

annual report

2019-2020



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

Contents

Executive Summary—	3
Message from the Commission—	5
Plan & Program Updates—	6
Equity—	10
Community—	14
Neighbors—	15
Environmental Literacy—	17
Healthy School Environments—	19
Waste and Recycling—	22
Urban Agriculture—	24
Human-Made Systems—	26
Neighborhoods—	27
Housing Affordability—	29
Buildings—	32
Transportation—	34
Noise—	36
Climate & Resilience—	38
Community Preparedness—	39
Energy—	41
Greenhouse Gas Emissions—	43
Clean Air—	44
Food Systems—	46
Nature in the City—	48
People and Nature—	49
Nature for Nature’s Sake—	52
Trees and Forests—	54
Water in the Environment—	56
Green Infrastructure—	58
Economy—	60
Local Economy—	61
Workforce Development—	63
Arts & Culture—	64
Sustainable Strategies and Actions—	66
About—	84
Commission & Office of Sustainability—	85
Acknowledgements—	86



Executive Summary

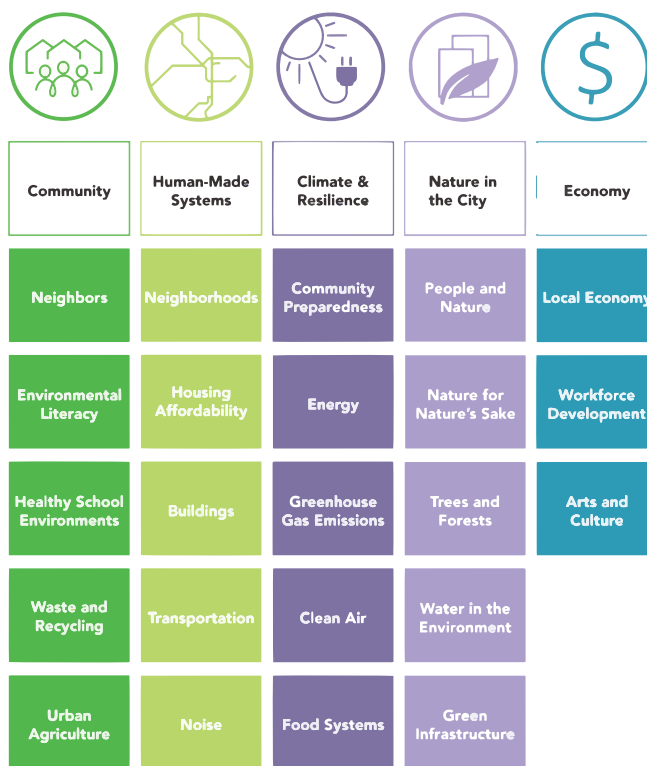
The past two years have brought both incredible challenges and exciting accomplishments. This annual report for 2019 and 2020 serves to summarize and highlight many of the accomplishments from the past two years that support the implementation of the Baltimore Sustainability Plan, which was adopted on Earth Day in 2019.

The 2019 Sustainability Plan articulates strategies, actions, and measures of success across 5 core themes - Community, Human-Made Systems, Climate and Resilience, Nature in the City, and Economy - and 23 topic areas, with the additional theme of equitable implementation integrated throughout the plan. Highlights from the Report include:

Equity - Improving equity in how and where public investments are made was a major focus in 2019 and 2020. Plans and equity analysis efforts included recommendations for how City services can be provided in a more equitable fashion and future investments can be distributed to address past disinvestment. New programs have incorporated equity criteria to ensure more equitable distribution of resources and benefits to communities.

Community - Baltimore’s communities and community-based organizations responded to the COVID-19 pandemic by supporting one another and adapting to address challenges. This included creating new public outdoor spaces as well as new outdoor spaces on schoolgrounds, distributing seedlings and produce at schools and urban farms, and creating new funding sources to provide support for urban farmers. Continued support for environmental education and youth environmental leadership and plans and programs to reduce and reuse waste materials was also demonstrated throughout 2019 and 2020.

Human-Made Systems - Many of the stories from 2019 and 2020 involve increased support for and investments in community development, affordable housing, and multi-modal transportation. Efforts to improve green building codes and increase access to safe, affordable, and energy-efficient housing options were also advanced. By the fall of 2020, the Planning Department had completed four cohorts for their innovative Planning



Academy, and the City implemented a “slow streets” program to designate low-traffic streets as spaces for drivers to travel slowly, and safely share the road with people walking and biking.

Climate and Resilience - Our city’s planning efforts around community preparedness and resilience were put into play through COVID-19 response efforts in 2020. Many of the nine Community Resiliency Hubs were active in the distribution of critical resources to their neighbors, and the City, along with nonprofit, business, and community partners implemented a comprehensive Emergency Food Strategy. The 2017 Greenhouse Gas Inventory showed emissions dropping by 13%, and additional efforts to reduce emissions from energy, transportation, and buildings sectors were undertaken in 2019 and 2020.

Nature in the City - Efforts to expand access to nature, local waterways, and green spaces are highlighted in community organizations, and residents also partnered to protect, restore, and improve Baltimore’s natural resources and community green spaces, including the permanent protection of two new community forest patches.

4 | Executive Summary

Both the Forest Conservation and Critical Area Management Program codes were strengthened.

Economy - COVID-19 assistance for local businesses, artists, and arts organizations was provided through relief funds, technical assistance programs, and outdoor gathering space creation in local commercial districts. Programs to support local makers and manufacturers, train students and residents for green careers, and grow the creative sector were also active in 2019 and 2020.

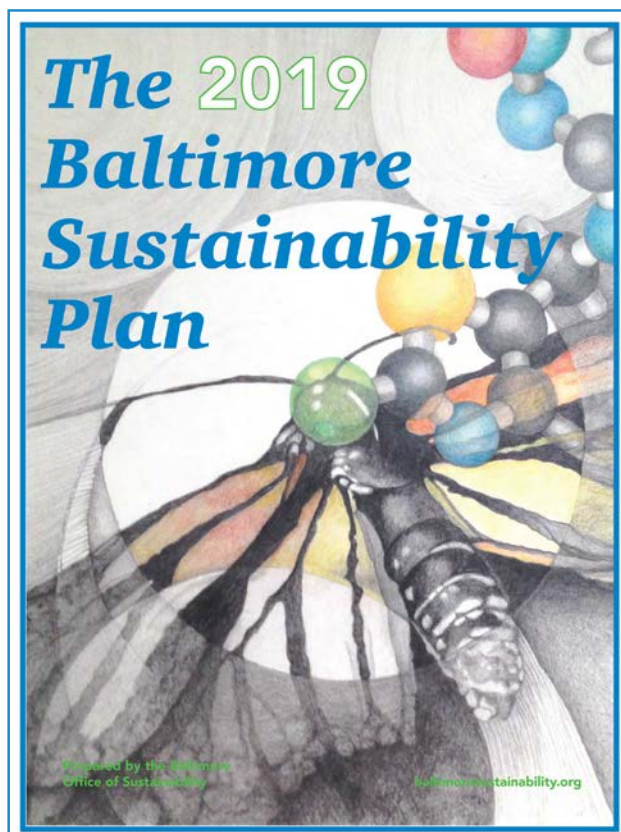
In addition to stories illustrating progress on Sustainability Plan strategies and actions, the annual report also includes data snapshots with many of the topics. The data snapshots include graphs, tables, or maps that illustrate the progress made for a select set of the Measures of Success associated with each Sustainability Plan topic. In the previous annual report, 14 Measures of Success were shared, and with this report 24 Measures of Success have been tracked and reported. Highlights include:

- Percentage of population over 18 registered to vote rose from 75% to 85% since 2010
- Percentage of households in Baltimore paying more than 30% of their total household income on housing has decreased by nearly 7% for households with mortgages and 4% for renters, since 2010
- 23% of Baltimore households have a high energy burden (above 6%), and 11% have a severe energy burden (above 10%)
- Percentage of children projected to be “food insecure” increased from 22.2% in 2016 to 33% in 2020

As implementation of the Sustainability Plan continues through future years, data for these and additional measures of success will be collected over time and shared - even when they do not show the hoped-for improvements.

The Sustainable Strategies and Actions Implementation section of the annual report illustrates the status and progress of each of the plan’s 243 actions, ranging from “still pending” to “implemented/ongoing”. As of the end of 2020, a total of 23%, or 55 actions, have reached mid-stages of implementation or beyond, with 71% of the actions reaching at least early stage implementation. Five

Executive Summary



of the actions have been completed or have reached ongoing implementation.

Updates on implementation progress will be provided with each future annual report, to support the commitment to transparency and accountability established with the creation of the plan.

While these pages feature a portion of the great work underway, we recognize that the stories shared here do not represent an exhaustive list. There are many additional examples of valuable work being accomplished throughout Baltimore, and we look forward to recognizing those efforts. We encourage all to share their efforts to make Baltimore more equitable, sustainable, and resilient by participating in Sustainability Commission meetings, sending us a message at sustainability@baltimorecity.gov, or commenting on our social media. We would be happy to recognize your successes through the Every Story Counts campaign, in our monthly newsletter, or in next year’s annual report.

Message from the Sustainability Commission

In the two years since the 2019 Sustainability Plan was adopted, the Commission on Sustainability, through its monthly meetings and other activities, has tried to sharpen its understanding of how we can best support this wide-ranging plan while keeping a focus on racial equity, both in our meetings and in how the Commission operates.

We focused on two topics:

- Transportation – because many commissioners see equitable transportation as a key determinant of economic sustainability. Among other activities, the group coordinated a Sustainability Commission meeting focused on the history of racial inequity in Baltimore transportation planning and policies; engaged with MTA officials regarding their Regional Transit Plan; and supported calls for a transit equity analysis for Baltimore. The group's research set a foundation for future work on transportation with an eye on equity.
- Waste – because of opportunities to substantially shift how Baltimore deals with its waste, and because it is a great example of how economic, social, and environmental improvement go hand in hand. The work of the group and the Office of Sustainability led to spotlighting the importance of Zero Waste principles, and provided several opportunities for residents to learn about waste and provide perspectives.

We've also focused on fulfilling our commitment to equity, both through internal work and through the content of our meetings. This work came into greater focus early in the COVID-19 pandemic, when it became clear that COVID-19 would exacerbate racial inequities. We moved our meetings to Webex, a computer environment, which made them more accessible to some people, and created hurdles for others. We took advantage of the pandemic moment to bring in Vernice Miller-Travis, a pioneer in the Environmental Justice movement, and we learned how many aspects of Baltimore's built environment reflect racist attitudes through the centuries. These educational meetings attracted new participants and sparked lively conversations.

We've put several new activities into our agenda:

- Recognizing that many Sustainability issues revolve around land use and capital funds – the domain of Planning – we have established a partnership with the Planning Commission. We are learning from each other's perspectives as we hold joint briefings with the Planning Commission.
- We've expanded our activity with the state legislative session, because we recognize that many of the goals in the Sustainability Plan can best – or only – be met in with supportive state policies. In 2020, we submitted testimony for 5 bills, and in 2021 we have submitted 16 testimony letters for 12 bills.

Many thanks to Anne Draddy, the former Sustainability Manager, who shepherded many important Sustainability initiatives and ably staffed the Commission.

We note with sadness the passing of Avis Ransom, a commissioner from 2015, who was a strong voice on the commission and in Baltimore for racial equity. Her keen insights into race and equity encouraged us to do better. We will continue the work she inspired.



The Sustainability Commission transitioned meetings to Webex in 2020, and also held a joint virtual meeting with the Planning Commission. - photo by BoS Staff

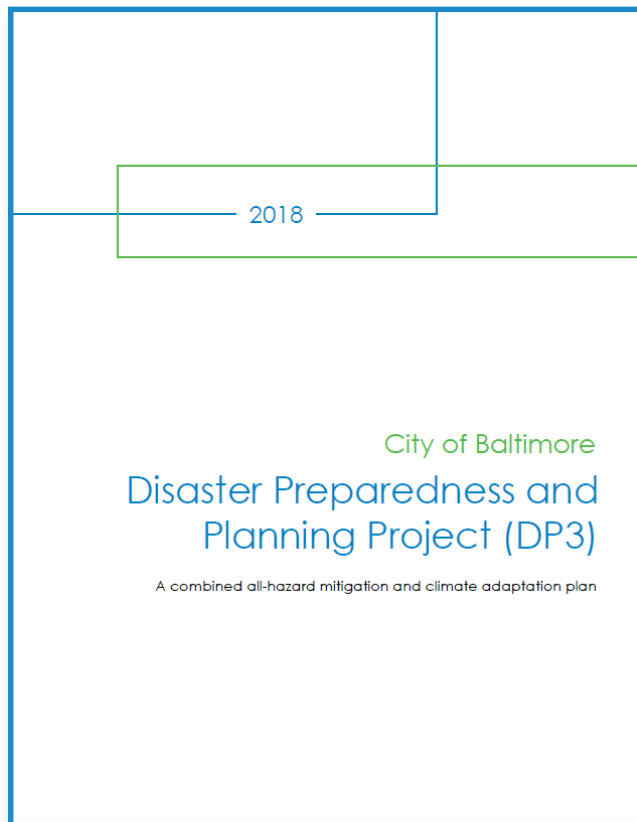
Disaster Preparedness

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

Baltimore is prone to a number of natural hazards including flooding, precipitation variability, extreme heat, extreme wind, winter storms, and coastal hazards such as sea level rise, nuisance flooding, hurricanes, and storm surge. All of these hazards are expected to increase in frequency, intensity, and unpredictability due to climate change, creating the need for continued and improved adaptation and hazard mitigation planning in the City.

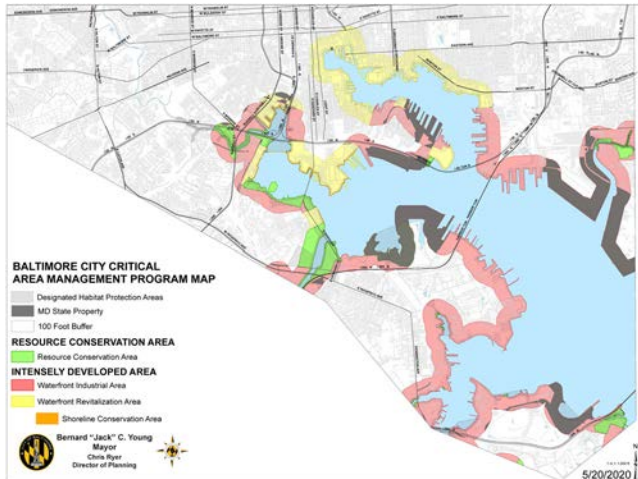
The DP3 addresses the need to increase resilience to disasters— both on the city and individual level – and uses a comprehensive, adaptive approach to All-Hazards Mitigation Planning. The DP3 also fulfills a federal mandate requiring local governments to have a FEMA-approved plan every 5 years, making the City eligible to receive grant assistance for pre-disaster hazard mitigation and post-disaster recovery assistance projects.

In 2019 and 2020, progress was made on various DP3 strategies and actions, such as increasing the number of Resiliency Hub Partners in our Community Resiliency Hub Program, continuing and improving community preparedness outreach in concert with the Office of Emergency Management (OEM), incorporating sustainability and resilience criteria into the Capital Improvement Program process, and further identifying, collaborating with, and supporting neighborhoods with high flood-risk to implement flood resiliency strategies. Our goal for 2021 is to continue focusing on implementation by further identifying funding opportunities and acquire funding for the FEMA-required 2023 plan update.



Critical Areas & Nuisance Flood Plan

Critical Area Management Program Manual Update



2020 Critical Area Management Program Map

The Baltimore City Critical Area Management Program (CAMP) is a State program that regulates development that happens within 1,000 feet from the water line and is intended to protect water quality and wildlife habitat in the Chesapeake Bay. The Baltimore City Department of Planning, through its Office of Sustainability, coordinates and implements the Program for the City. The CAMP manual was updated in 2020 – 18 years after the last update. The main changes to the program include the adjustment to the cost of offset fees and to the amount credit allowed per trees, and the creation of the Shoreline Conservation Area that aims to preserve our remaining natural shorelines.

For more information about the City's Critical Area Management Program please visit: <https://www.baltimore-sustainability.org/permits/critical-areas/>

Baltimore Nuisance Flood Plan

In 2020 the City of Baltimore assessed its waterfront to identify areas that are prone to nuisance flooding as required by State legislation. Nuisance flooding is defined as high tide flooding that causes disruptions to daily activities- It can occur with or without precipitation and is expected to increase in the coming years due to anticipated sea level rise. The intention of the Nuisance Flood Plan is to map, track and catalog nuisance flooding that happens from 2020 until 2025. In addition to assessing the physical characteristics and impacts of the phenomena, the Plan also includes an Equity Assessment section that identifies vulnerable populations that live within or near nuisance flood hot-spots. The data gathered from 2020 through will be used to better understand the impacts of sea level rise to coastal areas of the City and help inform the selection and siting of mitigation strategies.

For more information about the Baltimore Nuisance Flood Plan please visit: <https://www.baltimoresustainability.org/flood-preparedness/>



Fells Point Nuisance Flooding- photo by BoS Staff

Climate Action Plan

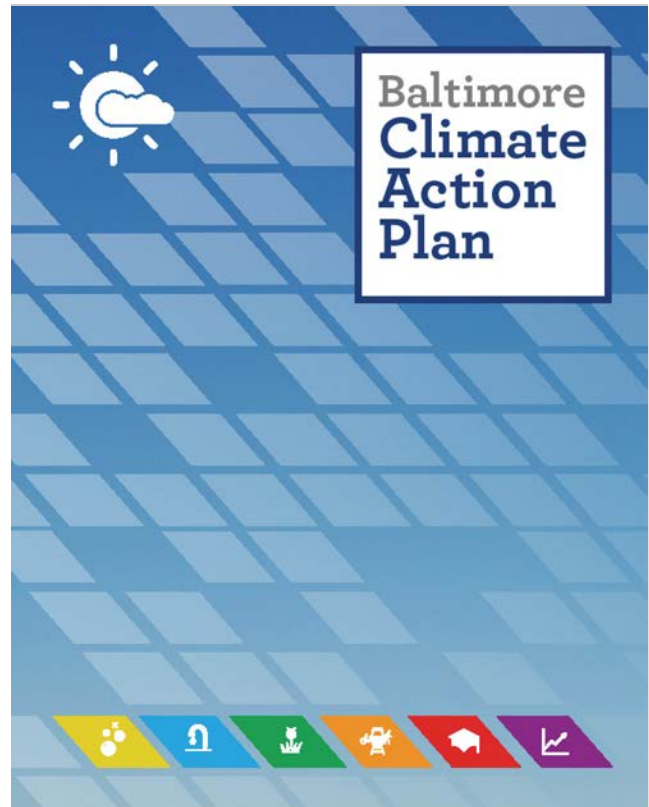
Our Goal: Reduce Greenhouse Gases 25% by 2020 and 30% by 2025 Relative to 2007

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:

- In 2020, the Department of Transportation drafted the Baltimore Complete Streets Manual, which contains design standards, street typologies, project prioritization, and community engagement policies to support the incorporation of Complete Streets standards into neighborhood planning and design. The manual was adopted in early 2021. This supports the completion of Land Use and Transportation Recommendation 1.A - Create high-quality pedestrian- and transit-oriented neighborhoods.
- In 2019 and 2020, the Office of Sustainability completed Growing a Green City Recommendation 1.C - Compost organic material - through the work of the Food Matters Program. Actions completed include the implementation of a decentralized community composting program (in place of implementing a back-yard bin program), the Save the Food educational campaign about practices to prevent food waste, support of community composting initiatives, and the initiation of a study to identify potential sites for a large long-term composting facility.

An update to the CAP is coming soon. Stakeholders will be engaged, a new GHG emissions inventory estimates will be prepared for 2018 through 2020, new climate change scenario projections will be developed, and ambitious emissions targets will be set - renewing momentum around GHG emissions reduction in the city.



Baltimore Green Network

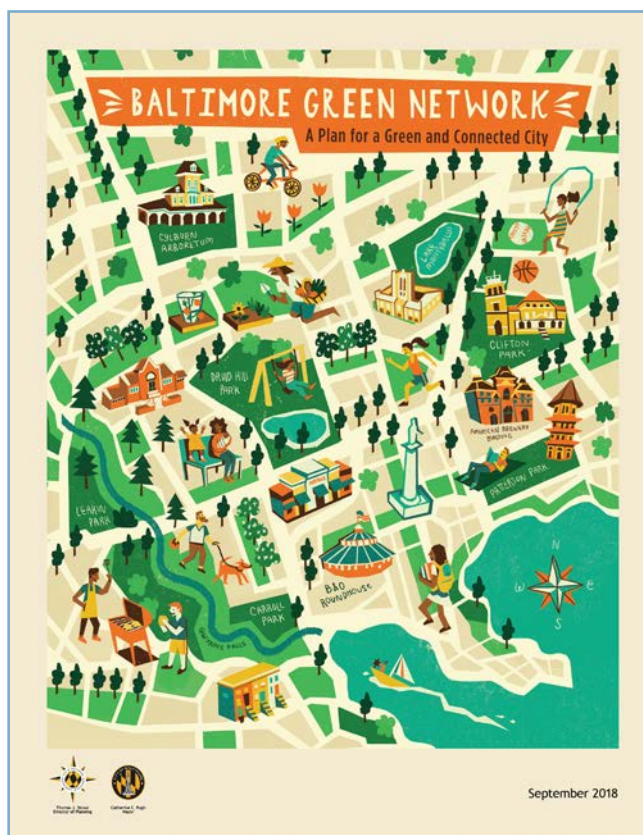
Green Network Pilot Projects Advance

The Baltimore Green Network (BGN), adopted in 2018, is a collective, bold vision for re-imagining 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. In 2019 and 2020, BGN worked closely with communities to help implement their greening visions. Broadway East has over 900 vacant lots, more than any other neighborhood, but with support from the Chesapeake Bay Trust, BGN funded an effort by the 6th Branch and New Broadway East Neighborhood Association to create a Greenprint Master Plan for their vacant lots. BGN also began hosting a monthly meeting for neighborhood associations and community groups on “Reclaiming Vacant Lots,” providing an opportunity for groups to share resources and learn about community benefit agreements and grants.

