



★ ★ ★
SUSTAIN
ABLE



DC



SUSTAINABLE
DC 2.0 PLAN



TABLE OF CONTENTS

INTRODUCTION.....	02
SETTING THE SCENE.....	08
GOVERNANCE	17
EQUITY.....	23
BUILT ENVIRONMENT	30
CLIMATE	42
ECONOMY	51
EDUCATION.....	60
ENERGY	69
FOOD	80
HEALTH	93
NATURE	104
TRANSPORTATION.....	116
WASTE.....	130
WATER.....	142
ACTIONS SUMMARY	155

INTRODUCTION



LETTER FROM MAYOR MURIEL BOWSER



Five years ago, the District Government released a plan to make the District of Columbia the most sustainable city in the country. At the time, the Sustainable DC plan was one of the most innovative, ambitious sustainability plans in the country. While the District remains at the forefront of innovation in sustainability, a lot has changed in the past five years. We have seen major economic, political, and social change in the District and across the country, and we need a sustainability plan that reflects the reality of 2018. We need a plan that takes advantage of new opportunities and addresses new challenges that have arisen—a plan that meets the needs of our changing city and the 700,000+ residents who call the District home. That is why I directed my team to update the Sustainable DC plan into a strategy for 2018 of which we can all be proud. I call it Sustainable DC 2.0.

Sustainability is about balancing the environmental, economic, and social needs of the District of Columbia today as well as the needs of the next generation, and the one after that. Addressing climate change and restoring our natural environment remain top priorities for my administration. In Sustainable DC 2.0, however, I also wanted to make sure we were addressing the equally pressing economic and social needs of residents. So we started this whole process off by doing something that not a lot of politicians are good at doing: **we listened.** I instructed my team to listen—to understand the real priorities of our residents and to use sustainability to address those priorities.

I also wanted to make sure that sustainability became inclusive of all residents. Too often sustainability feels like something for just some residents in some areas of the District. I insisted we change that. We refocused our events to be more convenient for those who had not been able to participate in the past. We partnered with community organizations to bring new people to the table. We also changed the way we talked about sustainability to align with the concerns of residents in all eight wards. I'm proud to say these efforts to be more inclusive have worked. While there is more work to do to, the development of Sustainable 2.0 included far more racially and culturally diverse voices than ever before. I made sure my team was transparent in how we developed the plan and incorporated feedback from the public. More importantly, I think you will see that Sustainable DC 2.0 is not just updated to be more relevant for 2018, it is updated to be more relevant to all District residents. **My vision is to make the District of Columbia the healthiest, greenest, most livable city for all District residents.**

Sustainable DC 2.0 is the final product of a 20-month intensive community engagement process involving thousands of residents. Not every action will work as anticipated and inevitably, we will need to adjust our strategies as Washington, DC continues to change. If you have a suggestion for how to implement one of the actions, your advice would be appreciated. Making the District of Columbia the healthiest, greenest, most livable city in the country will require the ideas and energy of our entire community. I invite you to get involved at **www.sustainabledc.org**.

A handwritten signature in black ink that reads "Muriel Bowser". The signature is fluid and cursive, with the first name "Muriel" and last name "Bowser" clearly legible.

Muriel Bowser
Mayor, District of Columbia

HOW TO USE THE DOCUMENT

The Sustainable DC 2.0 plan is broad. It contains 167 actions and 36 goals across 13 separate topics. This document has been designed to be read either cover-to-cover if you are feeling ambitious or as individual sections if you are interested in a specific topic. If you would simply like a summary of what each topic covers, a timeframe for implementation, and which District Government agencies are responsible for implementation, you can turn to the chart at the very end of this document. If you come across acronyms or a term you are not familiar with, you can flip to the list of acronyms or glossary in the back for a definition. Also, note that while the plan is largely written in the future tense, much of the work is already underway.

SUSTAINABLE DC 2.0 STRUCTURE

Each of the 13 topics is organized into distinct goals, targets, and actions. Here's what they mean:



GOALS are big picture, overarching ambitions.



TARGETS are the quantifiable method of tracking progress towards the goal. Each goal has one target.



ACTIONS explain how the District will reach each of the targets. Each goal usually has four or five targets.

Here's an actual example pulled from the Nature section of Sustainable DC 2.0:



GOAL 1

Protect, restore, and expand aquatic ecosystems.



TARGET 1

By 2032, protect, restore, and create 1,000 acres of critical aquatic habitat.



**TARGET 1
BASELINE**

36.25 acres

NA1.1

Develop a Wetland Registry to facilitate restoration or creation of wetland habitat.

NA1.2

Plant and maintain an additional 150 acres of wetlands in targeted Conservation Opportunity Areas.

NA1.3

Partner with developers to incorporate living shorelines in waterfront developments.

NA1.4

Reduce threats to 75 aquatic species of greatest conservation need.

ACTION INFORMATION

LEAD AND PARTNER AGENCIES

Each action is assigned at least one lead agency and usually partner agencies.

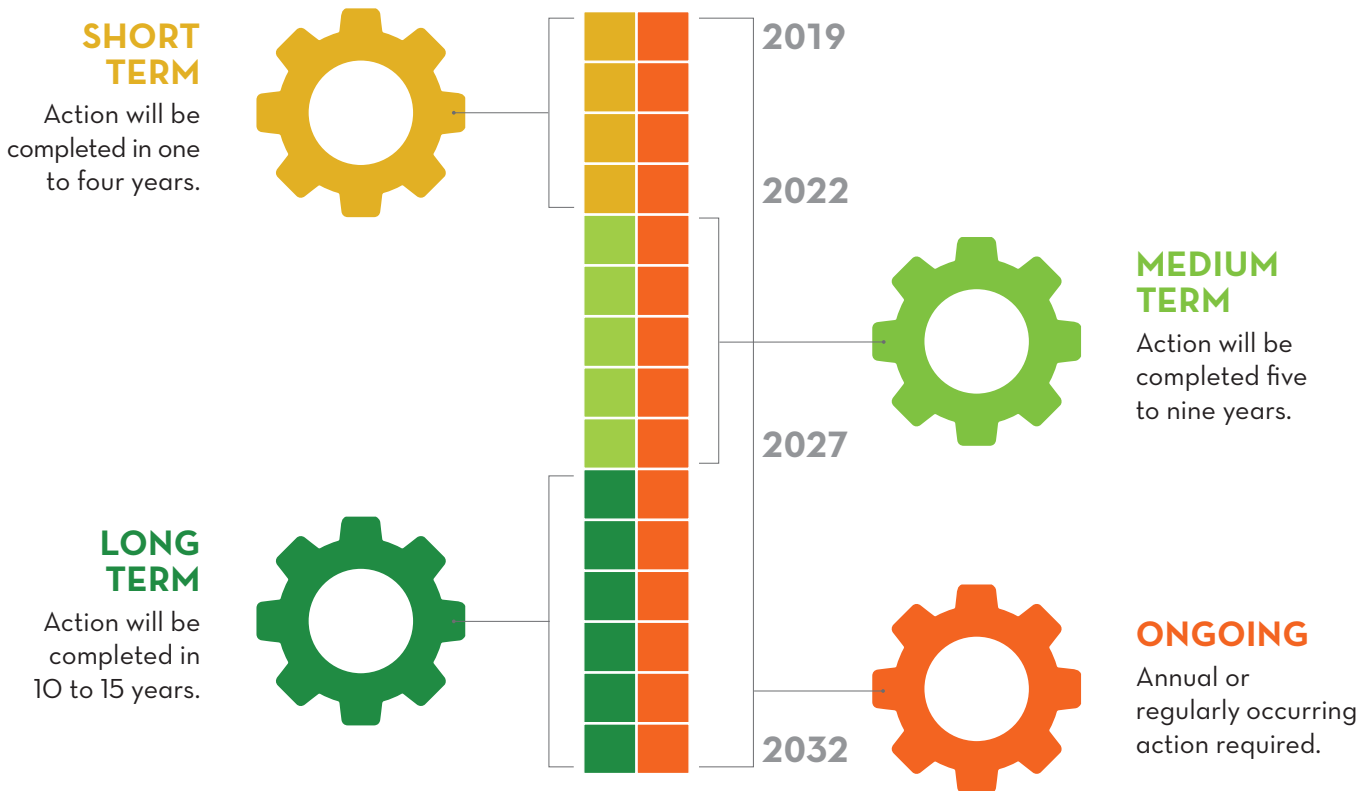
LEAD AGENCIES are responsible for heading up the implementation of that action and reporting on progress in the annual Sustainable DC progress report.

PARTNER AGENCIES have a role in implementing the action, but are not responsible for leading the work.

TIME FRAME

Each action has a time frame for implementation: short, medium, or long term. Short term actions are projects the District Government can implement now or very soon. Medium and long term actions require more planning, discussion, or other prerequisite action before they are launched. Ongoing actions are items that need to occur regularly for success (e.g., community engagement or releasing a progress report).

THE GENERAL TIME FRAMES ARE AS FOLLOWS:



SUSTAINABLE DC 2.0 SCOPE

To help you navigate this plan, we have created a short summary of what each section covers so you can decide which sections you wish to read in more detail.

GOVERNANCE

- Ensuring plan implementation and accountability by the District Government.

EQUITY

- Improving equity in District Government planning, starting with Sustainable DC

BUILT ENVIRONMENT

- Equitably accommodating population growth
- Strengthening existing neighborhoods
- Making existing buildings more sustainable
- Making new buildings more sustainable

CLIMATE

- Reducing greenhouse gas emissions (climate mitigation)
- Increasing resilience to climate change (climate adaptation)

ECONOMY

- Growing green jobs and economy
- Training residents for green jobs

EDUCATION

- Educating students about the environment
- Educating community members about sustainability

ENERGY

- Improving energy efficiency
- Increasing renewable energy
- Modernizing energy infrastructure

FOOD

- Expanding urban agriculture
- Increasing access to healthy food
- Growing the food economy
- Reducing wasted food

HEALTH

- Enabling active lifestyles for residents
- Increasing healthy places for residents
- Improving community-level health

NATURE

- Protecting and expanding aquatic wildlife and habitat
- Protecting and expanding land wildlife and habitat
- Improving residents' access to nature

TRANSPORTATION

- Increasing transit use
- Increasing the number of bikers and walkers
- Reducing dependency on single occupant vehicles
- Reducing emissions from transportation

WASTE

- Reducing the amount of waste created
- Increasing reuse and recovery of materials
- Increasing recycling and composting

WATER

- Making waterways fishable and swimmable
- Reducing the amount of stormwater runoff
- Reducing the amount of potable water used
- Ensuring safe drinking water

CROSS CONNECTIONS

By its nature, sustainability is crosscutting and interconnected. Although the plan is organized into 13 topics, there is overlap among all of the sections. For example, while food waste is covered in the Food section of the plan (Food Goal 4), the food waste Washington, DC generates directly contributes to the District’s overall waste diversion rate. Therefore, food waste is also captured in Waste Goal 1 (“Reduce the volume of waste generated per capita in the District”). To show how interconnected themes are throughout the plan, icons in the actions summary chart illustrate relationships across topics.

OVERALL THEMES

Throughout the Sustainable DC 2.0 planning process, several key themes emerged across all topics of the plan. These themes—first developed by the working groups—were guiding principles in plan development and have been incorporated into each topic’s goals, targets, and actions.



BETTER INCORPORATE ACCESSIBILITY

Working groups felt strongly that Sustainable DC 2.0 should better incorporate accessibility. This includes physical accessibility as well as equitable access and treatment by race, age, and gender.



FOCUS ON EQUITY

Equity—along with environment and economy—is one of the three pillars of sustainability, but often the hardest to address. For that reason, equity must be the leading principle in Sustainable DC 2.0. It should be addressed as its own topic, but also incorporated throughout the plan.

THINK REGIONALLY; TRACK LOCALLY

Sustainability is a regional issue—topics such as air and water quality, transportation, and food systems are particularly important to address at the regional level. At the same time, we need to track our progress at a finer-tuned detail than a citywide level. When the data exists, we need to track progress at both the ward and neighborhood levels.



USE COMMUNITY PRIORITIES AS FOUNDATION

The first step in the planning process was to better understand current community priorities (see Community Priorities). To make sure Sustainable DC 2.0 is relevant to all residents, community priorities must be guiding principles in plan development.



INCREASE QUANTITATIVE RIGOR

Sustainable DC 1.0 was released at a time when sustainability planning was relatively new. While there are many important aspects to the plan that can not easily be measured, for sustainability to be taken seriously, targets and actions must be on solid research and analysis.

ALIGN WITH OTHER DISTRICT PLANS

The District Government values good planning and we are fortunate to have several robust, detailed plans that address topics within Sustainable DC 2.0 (see a full list of plans in How Sustainable DC Relates to Other District Plans). Sustainable DC 2.0 builds on and aligns with these thoughtful documents.



SETTING THE SCENE



SETTING THE SCENE

Sustainability planning can not happen in a vacuum. Sustainable DC 2.0 focuses on making the District the healthiest, greenest, most livable city for all District residents, but there are many forces at play in the city in which that work is happening. The population of Washington, DC—both in how many people and who lives in the District—is rapidly changing. The population of the District is projected to reach almost 900,000 by 2032, the final year of this plan’s scope.¹

The demographics of Washington are also changing. Known for decades as “Chocolate City,” DC is now just 47 percent black.² At the same time, the District’s white, Latinx and Asian populations are growing with 37 percent of the city identifying as white, 11 percent Latinx and 4.3 percent Asian.³ Increased diversity brings new opportunities and benefits, but also brings new challenges for many residents.

While Washington, DC is one of the best educated cities in America and enjoys a relatively high median household income of almost \$73,000⁴ (compared to the national average of \$55,000)⁵, prosperity is not enjoyed by all residents. In 2017, the median household income in Ward 8 was \$32,000 while in Ward 3 it was \$110,000.⁶ Almost 17 percent of District residents live under the poverty rate.⁷ Ninety-four percent of white residents hold a bachelor degree or higher while only 36 percent of black residents do.⁸ While the District Government has made affordable housing a top priority, the pressure of rising housing costs is felt by many residents: more than 40 percent of District residents spend over a third of their monthly income on housing costs.⁹

Similar disparities also exist in resident health and wellbeing. Black residents in the District are six times more likely than white residents to die from diabetes-related health problems.¹⁰ Black residents in the District are also twice as likely to suffer from high blood pressure than other racial groups.¹¹

Sustainability alone is not the answer to these concerns, but it can be an important piece of the solution. Sustainable DC 2.0 was developed in the context of the 2018 District of Columbia. It integrates science-based projections, diverse viewpoints, and advancements in technology into a revision of our objectives.

More than 4,000 people participated in the development of this updated plan. We worked hard to be sure that we heard from the people and communities that were being most impacted by these inequities. A primary goal for Sustainable DC 2.0 was to address the crucial question of how to serve a growing and changing population; to conserve natural spaces; and to preserve the essence of why the District of Columbia has been an attractive place to live, work, visit and learn.



COMMUNITY PRIORITIES

Another primary goal of the process to update this plan was to align the Sustainable DC 2.0 plan with the things District residents care about the most. Based on conversations with and surveys from more than 4,000 residents (see ‘Sustainable DC 2.0 Planning Process’ for more information), we heard about six primary priorities for District residents. While the District Government is making progress in many of these areas, they remain concerns for residents at this time.

- Citywide access to healthy food
- Citywide recycling and composting infrastructure
- Affordable housing
- Clean, un-littered streets
- Accessible and walkable neighborhoods
- Equitable access to green space and parks



SUSTAINABLE DC: FIVE YEARS OF SUCCESS

Since the original Sustainable DC plan was released in early 2013, the District has achieved excellent progress in becoming more sustainable. After five years of implementation, 71 percent of the Sustainable DC plan's actions are underway and another 27 percent are complete. This update will reset that statistic, but we should be proud of everything that was accomplished in the first five years of Sustainable DC.

WHAT'S THE IMPACT OF THE ORIGINAL SUSTAINABLE DC PLAN?

NEW LAWS AND EXECUTIVE ACTION

Since the plan took effect, two legislative packages directly supporting Sustainable DC have been signed into law: the "Sustainable DC Act of 2012" and the "Sustainable DC Act of 2014." The District's environmental literacy program, transit benefits, relaxed beekeeping regulations, and the foam ban are all products of these legislative packages. Several other major pieces of legislation have also been passed during Mayor Bowser's administration, including the Fisheries and Wildlife Omnibus Amendment Act of 2016 and the Clean Energy DC Omnibus Act of 2018. Other executive action directly supporting the plan include committing to Washington, DC becoming carbon neutral by 2050, clearing up recycling requirements across the District, and entering into one of the largest municipal solar power purchase agreements in the country.

INNOVATION PROJECTS

After the release of Sustainable DC, the District Government awarded over \$8 million in Innovation Funding to District agencies to pilot new projects, engaging the District's key institutions—businesses, schools and universities, international institutions, and healthcare facilities—and its residents throughout the process. The Innovation Fund projects include an aquaponics farm at the University of District of Columbia, kinetic pavers that generate energy when walking atop them, and anti-idling devices that have been installed in police cars. For more information on these projects, please visit www.sustainabledc.org.

SECTOR PLEDGES

Sustainable DC developed strategic partnerships with sectors that have large sustainability footprints: universities, embassies, businesses, and healthcare providers. Sustainable DC launched four innovative pledges to increase the level of sustainability within these sectors. As a result of these partnerships, more than 100 embassies, 21 healthcare institutions, dozens of businesses, and all eight universities in the District have pledged to take steps to advance sustainability. The pledge focuses on areas like healthy foods, energy reduction, stormwater management, and waste diversion. The signatories of the pledges meet to share ideas and resources. Sustainable DC staff, in turn, provides technical assistance and helps to identify potential funding opportunities for sustainability initiatives. To learn more about these sector pledges, please visit www.sustainabledc.org.

AMBASSADORS AND VOLUNTEERS

In the spring of 2013, Sustainable DC piloted an ambassador program by training 12 volunteers to talk to their friends and neighbors about the benefits of sustainability. Now in year six, we have trained more than 250 residents as Sustainable DC Ambassadors. In 2016, Sustainable DC also launched a volunteer program to connect residents to hands-on volunteer opportunities hosted by nonprofit partners across the District. Between Sustainable DC staff and ambassadors, we have talked with more than 20,000 residents about sustainability.

