 2) The median household income is at or below 185% of the Federal Poverty Level, 3) Over 30% of households have no vehicle available, and 4) The distance to a supermarket is more than 1/4 mile.



nature in the city



Critical Area Management Program Supports Improved Habitat and Water Quality



Great Baltimore Oyster Partnership – photo by WPOB

The Chesapeake Bay Critical Area Management Program (CAMP) regulates the Critical Area, which is represented by first 1,000-feet of land measured from the mean high tide line along Baltimore’s shoreline. The first 100-feet landward of the shoreline is designated as the Buffer, which has more stringent land use and habitat protection requirements than the Critical Area in general. Industrial and commercial development that happens within the Critical Area and that includes ground disturbance of over 10,000 square feet, or that costs 50 percent or more of the property’s assessed value, is required to obtain a Critical Area permit prior to project commencement. Generally, residential projects are exempt from Critical Area requirements in Baltimore City.

Since 2015, the CAMP has sponsored afforestation, stormwater management and educational projects using funds from the Critical Area offset-fee program. In the past 4 years, the Office of Sustainability provided over \$640,000 in offset-fee grants to local nonprofit organizations working to improve water quality and wildlife habitat in the Chesapeake Bay.

Sixteen Acres of Forest Protected Through Forest Conservation Program



Forest Canopy - photo by Andy Cook

Baltimore’s Tree Canopy is Growing

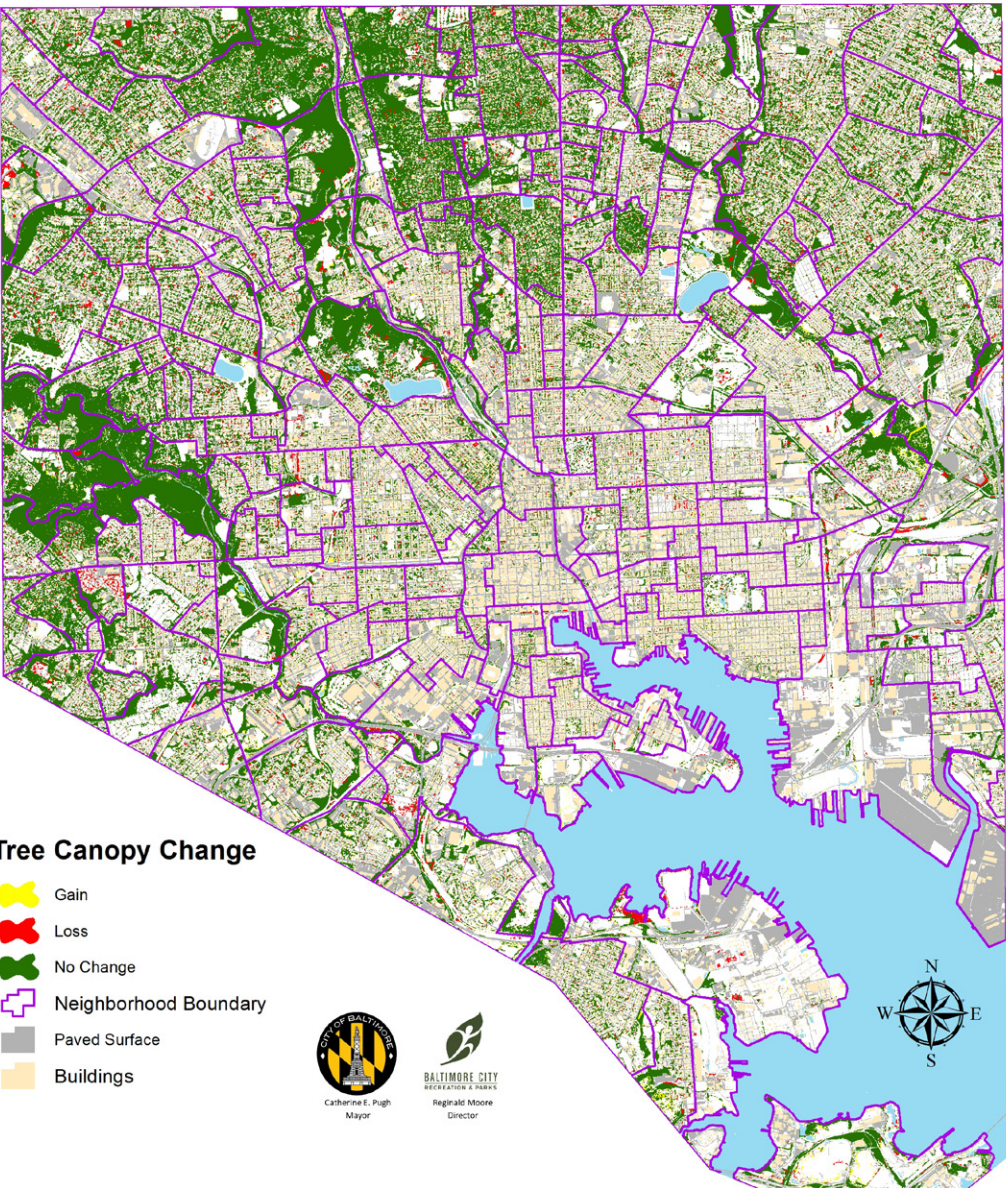
In 2017, the U.S. Forest Service in collaboration with Baltimore City and the University of Vermont, released an analysis of Baltimore’s tree canopy that shows a 1% increase between 2007 and 2015. Over that time period, there were both gains and losses in canopy cover. The gains totaled 1,500 acres, while the losses totaled 1,300 acres, for a total gain of 200 acres. This increase brings our tree canopy cover to 28%, or 14,500 acres. While small, this increase is a significant achievement, as many urban communities throughout the country are losing tree canopy cover due to threats that include development, insects, and storm damage. The City, its partners along with active participation by residents are working to meet the goal to grow its tree canopy to cover 40 percent of the city.