BGN also held a series of charrettes with the residents of Sandtown South and Druid Heights to create plans for two pilot projects--Smithson Street Mall and Cab Calloway Legends Square. Throughout 2020, BGN invested funds for Racheal Wilson Memorial Park in Boyd-Booth and Cab Calloway Legends Park in Druid Heights, and has continued to work with numerous neighborhoods to apply for grants for greening projects.

Pimlico Community Development Authority provided grant funding to green 3100 Spaulding in Central Park Heights, upgrade Queensbury Park, create a small park at Oakley and Park Heights, reclaim a vacant lot into a green parking lot, and create a mosaic in front of two vacant properties.



equity



e

“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

Improving equity in how and where public investments are made was a major focus in 2019 and 2020. Plans and analysis efforts included recommendations for how City services can be provided in a more equitable fashion and future investments can be distributed to address past disinvestment. New programs have incorporated criteria to ensure more equitable distribution of resources and benefits to communities.

First Annual Equity Report Released

In 2018, the City Council passed the Equity Assessment Ordinance, which became part of the City Code. As part of the implementation of the ordinance, the City’s first Annual Equity Report was released in 2020 by the Office of Equity & Civil Rights. The goal of the Annual Equity Report is to assess the progress towards the Equity Assessment Program’s goals and the current scope of its compliance, as well as to discuss outcomes from the equity assessments, recommended steps to address these outcomes, and updates on the progress towards eliminating identified disparities. Some of the recommendations from the 2020 Annual Equity Report include:

- reviewing City procurement practices through an equity lens,
- continuing to incorporate equity best practices in the creation and review of City budgets,
- developing and growing the Equity Assistance Fund,
- improving and expanding access to City services, and
- conducting a robust analysis of the City workforce.



Water Accountability and Equity Act

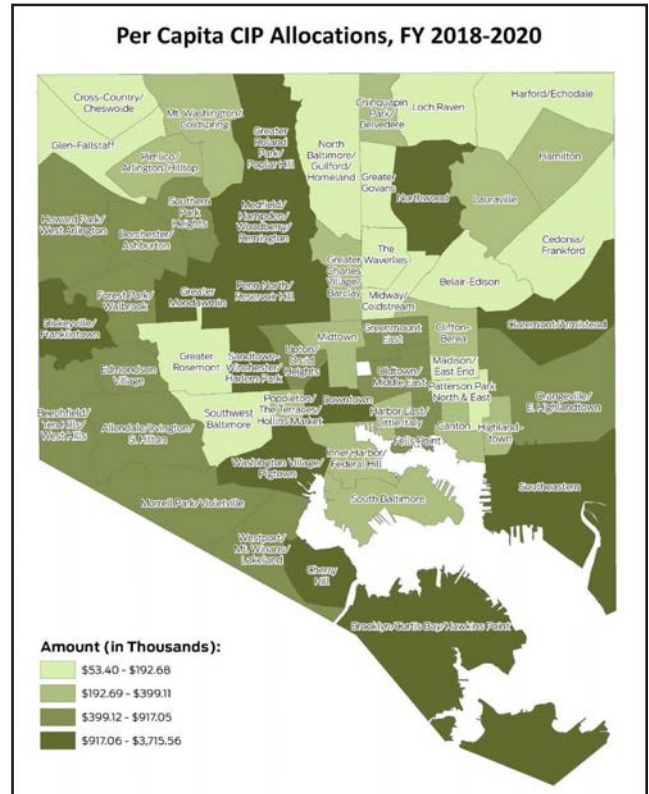
The Water Accountability and Equity Act (WAEA) is a comprehensive overhaul of the City’s water billing system, setting up a percentage-of-income affordability program for low-income households, a customer advocacy office, and a structure for appealing high bills and other issues. The WAEA, enacted in January of 2020, will discount water bills based on income. Residents whose income is below 50 percent of the poverty limit will not be charged any more than 1 percent of their income for water. Bills will be capped at 3 percent of income for any household who earns 100 to 200 percent of the federal poverty level. Lower caps are provided for households who earn less. The legislation also

Analysis of Capital Improvement Program Spending Provides Recommendations for Improving Equity

provides a compliance pathway to low-income households who have already fallen behind on their water bills.

In 2019, the Department of Planning partnered with Baltimore Neighborhood Indicators Alliance - Jacob France Institute at the University of Baltimore (BNIA) to prepare an equity analysis of Baltimore’s Capital Improvement Program (CIP) for FY14-20. The analysis included recommendations for improving the CIP review process and expenditure decisions in four different areas: distributional equity, structural equity, procedural equity, and transgenerational equity. Some of the recommendations included:

- The City should consider using income as a criteria for future CIP allocations. The analysis found that from FY14-FY17, per capita spending allocated to neighborhoods with the highest percentage of Black residents was only half of that allocated to areas with the lowest percentage of Black residents. Although allocation inequity has been improving, it does not yet adequately compensate for years of unequal investments.
- The analysis could not examine investments that are part of bulk (un-mapped) accounts. It was recommended that City agencies establish a process for reporting the locations of these expenditures so that the equity of the spending can be tracked and analyzed.
- Communities with the lowest life expectancy consistently had less than half of the CIP allocation. Agencies should consider life expectancy in neighborhoods as a factor in formulating future requests.
- Per capita CIP allocations have been consistently highest in communities with the lowest percentage of children under 5. Neighborhoods with very young children should be a criteria for prioritizing future CIP investments, particularly investments that affect young children.



Credit: BNIA-JFI

Regional Transit Plan Includes Recommendations to Improve Transit Equity

The Central Maryland Regional Transit Plan, adopted in 2020, includes a Five-Year Implementation Plan with recommendations to improve transit equity, including:

- the creation of an Equity Manager position at MDOT MTA,
- improving ADA accessibility at all Light Rail and Metro Subway stations,
- increasing the number of bus shelters in low-income areas,
- reviewing transit service plans through an equity lens, considering income, age, disability, English language proficiency, and vehicle access,
- reviewing marketing and communications to ensure access for all people,
- including more opportunities for community member participation in project planning, and
- improving transit access to economic and social opportunities including affordable housing, grocery stores, education, health-care, and recreation.

Transportation Prioritization Process Centers on Equity

The Baltimore Department of Transportation collaborated with city agencies and the Mayor's Office of Equity to develop a project prioritization process for transportation investment that centers on equity. The prioritization process will shift the assignment of work from an equal distribution among sectors to a weighted distribution that emphasizes project selection and project quantity (linear feet of sidewalk/lane miles of resurfacing) in equity zones. This process is included in the Complete Streets Manual, adopted in 2021.



Equity Zones Used in Implementation of Dockless Vehicle and Electric Vehicle Charging Programs

Baltimore's dockless vehicle program was officially launched in 2019 following a one-year pilot. All dockless bike/scooter companies permitted to operate in Baltimore City are required to offer low-income customer plans, non-smartphone access, and cash payment alternatives. Equitable deployment of vehicles in 20 Equity Zones is also required and tracked daily to promote dockless vehicle access in neighborhoods underserved by Baltimore City transportation systems.

The Baltimore City Electronic Vehicle Charger Equity Policy requires entities who are permitted to install EV Chargers on publicly owned land or right-of-way to install 30% of chargers within census tracts identified as being in the lowest quartile of median household income for the City of Baltimore (according to the most recently completed US Census).

community



Neighbors

Increasing the Number of Safe Public Gathering Places

In 2019 and 2020, the Baltimore Green Network (BGN) and INSPIRE programs worked with communities across the city to create plans for public gathering spaces. The BGN worked with the Broadway East, Oliver, Druid Heights, Marble Hill, Irvington, Upton and Franklin Square neighborhoods to ensure that the residents had input to plans for the city-owned vacant lots within their neighborhood. Visioning and block level planning for Impact Investment areas engaged residents in the Broadway East, Johnston Square, and Coldstream Homestead Montebello neighborhoods. Project implementation and planning through the INSPIRE program include a new playground at the Mary E. Rodman Recreation Center, completing elements of the Ft. Worthington School garden, and planning and implementing improvements to MUND Park, Garrett Park, Umbra Park, and Clifton Park.

The Parks + People Foundation has also been working with schools and communities to complete a number of new playgrounds and community green spaces. Schoolground and playground projects completed or underway include Hamilton ES/MS schoolyard and playground, Creative City playground and outdoor classroom space, and project planning with Cecil Elementary School. Community green space projects completed include Kirby Lane Park in Franklin Square, Reverend William Brown Community Park in Johnston Square, and Herbert Street Community Park in Mondawmin, and Gateway Park in Darley Park.

In response to social distancing guidelines for COVID-19, the City of Baltimore launched the Design for Distancing initiative in partnership with BDC and the Neighborhood Design Center. The effort aimed to help people maintain social distancing while they are out eating, shopping, or walking in their neighborhoods. A design competition was held to launch the initiative,



Mary E. Rodman Playground- photo by Jennifer Leonard



Gateway Park in Darley Park - photo by Steve Preston

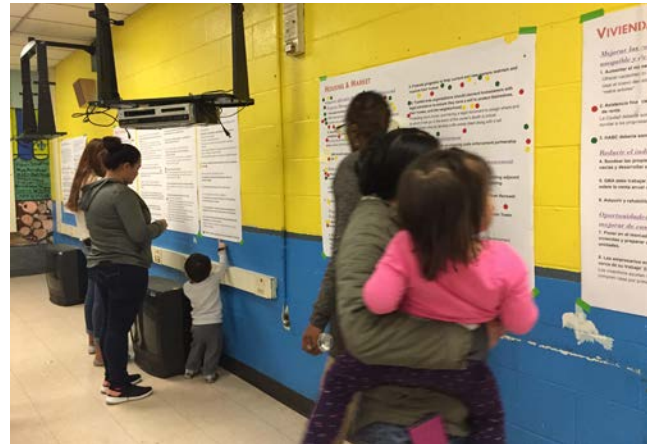
with winning designs being published in a guidebook. Over the summer and fall of 2020, Design for Distancing projects were installed in over a dozen neighborhoods and main streets across the city, including East Monument Street, Highlandtown, Hollins Market, Hamilton-Lauraville, and Waverly, to create safe spaces for public use in business districts.

Support Stronger Connections Between Neighbors and Among Neighborhoods

The Department of Planning has been working to create opportunities for conversations around racial equity as part of the Planning Commission’s meetings. In 2020, the Department of Planning developed a methodology for the preparation of equity assessments to be included in the staff reports for the Planning Commission. This methodology will be adopted for use in 2021.

Planning processes have incorporated new ways to promote voices who may not be traditionally heard and provide new avenues for resident voices to be included in decision-making processes. As part of the Cherry Hill Transformation Plan process, the Steering Committee included one position designated for youth, filled by a New Era High School student, and one designated position for a public housing resident. All INSPIRE planning efforts provide avenues for incorporating resident voices into decision-making through tabling at community and school events and using “quick touch” methods to collect information from people who may not have time or interest in attending longer meetings.

The Office of Sustainability and Department of Planning have increased avenues used for promoting neighborhood and sharing success stories. The Planning Director nominated Regina Hammond from ReBuild Johnston Square and Jacquelyn Cornish from Druid Heights Community Development Corporation to be recognized by the state of Maryland for their revitalization and development efforts in a statewide virtual ceremony in September 2020. The Office of Sustainability revived the Every Story Counts campaign in 2019 to share stories of resident-led sustainability work and began a Thank You Thursdays social media campaign in 2020 to recognize residents and community organizations serving and creating change in their communities. The INSPIRE program uses newsletters and presentations to promote resident successes and the INSPIRE plan template has been updated to highlight neighborhood accomplishments throughout the plans.

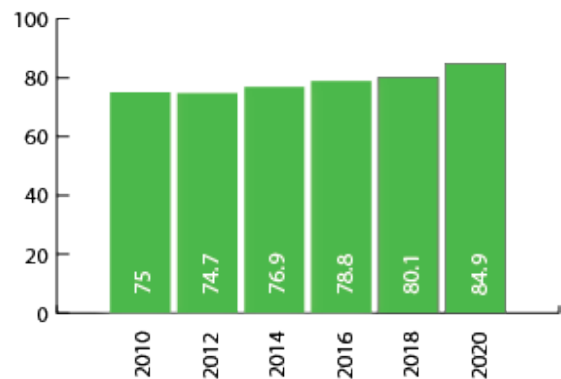


INSPIRE Plan Neighborhood Feedback - photo by Jennifer Leonard



Data Snapshot: % of Population over 18 Registered to Vote

Source: Baltimore City Board of Elections/BNIA-JFI



This data, which is reported biannually by the Baltimore City Board of Elections and BNIA, includes the percentage of persons over the age of 18 who are registered to vote out of all persons 18 years and over. The 2019 Sustainability Plan recommends an action under the Neighbors section to increase voter participation as part of a strategy to increase public participation in collective community activities.

Environmental Literacy

Providing School Leaders and Teachers with Resources and Professional Development

Over the last eleven years, almost 80% of Baltimore's public schools (134 total) have received mini-grants for hands-on, student-led environmental projects through the Office of Sustainability's Green, Healthy, Smart Challenge program. In the 2019-2020 school year, another 45 schools received grants, including six that had never participated before. To celebrate the program's tenth anniversary, in April 2019, 125 volunteers came out from some of our major funders and partners (including Constellation Energy, Exelon, BGE, the Baltimore Community Foundation, and T. Rowe Price) and joined students and staff at ten City Schools for a day of schoolyard greening projects like planting trees, creating garden beds, and installing birdhouses.

In fall 2020, BOS and City Schools, with support from our partners in the Cities Connecting Children to Nature initiative, launched the Baltimore Outdoor Learning Program (BOLP). This was a response to the increased safety of outdoor gathering during the COVID-19 pandemic and a way to increase access to the mental health, physical health, and academic benefits associated with time in nature for Baltimore's youth. We performed an equity scan to identify schools with the greatest needs, as well as those with demonstrated interest and available space, raised \$95,000 for construction and programming costs,

and selected ten schools. School teams are developing plans with support from volunteer landscape architects and engineers, with ground-breaking targeted for 2021.

The Green Leader Achievement Unit (AU) is awarded to City Schools teachers who document activities like leading student and staff Green Teams, implementing new environmental curricula, and working on Maryland Green School certification, and can contribute to pay raises. In spring 2019, 40 City Schools teachers received the Green Leader AU, and another 50 teachers applied for the AU in fall 2019 (though completion was interrupted by the COVID-19 pandemic).

Over 100 City Schools teachers per year participated in free environmental professional development that was sponsored by or documented by the school system in 2019 and 2020. Partners included the Chesapeake Bay Foundation, Towson University, the Waterfront Partnership of Baltimore, Notre Dame of Maryland University, the National Aquarium in Baltimore, UC Berkeley, NorthBay, the Maryland Association for Environmental & Outdoor Education, as well as BOS and City Schools staff who presented in-depth sessions on resources and policies for sustainability.



Volunteers at Bluford Drew Jemison STEM Academy and Augusta Fells Savage Institute for Visual Arts at the April 2019 service day - photo by Abby Cocke, BoS Staff



Bay Brook Elementary School outdoor classroom rendering - image courtesy of Joe Ignatius and Zolna Russell of Floura Teeter

Supporting Students as Environmental Leaders

In January 2020, BOS Youth Environmental Leadership Program interns, organizing as Baltimore Beyond Plastic, held an Art & Action Extravaganza attended by over 100 students and their supporters, and featuring arts-making and advocacy activities, local vegan food, live music by a local high-school aged band called Love Drift, raffles, tablers from local environmental advocacy groups, speeches by local elected officials and youth and adult activists, and a voter registration station.

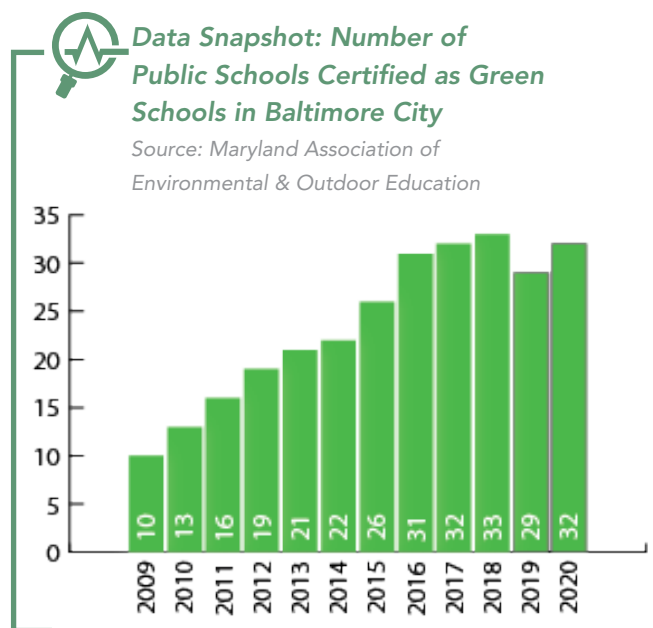


Students decorate canvas bags with environmental messages at the BBP Extravaganza - photo by Abby Cocke, BoS Staff

Environmental Literacy

Build and Sustain Meaningful Family and Community Engagement in Schools

The Maryland Green School Award Program is a rigorous certification open to K-12 schools statewide. In order to qualify, schools must demonstrate at least two years worth of environmental activities including staff professional development, classroom instruction across grade levels and subjects, student-led hands-on practices in a variety of areas, partnerships, and a school-wide celebration. Schools must recertify every four years in order to maintain their status. In 2019, Arlington Elementary/Middle School was certified as a Maryland Green School for the first time, and another four city public schools successfully recertified. In 2020, three new city public schools certified – Dr. Bernard Harris Elementary School, Hampden Elementary/Middle School, and Hampstead Hill Academy – and another four recertified. There are now a total of 33 Maryland Green Schools in our public school system in Baltimore, representing 20%. In addition, nine private schools in the city are Green School certified.



Healthy School Environments

Partner Success: Green Street Academy

Green Street Academy is a public charter middle-high school with a focus on preparing students for green career fields. In 2019, the school was honored with a Best of Green Schools Award in the K-12 category from the Center for Green Schools at the U.S. Green Building Council and the Green Schools National Network.

In addition to incorporating the environment into classroom lessons, the school uses its entire building and grounds as a learning and jobs lab. In the basement, students raise tilapia and yellow perch in tanks. Behind the school, they manage a small farm, with vegetable production, an orchard, chickens, and a hydroponic greens growing operation in a shipping container. Students are working on retrofitting a shipping container into a walk-in refrigerator, to store produce from a new hydroponic greenhouse being installed on site in 2021. In 2019, students incubated 150 chickens and donated them to a volunteer program that processed them and distributed the food to neighbors in southwest Baltimore. During the COVID-19 pandemic, students distributed produce from their farm.



Hoop house at Green Street Academy - photo by Abby Cocke, BoS Staff

Partner Success: Net Zero Energy Schools



The newly-constructed Graceland Park-O'Donnell Heights Elementary School - photo courtesy of Baltimore City Public Schools

In 2020, Baltimore City Public Schools held ribbon-cutting ceremonies for Holabird Academy and Graceland Park/O'Donnell Heights Elementary/Middle School, the district's first two Net Zero Energy schools (meaning that over the course of each year, they generate as much energy on site as they use). Portions of the design, engineering, and construction costs were funded by grant of over \$5 million from the Maryland Energy Administration. Each new school building utilizes the same design, allowing a direct comparison of their performance, but is positioned differently due to site constraints. Solar panels on each building's roof will generate an estimated 690 megawatt hours of energy per building per year, and geothermal wells below each building allow their heating and cooling systems to be very energy efficient. The Energy Use Index (EUI) measures energy usage per square foot per year, with a lower number indicating better energy efficiency; the national EUI average for schools is 68, and the Baltimore City Public Schools' average is 70, while the anticipated EUI at each new school is just 21. The schools have an energy dashboard that will show energy generation and consumption in 15 minute increments, as well as an interactive tour with information about features such as LED lighting, environmentally-friendly building materials, and the small green roof. Ultimately, these new buildings will save money, create a more pleasant and comfortable environment for students, staff, and community members, and set an example for the entire state of what healthy school environments can be.

Provide a Welcoming Environment and Increase Access to Nutritious Foods

As of 2020, 124 City Schools (78%) have Community Schools Coordinators, who work on strengthening relationships between the school, the community and citywide partners, and many have also developed School Wellness Teams. The City Schools' Food & Nutrition Services division hired four Farm-to-School (F2S) educators in late 2018 to support access to nutritious food, and in 2019 this team employed twelve high school students to help with their work. The F2S educators grow seedlings at the City Schools' Great Kids Farm for distribution to schools, consult with schools about growing their own gardens, and partner with the Baltimore City Master Gardeners to support school staff on garden design and maintenance. The F2S team works with all 2nd grade classes on lessons related to healthy eating and nutrition that are aligned with the City Schools science curriculum, and have themed summits and virtual field trips for other grades. During the COVID-19 pandemic, the F2S team provided free take-home seed kits, vermicompost, and aquaponics kits to teachers. In summer 2020, the F2S team launched a local food education network with quarterly meetings to coordinate with partners.