NEW FOCUS ON EQUITY

Sustainable DC has worked with cities from across the country to learn about best practices in inclusive community engagement and using sustainability as a method of decreasing inequity at the city level. We have piloted new community advisory board structures such as the Equity Advisory Group in Far Northeast Ward 7 and a 100% Renewable and Equitable Cities project. During Sustainable DC 2.0 planning, we refocused our engagement on populations that have not been included in sustainability planning in the past and are creating an equity impact assessment to help us evaluate our progress on equity during plan implementation.

SUSTAINABLE DC 2.0 PLANNING PROCESS

What started as a small plan update evolved into a much larger undertaking. The final process took place over the course of 20 months, with more than 4,000 people participating in the development of Sustainable DC 2.0 in all kinds of ways:



EARTH DAY 2017 KICKOFF

We launched Sustainable DC 2.0 on Earth Day 2017 with a community conversation on what has changed from when the original plan was released in 2013 throughout the time leading up to 2017. A panel of community experts discussed new technology, legislation, and innovation in sustainability needing to be reflected in Sustainable DC 2.0.

PHASE 1 | INTENSIVE COMMUNITY ENGAGEMENT

COMMUNITY CONVERSATIONS

Charged with better aligning Sustainable DC 2.0 with community priorities, we spent the summer better understanding what District residents care about most. We talked to 3,000 residents and asked them what they like most about their neighborhoods and city, what they would want to change, and how they would make the District more equitable and sustainable. We also held two open houses and 18 casual “pop-ups” at libraries and Metro stations to give anyone we missed a chance to tell us what sustainability means to them.

PROFESSIONAL POLLING

To complement and serve as a check on our more casual community conversations, we also worked with a professional polling firm to conduct a statistically significant phone survey of residents. We knew we would need deeper insight beyond what a phone survey could provide so we enlisted the firm to conduct six in-depth focus groups concentrating on communities that were under-represented in the development of original plan, particularly people of color, people with limited English proficiency, and small businesses.

PHASE 2 | FORMAL PLANNING

WORKING GROUPS

Over 400 people participated in one of seven working groups (we clustered similar topics together to foster broad thinking). Each working group met four to six times to identify original Sustainable DC content that should be updated or removed and made recommendations for new goals, targets, and actions. We also organized three larger community meetings during this time for residents to provide input and direction to the working groups.

COMMUNITY MEETINGS

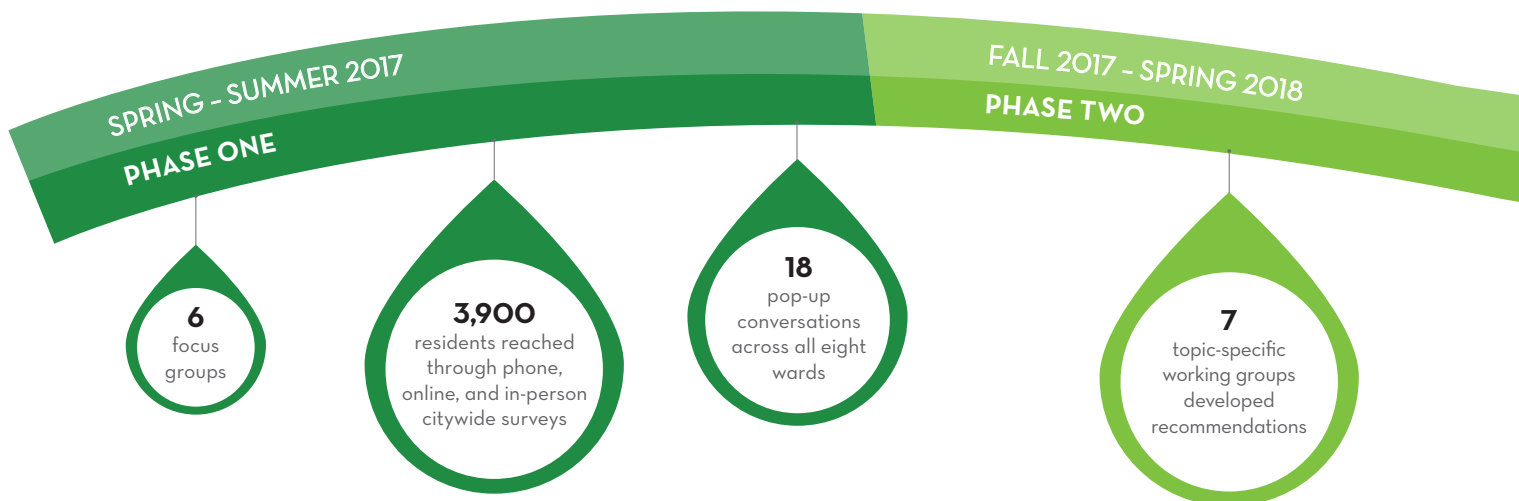
With a major goal of including residents who did not participate in the original Sustainable DC plan, we prioritized the convenience of communities of color, particularly residents living in Wards 7 and 8 in designing community meetings. We held meetings at Metro-accessible venues familiar to the community. We worked with trusted community organizations to help recruit participants to events, and restructured meetings to be less technical and more accessible. One good example is our working group launch meeting, which took place at five different community locations spread across the city to make it easier for anyone to attend at least one site. Participants at each site watched live-streamed opening remarks and a short presentation on what we learned from our community priority work before breaking out into smaller groups to have facilitated, site-specific conversations.

TECHNICAL ANALYSIS

To make sure the Sustainable DC goals and targets are ambitious yet achievable, and that draft actions would put the District on the path to meeting those targets, we hired a consulting firm to analyze the plan. They first analyzed the original plan and recommended changes. Then they analyzed the draft plan in fall 2018 and made recommendations for how to increase the quantitative rigor of the final Sustainable DC 2.0 plan.

UNDERSTANDING COMMUNITY PRIORITIES

FORMAL PLANNING



PHASE 3 | PLAN RELEASE

SUSTAINABLE DC 2.0 OUTLINE

The Sustainable DC 2.0 planning process was designed to be both transparent and iterative. We wanted to provide several opportunities for the public to weigh in on drafts so it was clear how we responded to input. We released the Sustainable DC 2.0 Outline on June 14, 2018 with a 30-day comment period. During that time, we held three “pop-ups” to talk with residents about their input and used new technology to allow people to directly edit the Outline online. In total, we received 491 comments on the Outline.

DRAFT SUSTAINABLE DC 2.0 PLAN

We next released a full draft of the Sustainable DC 2.0 plan on August 30, 2018 with a 30-day comment period. During this time, we held four “pop-up” events to listen to people’s thoughts on the draft plan. We also used two online platforms to allow people to edit the draft online and to inspire higher-level comments. Through our in-person and online engagement, we received a total of 401 comments. A summary of changes between the original Sustainable DC plan and the Draft Sustainable DC 2.0 plan, in addition to a list of comments and our responses, is available at www.sustainabledc.org.

Throughout the Sustainable DC 2.0 planning process, we strove to be inclusive, transparent, and iterative. If you have recommendations on how to improve our process in the future, we’d love to hear from you at sustainable.future@dc.gov.



PLAN RELEASE

SUMMER - WINTER 2018
PHASE THREE

3

citywide meetings to better understand community priorities

June

released draft framework

August

released draft plan













December

finalized plan

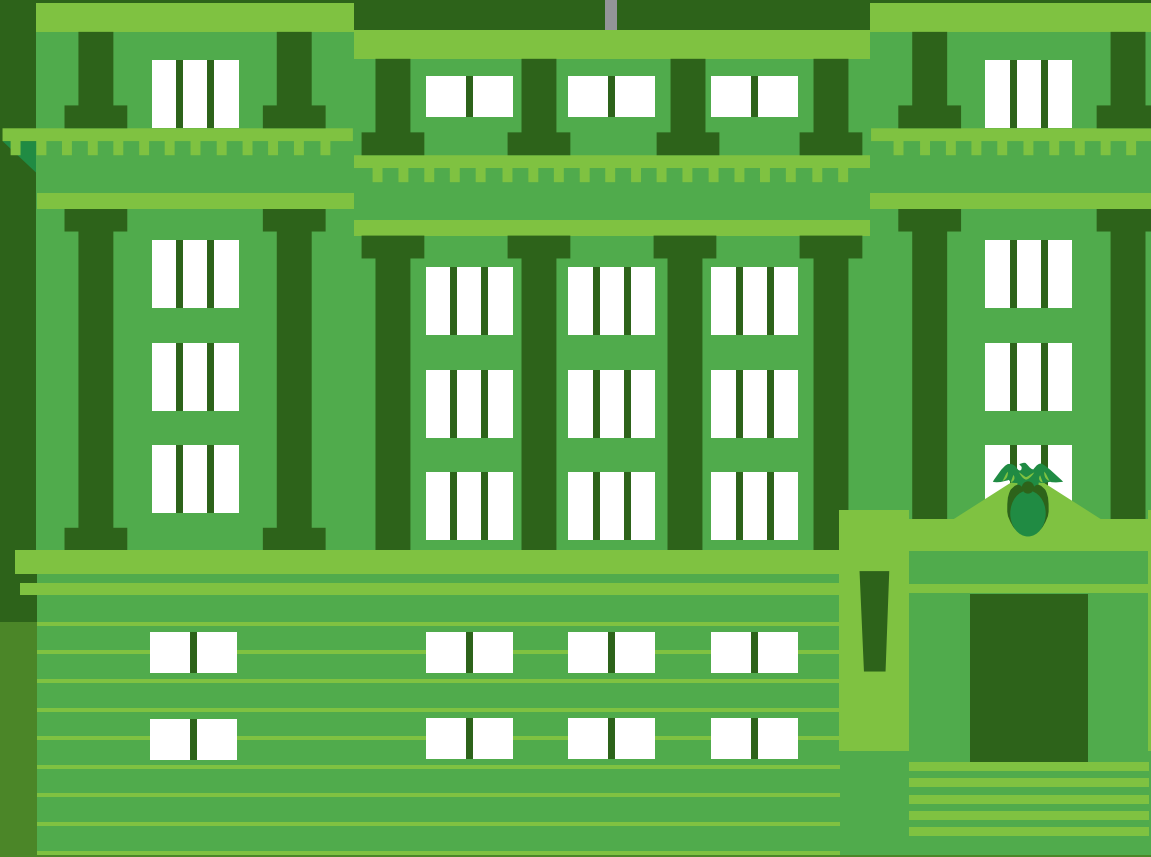
HOW SUSTAINABLE DC RELATES TO OTHER DISTRICT PLANS

Since the release of Sustainable DC in 2013, several more detailed plans on individual topics have been developed. We like to think of Sustainable DC as the umbrella to these plans. While Sustainable DC touches on all the topics in the plans below, including climate, transportation, and health, each of these individual plans takes a much deeper dive into the topics themselves. Sustainable DC is the framework to support these plans.

Additionally, District Government will be further studying opportunities to reduce waste and increase our diversion with a Zero Waste DC plan in the near future. Finally, the District is also in the process of updating the Comprehensive Plan. This plan—the guiding document for all other plans in the District—will shape future growth and development patterns. We have worked closely with the Office of Planning to ensure Sustainable DC 2.0 and the Comprehensive Plan are aligned.

SDC 2.0 SUBJECT AREAS	RELATED DC PLANS
 EQUITY	A Fair Shot, Age-Friendly DC, Health Equity Report
 BUILT ENVIRONMENT	Small Area Plans, Climate Ready DC, Clean Energy DC
 CLIMATE	Climate Ready DC, Clean Energy DC, Resilient DC (forthcoming)
 ECONOMY	DC's Economy Strategy
 EDUCATION	A Capital Commitment
 ENERGY	Clean Energy DC
 FOOD	Food Policy Council Plan
 HEALTH	Healthy People 2020, Age-Friendly DC, Health Equity Report
 NATURE	State Wildlife Action Plan
 TRANSPORTATION	Move DC, Vision Zero, Clean Energy DC
 WASTE	Zero Waste DC (future plan)
 WATER	Anacostia 2032

GOVERNANCE



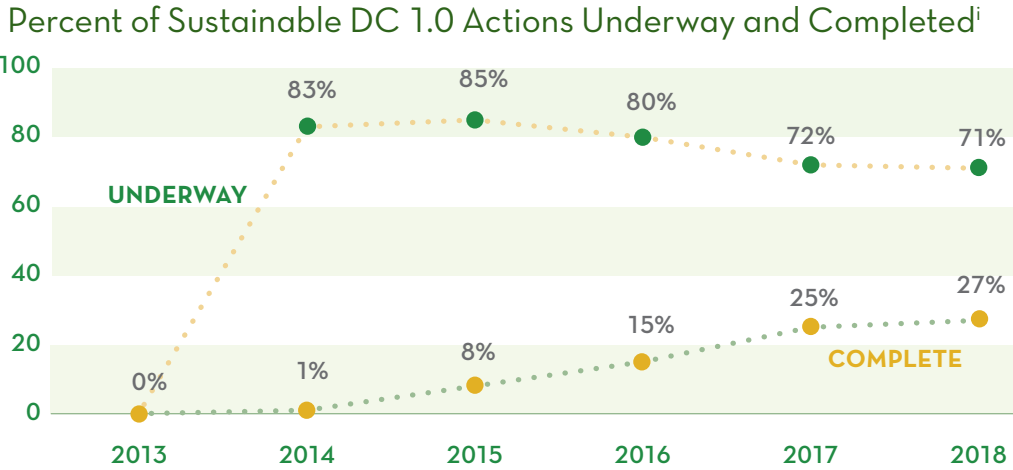


GOVERNANCE

Implementing Sustainable DC 2.0's 167 actions and 36 targets will require commitment and perseverance from the District Government. However, how the Sustainable DC 2.0 plan is implemented is equally important to making good progress.

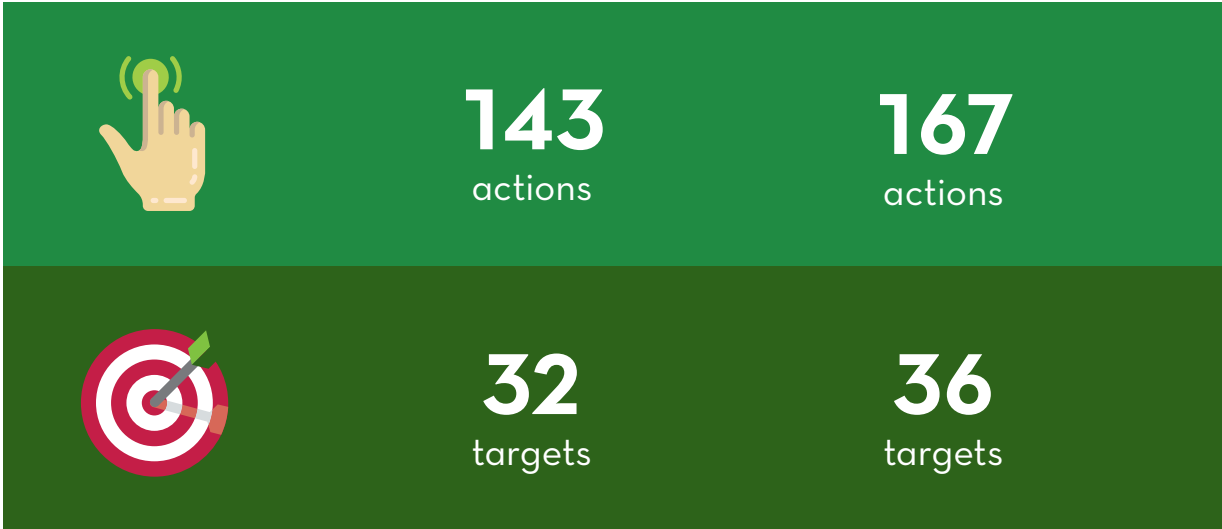
The District Government has assigned a core team of four employees who coordinate the work of more than 25 agencies implementing the plan. For the past five years, the District Government has released a report detailing the progress made in implementing each of the original Sustainable DC's 143 actions. The Sustainable DC Ambassador and Sustainable DC Volunteer programs were launched to help residents learn more about sustainability and connect them to hands-on sustainability programs. Some of the largest land and building owners were organized into sector pledges—universities, international institutions, healthcare providers, and businesses—to increase their sustainability. Still, much more work needs to be done to ensure that the next 15 years of implementation continue with a renewed focus on Sustainable DC's role in making the District of Columbia more equitable and relevant to the entire community.





**Sustainable DC 1.0
(2013)**

**Sustainable DC 2.0
(2018)**





GOAL 1

Expand District Government leadership to implement the Sustainable DC 2.0 plan.

GV1.1

Dedicate District Government staff and funding to implement the Sustainable DC 2.0 plan, track progress, and make results publicly available.

The District Government has invested in sustainability with employees focusing on sustainability in many agencies and a core Sustainable DC team of four full-time people at the Department of Energy and Environment (DOEE) and the Office of Planning (OP). The core Sustainable DC team has developed a set of 11 primary indicators (one per plan section) and five secondary indicators that it reports on in the annual progress report. An online dashboard will be developed and published by 2020.

TIMEFRAME

Ongoing annually

LEAD

DOEE, OP



TARGET 1

Implement 100% of the Sustainable DC actions by 2032.

GV1.2

Strengthen the existing process to collect, analyze, and report data to make progress towards goals and targets by prescribed dates.

Each year, the Sustainable DC team will coordinate with each of the agencies responsible for implementing the Sustainable DC 2.0 plan for a status update on each of the actions. Using this information, the team will continue to put out an easy-to-read annual progress report every Earth Day consisting of updates on each plan section, an implementation rating for each action, and a detailed status update for each action.

TIMEFRAME

Ongoing annually

LEAD

DOEE, OP



TARGET 1 BASELINE

0%

GV1.3

Identify existing laws, regulations, and policies that conflict with sustainability goals and areas where new authority is required.

As a result of past analysis of existing laws, regulations, and policies, the District Government enacted two Sustainable DC omnibus packages of legislation in 2013 and 2014. Other major pieces of related legislation were also passed, including the Waste Management Modernization Amendment Act of 2014 and the Fisheries and Wildlife Omnibus Amendment Act of 2016, and the Clean Energy DC Omnibus Act of 2018, among many others. The Sustainable DC team has since done further analysis, which it will continue to do every other year, to put forth policy suggestions to remove barriers to, and enable innovations in sustainability.

TIMEFRAME

Ongoing

LEAD

DOEE, OP

GV1.4

Expand sector-based sustainability partnerships and pledges to promote adoption of sustainable practices.