Baltimore’s Forest Conservation regulations establish rules for development sites to minimize the loss of existing forests and replenish tree cover. The City of Baltimore has adopted local regulations in compliance with the State law, and enforces the Forest Conservation Program for developers in the city limits. All projects that disturb or subdivide 20,000 square feet of land or more are subject to the City’s Forest Conservation Program. The requirements for forested sites include retaining a percentage of existing forest on site and mitigating for forest clearing according to formulas established by state requirements. Sites without existing forest are required to plant 15 trees per acre of site area, to establish new tree canopy.

Between 2016 and 2018, three new forest conservation easements were established on privately owned forests to meet forest conservation requirements. These new easements total 16 acres.



Data Snapshot: Tree Canopy Percentage 2007 to 2015



Brownfields Grant Supports Soil Testing

The Office of Sustainability has a \$200,000 U.S. EPA Brownfields grant for assessing soil conditions at sites of interest for future community greenspace projects. Working with GroundWorks USA, a national non-profit leader in brownfields redevelopment, we created an innovative community engagement process. Throughout 2017 and 2018, we worked with communities in east and west Baltimore to identify vacant, City-owned properties where community leaders had a vision for a new green use, and vetted them through the Department of Housing & Community Development and the EPA. We have a final list of seven sites to be assessed and a draft contract with a small local firm that hires trainees from the Civic Works’ Baltimore Center for Green Careers. As well as advancing the cause of cleaning up and greening these specific sites, we expect the results of this work will be invaluable as we consider where and how to invest in assessing soil safety while implementing the Baltimore Green Network.

Baltimore Meets a Restoration Milestone

Baltimore City Department of Public Works (DPW) Director Rudy Chow recently announced that Baltimore has met its stormwater discharge permit requirement to restore an equivalent of 20 percent of its impervious surface to the maximum extent possible. To date, Baltimore is the only Phase I Municipal Separate Storm Sewer System (MS4) permit holder to meet the impervious surface restoration requirements without having to resort to nutrient trading. Meeting local total maximum daily load (TMDL) targets is still in progress.



Data Snapshot: MS4 Nutrient Reduction TMDL Progress

Source: Baltimore Department of Public Works

TMDL for Back River Watershed		
	Total Nitrogen	Total Phosphorus
TMDL Targets	62,415	7,068
2005 Baseline	73,429	8,315
Total TMDL Reduction Completed 2010	73,293	8,210
Total TMDL Reduction Completed FY18	71,796	7,639
TMDL for Baltimore Harbor Watershed (Including Gwynns Falls, Jones Falls, and Lower North Branch Patapsco Watersheds)		
	Total Nitrogen	Total Phosphorus
TMDL Targets	221,275	23,950
2007 Baseline	260,323	28,177
Total TMDL Reduction Completed 2010	259,815	27,846
Total TMDL Reduction Completed FY18	246,693	22,992

Baltimore’s Growing Family of Trash Wheels

Since being launched by the Waterfront Partnership in 2015, Mr. Trash Wheel has been a popular public figure in Baltimore, removing floating debris from the Jones Falls and educating fans on Twitter. Since then, the trash wheel family has grown. Professor Trash Wheel, located at the Harris Creek outfall along the Canton waterfront, was added in 2016. Captain Trash Wheel, located at the mouth of a stream in Masonville Cove, debuted in 2018. Together, the three trash wheels have collected more than 1,119 tons of trash since May 2014.