Great Kids Farm - photo by BoS Staff

Increase Physical Activity, Outdoor Play, and Outdoor Learning Experiences

Every 4th grader in City Schools took part in the Every Kid in a Park program in 2019, visiting either Fort McHenry, Hampton National Historical Site, or the Gwynns Falls Trail through a partnership with the National Parks Service, National Parks Foundation, and Baltimore City Department of Recreation & Parks. In addition, a new Gardening 101 workshop was piloted on a teacher professional development day, co-led by staff from the City Schools' Great Kids Farm.



Data Snapshot: Number of Schools with Clean Water from Drinking Fountains

Source: BCPS

2020:
29 Schools
18% of Schools



Data Snapshot: Number of Schools with Community School Coordinators

Source: BCPS

2020:
124 Schools
78% of Schools

Create a Healthy Physical Environment in Every School

Window, roof, and HVAC system replacements are underway at many city public schools. All newly-built 21st Century Schools have usable drinking water fountains, and schools that are being renovated are also receiving this feature. City Schools is working with the Maryland Association for Environmental & Outdoor Education and the Maryland Pesticide Education Network on programming for student and staff engagement around integrated pest management.

Resource Conservation

The Baltimore City Department of Public Works provided free recycling pickup at 129 City Schools in 2019, representing 80% of the system. All newly-constructed 21st Century schools have a recycling dumpster, so that recyclable materials can be stored outside the school building. All newly-constructed 21st Century schools are being built to either LEED Silver or LEED Gold standards, which includes recycling of construction waste. Two Net Zero Energy schools are currently under construction.

The School Board voted in 2019 to approve a contract that allows City Schools to eliminate use of the plastic spork kit in cafeterias and replace it with a compostable fork or spoon and compostable straw. While these items are not yet being actively composted, this switch sets the tone to move to composting.



Students recycling at Gwynns Falls Elementary - photo by BoS Staff

In 2019, City Schools and the Baltimore Office of Sustainability hosted a screening of the food waste documentary “Wasted” at the Parkway Theater for cafeteria managers, with a panel discussion and Q&A afterwards with local food waste reduction experts. In order to reduce food waste, City Schools’ Food & Nutrition Services has been training staff on right-sizing ordering, employing electronic inventory management, and production tracking to better calculate what’s being eaten by students. In 2020, City Schools began piloting a system of electronic temperature sensors in freezers and fridges to reduce spoilage.

Waste and Recycling

Recycling and Solid Waste Plan (Less Waste Better Baltimore) & Zero Waste Plan

Two plans for improving management of waste were completed in 2020 – The Less Waste, Better Baltimore Plan and the Fair Development plan for Zero Waste. These plans were prepared with recognition that the City-owned Quarantine Road Landfill is rapidly reaching its capacity and the privately-owned BRESKO waste-to-energy plant may not be a viable long-term option. The LWBB Plan, prepared by the Department of Public Works, provides a roadmap for getting to 83% diversion of waste from disposal by 2040. The Zero Waste Plan, prepared through a partnership including the United Workers Association, Zero Waste Associates, the Fair Development Roundtable, and the Institute for Local Self-Reliance, calls for the city to achieve a 90% diversion rate by 2040, including allowing the City's contract with the BRESKO plant to expire in 2021.

Updates from the Camp Small Zero Waste Initiative

Initiated in 2016, the Camp Small Zero Waste Initiative has continued to transform the City's wood waste into useful products. Most recently in 2020 over 3,500 tons of woody materials collected from the City's downed, damaged, and removed street trees have been upcycled. This includes 40,000 board feet of lumber produced from the collected logs, 16,000 of which have been installed as part of the interior design for the new Cahill Wellness Center. Another 4,000 board feet of logs have been utilized to create outdoor learning spaces.



Above: Log sorting at Camp Small - photo by BoS Staff
Right: Bag Ban messaging - image by Full Circuit Studio

Plastic Bag Ban

Following many previous attempts and years of advocacy by residents and organizations, the Comprehensive Bag Reduction Act was signed into law in 2020. The law bans retail distribution of plastic grocery bags but allows retailers to charge 5 cents for other bag materials such as paper. The goal is to encourage residents to switch to using reusable bags to reduce single-use items. The law was originally scheduled to become effective on January 9, 2021, but due to the impact of COVID-19 on residents and businesses, the effective date for the new law has been postponed until at least July 9, 2021.

**BAGS NO LONGER FREE
NOW THERE'S A FEE**

WHY DOES A BAG BAN MATTER?

Plastic bags are a large portion of the plastic pollution that ends up in our trees, streets, parks, drains, harbors, waterways, and oceans.

By prohibiting their use, Baltimore is taking an important step towards a cleaner city and planet.



Food Matters Program Implementation

A relationship with the Natural Resources Defense Council and funding from the Rockefeller Foundation have helped to further the implementation of the City's Food Waste & Recovery Strategy. The Baltimore Food Matters (BFM) program within the Office of Sustainability brought together City agencies and institutional, nonprofit, business, and faith-based partners to advance and implement the following actions in support of food waste reduction:

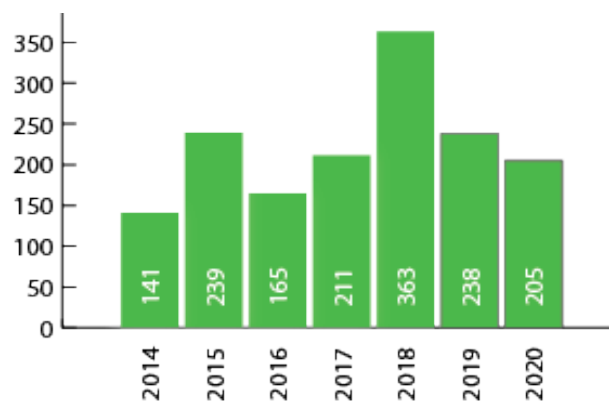
- BFM worked with NRDC to distribute \$200,000 to 13 organizations, with an emphasis on those working in historically underserved communities. The non-profits, schools and community gardens supported are implementing key outreach and education goals related to food waste, including the launch of community composting sites throughout the city.
- During the summer of 2019, BFM ran an 8-week Save the Food campaign within the Maryland Transit Authority system, raising the awareness of the rampant food waste among residents.
- BCPSS recently implemented a school system-wide food waste prevention program that leverages proven approaches to ensure that healthy foods are not wasted, but instead support students' nutrition. All 180 schools in Baltimore are implementing these programs.
- In 2019, BFM partnered with the Maryland Food Bank (MFB) to strategically address food waste and food insecurity. Through the partnership, MFB is promoting the use of the MealConnect software, which connects those with food surpluses, to non-profits who feed people.
- BFM has initiated and expanded the Baltimore Community Composting Network – including two farmers market drop-off locations. Baltimore's free residential food scrap program began at the Downtown Farmers' Market and Bazaar in May 2019 and expanded to include the Waverly Farmers' Market in November 2019. Food scraps collected are given to local farmers for use as compost and animal feed.



Compost collection at JFX Farmers' Market - photo by BoS Staff

Data Snapshot: Amount of Trash Collected by Trash Wheels in Baltimore (in Tons)

Source: Waterfront Partnership of Baltimore



This data shows the amount of trash, in tons, collected by Trash Wheels in Baltimore. Mr. Trash Wheel has been located at the mouth of the Jones Falls since 2014. Professor Trash Wheel at the Harris Creek outfall and Captain Trash Wheel at Masonville Cove were added in 2016 and 2018, respectively. As a year with exceptionally high precipitation, 2018 also saw a high volume of trash collected.

Urban Agriculture

Supporting Growers to Create Financially Viable Urban Agriculture

The Park Heights Plantation Urban Farm was awarded \$29,000 from the Pimlico Community Development Authority in 2019 for infrastructure upgrades including food storage, raised beds, hoop house improvements, and security cameras.

In April 2020, BOS provided a \$3,000 grant to Bon Secours Community Works to upgrade the infrastructure at a greenhouse on their farm in west Baltimore, cover the cost of soil and seeds, and contract for the time of a farmer to grow vegetables and herbs for free distribution. The goal was to ensure that local growers could continue to operate through the COVID-19 pandemic, and to help more residents begin to grow their own food. In total, 183 flats of seedlings were produced, totaling several thousand plants, and were delivered to 13 urban farms and community gardens, 7 community programs that redistributed them to residents, and 9 additional home gardeners.

In May 2020, the Farm Alliance of Baltimore announced the creation of an Urban Agriculture Resilience Fund, developed with \$103,500 in funding from the Baltimore Community Foundation, the Abell Foundation, the Jacob and Hilda Blaustein Foundation, the Rauch Foundation, the Bernard Family Fund at T. Rowe Price Charitable, the France-Merrick Foundation, and other donors. The fund covers post-harvest handling and food sanitation equipment, personal marketing staffing and support, infrastructure assistance such as repairs and installation work, and emergency cash assistance for Baltimore's farmers.

The Farm Alliance of Baltimore aggregates produce through a shared farmer's market stand at the Waverly Farmers Market, and urban farmers are also selling produce at their own farm stands, to restaurants, and, in some cases at public markets. In 2020, Strength to Love 2 Farm in Sandtown-Winchester got a COVID-19 related grant to grow, wash, prepare, and package over 1,500 free salads that were distributed in partnership with local organizations serving meals to seniors and other community residents. They also sold produce throughout the year via Fresh at the Avenue, a program of the No Boundaries Coalition that offers affordable fresh produce at The Avenue Market near the farm, and at a pre-Thanksgiving farm stand where neighborhood residents got a 50% discount and received donated produce. Civic Works' Real Food Farm, Baltimore's largest urban farm, harvested more than 7,700 pounds of produce over the 2019 and 2020 growing seasons, which was sold and donated to city residents.



Pre-Thanksgiving Promotion - graphic by Strength to Love Farm

Urban Agriculture



Data Snapshot: Projects and Amount of Land Used for Urban Agriculture

Source: BoS

2020:
119 Projects
30 Acres of Land

There are 119 community gardens and urban farms in Baltimore City, not counting gardens on the campuses of schools and faith-based institutions. These sites total 30 acres of land, distributed across 80 different neighborhoods.

Encouraging Urban Farms and Local Food Production

In 2019, Whitelock Community Farm signed a new five-year lease with the City of Baltimore through the Homegrown Baltimore Land Leasing Program, and, in 2020, the city entered into another such lease with Park Heights Plantation Urban Farm. For the first time, the city also approved applications for permanent protection of two neighborhood-based farms, Oliver Community Farm and Hidden Harvest Farm. Both are currently being processed for sale to the Baltimore Green Space land trust, which will preserve them for their communities in perpetuity.

Ensuring Farmers and Gardeners Can Continue Safe, Sustainable Production

In 2019, Future Harvest: the Chesapeake Alliance for Sustainable Agriculture collaborated with the University of Maryland Extension and the Foodshed Field School to deliver a 10-week course on Starting a Small Farm. Workshops were held at Pleasant Hope Baptist Church in north Baltimore City, the home base of the Black Church Food Security Network. There was also an Urban Farmer Winter Gathering held at the City Schools' Great Kids Farm, at which staff from the Baltimore Office of Sustainability (BOS) and many other organizations presented on resources for urban growers, as well as an array of other skills-building classes offered by the Master Gardeners and other partners throughout the year.

In spring 2020, working with the Farm Alliance of Baltimore, BOS and the Baltimore City Department of Recreation & Parks explored several sites and identified land for a potential future Farm Incubator to serve as a training ground for new urban farmers. Fundraising and initial planning is currently underway.

Partner Success: Cherry Hill Urban Community Garden



Cherry Hill Urban Community Garden - photo by Kyle Pompey

The Cherry Hill Urban Community Garden (CHUCG) was started in 2010 by Mama Juanita Ewell on a 1.25-acre vacant lot leased by Cherry Hill Development Corporation, with the goal of teaching people to “Eat Healthy, Live Healthy.” Over the years, committed volunteers worked together to expand the space from a handful of raised beds to multiple fields, raised mobility beds, a hoop house, and more. After Ms. Juanita passed away in 2015, the garden was cultivated under different farm leadership until in 2018 it was leased to Black Yield Institute (BYI), a pan-African power institution dedicated to Black land and food sovereignty. Under Black Yields Institute’s People’s Urban Agriculture initiative, CHUCG grew and sold 3,000 pounds of produce, including fruit like figs, peaches, apples, various greens, tomatoes, onions, and potatoes, and led over 2,000 volunteers. CHUCG supplies produce for the Cherry Hill Pop-Up Market (which engages and mobilizes residents to become members of a planned cooperative grocery store), Waverly Farmers Market, and other Black-led organizations, businesses, and farms. In 2020, they participated in an indigo-growing project with the Maryland Institute College of Art, cultivating 100 pounds of indigo to be used for local dye-making projects. BYI holds community-focused events at CHUCG, including their quarterly events and occasional celebrations throughout the season.

human-made systems



Neighborhoods



Fall 2019 Baltimore Planning Academy Cohort - photo by DOP Staff

Strengthening Community Capacity to Address Obstacles and Opportunities

In 2019 and 2020, the Department of Planning has helped to strengthen and serve communities through the Baltimore Planning Academy. As of Fall 2020, the Planning Academy has provided 4 cohorts of participants with a free six-week course with a focus on urban planning, zoning, and development in Baltimore. The program's goal is to build community leadership around these issues, using a Baltimore lens, empowering residents to shape the future of their neighborhoods. Past program materials are available for anyone to view on the Planning Academy web page. The program's fifth and sixth cohorts are anticipated to be welcomed to spring and fall sessions in 2021.

DOP has also supported communities in developing neighborhood plans. In 2019 and 2020 neighborhood plans including the Last Mile Park Project, Bay Brook ES/MS INSPIRE Plan, Broening Manor, Graceland Park, Medford and O'Donnell Heights Plan, O'Donnell Heights Revitalization Plan, Cherry Hill Transformation Plan, Matthew Henson/East-erwood Vision Plan, and Johnston Square Vision Plan were presented to and accepted or adopted by the Planning Commission. Six additional INSPIRE Plans are currently in process.

Operating Support for Capacity-Building Programs

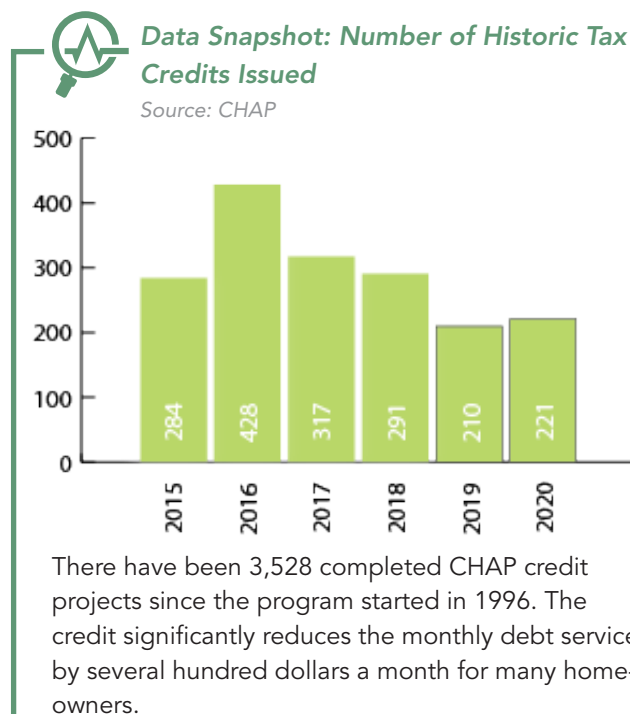
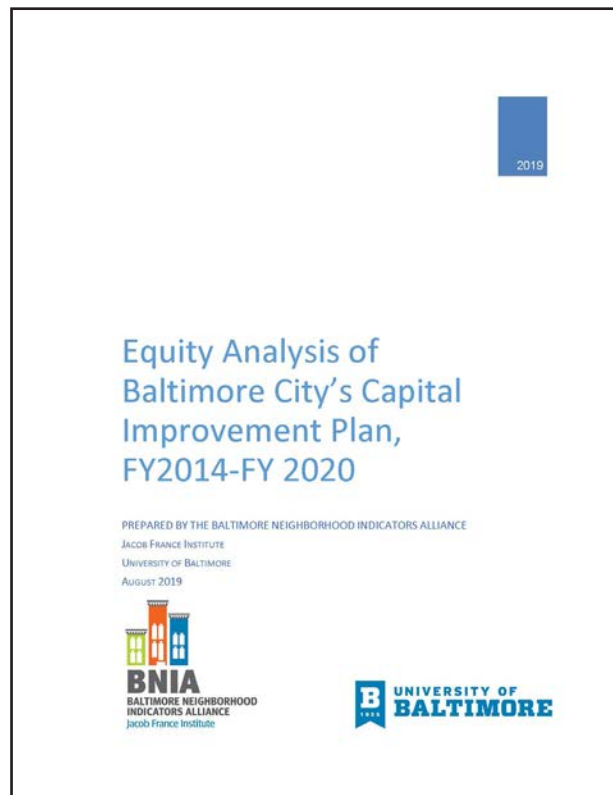
In 2018, the City launched the Community Catalyst Grants program to support locally driven community development work. Baltimore City Department of Housing and Community Development, with support of the Planning Department, awarded capital funds and operating funds for community-driven revitalization efforts. A total of 25 organizations received capital funds including the Arch Social Club, Black Women Build, BRIDGES, Civic Works, Inc., and People's Homesteading Group. A total of 35 organizations were awarded operating funds, including Cherry Hill Development Corporation, Coppin Heights CDC, Forest Park Alliance & WBC CDC, Leaders of a Beautiful Struggle, and the Station North Tool Library. A second round of Community Catalyst grants will be awarded in 2021.

Supporting Programs and Policies to Increase Investments in Neighborhoods

Over the past two years, the Department of Planning worked with partners to evaluate two programs that are critical to increasing neighborhood investments: the Capitol Improvement Program (CIP) and the Historic Tax Credit program. The results of both studies are being used to identify ways to improve the equity of these programs.

In 2019, the Department of Planning partnered (DoP) with Baltimore Neighborhood Indicators Alliance-Jacob Francis Institute at the University of Baltimore (BNIA) to prepare an equity analysis of Baltimore’s Capital Improvement Program (CIP) for FY14-20 and to develop a methodology that the Department could use to do annual analysis going forward. In 2020, this methodology was used to prepare an analysis of the FY21 capital budget. Recommendations were also provided for expanding and revising this analysis methodology for use in future years. More detail about the recommendations is shared in the Equity section of this report.

In 2019, the Department of Planning hired PlaceEconomics to analyze the historic tax credit. The result, completed in the summer of 2020, is the report; An Analysis of the Baltimore Historic Preservation Tax Credit. The report supports positive assumptions about the value of the credit, and brings to light new information about the use and benefit of the credit in communities across the city. One of the key findings concluded that the taxes foregone through the tax credit over 10 years are recouped by the City in just over 7 years as a result of increased private investment and property values. The program is also estimated to have created an average of nearly 600 direct and indirect jobs through tax credit projects.



Housing Affordability

Spending Plan Adopted for the Affordable Housing Trust Fund

In 2020, a spending plan designed to aid in housing for low- and extremely low-income households was adopted by the Affordable Housing Trust Fund (AHTF) Commission. An anticipated \$17 million in Fiscal Year 2020 is slated to support Community Land Trust initiatives, new construction, rental preservation, senior homeownership repairs, rent supplements and Choice Neighborhoods. The spending plan also identifies \$16.5 million in spending in FY21 and \$18 million for FY22. This spending plan was finalized after initial proposed priorities were presented and issued for public comment, which were used to finalize the priorities for funding.

The largest percentage for funding each year is designated for Community Land Trusts. Community Land Trusts are a nationally proven means of creating homeownership opportunities for households earning 50 percent or less of the Area Median Income. Under the land trust model, a nonprofit organization owns the land and sells the home to qualified buyers below market price. The land trust's ownership ensures that the home will remain affordable for a 99-year period. When a buyer purchases a home from the land trust, they agree to sell the home to a low-income household and to split the equity with the land trust. In cities with significant racial disparities, land trusts can be a valuable tool used to close the wealth and equity gap.

Other top funding priorities include new construction rental housing, funding for senior homeownership repairs and support of homeowner preservation. The City's 2015-2019 Consolidated Plan for HUD indicates that there are over 6200 senior homeowners who earn 30 percent or less of the Area Median Income and close to 3400 senior homeowners who earn 50 percent or less of the Area Median Income. Homeowner repair and preservation programs are one of the most cost-effective means to preventing vacancies, reducing homelessness and minimizing displacement.

Baltimore Develops Model to Pilot School-Centered Housing

In January of 2020, Fannie Mae awarded a contract for Baltimore to develop a model to provide school-centered housing to young families in elementary school. Through substantial engagement with over 100 Baltimore and National experts in the fields of affordable housing, family homelessness, education, and community schools, a white paper that describes the SCHORE (Student-Centered Housing Response) model was completed.

The model uses affordable housing as a lever to improve educational outcomes and school enrollment stability for elementary-aged children in neighborhood schools. The model calls for HCD to partner with affordable housing providers to facilitate the rehabilitation and maintenance of the properties near neighborhood schools, and Baltimore City Schools will identify the families of students in need of housing interventions. The City intends to implement this model with three pilot schools by the end of 2021.



Student-Centered Housing Response - image by HCD and UPD Consulting

Community-Centered Partnership Becomes Master Developer in Johnston Square

In 2020, a Master Plan to convert more than 700 blighted and abandoned properties to new housing and green space was revealed by Johnston Square Partners (JS Partners). JS Partners is a collaborative of several community-centered organizations including Baltimore Arts Realty Corporation (BARCO), Baltimoreans United in Leadership Development (BUILD), Rebuild Johnston Square Neighborhood Organization, ReBuild Metro, and St. Frances Academy. The Baltimore City Department of Housing & Community Development (DHCD) and JS Partners developed the pilot initiative that gives site control over all abandoned properties in Johnston Square to JS Partners; essentially placing the community in the position of Master Developer for the entire area.