The Sustainable DC team has facilitated four sustainability pledges (universities, international institutions, businesses, and healthcare providers) to discuss best practices in sustainability, collect and analyze data, and connect participants to resources like technical assistance and financial assistance. The District Government will continue to facilitate these pledges as well as launch new pledges for sectors with strong opportunities for increased sustainability. New sectors might include faith-based organizations or a regional-level pledge in partnership with the Metropolitan Washington Council of Governments (MWCOC).

TIMEFRAME

Ongoing

LEAD

DOEE, OP

GV1.5

Increase federal and regional collaboration by partnering with the federal government and regional council of governments.

About 29 percent of the District is controlled by the federal government and 55 buildings in the District are managed directly by the U.S. General Services Administration, making the federal government a critical partner on sustainability. The District Government will work closely with the National Capital Planning Commission, National Park Service, and U.S. General Services Administration to maximize opportunities for sustainability in federal buildings and on federal land. However, sustainability issues like transportation, water, air, and recycling are regional issues at their core. By continuing to work with the 24 jurisdictions that are part of the MWCOC, the District Government will be able to tackle these difficult challenges.

TIMEFRAME

Ongoing annually

LEAD

DOEE, OP

PARTNERS

DCRA, DDOT, DMPED, EOM



GV1.6

Designate a sustainability lead in every District Government agency to coordinate efforts across government.

With over 25 District Government agencies involved in the implementation of Sustainable DC and an enormous opportunity for the District Government to lead by example, a designated point of contact at every District Government agency is critical. Designated agency sustainability leads assist in plan implementation and reporting, help identify and reduce barriers for increased sustainability in their agency, and provide guidance on new sustainability programs. DOEE will also convene agency sustainability leads quarterly to update agencies on plan implementation, train them on new sustainability programs, share opportunities for funding and additional training, and collaborate across agencies to better understand agency challenges and priorities related to sustainability.

TIMEFRAME

Short term

LEAD

DOEE, OP

GV1.7

Develop a citywide strategy for greening internal District Government operations to save money and improve environmental performance.

With 32,000 employees and more than 400 managed buildings, the District Government has an important opportunity—and responsibility—to operate as sustainably as possible. Based on greatest need, opportunity, and best practices from other city, country, and state governments, the District Government will develop a “Greening the District Government” strategy to increase its own sustainability. The strategy will analyze opportunities in energy and water efficiency, renewable energy, sustainable purchasing, green fleet, waste management, biophilia, landscaping, and broader interagency organizational change.

TIMEFRAME

Short term

LEAD

DOEE, OP

PARTNERS

DDOT, DGS, DPR, DPW, OCA, OCP

GV1.8

Ensure that all Sustainable DC 2.0 Plan actions promote population health to address health disparities.

Building a culture of health involves thinking beyond hospitals and clinics as the main sources of our wellbeing. To effectively address health disparities among populations, the District Government must focus on factors like education, employment, income, housing, transportation, the food environment, preventative medical care, the outdoor environment, and community safety. These factors are represented in many of the 167 actions across the Sustainable DC 2.0 plan. All District agencies tasked with actions in the Sustainable DC 2.0 plan will evaluate the potential impact of their actions on population health.

TIMEFRAME

Short term

LEAD

DC Health, OP

PARTNERS

DCPS, DOEE



EQUITY





EQUITY

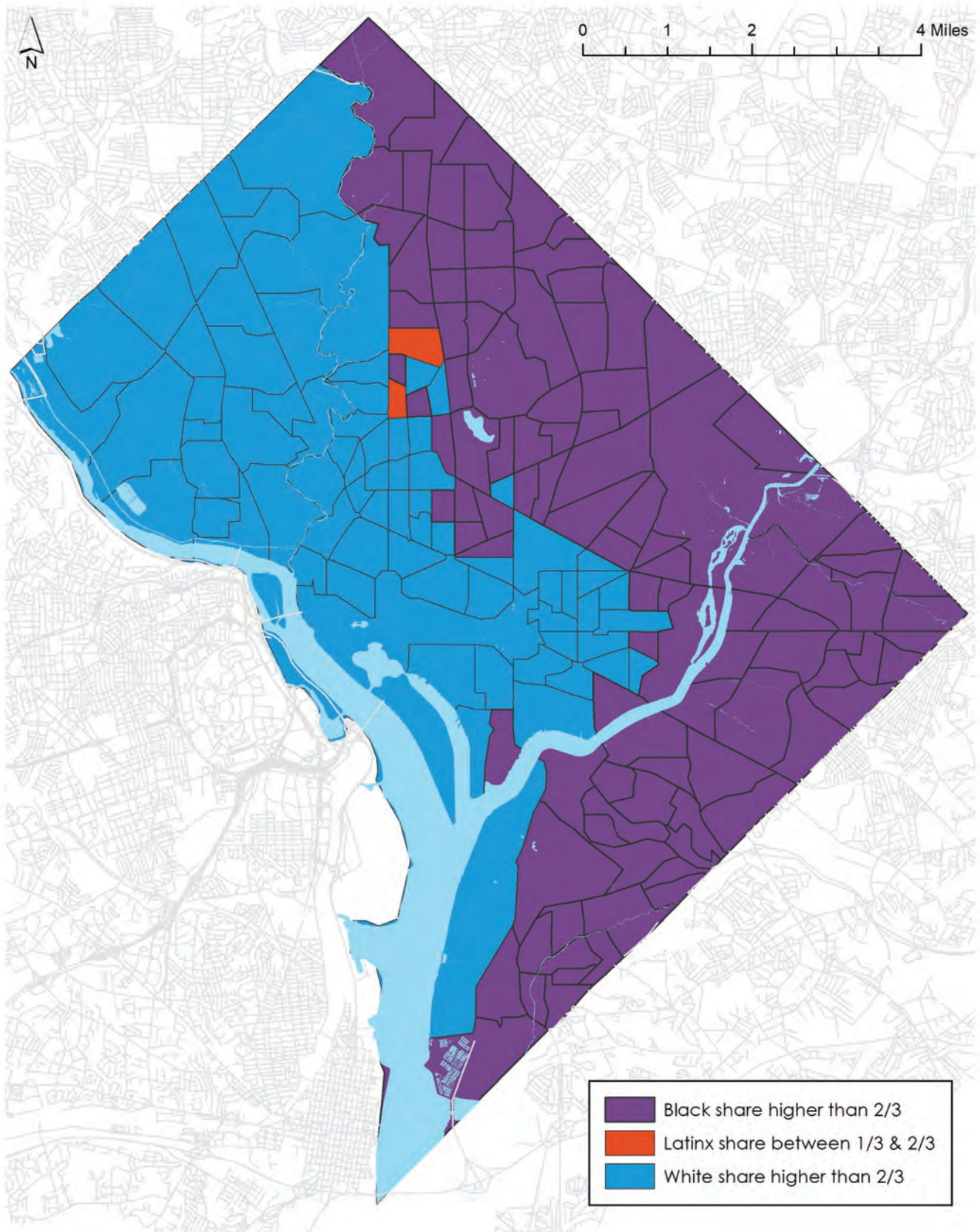
Racial equity is an integral element of a truly sustainable city. Communities of color are more prone to experience deep and persistent gaps in income, health, employment, and education.¹² While the District’s prosperity is growing, the benefits have not been widely shared.¹³ Studies suggest that the black median household income in DC—now around \$42,000—is less than a third of the white median household income of \$134,000 and has remained stagnant since 2007.¹⁴ The gaps in household income can be attributed to other disparities in geographic areas inhabited by people of color. In many places, the gaps are obvious. In wealthy areas, there is better access to well-maintained green space, high quality schools, and walkable commercial areas. Less affluent areas often experience more crime, higher mortality rates, lower income, and fewer amenities. In an equitable society, race wouldn’t be a factor in one’s quality of housing, employment opportunities, or earning potential. While this is not yet our reality, equity is a critical component of being a sustainable city. As we strive to create a sustainable District, we are also faced with an immediate challenge: ensuring residents living in less affluent communities equally enjoy the benefits of a healthier, greener, more livable city. For many residents, sustainability means struggling to afford housing in a rapidly changing city. To make sustainability relevant to all residents, we must take into account the struggle for racial equity in our city. As a short term goal, the Equity section in the Sustainable DC 2.0 plan calls for the creation of an Equity Impact Assessment Tool. District Government agencies will use this tool in the development of their plans and policies, to address the problems faced by underserved residents through a sustainability lens, using holistic solutions. The vision is for agencies to equitably distribute their resources to residents through the adoption of policies that do not perpetuate inequities. While equity includes gender, age, ethnicity, social class, language, sexual preference, and mental and physical ability, it must start with race. As the U.S. population shifts and racial minorities become majorities, the projections look different for American cities.

In the District, it is projected that the black population will continue to decrease as white residents become the majority. Sustainable DC can—and should—play an active role in reducing the disparities that help cause these shifts. The first step in the process is to create opportunities for historically marginalized residents to have an active voice in the decision-making process.

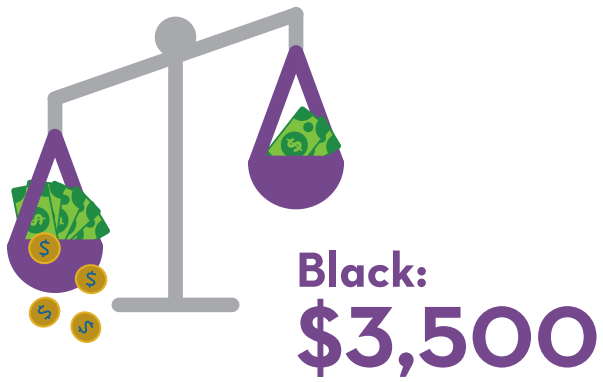
Sustainable DC 2.0 includes a new section intended to serve as an equity filter for the entire plan. This section is intentionally organized differently than the other sections in Sustainable DC 2.0.



2018 RACIAL SEGREGATION



Data Source: American Community Survey & DC GIS



White:
\$284,000

The net worth of white households in DC is 81 times higher than black households.ⁱⁱ



Between **2007** and **2014**, the median household income in DC increased by **\$10,000** but remained flat for black households.ⁱⁱⁱ

There are
43,000
D.C. residents who qualify as "extremely low-income."
91% of "extremely low-income" families are African-American.^{iv}



108,732
DC residents lived below the poverty line in **2012**.

115,119
residents lived below the poverty line in **2017**.^v



DC has the highest food assistance program use percentage in the U.S.^{vi}



DC has a **\$22,803** median student loan balance, the highest among any U.S. metropolitan area.^{vii}

EQ1.1

Create an Equity Impact Committee to guide equity in the development and implementation of the Sustainable DC 2.0 plan.

The Department of Energy and Environment (DOEE) will seek funding to launch the committee and provide for external consultation. The Committee will have a diverse, multi-generational membership, representative of community members and the public, private, and nonprofit sectors. It will monitor the implementation of the Sustainable DC 2.0 plan, including the development and tracking of metrics that focus on racial equity, to make significant progress toward equitable outcomes. This committee will serve as a catalyst to achieve a citywide commitment on racial equity that will reduce disparities and address the increasing wealth and class gaps.

TIMEFRAME

Short term

LEAD

DOEE

PARTNERS

DC Health, DPR,
EOM, OHR

EQ1.2

Develop an Equity Impact Assessment Tool to help the District immediately address racial inequities related to sustainability.

A pilot Equity Impact Assessment Tool will help the District Government immediately address racial inequities. The tool will define cross-cutting, guiding principles to be used in the ongoing implementation and future updates of the Sustainable DC 2.0 plan. District Government agencies will use the tool in the development of their plans and policies and the Sustainable DC 2.0 plan will be filtered through the tool. The tool, applied when planning processes are initiated, will hold the user accountable to ensuring that no community bears a larger share of negative impacts. As the use of the tool grows, content and procedures surrounding it will be assessed, it will be refined, and management tools will be created to assist District agencies

TIMEFRAME

Short term

LEAD

DOEE



EQ1.3

Provide equity-focused training for all District Government employees.

DOEE will develop a pilot equity-focused training for all District Government agencies working on Sustainable DC 2.0, including how they will apply the tool and equity principles to their work. Ongoing trainings will require a partnership with the Department of Human Resources and the Office of Human Rights to focus on cultural humility, equity, equality, biases, and unpacking racism. Equity trainings will serve as a starting point as all District Government employees learn the history of the city, so they more fully understand the fabric of the neighborhoods and communities they are serving. It will also help District Government employees identify and address their own biases to better serve all residents.

TIMEFRAME

Medium term

LEAD

DOEE, DCHR

PARTNER

OHR

EQ1.4

Focus community engagement on communities that have been historically under-represented.

The District Government will focus community engagement efforts on communities that have been historically under-represented in planning processes. This will require new approaches to connect and build relationships. Government agencies and their staff should bring residents in at the beginning of planning processes to listen and learn about community priorities. This will allow projects and initiatives to support communal needs more meaningfully. This level of engagement will result in the co-creation of culturally relevant programming and initiatives that will help promote equity and sustainability in the daily lives of District residents.

TIMEFRAME

Medium term

LEAD

DOEE

PARTNER

EOM



BUILT ENVIRONMENT






BUILT ENVIRONMENT

The District's population is approximately 700,000 people—an 11 percent increase since 2013, when the Sustainable DC plan was first developed. All District residents need healthy, safe, and affordable places to live, work, and play, even as the District continues to be one of the most expensive cities in the country. Simultaneously, climate change continues to be an increasingly serious threat with 75 percent of emissions in the District coming from buildings, the District's buildings—both new and existing—must become more energy efficient to reduce the amount of greenhouse gas emissions they are contributing to the atmosphere. The District Government must ensure that the built environment—meaning the city's human-made components like housing, utility lines, stores, and roadways—is sustainable, equitable, and resilient to the harmful effects of the changing climate.

The District Government has already made strides in shifting the built environment toward greater sustainability. Clean Energy DC, the city's energy and climate action plan, includes a section dedicated to reducing energy use in buildings and increasing renewable energy generation, and the city has strengthened green building requirements through the original Sustainable DC plan and the Green Building Act. Green buildings are sustainable because they meet the needs of their inhabitants while consuming fewer resources and protecting human health. They are also resilient, because they maintain their critical functions even in the face of disturbances like extreme weather.

However, sustainability is not sustainable without inclusivity, and there is more work to be done to be sure that the city's growth benefits all residents. While the District is experiencing rapid development and growth, there is tension between this growth and the real need for adequate affordable housing. The District Government has launched a number of programs and has made significant citywide investments in creating and preserving affordable housing. For example, the Inclusionary Zoning affordable housing program develops mixed-income communities by requiring new residential development to include affordable units. These developments support households of diverse incomes and boost the number of consumers for neighborhood businesses. More generally, increasing density throughout the city will help accommodate incoming residents and provide housing-insecure residents with homes—without displacing existing residents.



Sustainable DC 2.0's actions on the built environment have real benefits for Washington, DC at all levels:

INDIVIDUAL

Sustainable DC 2.0 aims to grow the city equitably, meaning that the actions aim to help residents find opportunities to reduce their utility bills and increase access to affordable housing. The plan also identifies ways to integrate the workforce into job opportunities in the built environment.

NEIGHBORHOOD

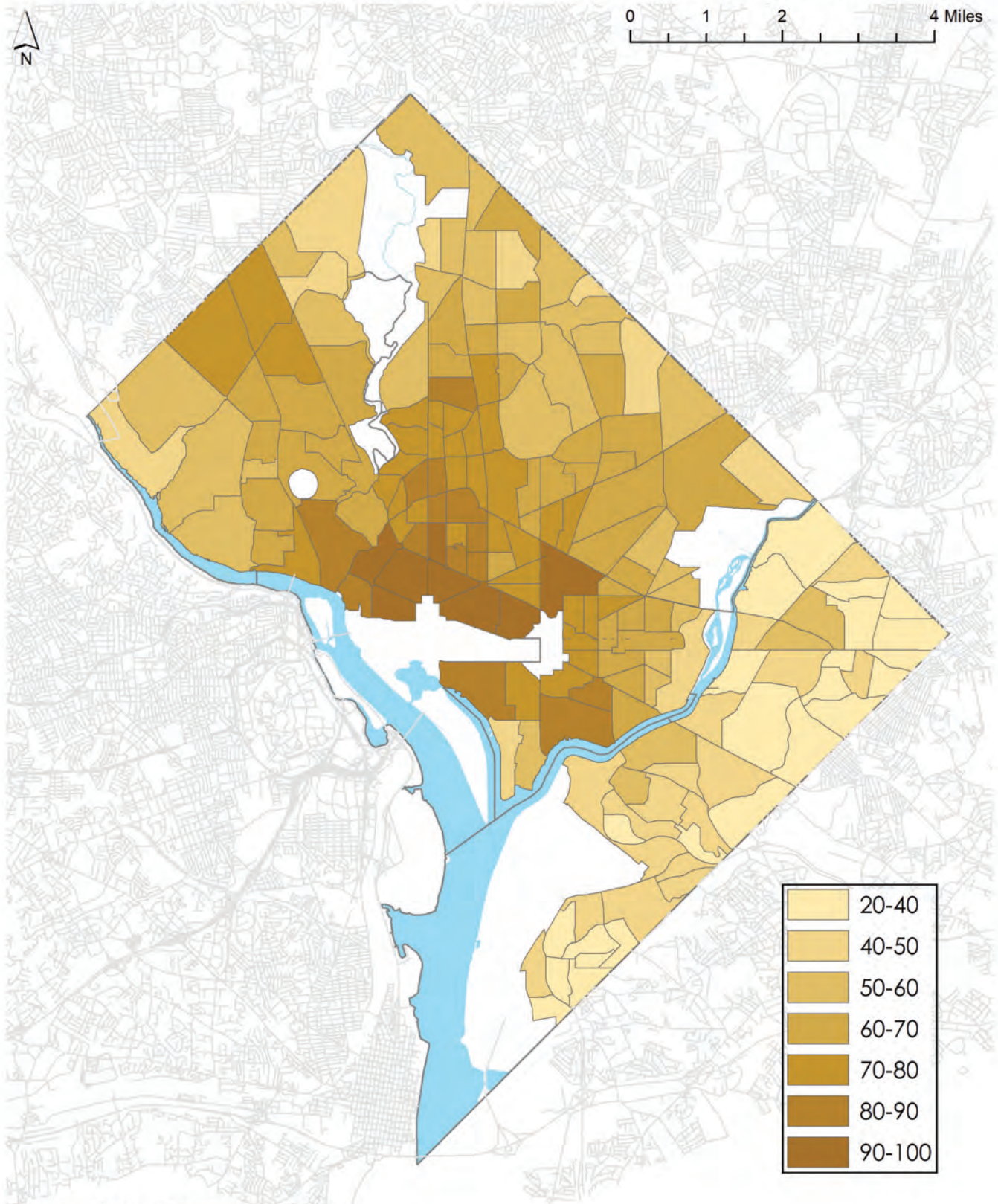
Sustainable DC 2.0 strives to build and strengthen neighborhoods based on each area's existing characteristics. Neighborhoods with high-capacity transit options would benefit from increased density, so more residents have access to public transit. Neighborhoods with fewer services like grocery stores would benefit from stronger commercial corridors. Neighborhoods across the city will be able to take advantage of sustainability programs.