Baltimore Becomes Certified as Community Wildlife Habitat

In May 2018, Baltimore was officially certified by the National Wildlife Federation (NWF) as a Community Wildlife Habitat, a result of nearly five years of greening efforts in the city. This achievement also marked the completion of one of the actions identified under the Natural Systems section of the 2013 DP3. Habitat gardens created in yards, parks, schools, and neighborhoods and then certified through NWF contributed to this certification goal. Baltimore is now the largest Certified Community Wildlife Habitat in the Chesapeake Bay Watershed, and the fourth largest in the United States.



Habitat Garden - photo by NWF

economy



Supporting Local Industry- Business Certification Programs and Pop-Up Shops

Made in Baltimore (MIB) is a branding program for locally made products. The program’s mission is to support local entrepreneurs by growing the market for locally produced goods. This is accomplished through local brand certification, print and media campaigns, special events such as the Holiday market, and business development services. Since the launch of the MIB certification in 2017, nearly 200 member businesses have joined the Made in Baltimore network. In 2018, MIB partnered with the Urban Manufacturing Alliance to complete the State of Urban Manufacturing: Baltimore study.

Made in Baltimore has hosted a total of six pop-up stores since it was launched, including its longest pop-up to date, the 2018 Holiday Market, which ran from October 2018 through February 2019 and included over 60 local artists and makers. These events exclusively feature products from Baltimore-based makers and manufacturers, ranging from clothing to furniture to personal care to food and more.



Photo by Andy Cook



Sewing Training – photo by Andy Cook

First Cohort in the Local Industrial Sewing Training Program

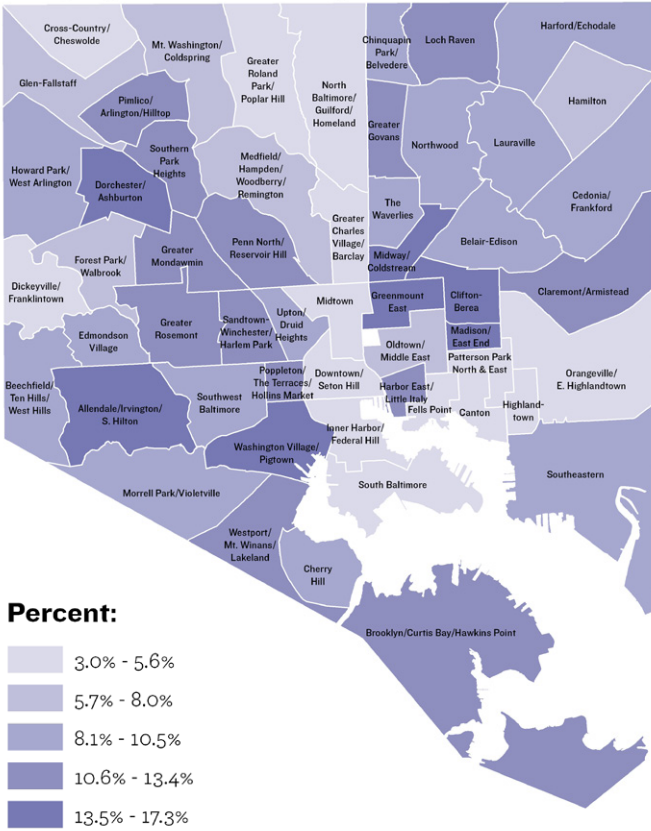
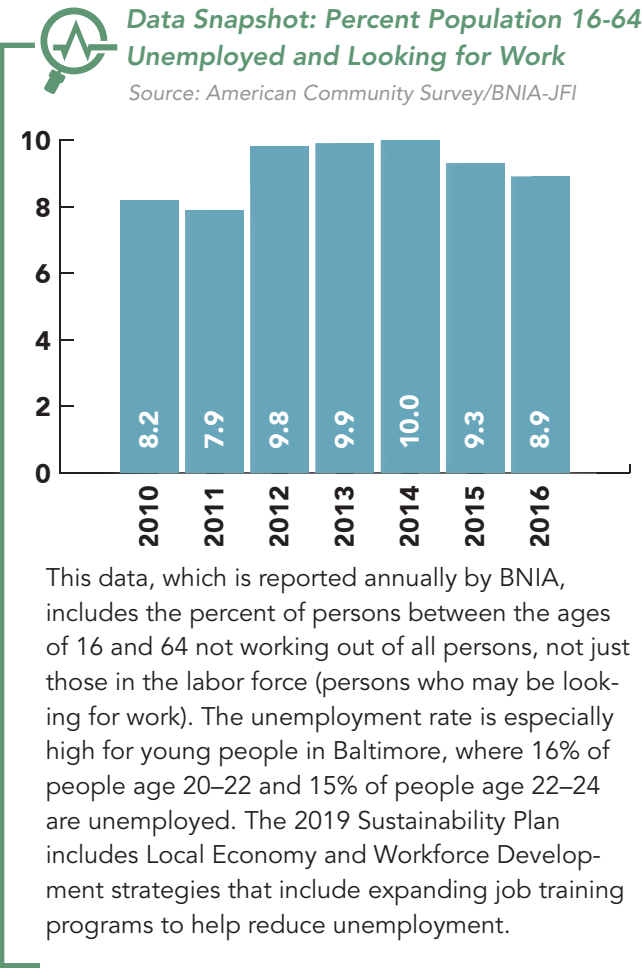
Made in Baltimore, SewLab USA, and Open Works partnered to create a workforce development program to help meet the growing demand for skilled industrial sewers and machine operators in the Baltimore area. The 12-week program trains a cohort of people in the skills most needed by Baltimore’s clothing, uniform, upholstery, and other soft goods manufacturers, as determined by a committee of these employers. The program includes soft and hard skills training, site visits and temporary placements at operating businesses, and culminates in the production of a product run for a local client. Bags made through the program have been featured in the Made in Baltimore shop.