This strategy of placing the community at the center of the planning process is a model that could become a template for revitalization efforts city-wide. Equitable redevelopment is central to the plan with a commitment to increasing homeownership opportunities, preserving existing and constructing new quality affordable housing, as well as protecting legacy residents. The partnership plans to decrease vacant housing in Johnston Square from 52% to as little as 3% and increase home values by more than 150% over the course of a ten-year development cycle.

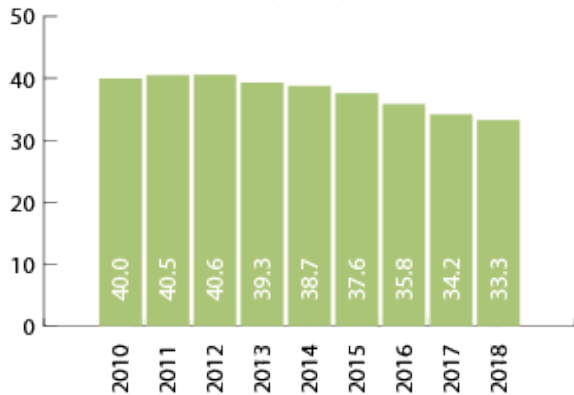


Image from the Johnston Square Vision Plan, showing the plan's vision for a new athletic field - image by Hord Coplan Macht

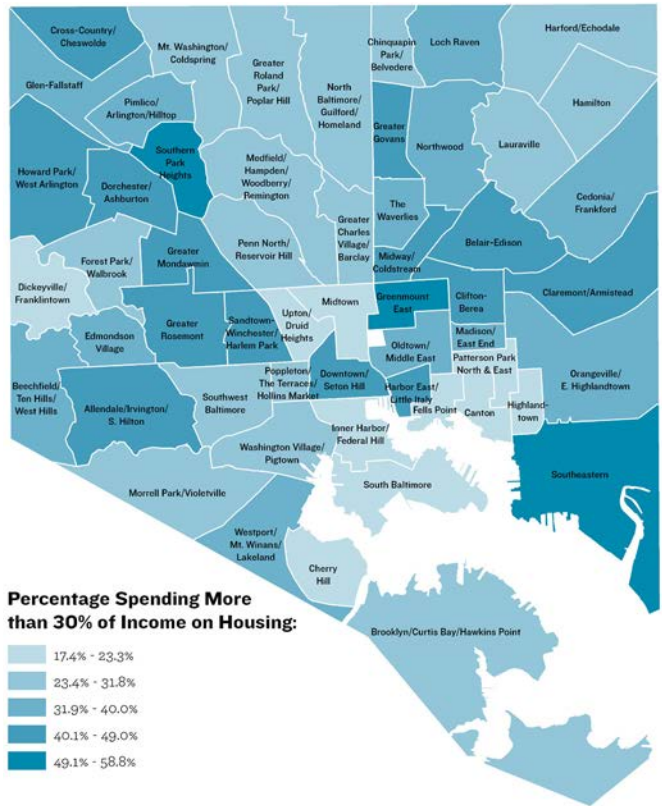


Data Snapshot: Housing Affordability Index - Mortgage

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

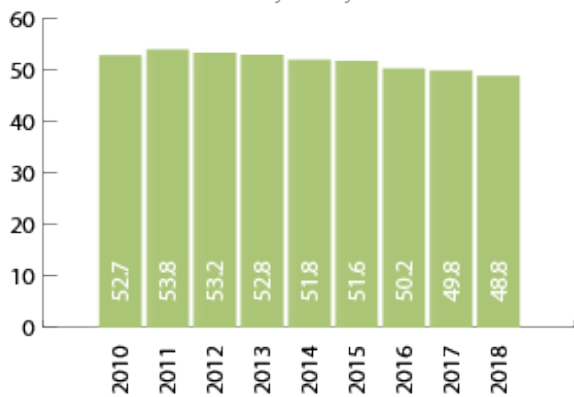


This data shows the percentage of households in Baltimore that pay more than 30% of their total household income on mortgage and other housing-related expenses. Households which pay more than 30 percent and may have difficulty affording necessities such as food, clothing, transportation and medical care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

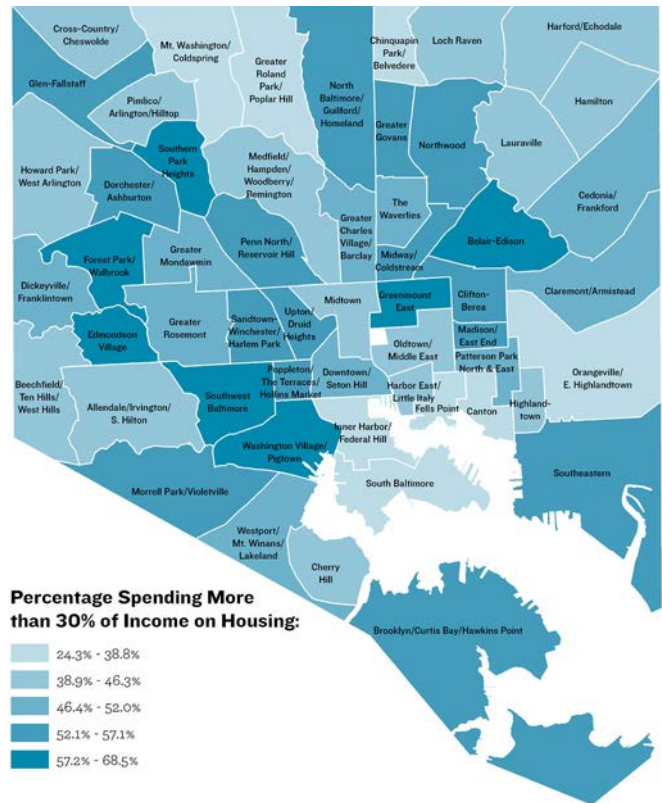


Data Snapshot: Housing Affordability Index - Rent

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. 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."



Buildings

New Eco-Village Project in Coldstream-Homestead-Montebello

In May 2019, the Baltimore City Department of Housing & Community Development that the Urban Green – LNW&A Development Team was granted the development rights for Phase 1 of the Tivoly Triangle Redevelopment Area in Coldstream Homestead Montebello (CHM). The Team has plans to develop the City's first net-zero homeownership community; a Tivoly eco-village. Net-zero energy homes generate 100 percent of the energy they consume by using renewal energy sources such as solar. The revival efforts for Tivoly Triangle build upon ongoing state and city investment to eliminate blight and replace it with a new homeownership community in Coldstream Homestead Montebello. This project includes 79 units, featuring 59 duplexes and 20 single-family homes. The homes will be locally manufactured by Blueprint Robotics – a Baltimore housing manufacturer that uses computer-based design and robotic technology to manufacture the framework and housing system. Additionally, the proposed development includes solar and heating systems that will generate electricity and hot water for the homes and can operate as a resiliency hub for first responders in the event of a regional grid blackout. All relocations have been finalized, and the remaining acquisitions are expected to be done in early 2021.

Green Building Codes Updated

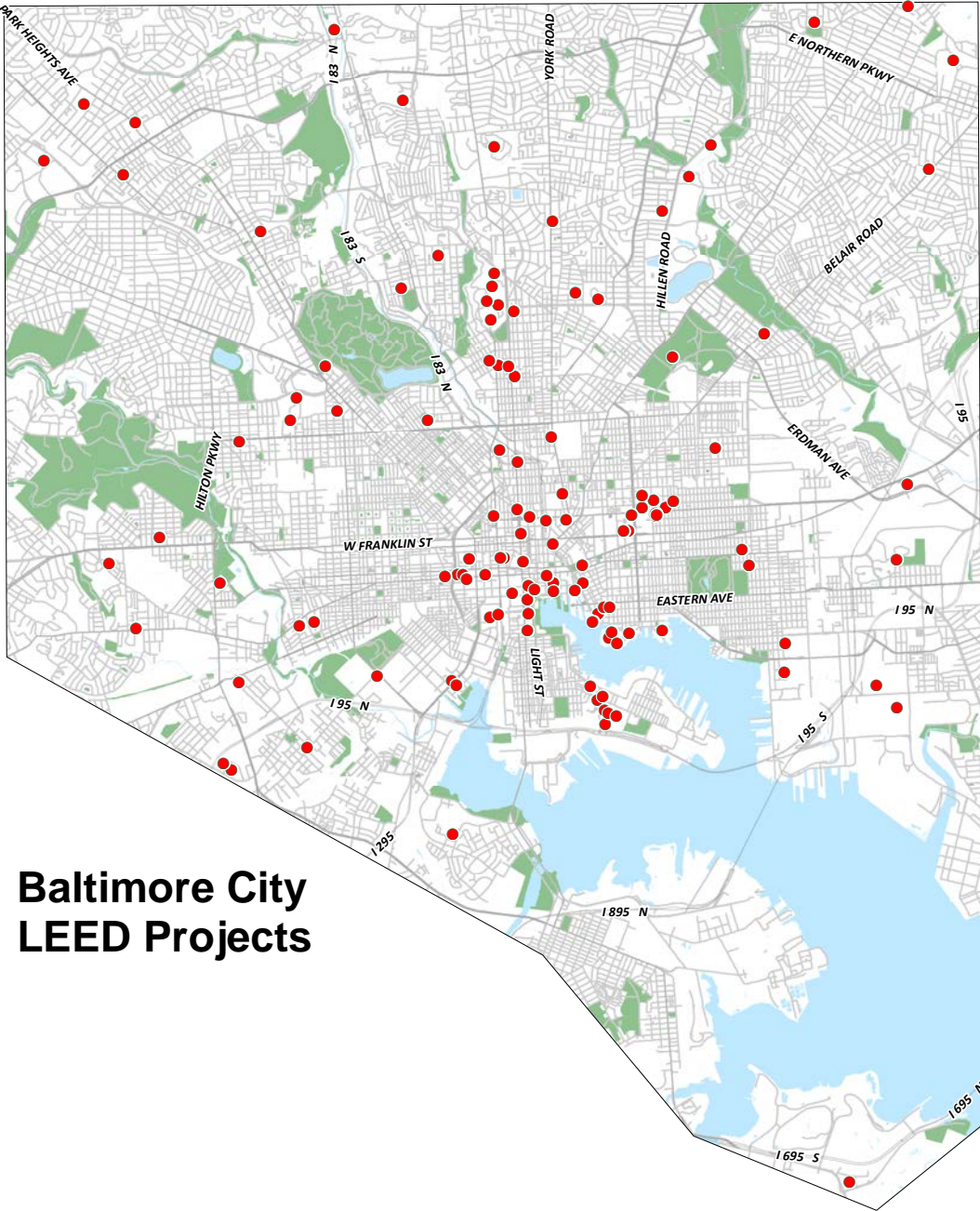
In 2020, the City updated its green building code by adopting the 2018 the International Energy Conservation Code (IgCC), the 2018 International Green Construction Code, and the 2018 International Building Code. As part of the 2018 IgCC update (see CB #20-0630), the section on elective requirements was updated and expanded “to implement additional measures to support Baltimore City’s sustainability goals, mitigate the impacts of building, and provide a greater benefit.” Under the new provisions, each project must now either achieve at least 10 points from a set list of categories (e.g., water and energy efficiency, indoor environmental quality, and site sustainability) or follow one of two zero energy paths. A new compliance form will collect additional data and help the City better understand how owners are complying with the codes.



Data Snapshot: Number and Geographic Distribution of Certified Green Buildings

Source: U.S. Green Building Council

This map shows the locations of green buildings or projects certified by the U.S. Green Building Council under the LEED rating system. LEED stands for Leadership in Energy and Environmental Design. As of 2019, there were 150 LEED Certified projects in Baltimore.



**Baltimore City
LEED Projects**

Transportation

Central Maryland Regional Transit Plan Adopted

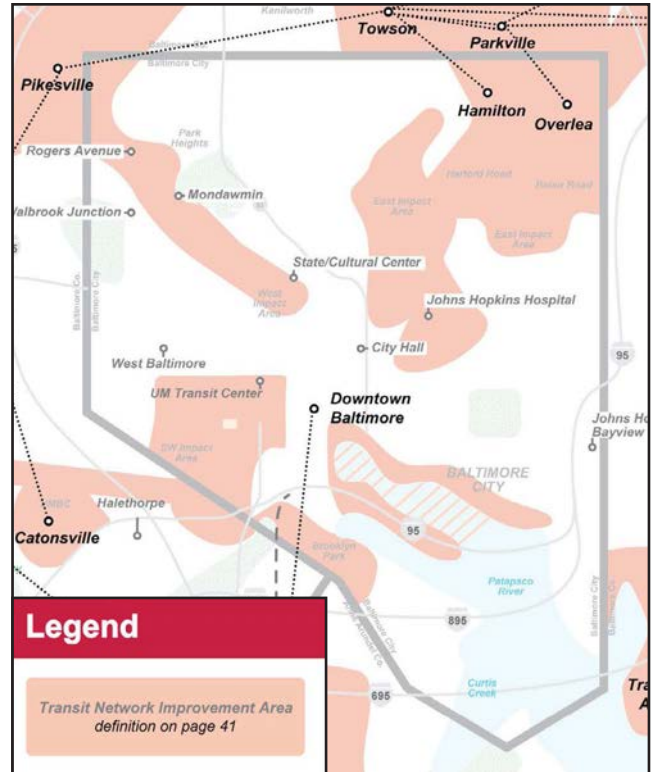
The Central Maryland Regional Transit Plan (RTP), Connecting our Future: A Regional Transit Plan for Central Maryland, was adopted in October 2020. The Plan’s adoption completed one of the actions from the 2019 Sustainability Plan. The RTP is a 25-year plan for improving transportation in Anne Arundel, Baltimore, Harford, Howard Counties and Baltimore City. The plan addresses traditional transit including buses and trains and explores new mobility options and technology.

Standardize Coordination Between City and State Agencies

MDOT, MTA, and BCDOT meet every month to discuss key issues and projects such as North Avenue Rising, Dedicated Bus Lanes, Shared Mobility Corrals, and the Transit Priority Initiative. Committees and meetings to facilitate interagency coordination include the Dockless Vehicle Committee, the Curbspace Management Committee, LINCS Implementation Plan meetings, and the Complete Streets Manual Subcommittee.

Transit Priority Initiative

Started in early 2019, MDOT MTA’s data-driven Transit Priority Initiative was created to identify roadway segments that would benefit from transit prioritizing investments and identify physical and technological treatments that can be tactically implemented to address bus travel delays, bus reliability, and pedestrian and bicyclist safety. This initiative assists neighborhoods, elected officials, transit planners, and transportation engineers to consider how these treatments can complement local investments in a community’s infrastructure. DOT worked closely with MTA to improve the efficiency and safety of the Light Rail by adjusting signal timings to prioritize movement of the Light Rail trains. The Belair Road/Gay Street corridor and the Garrison Boulevard/Bloomingdale Road corridor are the first two candidates for target transit-prioritizing investments through this program.



Network Improvement Areas Map from the Central Maryland Regional Transit Plan - image by MDOT/MTA



Transit Priority Initiative Concept for Gay Street - image by MDOT/MTA

Slow Streets Program Launched

The Baltimore City Council passed a bill in May of 2020 to mandate a minimum of 25-miles of Slow Streets in Baltimore City. The Slow Streets program supports safe, essential physical activity by creating more space for social distancing in response to the COVID-19 pandemic. The program discourages residents and visitors from driving on all “Slow Streets” unless they are necessary to reach a final destination. Slow Streets also urge all people driving to drive slowly and safely to respectfully share the road with people walking and biking. In 2020, DOT exceeded the 25-mile goal mandated by The Baltimore City Council, implementing 16 miles of Slow Streets in July and another 10 miles in September. In 2021 the program is going through an evaluation phase to collect and address resident feedback.

Dockless Vehicles Program Launched

Baltimore’s dockless vehicle program was officially launched in 2019 following a one-year pilot. DOT initiated an MOU with the MTA to coordinate dockless vehicle deployment with transit stops—including corrals and deployment to all MTA rail stations (metro, light rail, MARC). The program includes 20 zones around the city designated as “Equity Zones.” Equity Zones promote dockless vehicle access in neighborhoods underserved by Baltimore City transportation systems by requiring vendors to deploy at least three vehicles per zone every morning. Most Equity Zones are sited in historically underserved neighborhoods, which have been subject to housing and transportation discrimination that has resulted in limited access to private vehicles and reliance on first/last mile connections to transit. All dockless companies permitted to operate in Baltimore City are required to offer low-income customer plans, non-smartphone access, and cash payment alternatives to increase access to this transportation option.



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
2017	60.0	18.2	9.1	6.6	2.3
2018	60.1	18.0	9.0	6.4	2.3

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.

Noise

Adoption of International Green Construction Code Includes Noise Reduction Standards

In 2020, Baltimore adopted the 2018 International Green Construction Code, which includes establishing maximum levels for certain types of noise generated by building systems, and requiring new construction to meet standards for reducing noise. The code includes standards for interior background noise (including noise generated by mechanical, electrical, and plumbing systems) for room types including residential living and sleeping areas, offices, libraries, gymnasiums, and classrooms. The code also includes minimum sound and impact sound ratings for room types including homes, offices, classrooms, mechanical rooms, and retail or restaurant spaces. This addresses the ability of walls to dampen sounds and the ability of floors to absorb sound from footsteps.



International Green Construction Code -
image by International Code Council

Noise

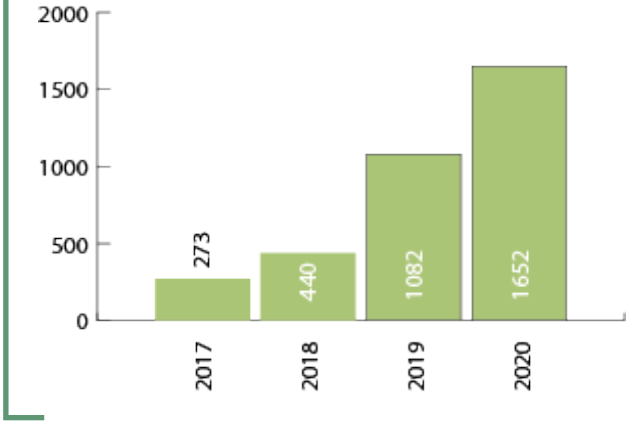
The Baltimore City Investigation Research Program Leads to End of Surveillance Planes

A City Council Bill known as The Baltimore City Investigation Research Program was introduced in October 2020. The bill called on the Baltimore Police Commissioner to provide data on the effectiveness of the City's Aerial Investigation Research Program and called on the Board of Estimates (BOE) to call a public hearing on the program before rendering any decision on its extension. In April 2020, the BOE had entered into a 6-month pilot program allowing 3 privately-funded surveillance planes to patrol Baltimore from the air. Shortly after initiation of the pilot program, residents voiced privacy and noise concerns regarding the flights. A September 2020 report on the program by the Baltimore Police Department indicated that BPD had received a total of 43 noise complaints about the program. The bill states that "Aside from the very real privacy concerns presented by the surveillance planes, the noise they generate is a quality-of-life issue that is unacceptable for many Baltimoreans". The Board of Estimates voted unanimously to end this contract in February 2021.



Data Snapshot: Number of Noise Complaints Received by 311

Source: Baltimore City 311 Data



**climate
& resilience**



Community Preparedness

Baltimore Community Resiliency Hub Program Updates

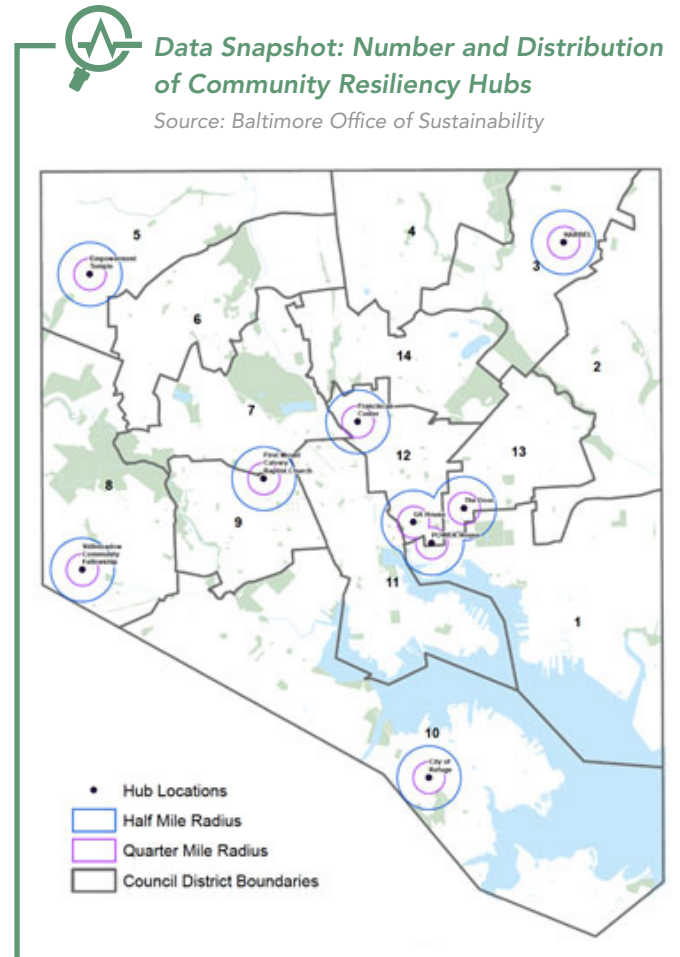
A key resiliency action identified in both the 2019 Sustainability Plan and 2018 DP3 calls for the expansion of the Baltimore City Community Resiliency Hub Program, the inception of which was in 2015.