DISTRICT

Actions in the Built Environment section of Sustainable DC 2.0 make buildings healthier and more energy- and water-efficient through data collection, regulation, and incentives. While some actions target only the largest buildings with the biggest environmental footprint, others apply to all buildings, recognizing that it will take a citywide effort to reach the District's sustainability goals.

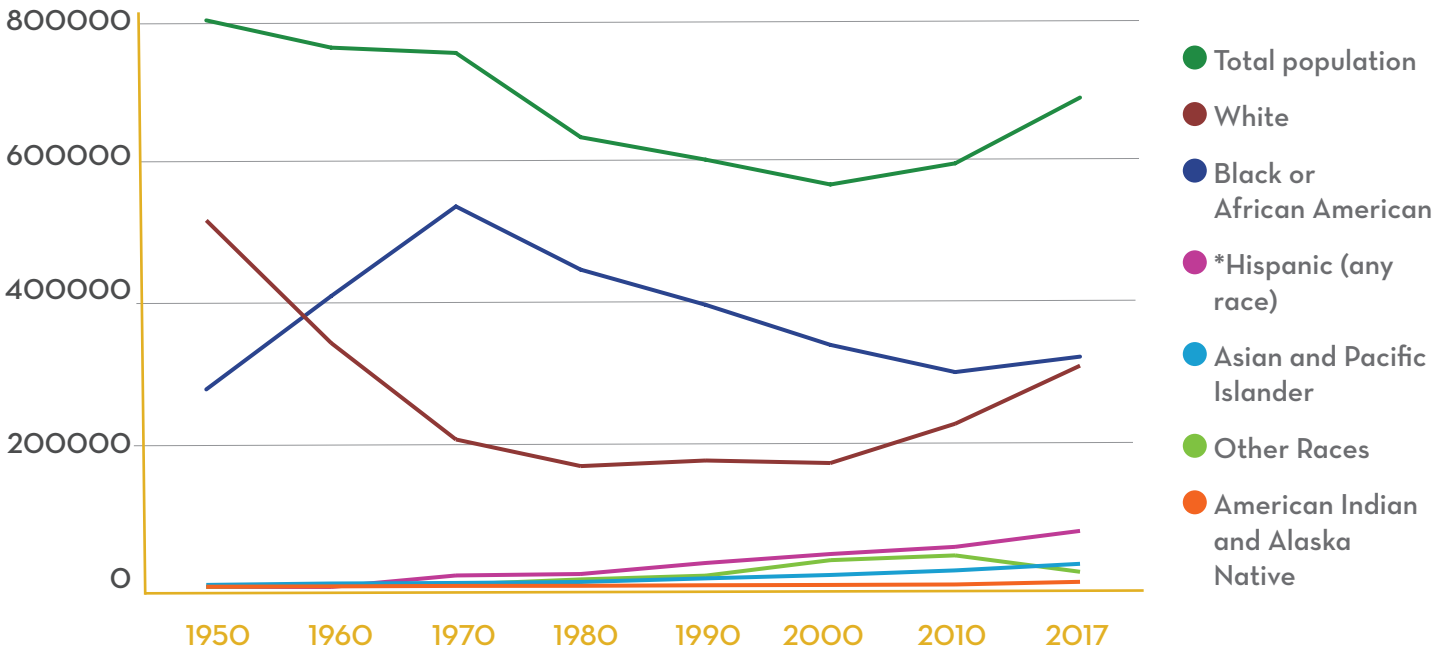
WALKABILITY

Lower scores indicate that it is more difficult to get around without a car, while higher scores indicate areas that are easier to live car-free (DC Policy Center, 2017)



Data Source: DC Policy Center & DC GIS

DC Population by Race (1950–Present)^{ix}



Since **2013**, there has been an **11%** increase in DC's population.



2012

Home price:

\$345,000

Rent:

\$2,357



2018

Home price:

\$575,800

Rent:

\$2,600^x



DC was named the first LEED Platinum City in the world in **2017**.^{xi}



There are

975 LEED certified projects in DC.^{xii}



GOAL 1

Sustainably and equitably accommodate future population growth within the District.



TARGET 1

By 2032, accommodate the District’s projected population growth while maintaining quality and affordability for those who need it most.

BE1.1

Create and preserve energy and water efficient affordable housing (including low-income and workforce housing) that accommodates different family sizes.

The District currently has a shortage of low-income housing and workforce housing. The District Government will continue to prioritize the creation and preservation of affordable housing through programs such as the Housing Production Trust Fund and the Inclusionary Zoning Affordable Housing Program, particularly housing options with multiple bedrooms for larger families. Because energy efficiency and solar energy can save households more than 50 percent on their utility bills, the District policies and programs will prioritize energy and water efficiency and solar energy.

TIMEFRAME

Ongoing term

LEAD

DMPED

PARTNERS

DCHA, DCHFA, DHCD, DOEE, OP

BE1.2

Expand brownfield redevelopment incentives.

Brownfields are previously developed properties that may have pollutants contaminating the site, making redevelopment of the land challenging. These sites are an opportunity for new housing, clean energy, parks, or retail. While the District Government already has a Voluntary Cleanup Program to support brownfield redevelopment, it will expand the program’s incentives to promote the greatest use of these brownfields.

TIMEFRAME

Medium term

LEAD

DOEE

PARTNERS

DHCD, DMPED



GOAL 2

Strengthen existing neighborhoods to be vibrant and walkable while maintaining their historic character.



TARGET 2

By 2032, provide essential services within a quarter-mile walk, and a variety of services and amenities within a half-mile walk of all residents.



TARGET 2 BASELINE

73
(Walk Score)

BE2.1

Enhance programs to support businesses to open and operate in neighborhood commercial corridors, focusing on vacant and underused spaces.

The District Government will make it easier for local businesses to find space in neighborhood commercial corridors, including in vacant and underused existing buildings, through actions such as streamlining the permanent and temporary permitting processes, providing tax incentives, and creating low-interest financing opportunities. Such programs will help new businesses—including essential services like grocery stores—thrive, particularly in areas that do not have as much commercial development as desired by residents.

TIMEFRAME
Short term

LEAD
DCRA

PARTNERS
DHCD, DMPED,
DSLBD, EOM, OP

BE2.2

Encourage the development of affordable live-work units.

The District Government will encourage the development of affordable live-work units—spaces that combine a workspace with living quarters. Living closer to work reduces traffic congestion, increases the number of people on public transit, and increases the number of residents who can simply walk to their work. Brookland Artspace Lofts is an example of affordable live-work housing in the District that allows artists to live and work in one space.

TIMEFRAME
Medium term

LEAD
DHCD

PARTNERS
DMPED, OP



BE2.3

Locate affordable, high-density housing close to commercial zones and high capacity transit.

Increasing the number of residents living near public transportation, schools, and other amenities can reduce congestion and support high-quality neighborhoods. The ability to live near transit is even more important for people with lower incomes who can thereby avoid the cost of owning a car. The District Government will strengthen initiatives to fund affordable housing near transit and other programs to increase the amount of transit-accessible affordable housing. New housing should be affordable for District residents and provide residents of all incomes with easy access to high quality transit and other amenities. The District Government will promote policies and incentives to maintain the affordability of housing as transit service is expanded to new areas.

TIMEFRAME Long term	LEAD DHCD	PARTNERS DCHFA, DMPED, OP
-------------------------------	---------------------	-------------------------------------

BE2.4

Expand the Great Streets program to five streets east of the Anacostia River to strengthen walkable, accessible, and vibrant commercial corridors.

Walkable, vibrant commercial corridors that are accessible to people of all abilities can provide a reliable base of customers, help neighborhoods retain their unique character, and allow residents access to retail and services without needing a car. The District Government will expand the Office of the Deputy Mayor for Planning and Economic Development’s (DMPED) Great Streets, to five corridors east of the Anacostia River to support walkable, vibrant commercial corridors.

TIMEFRAME Long term	LEAD DHCD, DMPED, DSLBD	PARTNERS DDOT, OP
-------------------------------	--------------------------------------	-----------------------------



GOAL 3

Improve the performance of existing buildings by reducing energy and water use, advancing health, and increasing livability.



TARGET 3

By 2032, audit 100% of existing commercial and multi-family buildings and implement improvements to achieve energy reduction goals.



TARGET 3 BASELINE

0%

BE3.1

Rehabilitate public housing to be energy and water efficient, equipped to meet net-zero energy standards, and to provide a healthy environment for occupants.

Since 2013, the DC Housing Authority (DCHA) has retrofitted much of the District's public housing to improve energy and water efficiency, as well as to improve the quality of the indoor environment, which supports the health of the over 7,000 families who reside in public housing. Indoor environmental quality is important because chemicals, poor ventilation, and other issues can contribute to asthma and other respiratory diseases. DCHA will ensure all existing public housing is energy-and water-efficient in addition to providing a healthy indoor environment for residents. All newly-built public housing can meet net-zero energy standards—meaning housing is built to consume the same amount of energy onsite as they generate or offset from renewable energy annually.

TIMEFRAME

Long term

LEAD

DCHA

PARTNER

DMPED, DOEE

BE3.2

Develop a green building workforce by training built environment professionals and building operations staff in the latest green skills.

Making sure that all buildings in the District run as efficiently as possible is a fast, low-cost way to reduce carbon emissions. However, Efficient, green buildings require a skilled workforce trained in building operations and energy management, including renovating buildings to be more sustainable and operating existing buildings as efficiently as possible. The District Government will work with partners to train this vital workforce and share best practices, in both reducing the amount of energy used in existing buildings and in maximizing new smart building technology, such as energy monitoring and automatic response systems.

TIMEFRAME

Short term

LEAD

DOES

PARTNERS

DCPS, DGS, DOEE

BE3.3

Build public-private partnerships to expand best practices for building operations and maintenance.

The District Government will Support the formation of public-private partnerships to promote best practices, trainings, and tools for building operations and maintenance throughout the District's commercial and public buildings, including schools and libraries. For example, the District Government has already created a curriculum in partnership with the University of the District of Columbia to train public and private building engineers. This curriculum could be expanded to reach a wider audience of building operators and include other topics like healthy building operations and bird-friendly buildings.

TIMEFRAME	LEAD	PARTNERS
Short term	DGS	DCPS, DOEE, OP3, UDC

BE3.4

Retrofit and maintain all buildings owned by the District Government to reduce energy use by 50% and maximize the installation of renewable energy technology.

In order to save money and to make progress towards the District's goal to reduce greenhouse gas emissions, the District Government will ensure that energy use is as efficient as possible, and supplemented by renewable energy generated onsite. In alignment with the Clean Energy DC plan, and the Clean Energy DC Omnibus Act of 2018, the District Government will continue to retrofit all public buildings to reduce energy consumption, and will continue to identify opportunities to install onsite renewable energy technology. A successful example of this is the Emery Coalition for the Homeless building.

TIMEFRAME	LEAD	PARTNER
Long term	DGS	DOEE

BE3.5

Complete energy assessments of all District homes and buildings.

Auditing all of the buildings in the District to understand their energy performance and identify strategies to save energy is no small undertaking, but smart meter technology now allows energy assessors to audit more buildings virtually by analyzing data remotely. In alignment with the Clean Energy DC plan, the District Government will develop a program to audit more buildings virtually to get the data necessary to help building owners make smart improvements, and target the District's incentive programs to help lower energy bills.

TIMEFRAME	LEAD
Medium term	DOEE





GOAL 4

Ensure the highest standards of building performance and operation for all new construction, including net-zero energy use, while advancing health and overall livability.



TARGET 4

By 2032, meet net-zero energy use standards with 100% of new construction projects and develop policies or regulation to improve the sustainability, livability, and resilience of new development.



TARGET 4 BASELINE

0%

BE4.1

Require higher levels of energy efficiency, renewable energy requirements, net zero standards for new construction, and broader sustainability metrics for public projects.

The District Government will ensure that public projects funded and controlled by the District remain at the forefront of best practices in new construction across all categories of sustainability, from energy and water efficiency, to renewable energy requirements, to sustainable sites and indoor environmental quality that supports human health such as biophilic design. The District Government will require all new construction and major renovations of its buildings to meet net-zero energy standards. This means that these buildings will only consume as much energy as they can generate onsite (e.g., through the use of solar panels), or offset by the purchase of renewable energy elsewhere.

TIMEFRAME

Long term

LEAD

DOEE

PARTNERS

DCPS, DCRA, DGS, OCA

BE4.2

Provide incentives for new building projects to achieve netzero energy.

Building a new net-zero energy building can cost more upfront, but will save money over time. Aligning with the Clean Energy DC plan, the District Government will incentivize net zero building by offering a coordinated set of incentives (such as accelerated permitting), regulatory improvements, recognition awards, and transparency of energy efficient data to help move the real estate market towards new net zero construction.

TIMEFRAME

Medium term

LEAD

DOEE, DCRA,
OTR

PARTNERS

DMPED, EOM

BE4.3

Incorporate sustainability best practices into neighborhood planning.

Environmentally-friendly, livable neighborhoods are more than just energy- and water-efficient: they are pedestrian-friendly, healthy places to live, with green spaces, amenities, mixed-use building options that house people across the income spectrum, while also seeking to reduce driving times. In addition, they aim to minimize the negative impact that the built environment can have on wildlife and human health. The District Government will take a holistic approach to neighborhood planning, including incorporating best practices that address walkability, wildlife, equity, and health—such as LEED for Neighborhood Development, STAR Community Rating System, and Living Community Challenge while guiding new neighborhood growth in the District.

TIMEFRAME	LEAD	PARTNERS
Ongoing	OP	DMPED, DOEE

BE4.5

By 2026, update the building energy codes to require that all new buildings achieve net-zero energy use or better.

Reaching the District’s commitment to eliminate carbon emissions by 2050 will require all new buildings to achieve net-zero energy in the near term, as the buildings built today will exist well into the future. As called for in the Clean Energy DC plan, the District’s building energy codes, which are updated every three years, will be updated by 2026 to require that all new buildings achieve net-zero energy use or better. The District will be a partner to help the private sector reach these benchmarks.

TIMEFRAME	LEAD	PARTNER
Medium term	DCRA	DOEE

BE4.4

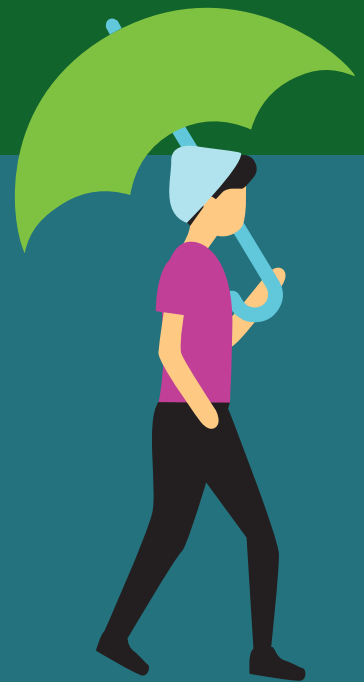
Continuously adopt the latest green construction codes

The International Green Construction Code (IgCC) is an international standard for the most innovative practices in green building, including better indoor environments, lower impact on natural resources, better neighborhood connections, and increased walkability. The IgCC is typically updated every three years. As the IgCC is updated, the District Government will quickly integrate the most recent version of the IgCC in the city’s construction codes. By consistently integrating the most recent IgCC, the District will remain at the forefront of green building best practices.

TIMEFRAME	LEAD	PARTNERS
Short term	DCRA	DCPS, DGS, DOEE, EOM



CLIMATE





CLIMATE


The District is already experiencing the impacts of human-made climate change. Climate change refers to long-term changes in global temperature, precipitation, wind patterns, and other aspects of climate. These global changes have serious consequences at the District level. In the past few years, the District has seen:

- Record-breaking extreme weather (heat waves and snowstorms)
- Higher tides caused by rising sea level
- Record precipitation, including heavy rains and flooding
- Warmer average temperatures and two to three times as many dangerously hot days

These climate change impacts can cause property damage and harm critical infrastructure—the infrastructure we depend on daily, including telecommunications, energy, transportation, water, and wastewater. The direct impacts of variable weather threaten both the safety and the quality of life of District residents.

The District Government is approaching climate change from two sides: mitigation and adaptation. Mitigation refers to reducing the following greenhouse gas emissions (GHGs)—carbon dioxide, methane, and nitrous oxide. The District’s Clean Energy DC plan is the roadmap to achieve the Sustainable DC goal of reducing GHGs by 50% by 2032. The District is also committed to becoming carbon neutral by 2050. Progress toward this goal is measured by an annual inventory of the city’s GHGs. Since the District began tracking GHGs in 2006, emissions have fallen by approximately 29 percent.¹⁵ We must build on and accelerate this progress.

Adaptation means adjusting to the impacts of climate change, and the District Government has outlined how the city will adapt in the Climate Ready DC plan. Published in 2016, Climate Ready DC shows how the District can bounce back from the impacts of climate change, even as we work to make the city healthier and more livable. Sustainable DC 2.0 incorporates Climate Ready DC’s adaptation strategy side-by-side with the District’s mitigation strategy.



Sustainable DC 2.0's actions on climate have real benefits for Washington, DC at all levels:

INDIVIDUAL

Climate change will affect all residents, but the impacts for some may be more serious, based on a number of factors: age, income level, geographic location, and other characteristics. The actions in Sustainable DC 2.0 focus on helping all residents adapt to climate change, especially those most at-risk economically and physically, and shows that mitigation efforts shouldn't unfairly burden people with low incomes.