Civic Works Expands Green Workforce Development Programs

The Center for Sustainable Careers’, Bmore Green program provides training for unemployed and underemployed Baltimore residents in brownfields, remediation, home energy efficiency, solar installation and stormwater management. Civic Works provided training for more than 820 residents on green construction careers, maintaining an 85% graduation rate and an 87% job placement rate. Average wages are \$13-\$18 per hour. The solar installation training program alone trained 55 residents with an average wage placement of \$15 per hour.



Civic Works Green Careers Press Conference - photo by Mark Dennis



Interactive Mapping of Baltimore’s Arts and Cultural Resources

In 2017, the Baltimore Neighborhood Indicators Alliance-Jacob France Institute (BNIA-JFI) launched the GEOLOOM co>map, an online, interactive map of Baltimore City featuring arts and culture information along with community indicators such as census demographics, children and family health, and crime and safety data. The “co” in GEOLOOM co>map stands for community, collaboration, and cohesion in Baltimore. The idea behind combining information about arts and culture with mapping that includes economic, social, health, and other statistics relates to how art and cultural resources support neighborhood identity and quality of life. The project is a result of three years of research, collaboration, and data gathering to create a web map that allows users to add data and view existing data. The map can be used by artists, civic leaders, residents, businesses, organizations, government entities, and funders for exploration, research, planning, and investment.