Community Resiliency Hubs are frontline community-based and faith-based organizations located largely in low-income communities of color that partner with the City to help their neighborhoods become more resilient to the impacts of climate change and other hazards. They seek to provide community-centered emergency support, resources, and services to their most vulnerable neighbors. They also serve as a trusted messenger, voice, and resource during non-emergency times. Baltimore is the first city in the country whose Resiliency Hub program is driven by community-based non-profits.

The Office of Sustainability, the Office of Emergency Management, and the Baltimore City Health Department regularly collaborate and work with Resiliency Hub Leaders to enhance Hubs' capacity to help their neighbors and fill gaps in risk awareness and preparedness. We offer support by using grant funding to provide high quality emergency supplies, preparedness and response training, education and outreach assistance, energy efficiency improvements to Hub buildings, and in some cases, solar and battery back-up power. Hub Leaders also have a direct line of communication with not only our office, but also the Office of Emergency Management.

We are currently working with nine Resiliency Hub Partners. Over the last two years, four organizations became Community Resiliency Hub Partners: the Franciscan Center of Baltimore in Old Goucher, Stillmeadow Community Fellowship in Beechfield, HARBEL in Hamilton, and City of Refuge in Brooklyn. They join The Door in C.A.R.E. Community, First Mount Calvary Baptist Church in Sandtown-Winchester, Living Classroom's UA House in Pleasant View Gardens, Living Classroom's POWER House in Perkins Homes, and the Empowerment Temple in Glen. (See Map)

We are in conversations with many other community-based organizations interested in becoming Resiliency Hub Partners, including many that rose to the forefront of the community-based response to the COVID-19 Pandemic, and hope to significantly expand this impactful program in the coming years.



Community Resiliency Hubs Active in Pandemic; Two Resiliency Hubs Receive Solar + Battery Storage Systems

In 2020, rooftop solar power and battery storage systems were successfully installed at two of our Community Resiliency Hub partner sites: Stillmeadow Community Fellowship and City of Refuge. These installations were made possible through a grant from the Maryland Energy Administration and a partnership with Groundswell, Inc., AFMensah, and Suncatch Energy.

The Community Resiliency Hubs were also active in the grassroots response to the COVID-19 Pandemic, helping distribute critical resources out to their highest-risk and most food-insecure neighbors. All Hubs were active in emergency food and PPE distribution. Four Resiliency Hub Partners served as COVID-19 Testing Sites in partnership with the Baltimore City Health Department or other medical institutions. Hubs also helped distribute box fans and water to seniors and other community members in need so that they could keep cool at home during Code Red Extreme Heat Season. The Baltimore Office of Sustainability helped the Hubs source grant funding, connected them with the formal City emergency food-distribution strategy, sourced PPE and other resources, maintained regular communications with the Office of Emergency Management, and provided other helpful support based on Hub input.

Our goals in 2021 are to continue working alongside existing Resiliency Hub Partners to receive feedback on areas for program expansion and improvement, seek additional funding to continue supporting existing and new Hub Partners, expand solar and battery storage installations for Hubs, and holding helpful trainings and convenings.



City of Refuge, a Resiliency Hub in the Brooklyn neighborhood of South Baltimore, received solar power and battery storage through the Baltimore City Community Resiliency Hub Program. Funding was made possible through a grant from the Maryland Energy Administration and a partnership with Groundswell, A.F. Mensah, and Suncatch Energy. – photo by Aubrey Germ, BoS Staff

Energy

City Agencies Advance Policies to Increase Access to EV Charging Stations & Green the City Fleet

An interagency Baltimore City Electronic Vehicle Work Group – with representatives from the Department of Transportation, Parking Authority, General Services, Law, Planning, Housing and Community Development, and Recreation and Parks – have been working to increase the number of electric vehicle (EV) charging stations. The Work Group has created a Baltimore City Electronic Vehicle Charger Equity Policy and adopted a formal MOU and Franchise Agreement between the City of Baltimore and BGE for new public EV charger locations. These new BGE public chargers are expected to be installed in 2021, and information on all existing and new chargers will be maintained on a new page on Baltimore City Parking Authority's website.

The Baltimore Department of General Services (DGS) is active in this workgroup for public charging, as well as sharing the City Fleet's progress towards electric vehicles. DGS has initiated discussions on a collaboration with BGE to install EV chargers to serve City Fleet vehicles exclusively under a Department of Energy grant received by BGE. In return, BGE will collect data on how and when vehicles are charged to inform future tariff development and demand analysis. DGS is an observer in the MD PSC Electric Vehicle workgroup to track development and discussion of charging tariffs and how this can impact electrification for the City Fleet. DGS is currently in the development stages for an alternative fuel strategy and recently completed an assessment of the value of converting to B20 for diesel vehicles as a short term measure. Over a longer time period, DGS will assess the opportunities to decarbonize the fleet. In 2020 and 2021 the City is purchasing 19 battery electric vehicle. In 2020, DGS purchased 25 Plug-in Hybrid (PHEV) Ford Escapes and 50 Ford Explore Hybrid Pursuit vehicles.

Other Energy-Related Accomplishments

City agencies have continued to increase energy efficiency and renewable energy sources for City buildings and infrastructure.

- In 2014 Baltimore established a goal to use renewable energy to power 20% of city-owned building energy use by 2022. Renewable energy projects implemented by the City and the increase in Maryland's renewable portfolio standard (RPS) have put the City on track to achieve this goal. As of 2020, Baltimore has achieved renewable energy use of 18% for City-owned buildings. DGS anticipates achievement the 20% goal by 2022.
- As of December 2019, almost 53,000 LED street lights have been installed.

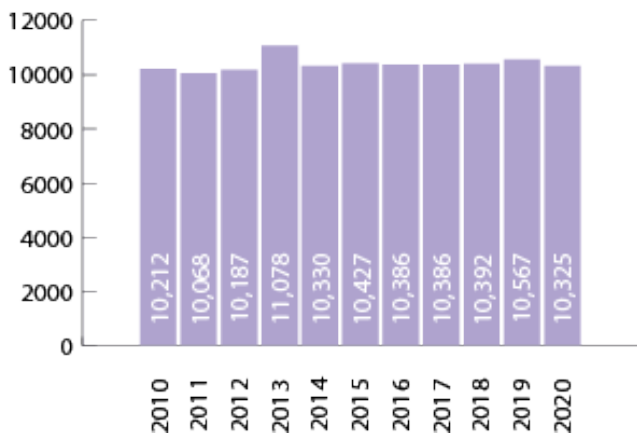
BGE Workforce Collaborative Partners with Civic Works

The BGE Workforce Collaborative provides a training program in partnership with Civic Works, for individuals who are interested in pursuing a utility infrastructure career. The program provides construction labor training, job readiness and related skills training to prepare program graduates with the skills needed to begin a career in construction. Program participants who successfully complete the program requirements have the opportunity to interview for full-time positions with BGE contractors and other industry partners. In the first year, approximately 90% of program graduates received job offers as a result of participating in the program.



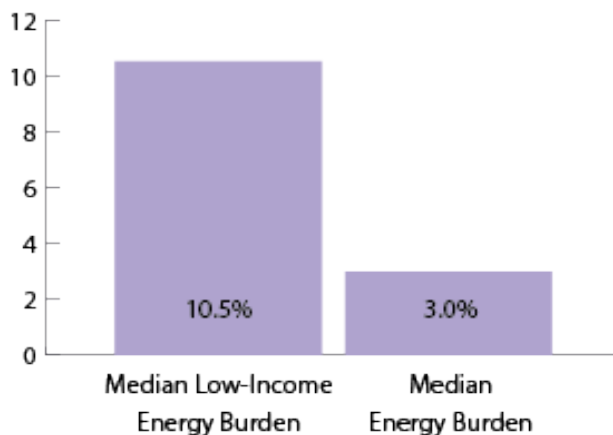
Data Snapshot: Total Electricity Consumption (kWh) Per Capita

Source: BGE/U.S. Census Bureau



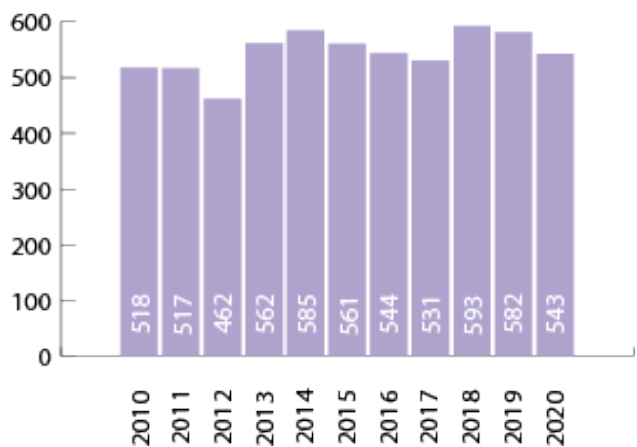
Data Snapshot: Average Percentage of Household Income Spent on Energy

Source: ACEEE (using 2017 data)



Data Snapshot: Total Natural Gas Consumption (Therms) Per Capita

Source: BGE/U.S. Census Bureau



A household’s energy burden is the percentage of income spent on home energy bills. A high energy burden is considered to be above 6% and a severe energy burden above 10%. In their 2020 study of 2017 American Housing Survey data, ACEEE found that

- Median energy burden is 3.0%, and the median low-income energy burden is 10.5% in the Baltimore metropolitan area.
- A quarter of low-income households have an energy burden above 22% in the Baltimore metropolitan area, which is more than seven times higher than the median energy burden.
- 23% of Baltimore households (237,681) have a high energy burden (above 6%).
- 11% of Baltimore households (120,345) have a severe energy burden (above 10%).

Greenhouse Gas Emissions

Baltimore 2017 Greenhouse Gas Inventory

In 2017, Baltimore was responsible for the emission of 7,487,000 metric tons carbon dioxide equivalent (CO₂eq). Emissions are dominated by Scope 1 and Scope 2 emissions from the stationary energy sector, which contribute 72% of the total, while 25% are from transportation within Baltimore and 3% of emissions are generated by waste management. In comparison to the 2007 baseline (8,570,000 tons CO₂eq), emissions have been reduced by 13%, shy of our target of a 25% reduction by 2020 (relative to 2007). This result was driven by:

- decrease in residential natural gas consumption (24%), possibly due to population loss and other demographic changes
- decrease in electricity emissions (24-32%) due to the decrease in the use of coal power and an increase in the use of natural gas to generate electricity for the regional grid
- increase in emissions from industrial and commercial gas consumption (50%), increase in transportation emissions by 8% and fugitive natural gas emissions (13%).

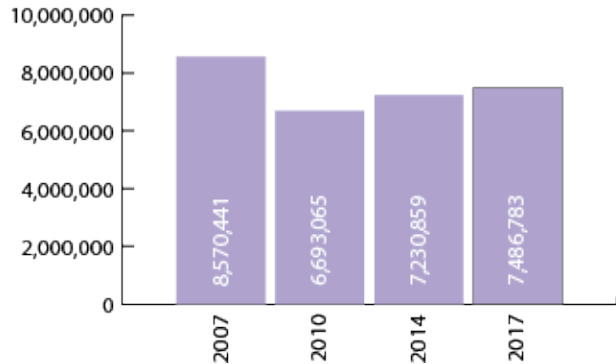
The protocols used to prepare the 2007 and 2017 inventories include some new emissions sources and methodologies that differ from those of the 2010 and 2014 inventories. The new sources include fugitive gas emissions and residential fuel oil, and a new methodology was used to estimate emissions associated with solid waste. These changes mean the new 2007 and 2017 inventories cannot be directly compared to the 2010 and 2014 inventories.

To avoid double-counting and to make sure that inventories are comparable across cities, the protocols that cities use to estimate their inventory exclude emissions from any source that produces power. For Baltimore, this includes the incinerator plus several other sources. These sources are estimated but not included in the totals above.



Data Snapshot: Greenhouse Gas Emissions (MMT CO₂e)

Source: City of Baltimore/JHU



The City of Baltimore has conducted four 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. In 2020, the City partnered with a team from JHU to complete the 2017 inventory and update the 2007 inventory.



Data Snapshot: Sources of Emissions (2017)

Source: City of Baltimore/JHU

Sector	Greenhouse Gas Emissions (MMT CO ₂ e)
Residential Buildings	1,375,279
Commercial Buildings	3,235,961
Industry & Manufacturing	403,980
Fugitive Emissions	344,176
On-Road Transportation	1,780,993
Waterbourne & Off-Road	128,568
Solid Waste	146,224
Wastewater	71,601

Greenhouse Gas Emissions

Clean Air

Baltimore Clean Air Act Passed and Later Invalidated

After years of grassroots community organizing, the Baltimore Clean Air Act was approved by City Council and officially signed into law in March 2019. The law tightened air pollution standards in the city and included provisions that would raise emissions standards for burners of solid waste or fuel with a capacity of 25 tons or more, require continuous monitoring of 20 major pollutants to be posted in real time on a public website, and require qualifying facilities to install pollution controls.

On March 27, 2020, a federal ruling invalidated the new law, contending that the law conflicts with state and federal air quality regulations. In April 2020, the City appealed the federal ruling, but the appeal was later withdrawn in November 2020, and the Board of Estimates approved a contract extension with the BRESKO waste incinerator to continue sending waste to the facility through 2031. The contract requires \$40 million in emissions control upgrades to the incinerator.



BRESKO (Baltimore Refuse Energy Systems Company), otherwise known as Wheelabrator Baltimore, in the Westport neighborhood. - photo by The Baltimore Sun

How Hot is it Outside?

This seemingly simple question actually isn't so simple in a city like Baltimore. The Urban Heat Island (UHI) means that on hot summer days and, even more, on hot summer nights, temperature in some parts of the city can be much higher than it is at the weather station reported in the news or on your phone's weather app. This effect isn't equally distributed across the city: some neighborhoods are hotter than others, and this means that residents in some neighborhoods have higher potential to suffer from heat stress and heat-enhanced effects of poor air quality. Since 2014, the Office of Sustainability has collaborated with researchers at Johns Hopkins University and with community groups to measure and understand Baltimore's UHI. We've learned that our parks offer meaningful refuge from heat, and that even small pocket parks can be significantly cooler than surrounding streets. We've also seen just how important trees are for reducing heat, and that urban forests can be the coolest places in the city on hot summer days. Our UHI measurement efforts were interrupted by COVID-19 in 2020, but data analysis continued. These studies have focused on ways to implement an efficient and sustainable urban heat monitoring network in Baltimore. We've found that with the right selection of sites and the use of satellite data it's possible to track temperatures across the city with fewer than 20 low-cost temperature sensors. This would enable more precise heat risk warnings and could inform equitable UHI reduction strategies in the future.

New Pesticide Regulations Become Law

In order to "protect the health of children, families, pets, and the environment," the "Pesticide Control and Regulation" bill was signed into law in 2020. The law prohibits the spraying of neonicotinoid insecticides on city-owned property. With goals of protecting public health and hazard reduction, the law will generally prohibit the use and application of chlorpyrifos (pesticide) and glyphosate (herbicide) use. The law also prohibits neonicotinoid pesticide use on City-owned property. The new rules will go into effect on July 1, 2022, and the Office of Sustainability will work closely with the Department of Health on the outreach and education informing the public of the requirements, prohibitions, exemptions, and penalties.

Air Quality Monitoring Study Measures Neighborhood Level Variability

Dr. Koehler and colleagues at Johns Hopkins University are working to evaluate how energy transitions impact local air quality and health through an EPA-funded SEARCH center and in collaboration with Yale University. The work evaluates how low-cost sensor technology can be used to measure neighborhood level variability in pollutant and greenhouse gas concentrations. To understand the variability in pollution around the city and over time, they built and installed approximately 45 low-cost air quality monitors around the city, which measure concentrations of contaminants relevant to human health and climate, including gases (O₃, NO, NO₂, CO, CO₂, and CH₄) and particulate matter. They plan to use this network data to evaluate spatial and temporal patterns in air pollution exposures and to understand the role of important sources in the region on the variability observed.

Food Systems

Using Policy to Create a More Equitable Food System



2019 Resident Food Equity Advisors – photo by BFPI

The Resident Food Equity Advisors is one of three pillars of the Baltimore Food Policy Initiative (BFPI) and seeks to co-create policy between residents and the City. The 2018-19 cohorts focused on improving small food retail and their recommendations led to the creation of the Healthy Food Priority Area Funds through an Enhancement Proposal. In its first two years, these funds have been able to support:

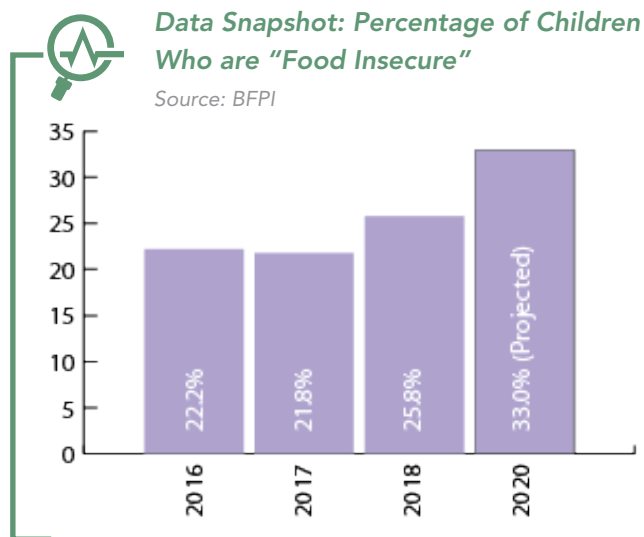
- Nutrition supplements at farmers’ markets, farm stands, corner stores, and a public market to provide low-income Baltimoreans with better access to affordable fresh produce
- A rideshare pilot in West Baltimore to help low-income residents of Healthy Food Priority Areas get to supermarkets and reduce barriers to purchasing and transporting healthy food
- Emergency funding to home deliver food to Latin populations vulnerable to COVID-19

The 2020 cohort was a partnership between BFPI and the Housing Authority of Baltimore City to provide insight from residents of public housing family developments on the intersections of food and public housing. Recommendations will be released in 2021.

Strengthening and Amplifying the Local Food Economy

Several Baltimore food businesses transitioned into worker-owned cooperatives during the pandemic, and organizations like the Baltimore Roundtable for Economic Democracy help support these efforts. The Made in Baltimore program boosts local food makers and connects these small businesses to clients and markets, while the Baltimore Creatives Accelerator Network supports entrepreneurs scale up their businesses – many businesses involved with these organizations are focused on food and food production.

The Food Matters program - funded through the Natural Resource Defense Council and the Rockefeller Foundation provided funding to support the Baltimore Office of Sustainability implement programming to reduce food waste in the city. Community-based organizations like the Maryland Food Bank, Baltimore Food Rescue, and Countered Fresh Food Market are able to increase and expand food rescue efforts as a result. In addition, the Baltimore City Health Department has trained Health Sanitarians to educate stores and restaurants on food rescue and safe donation practices.



Increasing Resilience at the Household, Community and Food System Levels

The Black Food Sovereignty movement has continued to flourish in Baltimore, with organizations like the Black Yield Institute, Black Church Food Security Network, and Black Girls Cook working across Baltimore's food system. Groups like these and others seek to build a Black food economy in Baltimore that can build culture, wealth, infrastructure, knowledge, and resilience.

The COVID-19 pandemic has presented an ultimate test of food system resilience. When Baltimore City first entered into stay at home orders, grocery store supply chains were disrupted, SNAP approvals were extremely delayed, food pantries were temporarily closed for lack of volunteers, and public transportation was extremely limited. Meals were being provided to children and older adults through federal meal programs, but no direct food resources were available through a large, coordinated strategy for vulnerable residents not fitting into these age categories.

The City of Baltimore, with leadership from the Food Policy and Planning Division, developed a comprehensive Emergency Food Strategy involving city agencies and critical nonprofit, business, and community partners. This food security response is based on four key pillars: (1) distribute food boxes, (2) distribute meals, (3) protect and maximize federal nutrition benefits, and (4) build food system resilience through urban agriculture. Between March and December 2020, City programs distributed over 20 million pounds of food in the form of meals and food boxes across several hundred schools, rec centers, and community-based sites, helping to maintain household-level resilience. In addition, countless grassroots food distribution and mutual aid networks provided food resources to neighbors, building community resilience, which will hopefully last beyond the pandemic.



Food box distribution – photo by BFPI

nature
in the **city**



People and Nature

Children’s Outdoor Bill of Rights



Celebrating the signing of the Children’s Outdoor Bill of Rights at the Office of Sustainability’s annual GreenScape celebration – photo by City of Baltimore

On May 11, 2019, Mayor Bernard C. “Jack” Young signed onto the Baltimore Children’s Outdoor Bill of Rights (COBOR) at the Office of Sustainability’s annual GreenScape celebration of youth environmental leadership. Baltimore’s COBOR establishes a commitment by the City and its partners to work towards equitable access to nature for children and outlines the right of every child to reap the benefits of a healthy, accessible environment.

Nature Immersion as a Coping Tool for Trauma and Stress at City Schools

With Baltimore’s mobilization to increase trauma-informed care for children and youth, educators and youth programs are working to address trauma through nature immersion. At Harlem Park Elementary Middle School, teacher and green team leader Marian Denning is incorporating trauma-informed care into nature-based teaching practices—through caring for plants and animals, her students learn relationship and empathy building, empowerment, and social-emotional skills. Similarly, farmer and behavioral specialist Ulysses Archie worked with three City Schools to teach resilience and mindfulness, and to build emotional intelligence, self-reflection, and relationships through communal urban farming techniques.