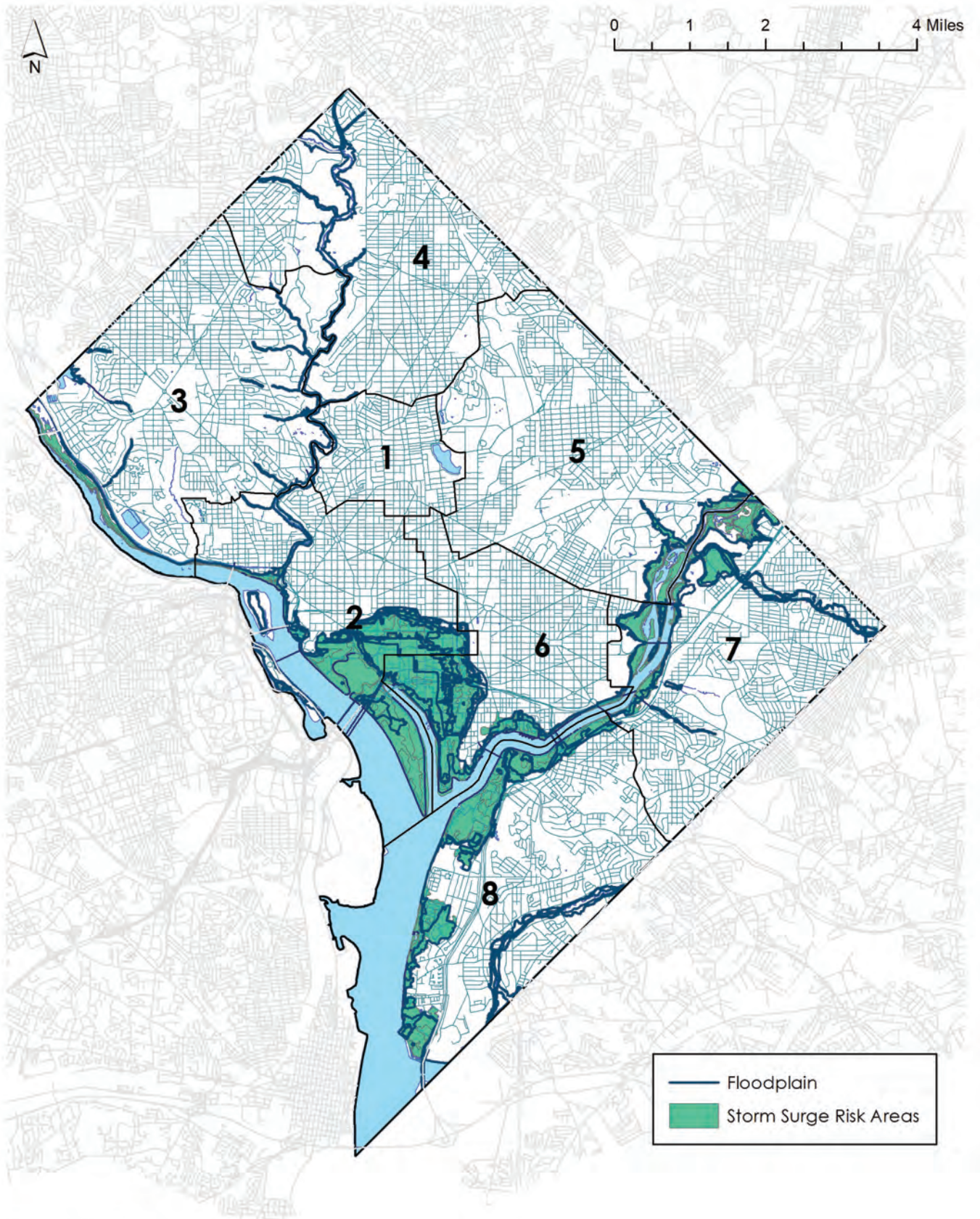
NEIGHBORHOOD

Climate change may affect parts of the District differently. Low-lying neighborhoods near the Potomac and Anacostia Rivers are more likely to be hurt by sea level rise and coastal flooding, while neighborhoods without green vegetation are more likely to suffer from heatwaves. Sustainable DC 2.0 focuses on improving the adaptive capacity of neighborhood building blocks—transit, energy, water, and telecommunications—so communities can bounce back quickly after extreme weather events.

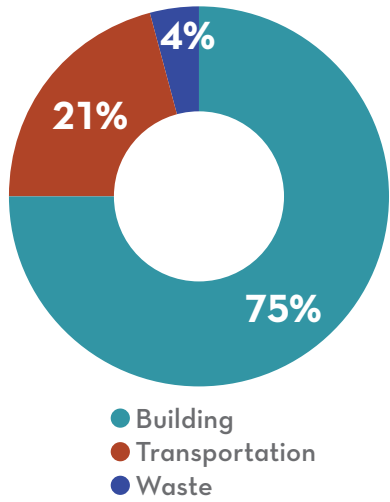
DISTRICT

Sustainable DC 2.0 helps set climate adaptation and mitigation priorities for the entire city. These requirements include specific policies tailored toward the District Government and stakeholders, such as real estate developers, whose work impacts many people.

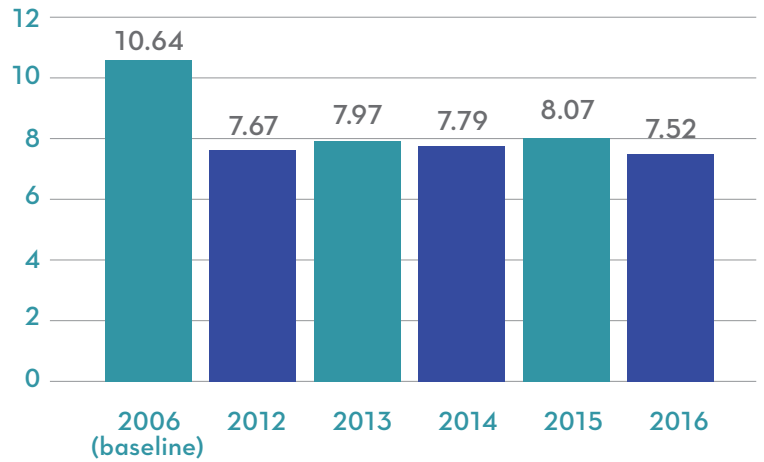
FLOOD RISK PROJECTED FOR 2080



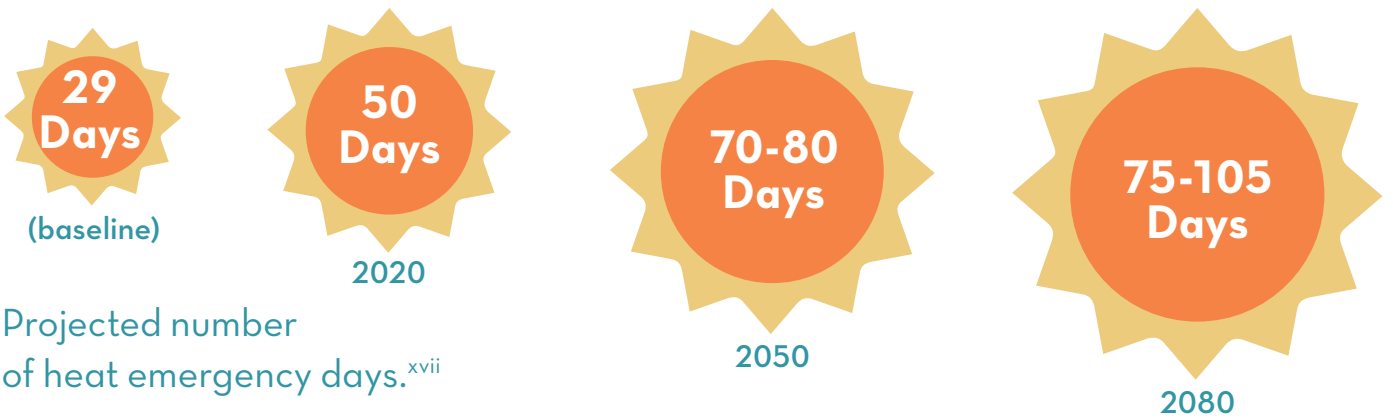
Data Source: DOEE & DC GIS



Greenhouse Gas Emissions by Sector (2016)^{xiv}



Citywide Greenhouse Gas Emissions
All figures are in MMtCO₂e
(million metric tons of carbon dioxide equivalent)^{xv}



Projected number of heat emergency days.^{xvii}

75% of the District's GHG emissions come from buildings.^{xix}

1 metric ton of GHG emissions is equivalent of **2,451** miles driven by an average car.^{xviii}

The District's GHG emissions are down **29%** from the 2006 baseline.^{xvi}



GOAL 1

Reduce greenhouse gas emissions from all local sources to put us on track to eliminate emissions by 2050.



TARGET 1

By 2032, reduce greenhouse gas emissions by 50%.



TARGET 1 BASELINE

10.64
metric tons (2006)

CL1.1

Build awareness and provide resources to empower people and organizations to take actions to reduce their share of greenhouse gas emissions.

Day-to-day energy use in buildings and vehicles, along with waste generation, make up of nearly all of the District's GHGs. In order to reduce the quantity of GHGs, the District Government will provide support and resources to people and organizations so that they are able to cut their energy use and waste generation in their daily routines. An example of building awareness and providing resources include the District Government's informative ad campaigns previously seen throughout the Metro transit system.

TIMEFRAME

Short term

LEAD

DOEE

PARTNER

OCTO

CL1.2

Report District emissions annually to track the reductions that can be attributed to specific initiatives.

Every year, the District Government tracks and reports GHG emissions by sector in an annual Greenhouse Gas Inventory. This inventory covers emissions from sources within the District as well as emissions that are created outside the District boundary as a result of activities taking place inside the District (e.g., the generation of electricity outside of the District for its own use). The inventory can help identify which initiatives are helping to reduce Washington, DC's emissions and where more work is needed. The District will report the results of this inventory each year and follow international protocols to ensure data quality.

TIMEFRAME

Ongoing

LEAD

DOEE

PARTNERS

DCRA, DDOT,
DGS, DPW, OPC



CL1.3

By 2020, develop a plan to achieve carbon neutrality by 2050.

Mayor Bowser has committed the District to achieving citywide carbon neutrality by 2050. This means that the District will eliminate GHG emissions, or offset any remaining emissions by supporting initiatives outside the District that will reduce emissions, like tree planting, renewable energy, and land conservation. In the short term, the District Government will develop a detailed implementation plan with clear milestones in order to achieve carbon neutrality by 2050.

TIMEFRAME

Short term

LEAD

DOEE

PARTNERS

DDOT, DGS, DPW

CL1.4

Measure and eliminate methane gas leaks into the atmosphere throughout the District.

Methane is a potent greenhouse gas that can leak from the pipelines that distribute natural gas to buildings. Although methane only lasts in the atmosphere for about a decade, it can cause about 28 times as much global warming as carbon dioxide,¹⁶ making it important for the District Government to take steps to identify and eliminate leaks.

TIMEFRAME

Long term

LEAD

DOEE

PARTNER

OPC



GOAL 2

Advance physical adaptation and human preparedness to increase the District’s resilience to climate change.



TARGET 2

By 2032, require 100% of new buildings, major infrastructure, and neighborhood plans to consider climate risks and identify adaptation solutions.



TARGET 2 BASELINE

0%

CL2.1

Evaluate and reduce the vulnerability of the District’s transportation, energy, water, and telecommunications infrastructure to the anticipated impacts of climate change.

As detailed in Climate Ready DC, it is essential that critical infrastructure remain in service or be quickly restored in the event of extreme weather, heat, or flooding. These services keep residents safe, healthy, and connected. Any significant climate risks to energy, water, transit, and telecommunications infrastructure should be evaluated and addressed. For example, severe storms can knock out power to entire neighborhoods. District energy systems and microgrids, which can provide backup power even when the grid is down, should be installed in critical facilities like hospitals.

TIMEFRAME

Medium term

LEAD

DOEE

PARTNERS

DC Water, DDOT, DGS, EOM, HSEMA, OCTO, OP, OUC

CL2.2

Improve emergency and community preparedness to respond to climate change events including extreme heat, storms, and flooding, with a focus on the most at-risk populations.

Some of the areas of the District that are most likely to flood or experience power outages during extreme weather are also home to people who have fewer resources to respond to risks and may be more sensitive to climate impacts. For example, a storm may be particularly dangerous and disruptive for someone dealing with other health issues or facing job or housing insecurity. Paying attention to the Vulnerable Populations Map used in Climate Ready DC, the District Government will work to develop and promote emergency and community preparedness plans to ensure that the all residents and communities are ready for an extreme weather event, including in the event of an evacuation.

TIMEFRAME

Medium term

LEAD

HSEMA

PARTNERS

DCHA, DC Water, DOEE, DPW, FEMS, MPD, OP



CL2.3

Require all new development projects to assess climate risks and incorporate climate adaptation solutions.

The District Government will require new development projects to consider climate risks and proactively identify adaptation solutions that would reduce eventual damage caused by climate change impacts. Relevant District Government agencies and stakeholders will create an assessment that balances climate adaptation with other District priorities such as affordable housing. For example, projects could include trees, vegetation, and green infrastructure to help reduce runoff and the risk of flooding streets and buildings. New projects could also counteract the high temperatures found in areas with lots of paved surfaces and buildings (the “urban heat island effect”) by installing a green roof (a roof with vegetation that helps insulate the building against heat gain) or a cool roof (a roof which reflects sunlight and absorbs less heat). Either of these measures would lower the temperature of the building and the surrounding area.

TIMEFRAME
Medium term

LEAD
OP

PARTNER
DOEE

CL2.4

Fully implement and regularly update the Climate Ready DC plan, the District’s plan to adapt to the changing climate.

The first Sustainable DC plan established a goal to make the District more resilient to climate change, which took shape as the Climate Ready DC Plan—the District’s plan to prepare for the impacts of climate change. Climate Ready DC’s actions will be implemented by the District Government and partners, and will be updated as needed to ensure that goals remain relevant as the climate continues to change.

TIMEFRAME
Ongoing

LEAD
DOEE

ECONOMY



\$ | ECONOMY

The District is the economic engine of the Washington metropolitan region and a national center of economic importance. However, to remain strong, the District needs to keep its growth rate high and to continue to diversify its economy to reduce its reliance on the federal government.¹⁷ While the District's unemployment rate has fallen from 8.4 percent in February 2013 (when the Sustainable DC plan was first released) to 5.6 percent in August 2018,¹⁸ it is higher than the national average of 3.9 percent at that same time.¹⁹ Further, unemployment rates are unequal across the city. As of December 2017, while Wards 2 and 3 have unemployment rates of 3.2 percent and 3.3 percent, respectively, Wards 7 and 8 have unemployment rates of 9.9 percent and 12.8 percent, respectively.²⁰ Recent analysis shows that the unemployment rate for black residents is 12.9 percent—more than eight times higher than the unemployment rate for white residents at just 1.5 percent.²¹

The District's economic plan, the DC Economic Development Strategy, has two goals: 1) grow a vibrant and resilient economy driven by private sector expansion, and 2) foster economic prosperity for all District residents by increasing job opportunities and decreasing employment disparities.²² The Economy section of Sustainable DC 2.0 mirrors these goals, with the added context of sustainability. Focusing on sustainability, related goods and services will help grow the economy and create new jobs—both in the District and regionally. For example, in 2016, U.S. job opportunities in the solar industry increased by 25 percent²³ and the number of people working in the wind energy field increased by 32 percent.²⁴

To prepare residents—especially underemployed residents—to work in the green economy, training programs with wraparound services are necessary. The District Government has several successful existing models for green job training programs, including Solar Works DC, which provides 12 weeks of hands-on training in solar energy, and the DC Infrastructure Academy, which recruits, screens, and trains residents for jobs in high growth infrastructure fields such as renewable energy and stormwater management. The Department of Energy and Environment also runs several green employment initiatives, including the Green Zone Environmental Program which teaches young adults about energy and environmental issues, and provides work experience on projects such as installing solar, building rain gardens, and installing storm drain markers.

Sustainable DC 2.0's actions on economy have real benefits for Washington, DC at all levels:

INDIVIDUAL

Green jobs can pay well! The median hourly wage for solar installers in the District is \$26, which equals roughly \$54,000 annually as a full-time job. 25

NEIGHBORHOOD

The green economy also helps businesses save money by being more sustainable. The District Government offers innovative financing and generous financial incentives to help small businesses use less energy, install solar panel and green roofs, while other financing programs help business of any size tackle the costs of installing energy efficiency measures.

DISTRICT

The highest unemployment rates in the District are in Wards 7 and 8 among black residents without a bachelor's degree. To help address this disparity, the Sustainable DC 2.0 plan recommends providing effective green job training programs. Smart, green job-training programs are an important part of the solution.

The DC unemployment rate is **5.6%.**

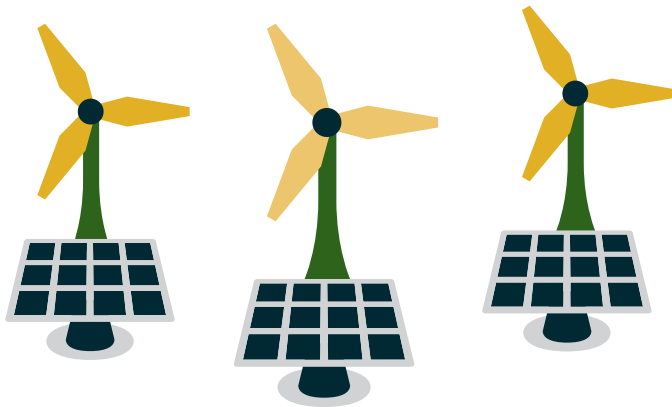
The national unemployment rate is **3.9%.^{xxi}**



17%
of US workers work for government.