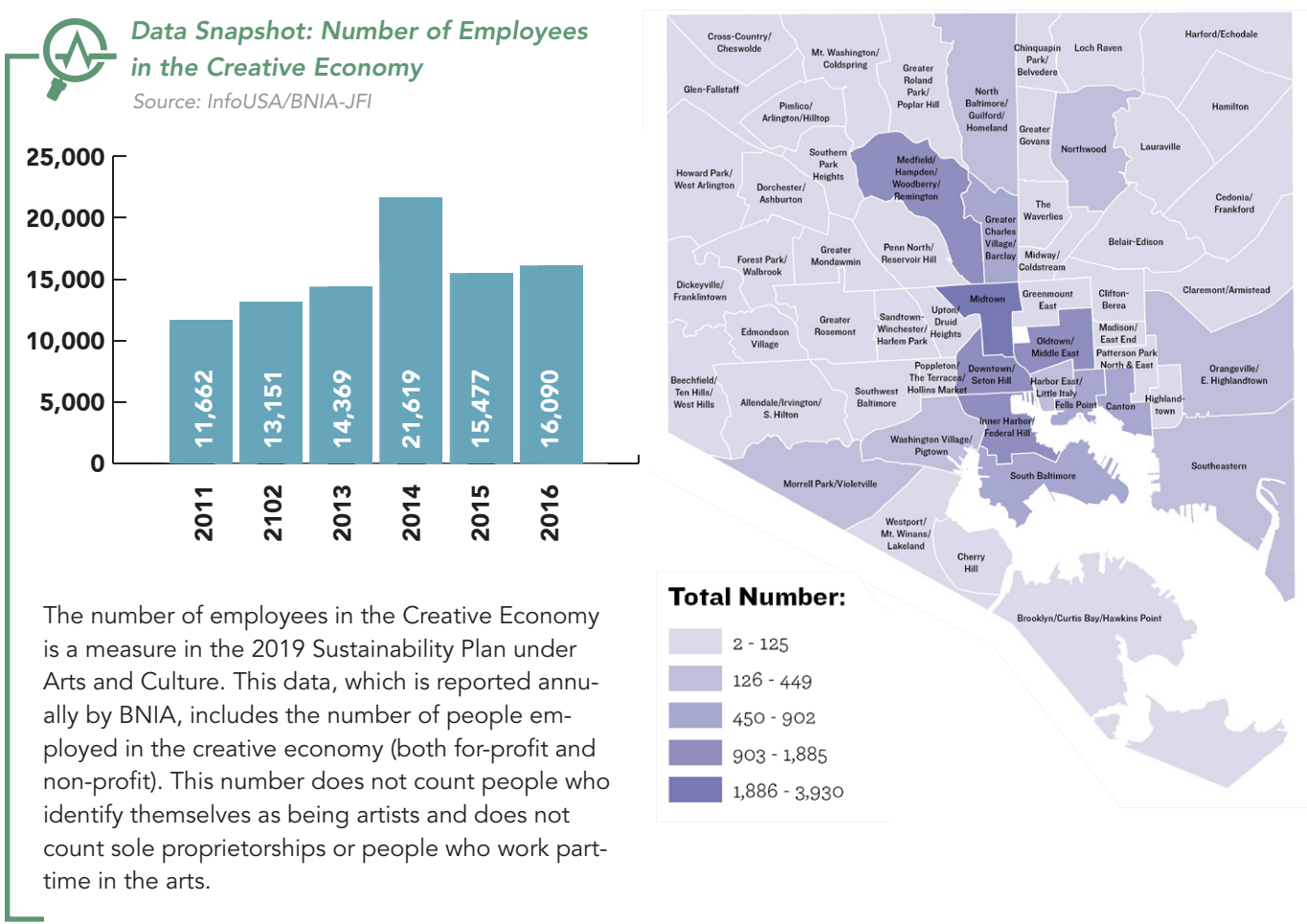


Fayette Street Mural - photo by Blue Water Baltimore

Mayor’s Task Force on Safe Art Space Releases Recommendations

In 2016 a Safe Art Space Task Force was created in response to local and national concerns about the safety, availability, and affordability of spaces for artists to live, work, and perform. The mission of the Task Force on Safe Art Spaces was to create a citywide network of safe, cost-effective, living, live/work, studio, and performance space for established and emerging artists. The Task Force integrated the perspectives of artistic, design, development, financial, regulatory, and revitalization experts to develop strategies, identify resources, and propose a programmatic framework to develop and sustain spaces that protect the safety of artists and patrons while meeting the logistical and technical interests of today’s performers and audiences.

The Task Force issued a report in 2017, which included more than 40 recommendations. The recommendations included proposed code changes, designating a city point person for art space issues, creating a technical assistance program, establishment of funding and micro-loan programs, and creating a business plan to make decommissioned city-owned buildings and vacant parcels available as potential venues for artist spaces.



Future Reports for the Office of Sustainability

Every year, the Commission on Sustainability and the Baltimore Office of Sustainability will produce an annual report. The reports will document progress on the strategies, actions and measures of success in the Plan and evaluate the efforts and effectiveness of acting in a racially equitable way. Every year, we will check-in with attendees at our annual Open House, renew our commitment, and ask, “How are we doing?” “What can we do better?” “Who is here?” “Who is missing in the conversation?” “Were there unintended consequences or undesired impacts and if so, how can structures be reassessed?”

Data for measures of success will be collected over time and shared even when they do not show the hoped-for improvements. A new database is being developed, with the support of the France-Merrick Foundation, to help with completeness and accuracy and is also expected to include a way for the community to assist in tracking efforts.

Feel free to email us – both on the work we are doing, could be doing and how we are sharing that work – sustainability@baltimorecity.gov.

Baltimore Commission on Sustainability

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- Rebecca Bakre (Co-Chair)
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- Donzell Brown
- The Honorable Ryan Dorsey
- Lisa Ferretto
- Michael Furbish
- Beth Harber
- Charlotte James
- Earl Johnson
- The Honorable Robbyn Lewis
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- Avis Ransom
- Inez Robb
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Thank You

We want to heartily thank everyone who participated in the process of developing the 2019 Sustainability Plan: the dedicated Ambassadors, the meeting and working session attendees, those who thoughtfully contributed comments on the public comment site. With your support and the love you bring to Baltimore, our combined vision for this great city should inspire us all.





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People · Planet · Prosperity

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