In December 2020, BOS and the Black Mental Health Alliance started the Wellness and Environmental Book (WEB) Club with school green teams to foster mental health awareness and environmental literacy, forming youth connections with mental health and nature.

Nature Play Space



Nature Play Space – photo by NWF

National Wildlife Federation’s Mid-Atlantic team, in partnership with Druid Heights Community Development Corporation, University of Maryland Medical Center and Chesapeake Bay Trust, have been transforming a large vacant lot into a nature play space for kids and their families since 2016, and officially opened it in August 2019. This green space is an outdoor haven for kids and wildlife with its native pollinator garden, jumping logs, and two murals lining the park entrance. The space also features a stone labyrinth, wood bridge, rain garden, and teepee, allowing community youth to use their imaginations as they connect with this unique urban playspace.

Forest Bathing

In 2019, BCRP sent staff member Ted Martello to become a trained and certified guide with the Association for Nature and Forest Therapy. An emerging wellness practice known as “forest bathing,” also called nature therapy, has since been piloted in Spring 2020 through Rec and Parks programs at Carrie Murray Nature Center, Druid Hill Park, and Herring Run Park.

People and Nature

Nature Nurtures: Using Nature to Mitigate Trauma and Stress



Nature Nurtures Symposium – photo by Allyson Washington

On March 7, 2020--prior to COVID-19 lockdowns--the Baltimore Cities Connecting Children to Nature (BCCCN) team led by BOS, City Schools, BCRP, and the National Aquarium, held the Nature Nurtures Symposium. The symposium brought together 159 formal and informal educators, childcare providers, and healthcare providers to increase awareness, strengthen partnerships, and activate stakeholders around the healing benefits of time in nature. Sessions included trauma-informed care training, workshops on outdoor programming, and a youth panel.

Building Stronger Neighborhoods and Stronger Social Connections

Baltimore came in fourth place among similarly sized metro areas in the 2019 City Nature Challenge, a global competition where cities around the world try to engage the most people in nature observations and species identifications. The National Aquarium coordinated the Baltimore metropolitan area’s efforts; over 600 people attended events from April 26-29, with 458 people documenting observations on iNaturalist. The 2020 City Nature Challenge included 705 nature observers in the Baltimore Metro area, with 11,093 observations made of 1,459 species!

Expanding Nature Programming and Support Organizations that Provide Experiences to Promote Biodiversity

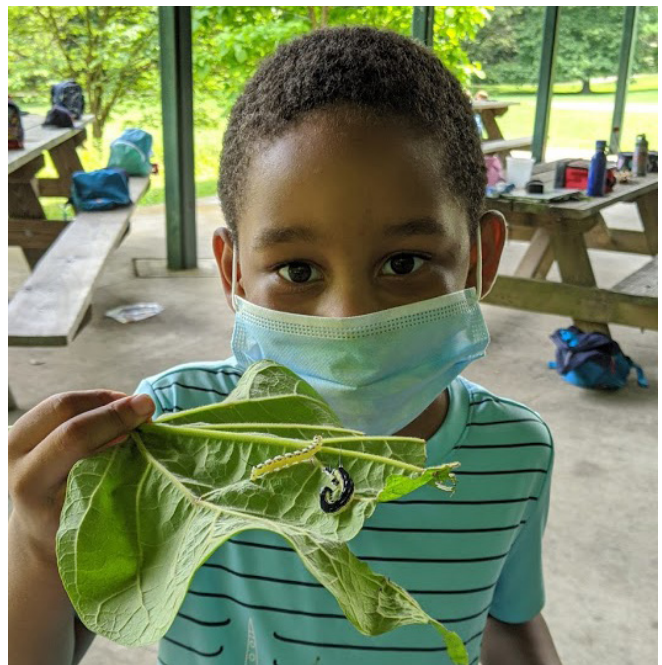
In 2019, Carrie Murray Nature Center (CMNC)'s nature Pre-K and daycare, Wild Haven, opened and continued to safely operate year round and outdoors throughout 2020. CMNC held Maryland Master Naturalist programs in 2019 and 2020, hosted a Chesapeake Conservation Corps member in 2019, and brought on 5 new hires. Throughout 2019, CMNC served over 10,000 adults and children through school field trips, public programs and events, and camps.

In 2020, many new programs were created by nature-program providers in the city to accommodate social distancing, including virtual programming to be done in nature spaces at home or in local parks. City Schools' Great Kids Farm began "facetime the farmer," and BCRP created a virtual rec center. CMNC held an outdoor Summer Camp to facilitate safe, in-person nature exploration, and in the fall launched Outdoor Discovery, a weekly program for children to hike, craft, and observe their natural surroundings. Each program involved the nature center's live animals, including Baltimore's native birds of prey, turtles, frogs and snakes. The nature center also became certified MD Green Center to support schools and recreation centers to practice environmental behavior and create stewards of the environment.

Throughout 2020, teens, adults, and family visitors continued to register for outdoor programming and guided hikes at CMNC. Many families from surrounding neighborhoods entered the park for the first time seeking socially distant, peaceful spaces to exercise and enjoy the outdoors. CMNC staff gave out water and maps, and welcomed everyone to the forested valley park with miles of trails, streams and meadows.

Improve and Grow Our Natural Systems and Support Increased Management of Them

In 2019, Baltimore Green Space (BGS) preserved two food gardens: The Harvest and Ash Street Community garden. These spaces are loved and cared for by the community and they provide food, flowers, and beauty to neighbors. In total, BGS now protects 16 green spaces and 7.2 acres of land. The preserved sites have over 465 community leaders who care for and utilize these spaces, and in 2019 alone, over 400 people participated in their forest and garden programs. In 2020, BGS received a CAMP grant for their Forest Stewardship Program to provide technical assistance and education to residents wishing to support green spaces.



Outdoor Summer Camp at Carrie Murray Nature Center – photo by Mary Hardcastle

Nature for Nature's Sake

Expanding Habitat for Pollinators and Other Wildlife

Local partners have been implementing projects and engaging residents in programs to expand habitat for pollinators, birds, and other wildlife in parks, on school grounds, and on private property.

- Through 2019 and 2020, Patterson Park Audubon Center certified 250 bird-friendly gardens, coordinated 89 greening programs and projects, and worked with 2447 participants in their programs and workshops.
- For many years, BGE has added and maintained wildlife habitat on its Spring Gardens Campus. As part of utility work in Carroll Park and Gwynns Falls Leakin Park, BGE will be restoring areas disturbed for utility work into pollinator meadow habitat.



Audubon's 3rd grade students plant native gardens in Patterson Park to feed birds and bugs – photo by Patterson Park Audubon Center

Invasive Species Management in Parks and Forest Patches

In 2019 and 2020, efforts to manage invasive species in parks and forest patches throughout the city have continued.

- Baltimore City Department of Recreation and Parks has begun implementing invasive species management projects in select parks and has developed standards for integrating invasive species management into specifications for projects implemented on park land.
- The BCRP Weed Warriors program, which trains volunteers to remove non-native invasive plants in parks through a 3-part class series and certification, has had 138 participants and 44 certified Weed Warriors over the past 4 years.
- Over the past two years, Weed Warriors volunteers have worked in Upper, Central, and Lower Stony Run, Gwynns Falls Leakin Park, Herring Run Park, Hooper & Rockrose Park, LaTrobe Park, Barbara & Parkwood Park, Druid Hill Park, and Wyman Park Dell to remove invasive plants.
- Baltimore Green Space has also continued to facilitate the Forest Stewardship Network, supporting the efforts of community forest patch stewards through quarterly meetings, trainings, events, and technical support.

Protection of Two Community Forest Patches under Land Trust Baltimore Green Space

In 2019 and 2020, Baltimore Green Space worked with residents and forest stewards to achieve permanent protection of two community forest patches.

- Fairwood Forest, located along the 5800-5900 blocks of Fairwood Avenue is home to 23 tree species and is located along a hawk flyway where many hawks are sighted each year. Through the efforts of the organizations and residents stewarding the forest, in 2019 3 acres of the forest became protected through the land trust Baltimore Green Space, protecting the forest from development.
- In 2020, Springfield Woods, a 2.5 acre forest located in the 4200 block of St. Georges Avenue, became the second community forest patch permanently protected through Baltimore Green Space. The centerpiece of the more than 100-year old forest is a restored freshwater spring, discovered as part of a cleanup organized by forest steward Butch Berry.



Residents gather to celebrate the protection of Fairwood Forest – photo by Friends of Fairwood Forest



Data Snapshot: New Policies or Plans to Require Use of Safer Alternatives to Chemical Fertilizers, Pesticides, and Herbicides and to Increase Use of Organic Land Care

Source: Baltimore Office of Sustainability

2 as of 2020

- 1) The Granite Pipeline Franchise Agreement for Gwynns Falls Leakin Park includes IVM specifications that include guidelines on the use of chemical herbicides.
- 2) A new pesticide ordinance passed in 2020 limits the use of insecticides, pesticides, and herbicides including neonicotinoid, chlorpyrifos, and glyphosate.

Trees and Forests

Forest Conservation Code Updates Advanced by Tree Ordinance Committee



Photo by BoS Staff

A Tree Ordinance committee was formed in 2018 to develop recommendations for legislation to better protect large individual trees. The committee includes representatives from the Baltimore Forestry Board, Blue Water Baltimore, the Baltimore Tree Trust, Baltimore Green Space, and the USDA Forest Service. City agencies providing coordination with the committee include Baltimore City Department of Recreation and Parks, the Department of Public Works, and the Office of Sustainability. As a result of recommendations made by the committee, a bill to update the City's forest conservation requirements was passed by City Council and signed into law in 2020. The changes make more properties subject to forest conservation requirements, increasing protection of forests on small lots previously not subject to regulation. The changes also allow for the establishment of forest banking. These updates significantly advance actions identified in the Sustainability Plan.

Trees and Forests

New Workforce Development Program Supports Tree Planting and Care

In 2020, the Baltimore Tree Trust kicked off the Urban Roots Apprenticeship (URA) program with 10 participants. Launched a few days before COVID-19 restrictions went into effect, the program was able to pivot the program to incorporate strict health and safety protocols and an online training platform. Crewmembers completed 100 hours of online training, including 8 who received TreeKeepers and Weed Warriors training. The crew also planted 2,200 street trees, 500 park trees, and had 0 positive COVID-19 tests. Of the 10 crew members who started with the program, 9 were promoted and 8 are employed with the BTT field team today.



Urban Roots Apprenticeship participants planting new park trees - photo by Baltimore Tree Trust

Continuing to Prioritize, Plant, and Care for Trees

TreeBaltimore and many community and NGO partners have continued to prioritize, plant, and care for trees in Baltimore neighborhoods. New in 2019, BCRP has developed a mobile app that allows TreeBaltimore partner organizations to map the trees that they plant, so that the plantings can be included in the City's tree inventory. BCRP and TreeBaltimore partners planted or distributed a total of 5,730 trees in 2019 and 5,684 trees in 2020, despite COVID-19 limitations for events and volunteer planting activities in 2020.

Other notable progress supporting actions in the Sustainability Plan include:

- Through the Treekeepers program, which trains volunteers to plant and care for trees, 520 participants over seven years were certified in tree planting and pruning.
- In 2019 and 2020, Flowering Tree Trails of Baltimore planted 350 trees along trails and greenways, provided conceptual designs for tree plantings at school sites as part of the INSPIRE program, held 12 workdays, and worked in 14 communities to plant and care for trees in parks.
- In 2019 and 2020 the Forestry Board measured 77 trees for the Maryland Big Tree program. Through those measurements, 48 new trees were registered, and 24 additional champions or co-champions were documented.
- Under BCRP Forestry's Proactive Neighborhood Pruning Program, street trees in 37 neighborhoods were proactively pruned in 2019 and trees in 22 neighborhoods were pruned in 2021. This proactive work resulted in reductions in service requests and urgent service requests by 26% in 2019 and 23% in 2020.



Students take a hands-on role in planting a tree in Herring Run Park - photo by Amanda Cunningham



Data Snapshot: Number of Acres of Controlled Invasive Species Management and Subsequent Reforestation

Source: BCRP Forestry

**43 Acres
as of 2020**



Data Snapshot: Percent of Area Covered by Trees

Source: U.S. Forest Service/BCRP Forestry

28% as of 2015

Water in the Environment

EPA Approves Maryland Plan to Improve Water Quality

The U.S. Environmental Protection Agency (EPA) announced in October 2019 that it has approved and helped fund a \$297 million plan by Maryland to implement key water infrastructure projects. One of the projects targeted for funding in the state's Clean Water State Revolving Fund plan include a \$35.9 million to Baltimore City for upgrades to the Back River Wastewater Treatment Plant. Funding will support electrical improvements and replacement of five substations. The upgraded power capabilities will protect the plant's treatment processes from wet weather flows, helping to ensure untreated flows go into storage tanks, rather than into local waterways.

Enhancing Water Quality One Oyster at a Time

Since the Great Baltimore Oyster Partnership was launched in the Fall of 2013 by the Waterfront Partnership of Baltimore and Chesapeake Bay Foundation, volunteer oyster gardeners have grown over one million oysters in the harbor and planted them at the Fort Carroll Sanctuary. Over 300,000 oysters were planted in 2019 with the help of 645 volunteers!

Oysters are important because in addition to filtering water, oyster reefs provide key habitat for a variety of Chesapeake Bay marine species. Species observed living among the oyster cages included white-tipped mud crabs, American eels, menhaden, naked gobies, bristle worms, and amphipods. In addition to restoration, the goal of the program is to train volunteers to become community scientists and advocates who can speak to others about the pollution challenges facing the harbor and the role that oysters play in improving water health.

Engaging Baltimore City Youth in Meaningful Watershed Experiences

The National Aquarium is committed to bringing back some of the natural habitats that once existed in Baltimore's Harbor. In 2017, a custom floating wetland prototype was installed to evaluate performance its capacity to attract wildlife. In 2019 complimentary habitats were added, including oyster reefs comprised of shell collected from nearby restaurants, and 6 reef balls. Collectively, these habitats are helping to restore biodiversity and species abundance in the harbor's aquatic community.

Engaging Baltimore City youth in a Meaningful Watershed Educational Experience (MWEE) has been the cornerstone to connecting the aquarium's waterfront campus project to surrounding communities. In 2019, staff engaged 1,716 students in exploring the aquatic world to help them grasp how their decisions and actions can achieve a healthy harbor. This "What Lives in the Harbor" program will continue through 2021 where every traditional middle school in the Baltimore City Public School System will be invited to participate.



Students participating in the "What Lives in the Harbor" program – The National Aquarium - photo by Theresa Keil, National Aquarium

Baltimore City Recreation and Parks' Canoe N Scoop Program



Participants in the Canoe N Scoop program remove trash from the Middle Branch - photo by BCRP Staff

This project was designed for Baltimore City residents to collect trash along the shores of the Middle Branch, a tributary of the Patapsco River and located within the Chesapeake Bay watershed. The Canoe n' Scoop program allows groups of participants to venture out and retrieve this trash over a span of 3 hours. Each group's bag collection is recorded and computed into annual amounts. In the 2019 season 21,347 pounds of trash was collected by 625 participants and in the past 5 years, over 100,000 pounds.

Baltimore City Recreation and Parks' Learn to Kayak Program

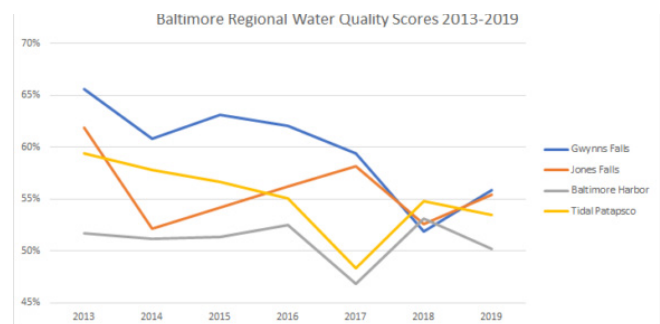
Baltimore City Outdoor Recreation Learn to Kayak program strives to get anyone and everyone into a kayak at least once, no excuses. Outdoor Recreation assuages anxieties such as aqua phobia, non-swimmers, lack of knowledge of safety equipment, such as life jackets, and beginner kayakers. To alleviate participants apprehensions, Outdoor Recreation offers a Learn to Kayak program in both the winter and the summer seasons, that has garnered 420 participants in 2019 and over 1,300 since 2017.

Blue Water Baltimore Water Quality Monitoring Program

Blue Water Baltimore's (BWB) water quality monitoring program hit a very important milestone in 2020, as 2019 marked their 10th year of collecting bacteria data in the Baltimore Harbor. BWB expanded the variety of water quality data they collect from our local waterways in 2013, and the additional data is used by the organization to produce their yearly Water Quality Report Cards.

For additional information about BWB's Report Cards please visit: <https://bluewaterbaltimore.org/learn/publications/>

Blue Water Baltimore Water Quality Report Cards



Baltimore Regional Water Quality Scores 2013-2019 - graphic by Blue Water Baltimore

BWB's Report Cards were created to answer a simple question – How's water quality in Baltimore? – As the graphic above shows, things don't look great. Poor conductivity is a primary driving factor for the consistently low scores in our non-tidal waterways. But it's not all bad news. BWB reported a significant improving trend in bacteria levels in almost 70% of their monitoring stations. Phosphorus scores generally improved as well.

Green Infrastructure

Increasing Green Infrastructure Throughout the City



Mural at Racheal Wilson Memorial Park - photo by Kim Knox

In 2019, the Baltimore Green Network (BGN) increased access to green spaces by taking the first steps in creating Racheal Wilson Memorial Park at 145 S. Calverton Road, which is dedicated in the memory of the first female firefighter to die in the line of duty in Maryland. A mural was installed with a design created by the community. With the assistance of the African American Fire Fighters Historical Society, Inc., state funds were allocated for the installation of a playground at the park, which is scheduled to be installed in 2021.



In 2020, the community worked with Arts in the Park with funds from Keep Maryland Beautiful to create a mosaic designed by Princess Davis, the daughter of Racheal Wilson, which was placed on the steps of 145 S. Calverton Road (the site where Firefighter Wilson was mortally injured). Through a grant from AARP, Bon Secours Community Works planted 32 trees at Racheal Wilson Memorial Park.

In 2019, the design for an another BGN pilot project, Cab Calloway Legends Park at 2216 Druid Hill was finalized through three charrettes with the Druid Heights community.

In 2020, the BGN also received \$27,000 for stormwater engineering and \$200,000 from the Maryland Department of Natural Resources for the removal of impervious surface in the park at Cab Calloway Legends Park. At the request of the community, an artistic temporary fence was installed at Cab Calloway Legends Park with a mural of a keyboard to showcase the musical talents of Cab and Blanche Calloway and their musical family.



Cab Calloway Legends Park Plan - image by HCM
Cab Calloway Legends Park Fencing - photo by Kim Knox

In 2019, BGN also worked with the Pimlico Community Association and Pimlico Merchants Association to create the Pimlico Golden Garden on Spaulding Avenue. The garden provides a space where seniors meet daily to enjoy the shade trees, plant containers with flowers and artwork. BGN also worked with the Oakley community in Park Heights and the Northwest planner to create a dog park in the 3100 block of Oakford in 2020.

Ensuring Green Infrastructure is an Asset to the Community

In 2019, BGN launched a pilot program called “Lots to Love.” Based on the Philadelphia LandCare Model, BGN and community planners worked with the residents of Upton, Shipley Hill, Carrollton Ridge and Boyd-Booth to identify 47 vacant lots that had been cited for tall grass or trash along and near Frederick Avenue and Pennsylvania Avenue. BGN hired two workforce development groups to clean and mow each of these lots twice per month from April through October. The lots were inspected prior and after the work had been done by the workforce development groups. The community residents were very pleased with the efforts. One lot was used to launch a parade by a local business and another community is using one of the lots for a monthly movie night.

In 2020, BGN completed the document: “Framework of Reclaiming Vacant Lots” which is now posted on the Office of Sustainability’s website. The framework provides information and resources to community associations who want to transform vacant lots within their community into community gathering areas, community gardens, urban farms and community orchards.



Informational signage at one of the Lots to Love pilot sites - photo by Kim Knox

Increasing the Awareness of the Benefits of Green Infrastructure

In 2019, the Department of Public Works (DPW) continued its collaboration with partners to hold GROW (Green Resources and Outreach for Watersheds) Center pop-ups and workshops across Baltimore. The GROW Center pop-ups are aimed at increasing citizen capacity for implementing community greening and stormwater management projects.

With funding from USDA/Forest Service, nine GROW Center pop-ups and five workshops were held in 2019. These workshops and pop-ups provide people with access to free/low cost materials as well as plants, training, and information to develop skills and connections for undertaking greening projects.

In 2020, the BGN’s Greening Coordinator presented on vacant lots and the importance of maintaining vacant lots on a community at the 2020 Baltimore Data Week.



GROW Center Composting Workshop - photo by DPW Staff

economy



Local Economy

Made in Baltimore Program Updates

The Made in Baltimore program (MIB), which originated as a program of the Office of Sustainability and is now part of the Baltimore Development Corporation, has continued to grow its membership and offerings in 2019 and 2020. MIB supports makers and manufacturers in Baltimore City through networking, business development opportunities, retail events, educational workshops and dedicated marketing campaigns. In 2019, the program offered retail space for the sale of Baltimore-made products in the Made in Baltimore store located on North Avenue. The program also offers a mobile Kiosk that can host member products at Baltimore retail locations.