38%
of DC workers work for government.^{xxiv}

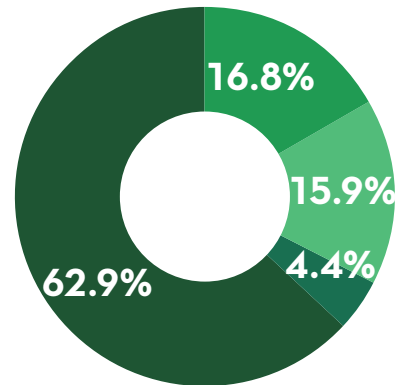
US solar jobs increased by **25%** in 2016.^{xxv}



The median hourly wage for solar installers in the District is **\$26.^{xxv}**

The number of people working nationally in wind energy increased by **32%** in 2016.^{xxvi}

Number of Jobs Openings in DC by Education Requirement^{xxiii}



- No requirement listed
- High school diploma or equivalent
- Associates degree or vocational school
- Bachelors degree or higher

The unemployment rate for black residents is

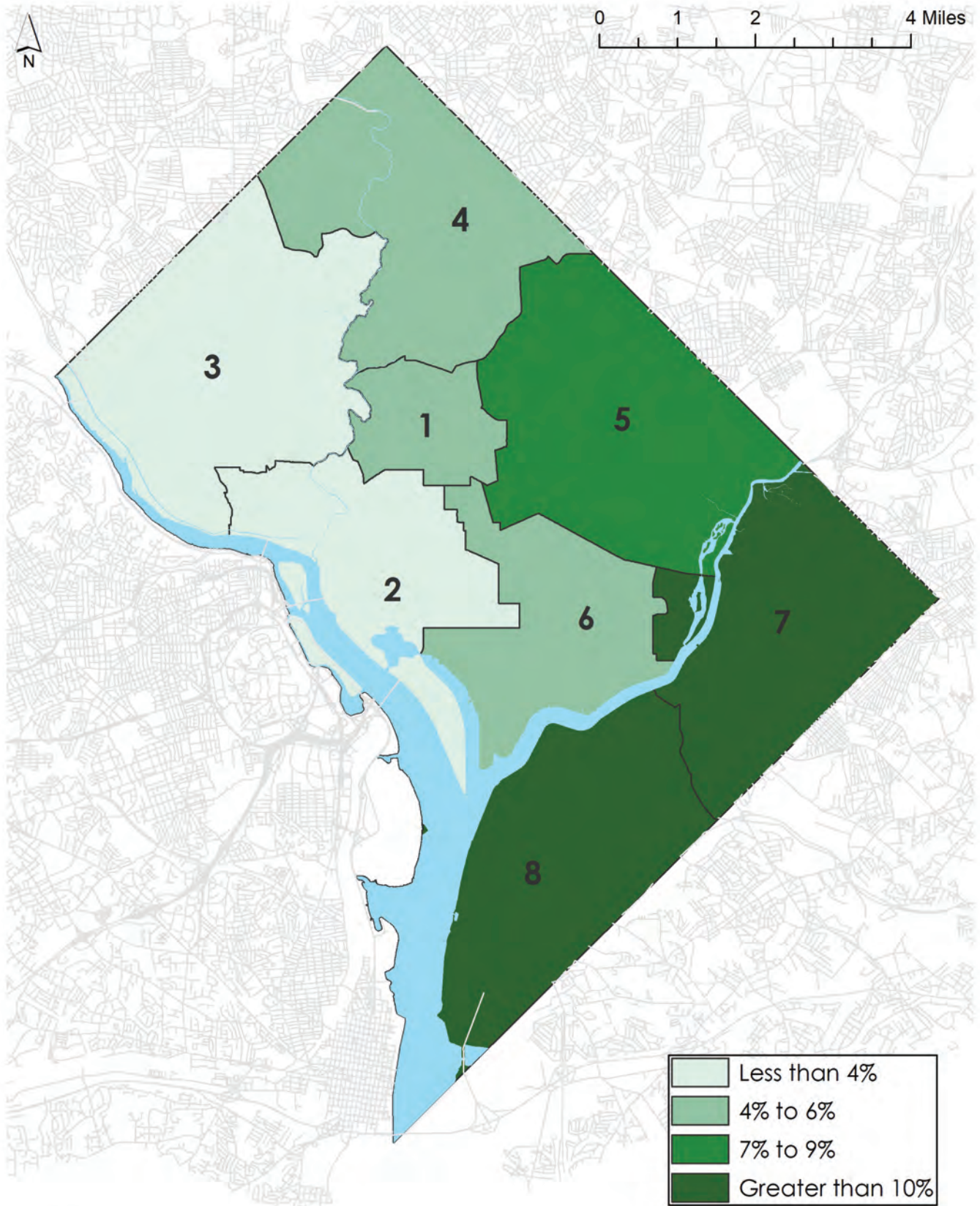
8 times higher than the rate for white residents.^{xxii}



1,691 DC-certified business enterprises (small businesses)^{xxvii}



UNEMPLOYMENT BY WARD (JUNE 2018)





GOAL 1

Grow and diversify the District’s economy, focusing on sustainability, climate, and resilience industries.



TARGET 1

By 2032, develop two times as many small, District-based businesses.



TARGET 1 BASELINE

1,124
businesses

EC1.1

Provide training, financial assistance, and marketing for jobs in sustainability business start-ups, targeting strategic populations.

About half of new businesses close within four years of opening their doors.²⁶ Training, financial assistance, and promotion from the District Government (including the Office of the Deputy Mayor of Planning and Economic Development (DMPED), the Department of Small and Local Business Development (DSLBD), and the Department of Housing and Community Development (DHCD) can be the difference in helping a new business succeed. To strengthen the sustainability economy, the District will provide new training programs on sustainable business opportunities, provide financial and technical resources, and help promote businesses that meet sustainability standards. These resources will strategically focus on populations underrepresented in business ownership.

TIMEFRAME

Medium term

LEAD

DOEE, DSLBD

PARTNERS

DHCD, DMGEO,
DMPED

EC1.2

Coordinate with anchor institutions such as hospitals and universities to encourage purchasing from local sustainability-related businesses.

Anchor institutions are major stable organizations and corporations in a city that are unlikely to relocate, such as universities, hospitals, and large international institutions. The District Government will partner with these major institutions to direct their substantial purchasing power to help establish and grow small businesses related to sustainability. A successful example of this is the Evergreen Cooperatives in Cleveland that supply fresh produce, green laundry services, and energy efficiency improvements to universities and healthcare institutions in the University Circle area through a long-term agreement.

TIMEFRAME

Medium term

LEAD

DOEE

PARTNERS

DSLBD, OCP

EC1.3

Work with private partners to support new incubators and “maker spaces” with a focus on communities most in need.

New entrepreneurs often have difficulty accessing specialized equipment and technology required to operate their businesses, which is too expensive for most people to buy on their own. The District Government will collaborate with private partners to facilitate and help fund projects to foster new business incubators and “maker spaces” that provide affordable shared access to specialized equipment and technology to make things. Locations and types of equipment will prioritize communities with the greatest need and least access to such equipment in addition to industries for which there is existing demand. A successful existing example is the District of Columbia Public Libraries fabrication labs that allow residents to use laser cutters, 3-D printers, soldering tools, and sewing machines, while offering workshops on how to use them.

TIMEFRAME

Medium term

LEAD

DMPED, DSLBD

PARTNERS

DCPL, OP, DMGEO

EC1.4

Increase the number of businesses that offer sustainable products and services by connecting them to third party certification programs.

As more businesses offer sustainable products and services, it’s increasingly important to separate the real deal from “green washing”—pretending to be environmentally friendly to attract new customers. Third party certification programs like Cradle to Cradle, Green Seal, Green America, R2, and B-Corporations—along with resident education—can help make it clear which businesses have legitimate sustainable options. The District Government will help educate businesses on options for certification, provide financial assistance to reduce the cost of certification programs, and help educate residents on the value and meaning of these certifications.

TIMEFRAME

Short term

LEAD

DOEE

PARTNERS

DMPED, DSLBD

EC1.5

Provide training and connect District businesses to financial resources to operate more sustainably.

Few small- to medium-sized business owners find time to learn how and why to make their business operate more sustainably, but the payoff in financial savings and new customers is well worth the effort. The District will lower barriers to “going green” by making training easy to find and participate in, and connecting businesses to financial assistance for solar installation, energy efficiency, stormwater management and other sustainable improvements. Community partners may include Think Local First, chambers of commerce, industry associations, and business improvement districts.

TIMEFRAME

Short term

LEAD

DOEE

PARTNERS

DSLBD, DMPED

EC1.6

Launch the DC Green Bank by 2020.

Mayor Bowser proposed the “District of Columbia Green Finance Authority Establishment Act of 2018,” which was enacted in 2018. Widespread installation of renewable energy (energy sources that do not use fossil fuels) and energy efficiency projects are critical to meeting Sustainable DC’s energy and climate goals. However, financing large-scale deployment is often so complicated that it prevents important investments in sustainability. New innovative financing through the DC Green Bank will lower these barriers by removing or lowering the upfront cost of adoption, leveraging private investment, and increasing the efficiency of public dollars.

TIMEFRAME

Short term

LEAD

DOEE



GOAL 2

Train District residents to be competitive for livable wage jobs in growing industries such as sustainability, the environment, and resilience.



TARGET 2

By 2032, reduce unemployment in severely unemployed populations by 50%.



TARGET 2 BASELINE

20%*

*A population or community with an unemployment rate higher than 10%.

EC2.1

Partner with the Workforce Investment Council to identify the fastest growing sustainability fields for future job training programs.

The Workforce Investment Council (WIC) is a private sector-led board responsible for advising the District Government on the development, implementation, and continuous improvement of an integrated and effective workforce investment system. By working with the WIC to identify jobs in sustainability that align with the District's current six high growth sectors (such as construction and transportation) the District will be in the best position to design sector-specific training sessions to ensure District residents are prepared to benefit from new sustainability job opportunities. Promising opportunities include solar installation and rain garden maintenance in the high growth construction sector.

TIMEFRAME

Short term

LEAD

DOEE,
DOES

PARTNERS

DMGEO,
DMPED, WIC

EC2.2

Help connect underemployed residents with jobs in sustainability with opportunities in growing fields.

After working with the WIC to identify the best opportunities for new jobs in sustainability, the District will connect underemployed residents to those training programs and any necessary social services. Working with the Department of Employment Services (DOES), community organizations, and local businesses, the District Government will match trained residents with jobs in sustainability and climate that pay living wages. The District will also match candidates with necessary wrap-around services to help residents succeed in these positions.

TIMEFRAME

Medium term

LEAD

DHS, DOES

PARTNERS

DMPED, DOEE

EC2.3

Create new paid job opportunities in sustainability fields for young adults and high school students, focusing on populations with highest unemployment rates.

The unemployment rate for black District residents is 8.5 times higher than that of white residents.²⁷ Jobs in sustainability can play a role in reducing this disparity. The District Government will create a training pipeline for jobs in sustainability starting with paid opportunities for young people (up to 24 years old), including high school students. The pipeline could include partnering with public schools and universities to support career education programs, including work-based learning opportunities and high-quality certification programs that can be applied to jobs in sustainability in high growth sectors.

TIMEFRAME

Medium term

LEAD

DOEE

PARTNERS

DCPS, DOES, OSSE, UDC



EC2.4

Track the economic impact of jobs in sustainability on the local economy.

Without good data to back up assumptions and case studies, it has been difficult to make a strong case for investing in sustainability jobs. By dedicating the resources to accurately track the economic impact of sustainability jobs on the local economy, the District can make better investments in training programs, wrap-around services, and sustainability-focused businesses.

TIMEFRAME

Short term

LEAD

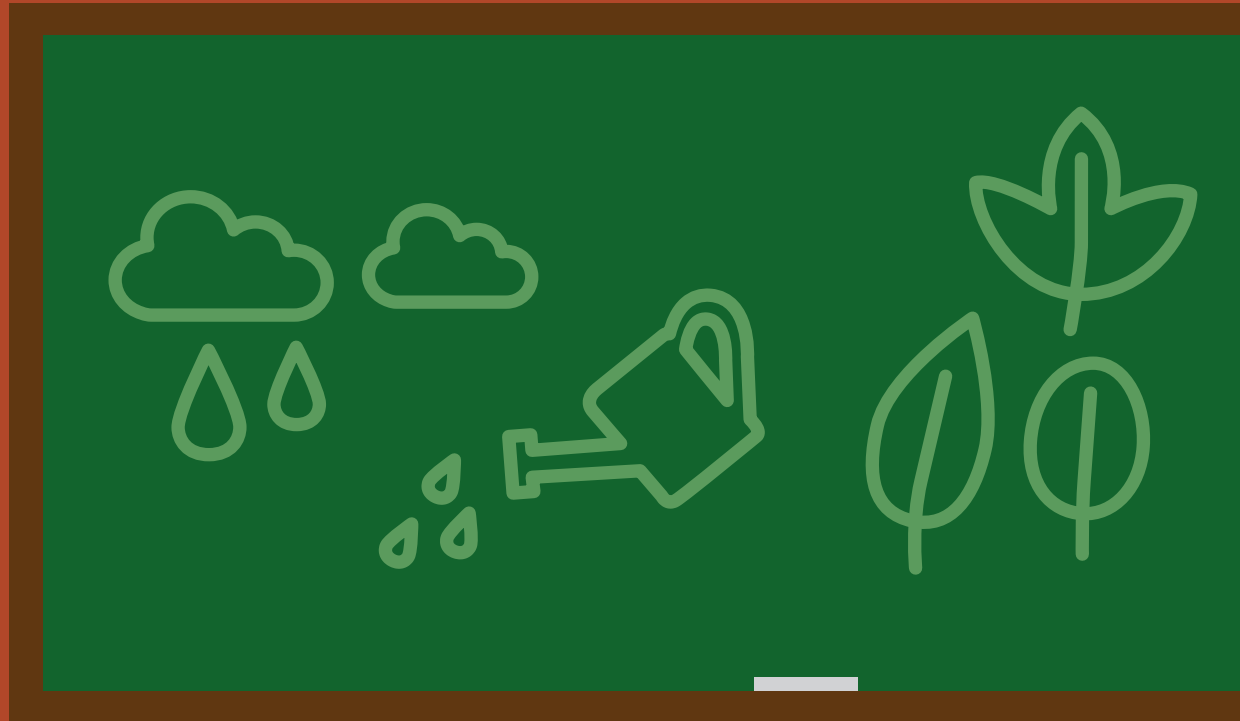
DOEE, OP

PARTNERS

DMPED, DOES



EDUCATION





EDUCATION

Sustainability education is fundamental to the success of Sustainable DC. This includes education of our young people within the formal education system as well as community-wide education on the benefits and importance of sustainability. In a recent survey, half of residents responded that they have heard of Sustainable DC and over two-thirds supported the concept of sustainability.²⁸ This is a good foundation of support, yet provides an opportunity to engage with more residents on Sustainable DC. Another theme in this recent survey was that sustainability doesn't feel inclusive—that it is only for some residents, but not others, a feeling that was particularly prominent among residents of color. The District Government has work to do to better include people of color and ensure that sustainability is relevant, meaningful, and welcoming to all District residents.

Currently, the main forms of sustainability education by the District Government are the implementation of the Office of the State Superintendent of Education's Environmental Literacy Plan, community engagement by the Department of Energy and Environment (DOEE), including its Sustainable DC Ambassadors and the Green Zone Environmental Program, and Department of General Services programs to reduce wasted food and electricity usage in schools. Much more expansive sustainability education is done by the District's strong network of environmental and sustainability nonprofit organizations.

Sustainable DC 2.0's actions on education have real benefits for Washington, DC at all levels:

INDIVIDUAL

Every resident, regardless of where they live, should be afforded the opportunity to access all the public services and financial incentives that the District Government offers, to improve the quality of their lives. Residents—especially those who've been marginalized—also deserve to be educated on plans and projects and provided a convenient way to give input on them. Through Sustainable DC, the District Government will strive to create a method to ensure its community engagement reaches those who have not weighed in, resulting in equitable outcomes.

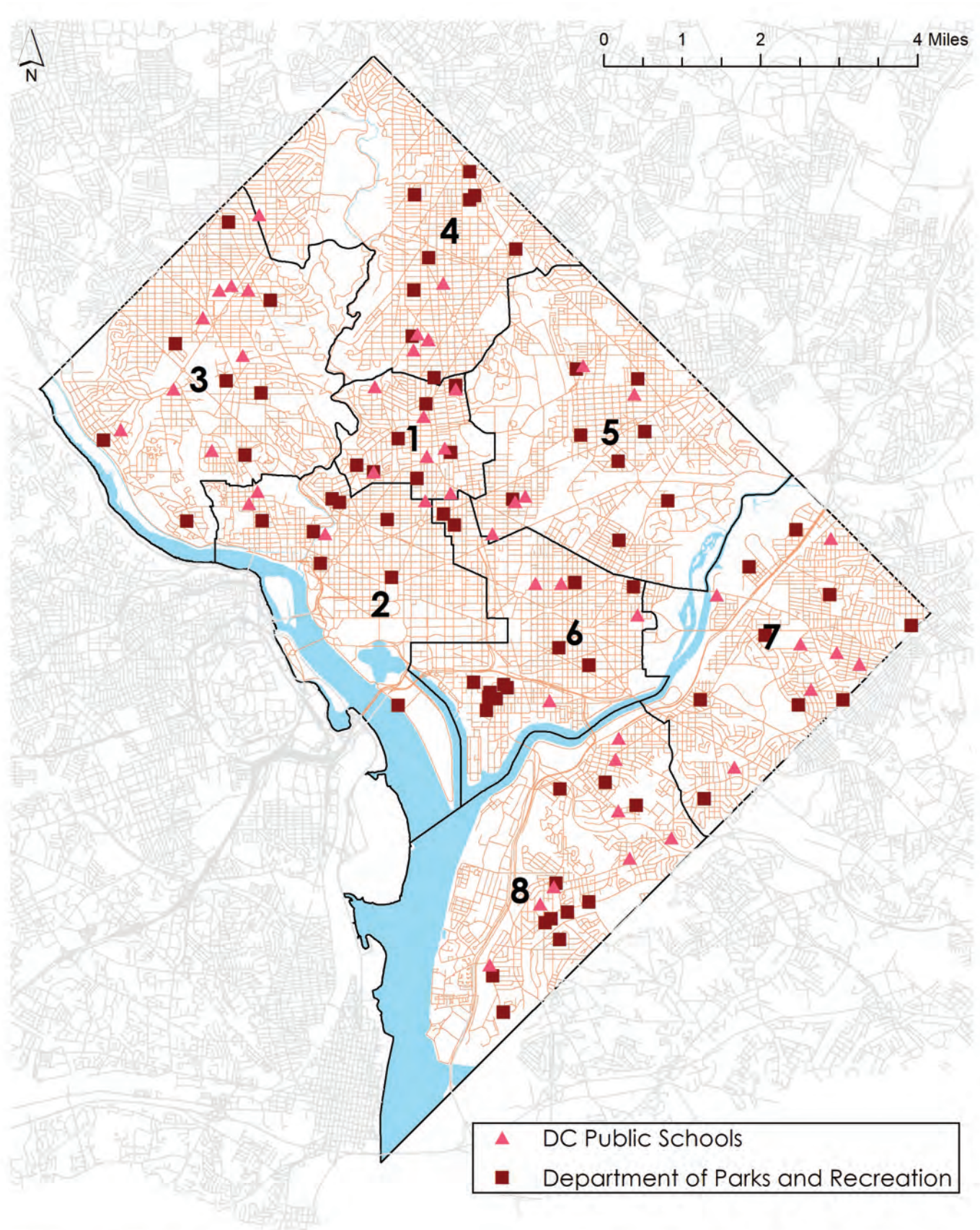
NEIGHBORHOOD

The District's public school buildings, recreation centers, and libraries are critical facilities for the development of residents. As we renovate these buildings to be healthy and green, they become excellent opportunities for communities to learn about green building, energy efficiency, stormwater management, and sustainable waste diversion. By making buildings more sustainable, we are also transforming them into tools for communal learning.