MIB has provided a number of programs to help member businesses reach new customers, including a Sourcing & Supplier Fair in 2019 and a Winter 2020 Look Book to promote member businesses during the holiday shopping season. The Maker Conversations series, featuring six member businesses, was hosted at the Parkway Theater in late 2019. Recent offerings to member-businesses have included tools, information, and workshops. The Doing Business with Anchor Institutions toolkit and “Tools of the Trade” business development workshop series were launched in 2020. MIB has also provided information and assistance to small businesses navigating COVID-19 business relief programs and funding.



Made in Baltimore Store on North Avenue - photo by Andy Cook

Alternative Sources of Financing to Support Local Business Growth

The Neighborhood Impact Investment Fund is an innovative public-private partnership to promote community development and deliver capital to benefit historically disinvested Baltimore neighborhoods. The Fund is governed by a 13-member Board of Directors, three of whom are representatives of City government, and ten who are independent. The fund was capitalized by a \$51.7 million loan from the City and is being used to leverage investment from philanthropies, financial institutions, and investors.

The Maryland Neighborhood Exchange was launched in 2019 by Community Wealth Builders to help local and minority-owned businesses access capital needed to grow. It is the nation's first locally-focused grassroots investment crowdfunding platform. So far the Exchange has helped 33 businesses raise \$2.7 million from 4,900 investors.

COVID-19 Small Business Assistance

The Baltimore Development Corporation (BDC) established a Small Business Technical Assistance program to help local businesses navigate the programs and resources available to help them remain open through the COVID-19 pandemic. Through the program, a network of 19 organizations has helped 1,400 small businesses access funding and resources.

In response to social distancing guidelines for COVID-19, the City of Baltimore launched the Design for Distancing initiative in partnership with BDC and the Neighborhood Design Center. First, the initiative launched a competition for ideas to adapt streetscapes and commercial districts to adhere to distancing guidelines while still maintaining space for business functions and public use. A guidebook was created, featuring the 10 finalists from local design firms. In the summer and fall, Design for Distancing projects were installed in over a dozen commercial districts across the city, including Belair-Edison, Pigtown, Pennsylvania Avenue, Pimlico, and Station North, to create safe spaces for waiting or dining outside local businesses.

Baltimore Together - Comprehensive Economic Development Strategy

BDC has initiated the process of creating a Comprehensive Economic Development Strategy (CEDS) for the city, called Baltimore Together: A Platform for Inclusive Prosperity. The vision for the plan is to make Baltimore a global model of an urban economy that is based on diversity, inclusion, and resiliency. The plan seeks to break down barriers, foster collaboration, increase efficiency, invest in people and places, strategically invest in disinvested neighborhoods, and promote digital equity.

Workgroup meetings initiating the planning process kicked off in November 2019 and a series of virtual meetings was held in May 2020. An interim Baltimore Together report and Residential Growth Strategy were issued in January 2021 and the final draft report is expected in spring 2021.

Local Economy



Design for Distancing projects were installed in commercial districts across the city, including Belair-Edison (top), Station North (middle), and Pimlico (bottom). - photos by NDC and Side A Photography

Workforce Development

Expanding Green Job Training Programs



photo by Civic Works

Civic Works Center for Sustainable Careers adapted their training to a hybrid format during the pandemic, with each participant provided with a laptop and hotspot during the program to ensure access to the virtual instruction. In February 2020, Civic Works was awarded program accreditation from the Interstate Renewable Energy Council (IREC) for our Weatherization Training. Civic Works is now the first IREC accredited training provider in Maryland, and the accreditation provides independent verification of the quality and value of the program. Of the total 213 enrollees, 81 were in Brownfields, 48 in Solar, 39 in stormwater, and 45 trained in weatherization. 83% of enrollees completed their training, 88% were placed with a job after, and the average wages earned at placement sites was \$16.06/hour.

In 2020, the Greater Baltimore Wilderness Coalition started a Green Jobs workgroup to increase tree planting as part of the National Fish and Wildlife Foundation grant they received, and to create a larger city-wide and regional strategy around green jobs training.

Increasing the Number of Partners Involved in Green and Sustainable Jobs

In December 2019, the Baltimore Cities Connecting Children to Nature (BCCCN) team hosted a webinar for environmental and nature-based organizations on how to become a YouthWorks site to encourage more “green” placements for youth workers.

In 2019, YouthWorks had 20 “Environmental/Green” site placements, with a total of 516 placements. In 2020, YouthWorks again had 20 “Environmental/Green” sites register, however given the pandemic, only 9 were able to host youth through virtual programming, bringing the 2020 green YouthWorks job count to 193 total placements.

Fusing a Relationship Between Baltimore City Public Schools and Green Industries

City Schools’s College and Career Readiness Office has started “CTE Fridays” where Career and Technology Education (CTE) students attend panels or talks by professionals working in various fields. In December 2020, the BCCCN team worked with City Schools to organize a “green careers” panel attended by over 80 students. The speakers represented Civic Works, Parks + People Foundation, and Plantation Park Heights, and the panel was facilitated by one of the BOS interns who attends the agricultural program at Reginald F. Lewis High School.

Promoting City Government Workforce Training Programs

The BCCCN team created a 3-page guide on green jobs training opportunities in Baltimore, which has been distributed to City Schools students.

Arts & Culture

Pennsylvania Avenue Black Arts & Entertainment District

In 2019, the Pennsylvania Avenue Black Arts & Entertainment District became the City's fourth arts district, and the City's first arts district dedicated to the cultural contributions of African-American artists and entertainers. This designation was the result of the work of a community coalition that included Leaders of a Beautiful Struggle, Historic Pennsylvania Avenue Main Street, Druid Heights Community Development Corporation, Arch Social Club, Arch Social Club Community Network, Upton Planning Committee, Fight Blight Bmore, and Avenue Bakery. The district covers 149 acres of historic west Baltimore, including portions of the Penn North, Druid Heights, Upton, and Sandtown-Winchester communities. This location is especially appropriate for this designation, as Pennsylvania Avenue has historically been a revered destination for African-American art and entertainment. As a designated arts district, the area now qualifies for several tax incentives to spur economic opportunities, including property tax credits for new construction or renovation of arts spaces.

Investment in Artists and Art Organizations

To support Baltimore artists and entrepreneurs who lost income due to the COVID-19 pandemic, the Baltimore Artist Emergency Relief Fund was launched by a coalition of supporters in spring of 2020. The fund offered one-time grants of \$500 to approximately 200 artists living in Baltimore. The partnership to organize the relief funding included 20 artists and arts organizations and numerous funders.

Encouraging Discourse Through Mobile Spaces, Popups, and On-site Art



Baltimore Food Policy Initiative staff share information at the BMA Lexington Market - photo by BFPI Staff

The BMA Lexington Market is a branch of the Baltimore Museum of Art that opened June 27, 2019 in a 250 square foot stall in Lexington Market. The space within the market provides a place for visitors to make art and participate in free programming. Visitors' stories are collected in video or audio and added to an ongoing archive. Due to the gathering limitations as a result of COVID-19, the BMA Lexington Market has transitioned to provide Free Family Sundays at Home, distributing weekly take-home art kits for families to make their own creations inspired by the BMA's collections.

Entrepreneurial Support to Baltimore Creative Professionals

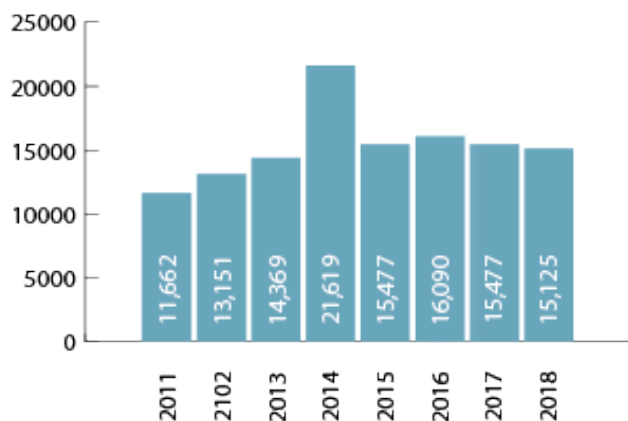
In 2019, Baltimore Creatives Acceleration Network (BCAN) provided a 12-week business accelerator fellowship to 5 creative entrepreneurship businesses. The program provided participants with incubation space, mentorship, training, and support to develop business plans for creative sector businesses located in Baltimore. The 2019-2020 fellows included Mebane Design Studio, Cajou Creamery, Fruit Camp Tattoo, Mera Kitchen Collective, and Vent Coffee Roasters.

In December 2020, BCAN held a free two-day entrepreneurship program for creative arts professionals entitled “Scale Your Passion”. This virtual program provided tools and presentations for 40 participants, covering topics including team building, operations, branding, finance, and legal issues. The program also partnered participants with an accountability partner from the BCAN team and community to provide an ongoing resource for participants.

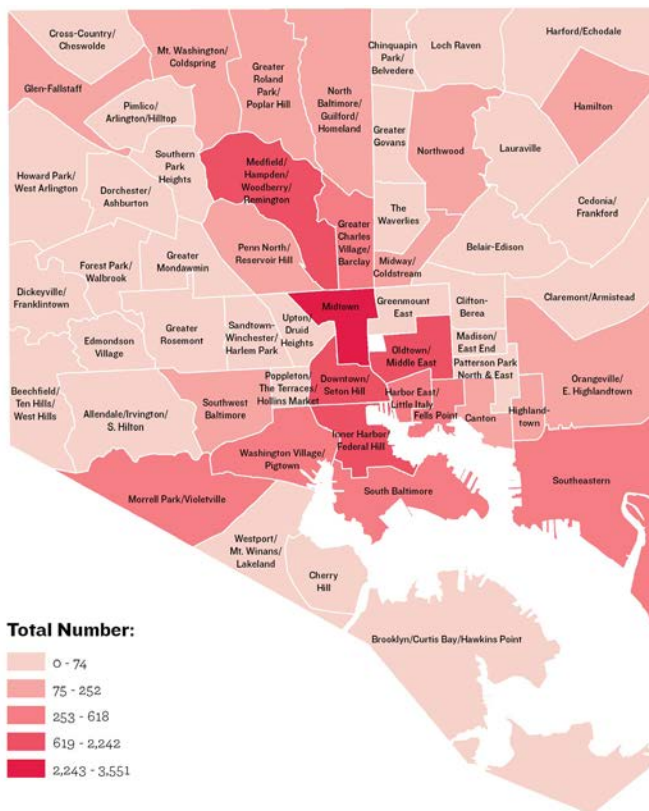


Data Snapshot: Number of Employees in the Creative Economy

Source: InfoUSA/BNIA-JFI



The number of employees in the Creative Economy is a measure in the 2019 Sustainability Plan under Arts and Culture. This data, which is reported annually by BNIA, includes the number of people employed in the creative economy (both for-profit and non-profit). This number does not count people who identify themselves as being artists and does not count sole proprietorships or people who work part-time in the arts.



Sustainable Strategies and Actions Implementation

The Baltimore Sustainability Plan addresses all three legs of the sustainability stool – social equity (people), environmental stewardship (planet), and economic health (prosperity). The Plan was designed to lay out a broad, inclusive, and community responsive sustainability agenda. The Plan articulates strategies, actions, and measures of success across 5 core themes and 23 topic areas. Each topic area includes two to four strategies, and each strategy includes a list of recommended actions to support implementation of the strategy. There are 243 actions listed in the Plan, and we report on the implementation status of each action on an annual basis.

The charts below will allow you the opportunity to review the strategies and actions, and easily get an idea of where each action stands in implementation. Actions that advanced in status during 2020 are indicated with a black line that shows how the action advanced in status from 2019 to 2020. A gray circle indicates that a strategy is “still pending,” and the green check mark indicates that the strategy has been “implemented and/or is ongoing.” A strategy may fall somewhere in between, and will be noted by orange, yellow, or light green. We will update these charts every year to demonstrate our progress.



		Still Pending	Early Stages	Mid-Stages	Advanced Stages	Implemented/Ongoing
Strategy #3: Increase the number and use of safe, well-maintained indoor and outdoor public gathering places.						
Action 1:	Use community-driven processes to envision, create, and activate safe, accessible community spaces.	●	●			
Action 2:	Support resident-generated ideas for neighborhood events.		●			
Action 3:	Create an annual permit-free day for neighbors to connect in public spaces.		●			
Action 4:	Engage youth and designate spaces for youth to gather	●	●			
ENVIRONMENTAL LITERACY						
Strategy #1: Engage school leadership in sustainability and environmental justice education and practices and provide teachers with resources and professional development.						
Action 1:	Expand and provide professional development in environmental literacy including environmental justice.		●			
Action 2:	Incorporate meaningful outdoor learning experiences into science classes at every grade level.		●			
Action 3:	Foster sustainability-minded school leaders.		●			
Strategy #2: Support students as environmental leaders and entrepreneurs, connecting green projects with economic sustainability.						
Action 1:	Support student-led environmental projects.				●	
Action 2:	Pursue youth-based economic sustainability programs.		●			
Strategy #3: Build and sustain meaningful family and community engagement in schools.						
Action 1:	Make environmental literacy meaningful for families and communities.	●				
Action 2:	Expand and sustain meaningful partnerships.				●	
Action 3:	Increase the number of Baltimore City Public Schools that are green certified.				●	
HEALTHY SCHOOL ENVIRONMENTS						
Strategy #1: Create healthy physical environments in every school.						
Action 1:	Improve indoor air quality in all schools.		●			
Action 2:	Provide clean, local potable water via water fountains in all schools.	●				
Action 3:	Ensure acceptable temperatures, light, and acoustics in all schools.		●			

COMMUNITY - CON'T		Still Pending	Early Stages	Mid-Stages	Advanced Stages	Implemented/Ongoing
Strategy #2: Provide a welcoming environment for students, faculty, and families, and increase access to nutritious foods.						
Action 1:	Fund a Community School Coordinator in every school.			●		
Action 2:	Maintain clean and attractive buildings and grounds.		●			
Action 3:	Increase student consumption of nutritious food.			●		
Strategy #3: Increase physical activity, outdoor play, and outdoor learning experiences.						
Action 1:	Adapt school grounds into inviting outdoor areas.	●	—	●		
Action 2:	Make schoolyards and indoor and outdoor spaces available for public use during non-school hours.		●			
Action 3:	Promote physical activities.	●				
Strategy #4: Conserve resources.						
Action 1:	Reduce waste and increase recycling.			●		
Action 2:	Green the school system's fleet of vehicles.	●				
Action 3:	Follow green design and construction practices.			●		
WASTE & RECYCLING						
Strategy #1: Increase the amount of trash that is diverted from the landfill and incinerator to recycling programs.						
Action 1:	Provide free recycling bins.	●	—	●		
Action 2:	Launch an anti-litter, pro-recycling campaign.	●	—	●		
Action 3:	Create and implement a plan to achieve zero waste.		●			
Strategy #2: Expand Baltimore's Waste to Wealth initiative.						
Action 1:	Implement the City's Food Waste and Recovery Strategy.		●			
Action 2:	Site a local composting facility.		●			
Action 3:	Investigate revising codes and creating ordinances to eliminate waste and maximize reuse of materials; Establish businesses that reuse products and marketplaces for selling them.		●			
Action 4:	Create a revolving loan fund for investment in recycling and composting infrastructure.	●				

		Still Pending	Early Stages	Mid-Stages	Advanced Stages	Implemented/Ongoing
Strategy #3: Pursue legislative and policy changes to reduce the waste stream.						
Action 1:	Enact legislation to impose a fee for plastic bags; and support State legislation instituting beverage container deposits.					
Action 2:	Create a City government procurement committee.					
Action 3:	Develop a plan for a "Save As You Throw" program to reduce waste that is landfilled or burned.					
URBAN AGRICULTURE						
Strategy #1: Create agriculture land-use policies that encourage urban farms and local food production.						
Action 1:	In partnership with urban agriculture practitioners, develop site criteria for identifying City-owned land that may be suitable for farming.					
Action 2:	Protect and support existing farms.					
Action 3:	Create better defined and supported pathways to ownership.					
Strategy #2: Ensure farmers and gardeners can produce food, flowers, fiber, and fuel in ways that are safe, environmentally sustainable, and socially responsible—and educate residents on opportunities to support and engage with them.						
Action 1:	Connect growers to educational resources and training.					
Action 2:	Support existing social networks and non-profits of growers.					
Action 3:	Improve strategies for engaging communities in urban agriculture projects.					
Strategy #3: Support growers to create financially viable urban agriculture.						
Action 1:	Create and expand City programs, and connect more growers to public, private, and philanthropic programs and incentives.					
Action 2:	Support aggregation among small farms.					
Action 3:	Increase demand for locally grown products.					

HUMAN-MADE SYSTEMS		Still Pending	Early Stages	Mid-Stages	Advanced Stages	Implemented/Ongoing
NEIGHBORHOODS						
Strategy #1: Strengthen community capacity to address neighborhood obstacles and opportunities.						
Action 1:	Continue the City's Neighborhood Planning Academy.					
Action 2:	Support residents in developing neighborhood plans, baselines, and maps.					
Action 3:	Continue to increase resident-led and city-supported improvements with a focus in under-served neighborhoods.					
Strategy #2: Support programs and policies to increase investments in neighborhoods.						
Action 1:	Seek to increase investment in small businesses in neighborhoods.					
Action 2:	Annually evaluate city government capital funding through an equity lens.					
Action 3:	Review historic preservation and other renovation tax credit programs.					
Action 4:	Increase funding for affordable housing.					
Action 5:	Continue to provide operating support for capacity-building programs such as the city-funded Community Catalyst Grant.					
Action 6:	Improve the investment landscape in under-invested communities.					
Strategy #3: Encourage, support, and implement neighborhood improvements.						
Action 1:	Require new developments to be accessible by all.					
Action 2:	Increase Code Enforcement to ensure that vacant buildings and blighted, occupied homes do not remain in neighborhoods for long periods.					
Action 3:	Ensure commercial outlets, such as corner stores and bars, are not nuisances and are supported by the community.					
Action 4:	Implement the Complete Streets Ordinance.					
HOUSING AFFORDABILITY						
Strategy #1: Increase housing affordability for both renters and homeowners and create opportunities for economic mobility						
Action 1:	Use City resources to leverage funds to preserve housing and create affordable housing.					
Action 2:	Explore tools to ensure significant new development projects support existing residents and minimize resident displacement.					

	Still Pending	Early Stages	Mid-Stages	Advanced Stages	Implemented/ Ongoing
Strategy #2: Expedite housing renovations, demolitions, and greening efforts to increase the number of thriving, safe, neighborhoods.					
Action 1:	Continue to strategically demolish vacant structures.				●
Action 2:	Facilitate the transfer of vacant, abandoned properties to owners who have capacity to rehabilitate them.	●			
Strategy #3: Enable homeowners—especially older adults, people of color, and people with low-incomes— to maintain their homes.					
Action 1:	Increase awareness of financial assistance and incentives to help low-income homeowners maintain their homes.		●		
Action 2:	Increase financial resources (and increase awareness of them) to assist low-income and older adults with ADA updates.	●			
Action 3:	Increase financial resources (and increase awareness of them) to assist low-income households to become homeowners.	●			
BUILDINGS					
Strategy #1: Advance building energy and water efficiency, as well as education and outreach, in all sectors—residential, commercial, municipal, and institutional—to reduce long-term costs and increase the health of occupants.					
Action 1:	Expand outreach about energy and water rebates.		●		
Action 2:	Develop a financing toolkit to assist building owners to understand available energy and water efficiency financing options.	●			
Action 3:	Promote Property Assessed Clean Energy (P.A.C.E.) financing.				●
Strategy #2: Increase energy and water efficiency retrofits in affordable and low-income housing markets to reduce greenhouse gas emissions, expand local sector jobs, and improve the long-term viability of affordable housing.					
Action 1:	Expand outreach to private landlords of low-income and affordable housing.	●			
Action 2:	Develop programs to retrofit affordable housing units into energy- and water-efficient units.	●			
Action 3:	Analyze long-term return on investment opportunities for deep energy and water retrofits in the low-income housing market.	●			
Action 4:	Increase workforce programs in energy efficiency, renewable energy and healthy upgrades, emphasizing local hiring.				●

HUMAN-MADE SYSTEMS - CON'T		Still Pending	Early Stages	Mid-Stages	Advanced Stages	Implemented/ Ongoing
Strategy #3: Create policies to promote awareness and transparency of energy and water use and reduction.						
Action 1:	Create residential disclosure for energy and water use at time of sale or lease agreement.	●				
Action 2:	Develop and pass benchmarking legislation.		●			
Action 3:	Evaluate existing utility and city-wide energy- and water-savers programs to further advance incentives and efficiency	●				
Strategy #4: Create and adopt programs and codes for promoting occupant health and comfort as well as efficiency						
Action 1:	Review the City's existing green building code and amend.		●			
Action 2:	Create systematic approaches to building designs that integrate and restore the natural environment.	●				
Action 3:	Support the development of holistic, neighborhood-wide, deep energy retrofit projects.	●				
Action 4:	Explore requiring development plans to include operational efficiency cost-benefit analyses.	●				
Action 5:	Integrate energy- and water-savings strategies and promote gray-water harvesting and stormwater capture.	●				
Strategy #1: Prioritize local and regional transportation coordination and investments, ensuring equity.						
Action 1:	Advance the Central Maryland Regional Transit Plan.				●	●
Action 2:	Support a dedicated funding source for public transportation and safety improvements.	●				
Action 3:	Increase equitable investment.		●			
Action 4:	Standardize ongoing coordination between city and state agencies and the public.				●	●
Strategy #2: Enact policies that promote city and regional priorities for pedestrians, transit, and alternative forms of transportation.						
Action 1:	Implement Baltimore's Complete Streets Ordinance.		●			
Action 2:	Create and implement a Pedestrian Master Plan.	●	●			
Action 3:	Fully implement the Bicycle Master Plan.			●		

		Still Pending	Early Stages	Mid-Stages	Advanced Stages	Implemented/Ongoing
Action 4:	Alter traffic signal timing citywide.	●				
Action 5:	Seek opportunities to implement more pedestrian-only spaces.	●	●			
Strategy #3: Improve reliability, accessibility, safety, and efficiency of transit while reducing the environmental impacts of vehicles.						
Action 1:	Develop and maintain transit hubs.	●	●			
Action 2:	Create more efficient public transit options.	●	●			
Action 3:	Eliminate parking subsidies and mandates, and offer employee incentives.		●			
Action 4:	Encourage green commutes to work and school.		●			

NOISE

Strategy #1: Meet the goals of Baltimore’s noise ordinance by reducing overall noise levels.