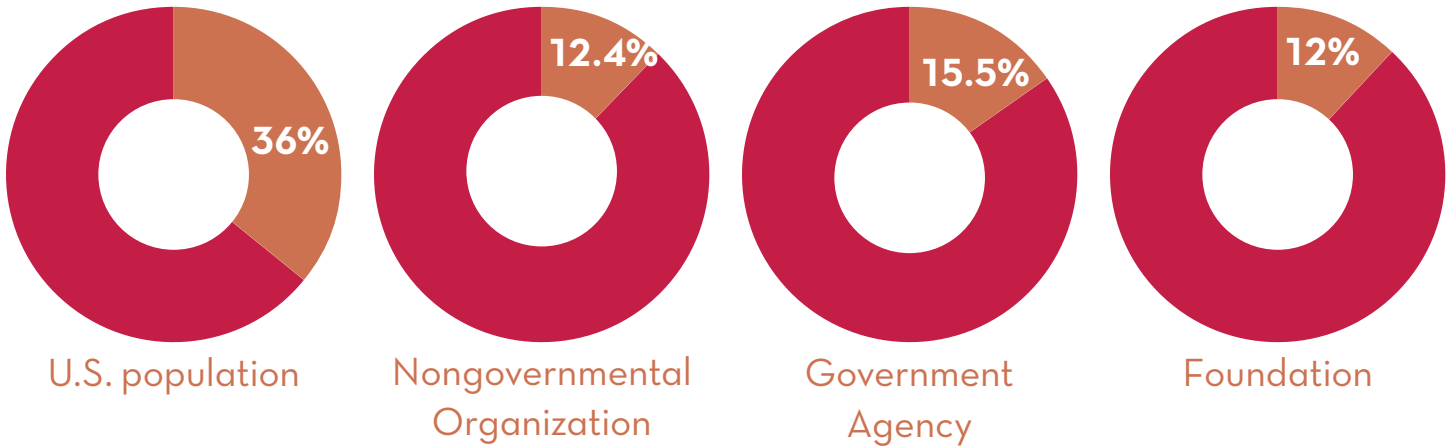
DISTRICT

A growing population of sustainability stewards engaged in community-driven processes will lead to positive impacts in all communities, especially communities of color and those with limited English proficiency. More importantly, District Government employees will have the opportunity to better understand how to shape programs and initiatives that are most attractive to residents based on the needs of their individual communities.

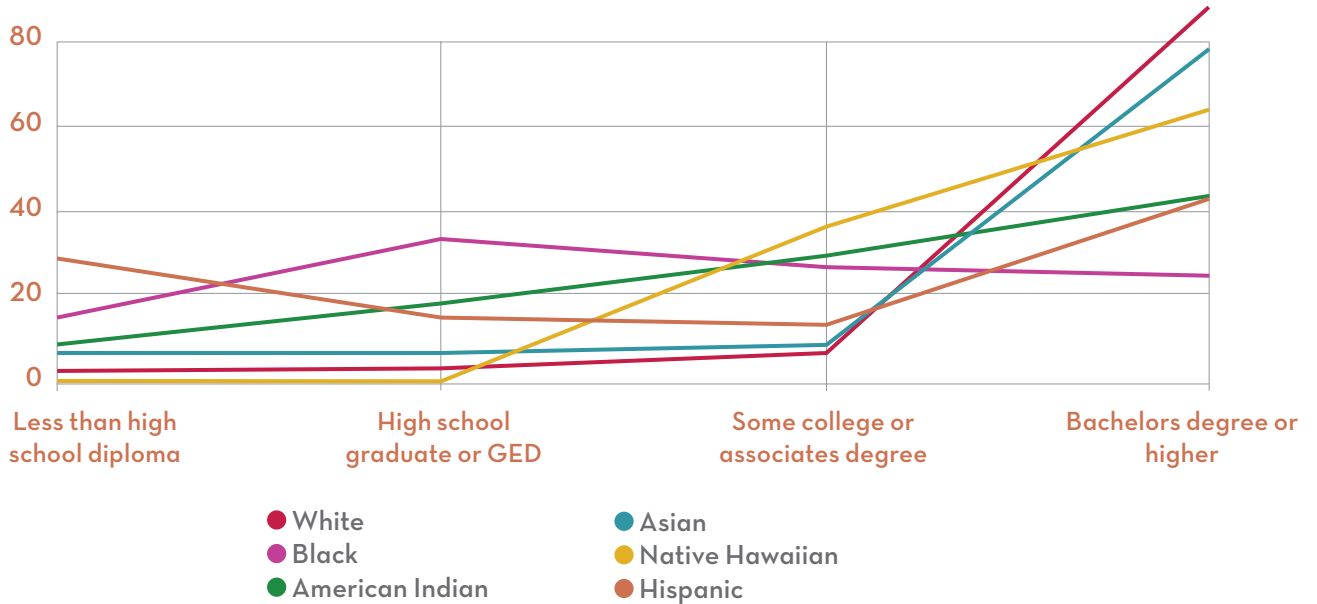
MODERNIZED SCHOOLS AND RECREATION FACILITIES BY WARD



Staff Diversity in Environmental Organizations^{xxvii}



Educational Attainment in DC by Race (Age 25+)^{xxviii}



115
DC public schools

123
DC public charter schools^{xxix}

32 schools have adopted the Environmental Literacy Program.^{xxx}

DC Government Investment in Meaningful Watershed Educational Experience (MWEE)^{xxxi}



2011–2012: **\$100,000**
 2012–2013: **\$420,000**
 2013–2014: **\$20,000**
 2014–2015: **\$1.4 million**
 2015–2016: **\$20,000**
 2016–2017: **\$340,000**



GOAL 1

Ensure every student in the District graduates with the knowledge to protect and restore their local environment.



TARGET 1

By 2032, teach 100% of children in the District about environmental and sustainability concepts.



TARGET 1 BASELINE

0%*

*Going forward the data will be measured by students reached via Environmental Literacy Leadership Cohort.

ED1.1

Modernize all public school buildings, recreation centers, and libraries to reduce their environmental footprint and integrate sustainable and healthy practices into their operations.

To ensure that our students and residents have the best possible educational and recreational environments, the District Government must continue to renovate District public schools, libraries, and recreation centers to efficiently use energy and water, manage waste. Further, it must maintain them with sustainability and health in mind. The District Government will promote interactive learning and stewardship opportunities through sustainability elements of these buildings such as rain gardens, green roofs, and sustainable cleaning programs at these buildings. The District Government will develop learning materials to help students and guests learn about sustainability via these important public buildings.

TIMEFRAME

Medium term

LEAD

DGS

PARTNERS

DCPL, DCPS, DOEE, DPR

ED1.2

Implement a program to encourage all District schools to adopt healthy, green, and sustainable practices.

The District Government will create a program that will support and continually increase the number of schools that integrate sustainability practices and reduce the impact of their buildings and grounds while providing learning opportunities about sustainability for students. The District Government will work to encourage the staff and students to engage in environmental health practices through providing environmental and sustainability education. The creation of student ambassadors who will serve in a green leadership capacity will be a large part of this educational program in schools.

TIMEFRAME

Long term

LEAD

DOEE, OSSE

PARTNER

DCPS

ED1.3

Implement the Environmental Literacy Plan.

In order to support the implementation of the Environmental Literacy Plan (ELP)—the District’s plan for aligning sustainability and environmental education with existing curricula—Sustainable DC 2.0 has been updated to better align the plan goals, targets, and actions with the ELP. To further propel this effort, the sustainability education program in ED1.2 will be guided by standards within the 2014 Environmental Literacy Framework.

TIMEFRAME

Short term

LEAD

OSSE

PARTNERS

DCPS, DOEE

**ED1.4**

Provide adequate support so that every student will have access to meaningful environmental experiences in elementary, middle, and high school.

The District Government’s current program effort, facilitated by DOEE, only reaches 39 percent of fifth graders in a given year. While Meaningful Watershed Environmental Experiences (MWEEs) take place in some high schools and middle schools, the MWEE’s are only systematic for fifth grade. There are fewer options for most high school students and grades kindergarten through four and six through eight. In order to provide access to meaningful environmental experiences for students between grades three and 12, District Government will need to increase support for this important program.

TIMEFRAME

Long term

LEAD

DOEE, OSSE

PARTNERS

DCPS, DOEE

ED1.5

Provide dedicated scholarship funding to allow District residents of color to major in sustainability programs in higher education.

While it is projected in the coming decades that people of color will make up the majority population in the United States, the same is not true for people of color in environmental fields. Studies show that while people of color increasingly support environmental protections at higher rates than white individuals, they have not broken the “green ceiling.” Fewer than 16 percent of environmental jobs are held by people of color.²⁹ The District Government can take a bold step to diversify environmental fields by supporting targeted environmental education for its residents. The District Government will provide dedicated scholarship funding and ensure District high school graduates are aware of career pathways and financial resources to study in sustainability-related fields.

TIMEFRAME

Long term

LEAD

EOM

PARTNERS

DCPS, DOEE, OSSE, UDC



GOAL 2

Expand community education and engagement on sustainability practices that will help residents live green lifestyles and save money.



TARGET 2

By 2032, leverage resources to expose 100% of District residents living in underserved and underrepresented communities to sustainability events and initiatives in their neighborhood.



TARGET 2 BASELINE

25%

ED2.1

Increase District residents' awareness of sustainable living using culturally relevant and community-driven materials.

A 2017 DOEE survey showed residents—especially people of color—want to know more about how to “go green” in their daily lives. In response, the District Government will provide practical actions that residents can take to be more sustainable, such as reducing their use of single-use plastic bags, washing clothes in cold water, eating less red meat, and using programmable thermostats to control and balance home temperatures while they are away. Information and resources will be co-created with the community—focusing on under-represented residents—and culturally relevant.

TIMEFRAME

Short term

LEAD

DOEE

PARTNER

OP

ED2.2

Increase participation of people of color in Sustainable DC community events, planning efforts, and implementation of programs and policies.

The District Government will work to better represent people of color in sustainable planning by intentionally prioritizing work in historically underserved communities. To garner support for these projects, the District Government will engage residents at the outset of processes to ensure community priorities (for example, economic mobility, employment opportunities, and youth development) are factored into the decision-making process and framing of plan and project goals.

TIMEFRAME

Short term

LEAD

DOEE

PARTNERS

DMGEO, EOM, OP



ED2.3

Recognize residents and community leaders for their sustainability achievements with awards and in public sustainability campaigns.

DOEE hosts an annual Sustainability Awards ceremony, where business, schools, and partners are honored for their achievements and contributions to the sustainable goals in the District. DOEE will make a commitment to expand the reach of, and diversify the cohort of, those who are honored to include more people of color, for their contributions to the District's sustainability.

TIMEFRAME

Short term

LEAD

DOEE

PARTNER

EOM

ED2.4

Develop a list of actions that residents should take to help reach our sustainability goals based on data.

The ambitious goals of Sustainable DC and its sister plans such as Clean Energy DC and moveDC will not be met without the participation of District residents. Based on analysis, the District Government will create a list of actions that are most needed for residents to take. The District Government will incentivize residents through creative campaigns and friendly competitions to promote these actions.

TIMEFRAME

Short term

LEAD

DOEE

PARTNERS

DDOT, DPW, OP

ED2.5

Create and promote accessible opportunities for adults to learn and build connections to the natural world.

DOEE currently provides funding to organizations to train and educate residents to become Master Gardeners, Master Naturalists, and Watershed Stewards. We envision using the foundations of these programs to attract new audiences to help us create programs that are both accessible and provide marketable skills.

TIMEFRAME

Short term

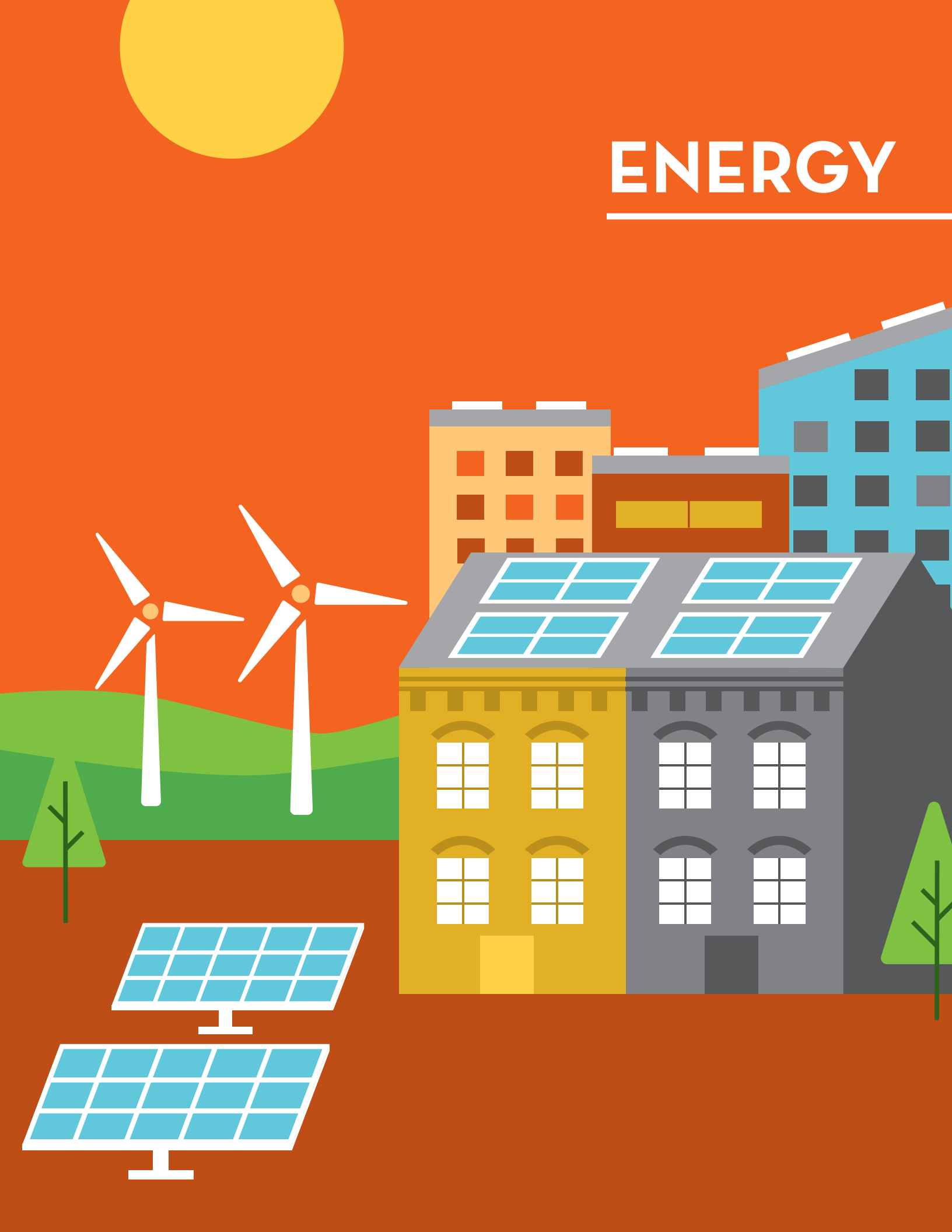
LEAD

DOEE

PARTNERS

DMGEO, DPR, UDC

ENERGY





ENERGY

Energy literally powers our city—it lights our buildings, heats and cools our homes, and fuels our motorized vehicles. However, generating energy from fossil fuels releases greenhouse gases (GHGs) that cause climate change. In fact, 96 percent of the emissions in the District come from using energy, and 75 percent of those emissions come just from the energy used to heat, cool, and power buildings.³⁰ Energy generation from fossil fuels also has an impact on regional air quality. Some of the biggest challenges for the District are determining how to reduce costs, reduce energy use overall, and shift the power supply to renewable sources such as solar and wind—all while the District’s population and economy continue to grow.

The District Government’s approach to address this challenge is detailed in the District’s energy and climate action plan, Clean Energy DC, with which the energy section of Sustainable DC is closely aligned. Clean Energy DC is the roadmap for meeting Washington, DC’s climate change goals by increasing clean energy and reducing dirty energy—meaning the District Government will help businesses, residents, and city operations improve energy efficiency and increase their access to renewable energy. Clean energy is energy generated with no pollution or carbon emissions in contrast to dirty fuels (like coal and most oil). Washington, DC already has some significant tools: the DC Sustainable Energy Utility was created to help residents and businesses use less energy and save money, while Property Assessed Clean Energy (PACE) financing and the newly established Green Bank provide innovative financing for energy efficiency and clean energy upgrades.

Sustainable DC 2.0's actions for energy have real benefits for Washington, DC at all levels:

INDIVIDUAL

Actions in Sustainable DC 2.0's Energy section apply to residents where they live and work. These actions will make it easier for people to access energy efficiency upgrades and renewable energy financing for home systems. Sustainable DC 2.0 also aims to end power outages by building resilience into our energy system.