Action 1:	Create new regulations to bring the noise ordinance in line with best practices.	●				
Action 2:	Strengthen enforcement of commercial and industrial noise standards.	●				

Strategy #2: Ensure all neighborhoods enjoy the benefits of quiet.

Action 1:	Engage a group (or groups) of residents representing city demographics to discuss noise and seek ways to address it.	●				
Action 2:	Inventory noise pollution throughout the city.	●				
Action 3:	Initiate outreach activities to increase community awareness of noise standards.	●				
Action 4:	Direct tree planting and other efforts to muffle noise.	●				

CLIMATE & RESILIENCE		Still Pending	Early Stages	Mid-Stages	Advanced Stages	Implemented/Ongoing
COMMUNITY PREPAREDNESS						
Strategy #1: Review regulatory codes and implement collaborative programs to protect vulnerable residents, such as in neighborhoods with high percentages of seniors, low-income residents, and non-English-speaking immigrants.						
Action 1:	Enhance City floodplain regulations and building codes.	●	●			
Action 2:	Update Capital Improvement process.		●	●		
Action 3:	Streamline the permitting process.	●	●			
Action 4:	Upgrade infrastructure to minimize threat to most vulnerable communities.	●	●			
Strategy #2: Develop plans and systems to increase community resilience.						
Action 1:	Develop a post-disaster plan.	●				
Action 2:	Apply an equity lens to all-hazards mitigation and climate adaptation planning			●		
Action 3:	Finalize flood alert system upgrade.			●		
Strategy #3: Increase community awareness of natural hazards and climate change.						
Action 1:	Continue to host workshops on "community preparedness."			●		
Action 2:	Continue to support the growth of "community resiliency hubs" in disinvested, high-impact areas.				●	●
Action 3:	Develop "community resiliency plans."		●			
Action 4:	Increase the number of residents receiving community preparedness training in low-resourced neighborhoods.		●			
ENERGY						
Strategy #1: Expand awareness of and funding models for energy efficiency and renewable energy.						
Action 1:	Expand energy efficiency, conservation, and renewable energy education programming.		●			
Action 2:	Seek increased financing for energy programs.	●				
Action 3:	Expand solar job training programs and job placement opportunities.		●			

		Still Pending	Early Stages	Mid-Stages	Advanced Stages	Implemented/Ongoing
Strategy #2: Speed the path to decarbonization through increased deployment of renewable energy and electric vehicles.						
Action 1:	Increase the supply of clean, renewable electricity.	●				
Action 2:	Advocate for a higher State of Maryland renewable portfolio standard.		●			
Action 3:	Increase electric vehicle adoption.	●	●			
Action 4:	Adopt a goal for electric vehicle charging stations.		●			
Strategy #3: Support and deploy innovative technologies and programs to reduce energy use in buildings and transportation.						
Action 1:	Review current building codes and regulations, and adopt a residential green building code.		●			
Action 2:	Complete the conversion of streetlights to LEDs.			●		
Action 3:	Increase installation of cool roofs and green roofs and plant more shade trees.	●				
Action 4:	Promote and expand installation of energy-efficient combined heat and power and district energy systems which capture and reuse waste heat.	●				
Action 5:	Set a goal to reduce petroleum consumption and increase use of alternative fuel vehicles and equipment in the city government fleet.	●				
GREENHOUSE GAS EMISSIONS						
Strategy #1: Improve efforts to reduce greenhouse gas emissions.						
Action 1:	Update the Climate Action Plan.		●			
Action 2:	Establish a Climate Change Advisory Committee.	●	●			
Strategy #2: Modify operations and policies in City government to reduce emissions.						
Action 1:	Set an ambitious reduction target.			●		
Action 2:	Require a life-cycle evaluation of energy savings and emission reduction options.	●				
Action 3:	Update codes.	●				
Action 4:	Work with community members and organizations to develop strategies to mitigate harm to, and to also increase the benefits accrued by the communities from climate actions.		●			

CLIMATE & RESILIENCE - CON'T		Still Pending	Early Stages	Mid-Stages	Advanced Stages	Implemented/Ongoing
Strategy #3: Create new programs to reduce greenhouse gas emissions.						
Action 1:	Develop outreach campaigns focused on actions to reduce emissions.	●				
Action 2:	Commit to being a “Carbon Neutral City”.	●				
Action 3:	Reduce short-term pollutants.	●				
CLEAN AIR						
Strategy #1: Reduce emissions from industrial operations to reduce harm to people living nearby						
Action 1:	Encourage state-of-the-art pollution controls.		●			
Action 2:	Work with federal, state, and regional agencies to reduce toxic air emissions from transportation.	●				
Action 3:	Work with the Port of Baltimore.	●				
Action 4:	Enact and enforce strong anti-idling regulations for commercial cars, buses, and trucks.	●				
Strategy #2: Assess and monitor how air quality varies across the city to identify neighborhoods in greatest need of improvement, and increase community awareness of how air quality impacts the health of children, the elderly, low income communities, and communities of color.						
Action 1:	Partner with researchers.		●			
Action 2:	Integrate information about unhealthy air quality days into community preparedness workshops.	●				
Action 3:	Adopt a policy or plan for eliminating use of pesticides and other toxic chemicals.		●			
Action 4:	Develop an alert system for Code Red days.		●	●		
Strategy #3: Develop and support programs that can improve indoor air quality for those most impacted.						
Action 1:	Implement an Indoor Air Quality management program for the school system.	●				
Action 2:	Increase inspections, enforcement, and hazard remediation in rental properties.	●				

		Still Pending	Early Stages	Mid-Stages	Advanced Stages	Implemented/Ongoing
FOOD SYSTEMS						
Strategy #1: Use policy to create a more equitable food system.						
Action 1:	Integrate food system priorities across government.				●	
Action 2:	Implement equitable food policies.			●		
Action 3:	Engage residents in policy creation and support community-led processes.				●	
Strategy #2: Increase resilience at the household, community, and food system levels.						
Action 1:	Reduce acute food insecurity.		●			
Action 2:	Increase overall resilience.		●			
Action 3:	Support equitable food systems.		●			
Strategy #3: Strengthen and amplify the local food economy.						
Action 1:	Leverage the purchasing power of the City.		●			
Action 2:	Support and cultivate local, food-based businesses.		●			
Action 3:	Increase food recovery.				●	

NATURE IN THE CITY		Still Pending	Early Stages	Mid-Stages	Advanced Stages	Implemented/Ongoing
PEOPLE AND NATURE						
Strategy #1: Increase community connections to nature; ensure it is done in culturally competent ways with early and frequent engagement.						
Action 1:	Provide opportunities for residents to define and shape concepts of nature and incorporate them into plans and programs.	●	—	●		
Action 2:	Reconnect youth and families to the concepts and places of nature by co-creating programs.				●	
Action 3:	Connect with residents on ways to take action to support a diversity of species while healing ourselves and the nature around us.		●	●		

NATURE IN THE CITY - CON'T		Still Pending	Early Stages	Mid-Stages	Advanced Stages	Implemented/Ongoing
Strategy #2: Build stronger neighborhoods and stronger social connections.						
Action 1:	Develop high quality nature immersion programs for young children as a coping tool for trauma and stress.			●		
Action 2:	Expand the Docs in the Parks program.		●			
Action 3:	Expand nature programming and support organizations.		●	●		
Strategy #3: Improve and grow our natural systems and support increased management of them by residents, communities, organizations, and city government.						
Action 1:	Develop a clear process for those seeking to enhance, transform and maintain city owned open space for short and long term greening.		●	●		
Action 2:	Identify creative methods for increasing conservation easements.	●				
Action 3:	Implement the Baltimore Green Network, continuing to create a collective vision with communities.			●		
Action 4:	Explore the development of a management plan that would identify existing and future threats to our natural resources.	●				
NATURE FOR NATURE'S SAKE						
Strategy #1: Increase restoration, creation, and maintenance of habitat for native species on public and private land; ensure it is done in culturally competent ways with early and frequent engagement.						
Action 1:	Expand habitat for pollinators and other wildlife.		●			
Action 2:	Acquire and maintain permanent green spaces;		●			
Action 3:	Link natural systems within the city and to the regional network.	●				
Strategy #2: Encourage and increase sustainable land management policies and practices on public and private land, taking into account the context of surrounding neighborhoods and the impacts to residents.						
Action 1:	Complete Forest Management Plans for the largest forested parks.		●			
Action 2:	Implement invasive species management for both plants and animals in and outside of parks.		●			
Action 3:	Develop and implement organic land care policies. Develop policies to eliminate pollinator-harming insecticides (especially the class of "neonicotinoids") from City property maintenance procedures.		●	●		

		Still Pending	Early Stages	Mid-Stages	Advanced Stages	Implemented/Ongoing
Strategy #3: Increase the acreage of maintained and protected land.						
Action 1:	Develop workforce training programs for residents to restore and protect natural resources that lead to resident employment while actively avoiding community displacement.		●			
Action 2:	Identify mechanisms to ensure protection and maintenance of habitat areas on public and private lands, in perpetuity.		●			
Action 3:	Assess the potential for requiring natural spaces and on-site quality-of-life amenities in development plans.	●				

TREES AND FORESTS

Strategy #1: Plant and establish more trees ensuring equitable planting distribution.

Action 1:	Continue prioritizing, planting, and caring for trees.		●			
Action 2:	Expand the call-to-action to plant and care for trees.		●			
Action 3:	Ensure a diversity of tree species.				●	
Action 4:	Create a workforce development program employing residents to plant and care for trees and forests.					

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

Action 1:	Assess forests in all large parks and utilize the street tree inventory and tree canopy change data as a management tool.					
Action 2:	Create and implement plans to reduce harm to trees.		●			
Action 3:	Develop unified, long-term strategies to increase support and funding for managing forests.	●	●			
Action 4:	Develop and implement policy to manage parks after construction projects.		●			

NATURE IN THE CITY - CON'T		Still Pending	Early Stages	Mid-Stages	Advanced Stages	Implemented/ Ongoing
Strategy #3: Preserve the city's existing tree canopy.						
Action 1:	Classify trees and forests as public infrastructure.	●	●			
Action 2:	Adopt a Tree Ordinance.		●	●	●	
Action 3:	Investigate the creation of a forest land-banking credit program.	●	●	●	●	
Action 4:	Investigate a mechanism for monitoring long-term forest protection.	●				
Action 5:	Prioritize the Proactive Neighborhood Pruning Program.		●	●		
WATER IN THE ENVIRONMENT						
Strategy #1: Increase positive and safe connections to public waterways, along with awareness of how litter and other pollutants enter them.						
Action 1:	Connect more people to water in safe ways.		●			
Action 2:	Increase education and pursue progressive actions to reduce pollutants entering our waterways.		●			
Action 3:	Develop a combination of incentives and deterrents.		●			
Action 4:	Foster cross-jurisdictional partnerships.			●		
Strategy #2: Improve aquatic habitats by increasing riparian restoration and water quality monitoring, and creating policies to eliminate sources of pollution.						
Action 1:	Increase restoration of riparian corridors, and pursue other innovative habitat restoration.		●			
Action 2:	Remove invasive species along waterway buffers.		●			
Action 3:	Identify, prioritize, and remediate sources of human fecal bacteria.			●		
Action 4:	Develop and promote legislation and policy.		●			
Strategy #3: Ensure access to safe and affordable drinking water.						
Action 1:	Improve watershed management for the City's three raw water reservoirs.			●		
Action 2:	Evaluate the potential for water re-use.	●	●			
Action 3:	Promote assistance programs for low-income residents and seniors.			●		

		Still Pending	Early Stages	Mid-Stages	Advanced Stages	Implemented/Ongoing
Strategy #1: Increase green infrastructure throughout the city, targeting neighborhoods with limited access to large parks and green spaces and high disparities in health outcomes.						
Action 1:	Evaluate an Off-site Mitigation Credit or Pay for Performance program.		●			
Action 2:	Create standard design specifications.	●				
Action 3:	Support and expand programs to establish and maintain green infrastructure.		●			
Action 4:	Create a coordinating committee.	●				
Strategy #2: Ensure green infrastructure is functional, proactively maintained, and an asset to neighborhoods.						
Action 1:	Create a green infrastructure workforce development program.	●				
Action 2:	Seek funding to develop stewardship models and recruit residents.		●			
Action 3:	Create a database of green infrastructure sites.		●			
Action 4:	Create a standard agreement.	●				
Action 5:	Analyze displacement pressures that new investments may have.		●			
Strategy #3: Increase awareness of stormwater runoff and the benefits of green infrastructure.						
Action 1:	Ensure projects are appropriate within the neighborhood context.	●				
Action 2:	Create demonstration projects on public land.		●			
Action 3:	Create, maintain, and promote the use of educational mapping tools.		●			

ECONOMY		Still Pending	Early Stages	Mid-Stages	Advanced Stages	Implemented/Ongoing
LOCAL ECONOMY						
Strategy #1: Proactively support local businesses to advance the triple-bottom-line approach.						
Action 1:	Set purchasing preferences and supplier diversity goals.		●			
Action 2:	Grow cooperative business models.		●			
Action 3:	Expand the adoption of environmentally-friendly business practices	●	●			

ECONOMY - CON'T		Still Pending	Early Stages	Mid-Stages	Advanced Stages	Implemented/ Ongoing
Strategy #2: Build the capacity of local manufacturers and entrepreneurs through access to resources, technical, and financial assistance, and a supportive policy and investment environment.						
Action 1:	Provide support services to grow businesses.		●			
Action 2:	Build the capacity of Made in Baltimore.				●	
Action 3:	Advocate for state and local policies that support manufacturers and owner-operated business.		●			
Strategy #3: Ensure historically underrepresented groups' share in the City's economic prosperity by strengthening the capacity of and purchasing from small, local, minority-owned, women-owned, and cooperatively owned businesses.						
Action 1:	Continue to address needs unique to minority- and women-owned businesses.		●			
Action 2:	Continue to align Baltimore City's MBE/WBE certification with the State of Maryland's.		●			
Action 3:	Promote increased access to alternative sources of financing and technical assistance.		●			
Action 4:	Create and adopt an economic plan.				●	
WORKFORCE DEVELOPMENT						
Strategy #1: Collectively integrate and streamline the delivery of green workforce services to increase employment and self-employment, and help close the equity and opportunity gaps for Baltimore's low income, African-American, and minority residents.						
Action 1:	Expand green job training programs for the unemployed, underemployed, and those facing barriers to unemployment.		●			
Action 2:	Ensure green jobs are part of a larger, centralized case management system.	●				
Action 3:	Ensure wrap-around services and support are built into green training programs.		●			
Action 4:	Ensure green jobs are part of a job-matching tool.	●				
Action 5:	Increase the number of nonprofits and industry partners involved in green and sustainable jobs.		●			
Strategy #2: Connect youth, young adults, returning citizens, and others who have limited work experience to green, work-based learning opportunities.						
Action 1:	Fuse a relationship between BCPS and green industries.		●			

		Still Pending	Early Stages	Mid-Stages	Advanced Stages	Implemented/ Ongoing
Action 2:	Promote city government workforce training programs that lead to jobs.		●			
Action 3:	Collect common data points on green job seekers using the Mayor's Office of Employment Development's standard assessment tool.	●				
Action 4:	Institute the use of common performance metrics.	●				
Strategy #3: Increase post-placement services, setting up newly employed residents for greater success.						
Action 1:	Work with employers to find pathways, interventions, and services gaps in supporting workers in green and sustainability fields.		●			
Action 2:	Develop funding opportunities to support long-term engagement.	●				
ARTS & CULTURE						
Strategy #1: Create processes that ensure Baltimore's art institutions and organizations represent and engage audiences reflective of the demographics of the city.						
Action 1:	Require publicly funded arts organizations to track audience engagement.	●				
Action 2:	Increase artist-led decision making.		●			
Action 3:	Support and expand youth arts programs.		●			
Strategy #2: Invest in the economic and neighborhood development potential of artists and art organizations.						
Action 1:	Implement the recommendations of the Mayor's Task Force on Safe Arts Space.		●			
Action 2:	Host free or low-cost professional development and entrepreneurial workshops for artists and art-based organizations.		●			
Action 3:	Fully implement the City's "1% for Art" program.	●				
Strategy #3: Increase arts funding and ensure equitable distribution of arts funding opportunities.						
Action 1:	Seek a dedicated fund for art, such as a grant making program.		●			
Action 2:	Equitably distribute funding to artists ensuring broader cultural representations.	●				
Action 3:	Create and support spaces for discourse and engaging people through art-making.	●	●			
Action 4:	Provide funding and support for local leaders to engage artists, arts organizations, and residents.	●				

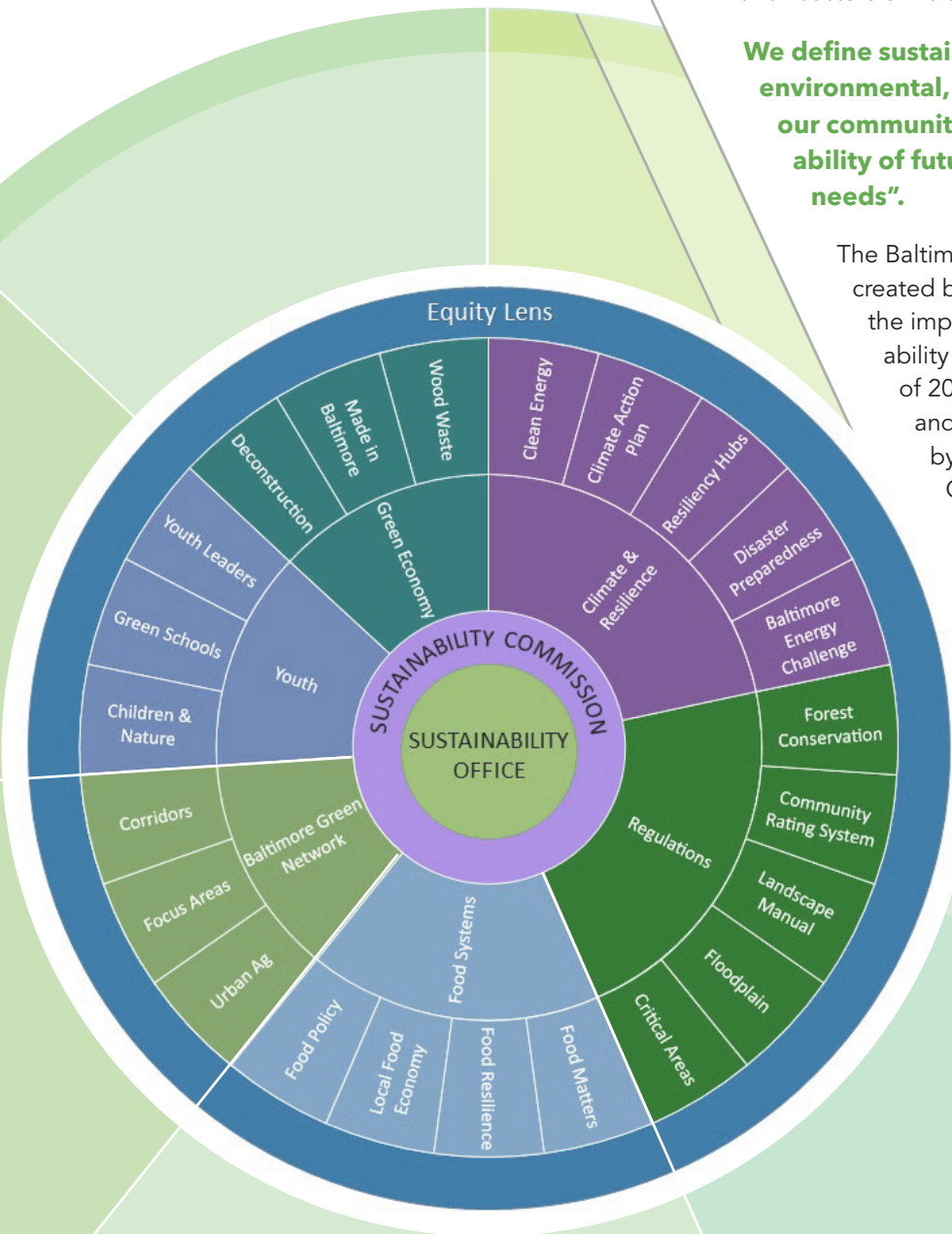
About

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".

The Baltimore Sustainability Commission was created by the City Council in 2007 to oversee the implementation of the Baltimore Sustainability Plan. The Commission is comprised of 20 members appointed by the Mayor and one City Council member appointed by the City Council President. The Commission is made up of members representing environmental groups, community organizations, labor unions, public health and environmental justice interests, and private industry.

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



The Baltimore Office of Sustainability

Baltimore Commission on Sustainability 2019-2020

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