NEIGHBORHOOD

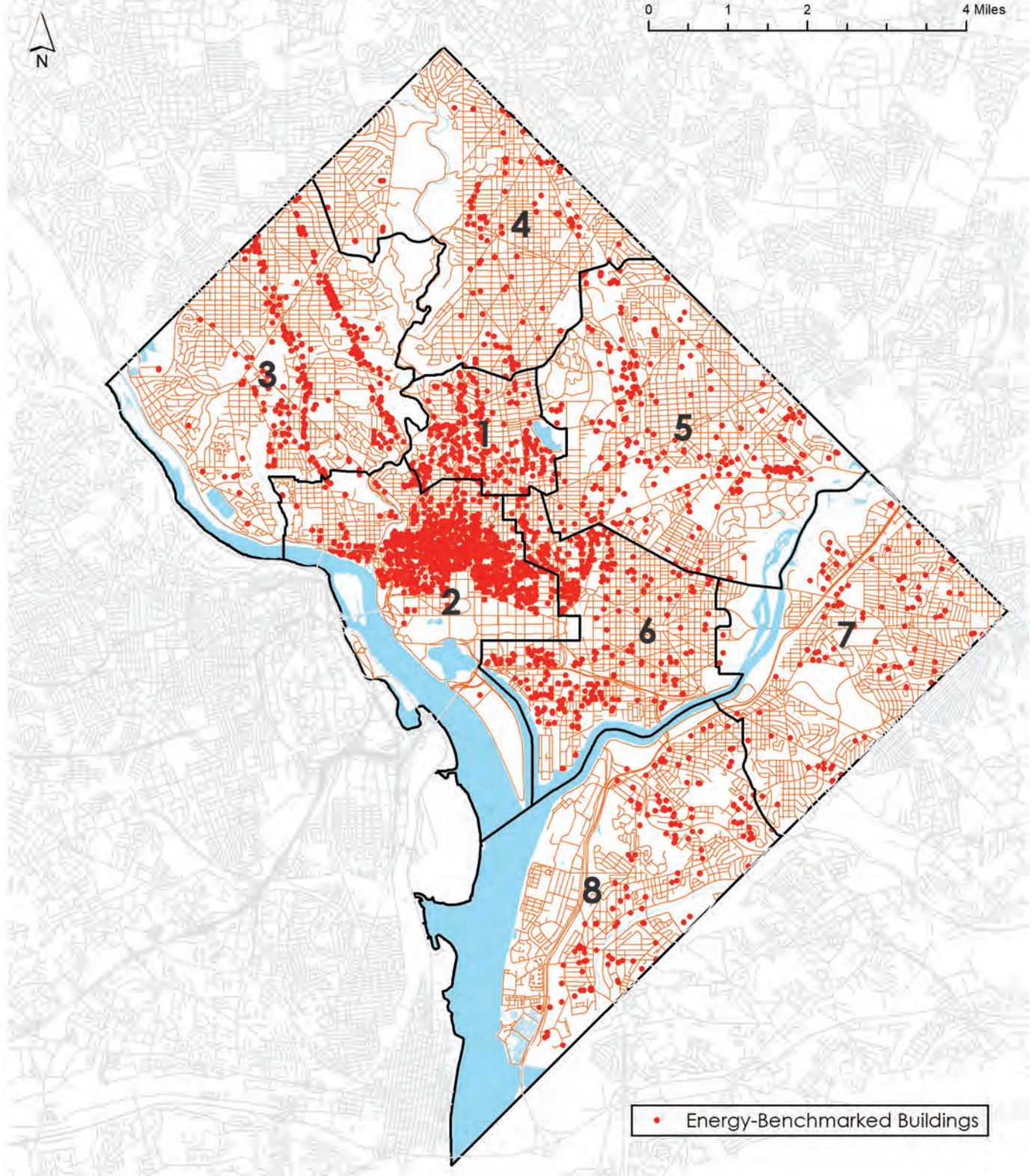
Energy systems that work at the neighborhood level take advantage of a larger scale—entire neighborhoods can band together to install and use solar power, for example. Sustainable DC 2.0 outlines actions to incentivize energy actions at this level.

DISTRICT

Actions in Sustainable DC 2.0 will have an impact on buildings, lighting, and access to renewable power District-wide, and also incentivize improvements to the District's electrical grid. The Mayor's office, as well as numerous government agencies including the Department of Transportation and the Department of General Services, will look to this plan when they set their energy priorities each fiscal year.

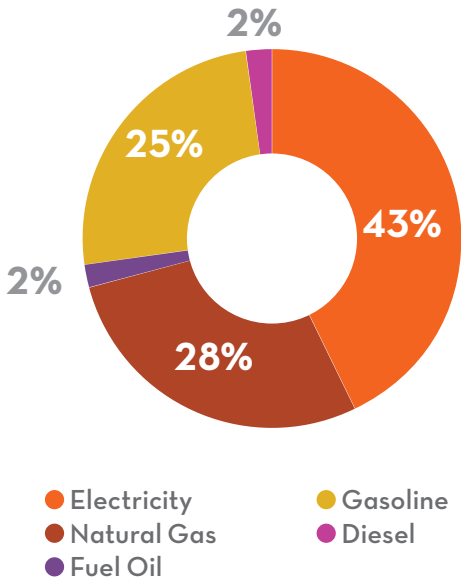
EXISTING BUILDING PERFORMANCE

Benchmarking is defined as tracking a building's energy and water use and using a standard metric to compare the building's performance against past performance and to its peers nationwide.



Data Source: DOEE & DC GIS

Source of Energy by Fuel Type
(2012)^{xxxiv}



An LED light uses

75%

less energy than a regular light bulb.^{xxxv}

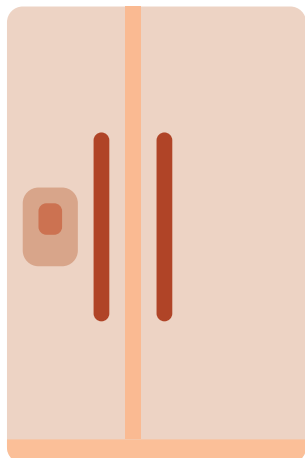


Number of DC households served through Low Income Home Energy Assistance (LIHEAP) Program^{xxxvi}

2016—**22,322**

2017—**20,696**

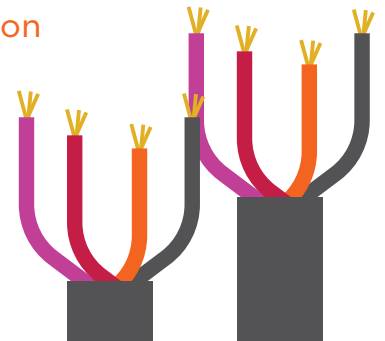
2018—**20,270**



1 kWh is enough energy to power an efficient refrigerator for one day.^{xxxvii}

About **2 to 6%**

of electricity is lost through transmission from its original source.^{xxxviii}





GOAL 1

Improve the efficiency of District-wide energy use to reduce overall consumption.



TARGET 1

By 2032, cut per capita energy use District-wide by 50%.



TARGET 1 BASELINE

85
billion kBtu

EN1.1

Expand regular tracking and disclosure of energy performance.

Buildings consume more than half of all energy in the District through heating, cooling and electricity use.³¹ The first step to managing energy use is to measure it. Energy benchmarking refers to programs that require building owners to track and disclose their energy use. The District Government was one of the first cities in the nation to require the annual tracking and disclosure of energy use for large buildings through its energy benchmarking program. Other cities now require smaller buildings to disclose their energy use at key points such as time of sale. The District will expand its existing program to include additional buildings through a variety of mechanisms and to continue sharing this data through tools such as www.buildsmartdc.com.

TIMEFRAME

Short term

LEAD

DOEE

PARTNER

DGS

EN1.2

Establish a Building Energy Performance Standard for existing large buildings.

A Building Energy Performance Standard (BEPS) would establish regular energy check-ups of buildings and require the owners of poorly performing buildings to improve the energy efficiency of their buildings. The District Government will develop and implement a BEPS, as described in the Clean Energy DC, for existing large buildings. BEPS will substantially reduce GHG emissions since energy consumed by buildings is the leading source of greenhouse gases in the District.

TIMEFRAME

Short term

LEAD

DOEE

PARTNER

DCRA

EN1.3

Replace all street and public lighting with high efficiency fixtures that protect public health, reduce light pollution, and do not harm wildlife.

Adequate public lighting (such as street and traffic lights) is critical to public safety, and the District Government is already replacing streetlights with more efficient light-emitting diode (LED) versions. While LED lights generally use 75 percent less energy and can last more than 25 times longer than incandescent bulbs,³² some forms of LED lighting emits a blue-white light that can disrupt animal and human circadian rhythms.³³ When replacing street and public lighting in the future, the District Government will follow the American Medical Association’s recommendations to use lights with a color temperature no greater than 3,000 Kelvin, as well as ensure that light fixtures direct light downwards where it is needed, rather than into trees and windows where it may disrupt feathered and human residents.

TIMEFRAME	LEAD	PARTNERS
Short term	DDOT	DCPS, DPR, DGS

EN1.4

Fully fund, implement, and regularly update the Clean Energy DC plan, the plan to achieve the District’s greenhouse gas reduction goals.

Clean Energy DC is the District’s plan to reduce GHGs 50 percent below 2006 levels by 2032, by reducing energy consumption and increasing renewable energy within the District. The plan describes in detail 57 actions that will allow the city to meet its overall climate and energy goals. In order to fulfill the goals of Clean Energy DC, the District Government will fully fund, implement, and periodically revisit Clean Energy DC to ensure that periodic targets are being met and the latest data and technology are considered. To accomplish the public building improvement aspects of the plan, District Government will provide adequate funding to the Department of General Services.

TIMEFRAME	LEAD	PARTNERS
Medium term	DOEE	DGS, EOM

EN1.5

By 2020, launch a citywide educational and behavioral campaign to lower citywide energy use and expand awareness of the District’s resources for efficiency and renewable energy.

One of the quickest and most cost-effective ways to lower citywide energy use is for individuals and businesses to lower their energy consumption. However, many residents aren’t aware that there are opportunities and financial incentives offered by the District Government to help them save on their energy costs. The District Government will launch a campaign to help residents and businesses take advantage of these resources, from reminders about ways individuals and businesses can save energy, to home audits and weatherization.

TIMEFRAME	LEAD	PARTNERS
Short term	DOEE	DCHA, EOM

EN1.6

Launch a program to accelerate deep energy retrofits in at least 20% of all buildings.

A deep energy retrofit analyzes an entire building in order to identify and upgrade areas where investments in energy efficiency can have the biggest impact. The process can help building owners save on energy costs over time, but upfront costs make it more difficult for building owners to invest in energy efficiency. The District Government will develop and launch a program providing financial incentives to help all building owners, including residential and commercial, embark on deep energy retrofits that will make buildings less expensive to operate and cut GHGs. The 20 percent of all buildings will be determined by floor area.

TIMEFRAME	LEAD	PARTNERS
Short term	DOEE	DCHA, DGS



GOAL 2

Increase the proportion of energy sourced from both clean and renewable supplies.



TARGET 2

By 2032, increase renewable energy to make up 50% of the District’s energy supply.



TARGET 2 BASELINE

29.96%

EN2.1

Reduce the use of fossil fuels for electricity generation and heating, and eliminate the dirtiest fuels by 2023.

Burning coal, gas, and oil for electricity and heating can negatively impact air quality, and emits the greenhouse gases that cause climate change. Through the Renewable Portfolio Standard (RPS) and other policy tools and incentives, the District Government will collaborate with residents and the private sector to decarbonize their energy supply, including heating systems, and will work to completely eliminate the most polluting fuels—coal and the dirtiest fuel oils—by 2023. Ways to accomplish this action include, but are not limited to, using power purchase agreements (PPAs) to buy electricity with bundled Renewable Energy Credits (RECs) from renewable sources, electrifying heating systems in buildings by using efficient heat pump technologies, using battery storage or low carbon Combined Heat and Power, and using carbon-neutral biomass or biogas.

TIMEFRAME

Medium term

LEAD

DOEE

PARTNER

OPC

EN2.2

Build and support commercial and residential renewable energy projects sufficient to get at least 5 percent of citywide electricity from local generation.

Locally generated electricity from renewable sources has many benefits for the District: it helps reduce greenhouse gas emissions, reduces regional air pollution, diversifies the local energy supply, lowers energy bills, and can even help create jobs in renewable energy installation. The District Government will oversee and support both commercial and residential renewable energy projects, including the option to share a solar project among several neighbors (“community solar”). The District Government will also use financial incentives, research and education, and maximize existing programs to help install solar panels and solar thermal systems throughout the District. For example, the program Solar for All provides solar energy to households of low income, helping to reduce their energy bills by 50 percent. Additionally, the District’s Renewable Portfolio Standard requires that 5 percent of all the renewable energy supplied to the District by 2032 come from locally generated solar.

TIMEFRAME

Long term

LEAD

DOEE

PARTNER

DC Water

EN2.3

Provide residents with renewable energy by default, sourced from regional wind and solar farms by 2023.

Right now in the District, all residents have the option to purchase electricity generated from renewable energy, as opposed to electricity generated by fossil fuels. The increase in demand for renewable electricity has helped propel growth in the supply of renewable electricity, and the region overall is moving away from energy generated from dirty fossil fuels, and towards energy that doesn't create harmful greenhouse gases or air pollution. Although residents should have the option to choose how their energy is generated, switching the default to clean energy makes it much easier for residents to get their energy from renewable sources.

TIMEFRAME

Medium term

LEAD

DOEE

EN2.4

Expand the use of renewable sources of heating and cooling.

When we typically think about the renewable energy we use in our daily lives, we're thinking about electricity that was generated by wind or solar and distributed to our homes. But renewable thermal energy such as ground-source and air-source heat pumps, heat from wastewater, and biogas (gas created by the decomposition of organic material), can also be used to heat and cool spaces directly, replacing fossil fuels such as natural gas. The District Government will support and incentivize the use of renewable energy in heating and cooling technologies to make use of these underused renewable resources right here in the District.

TIMEFRAME

Ongoing

LEAD

DOEE

PARTNERS

DC Water, DGS, OP





GOAL 3

Modernize energy infrastructure for improved efficiency and resilience.



TARGET 3

By 2032, 100% of residents live within walking facility offering clean back up power to serve critical needs during power outages.



TARGET 3 BASELINE

0%

EN3.1

Use smart meters and smart grid infrastructure to collect data on electricity use.

Smart meters and smart grid infrastructure help individuals and organizations like the DC Sustainable Energy Utility (DCSEU) understand where improvements to buildings could be most effective, because these “smart” systems are able to provide information about when and how a building uses energy. The District Government will collect and use the most accurate and detailed energy data, and make it possible for residents and businesses to access and control their own data. This way residents and government can take advantage of smart meters and other smart infrastructure that already exist throughout the District and make the most effective improvements possible to our buildings, reducing costs by better managing our energy use.

TIMEFRAME

Ongoing

LEAD

DOEE

PARTNERS

DDOT, DGS,
OCTO, OP, OPC

EN3.2

Improve the reliability and resilience of the transmission and distribution of electricity, using smart grid technologies and distributed energy resources.

The District imports nearly all of its electricity, meaning that heat waves, severe weather, or other malfunctions in the region can cause power outages. To limit the impact of area-wide power outages, the District Government will improve the reliability and resilience of electricity delivery (including transmission and distribution) by developing and supporting distributed generation, smart grid technologies, and energy storage. Distributed generation technologies like solar power generate electricity close to where it will be used. Smart grid technologies help reduce the number of residents impacted by outages as well as helping restore power quickly after outages. Energy storage, like batteries, provides back-up sources of power, which help ensure that District residents and businesses can bounce back quickly after power outages.

TIMEFRAME

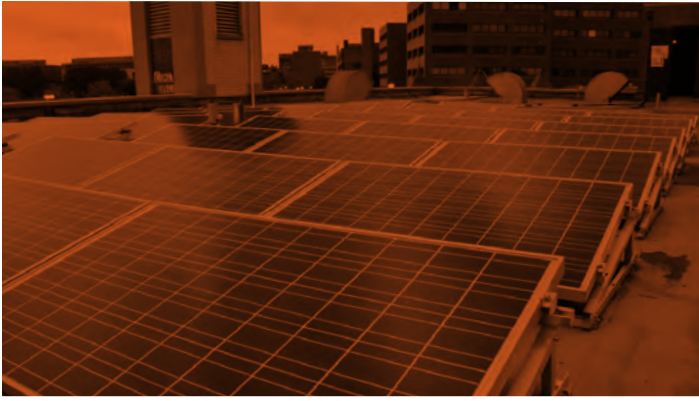
Medium term

LEAD

DOEE

PARTNERS

DDOT, OCTO, OP, OPC



EN3.3

Remove all barriers to modernizing electricity infrastructure to enable the deployment of neighborhood-scale energy systems and distributed energy resources.

Creating a modern energy system that allows for neighborhood-scale systems and recovers quickly after disruptions will require addressing regulatory, political, and physical barriers. Neighborhood-scale systems combine renewable energy sources, energy storage, and the management of electricity demand, all at a local scale that considers the specific needs and energy consumption patterns of the community. The District Government will remove barriers to electricity infrastructure modernization, allowing neighborhoods to cut costs, help the environment, and recover quickly or prevent power outages completely.

TIMEFRAME
Medium term

LEAD
DOEE

PARTNERS
DC Water, DDOT,
OCTO, OP, OPC

EN3.4

By 2020, complete and begin implementing a neighborhood-scale energy system development plan to target high load growth areas and at risk communities.

High electricity demand increases the likelihood of a power outage as residents and businesses draw large amounts of power at the same time (like during heat waves when everyone runs their air conditioning). To avoid this scenario, the District Government will launch a project to identify and improve the energy resilience of high load growth areas, paying particular attention to areas where residents may be more sensitive to outages. To improve energy resilience, the District Government will explore the development of neighborhood-scale energy systems (using technologies like microgrids) tailored for the specific needs of the community.

TIMEFRAME
Short term

LEAD
DOEE

PARTNERS
DC Water, OP, OPC

FOOD






FOOD

How the District grows, sells, eats, and disposes of food has far-reaching effects on our communities, health, and sustainability. Despite the strides Washington has made in the last decade towards increasing healthy food access in underserved communities, more than one in ten of the District's residents still have difficulty accessing healthy, affordable food. The District has expanded the number of urban farms and community gardens that provide community spaces and fresh food to residents—but still, disparities in food access and diet-related chronic diseases persist.

Currently District Government leaders and nonprofits are focused on addressing the inequitable supply of fresh, healthy food in the District. While some wards have one grocery store for approximately every 10,000 residents,³⁴ Wards 7 and 8 have one grocery store for every 60,000 residents. The DC Food Policy Director and Food Policy Council, both created by legislation in 2014, have named expanding fresh food access in Wards 7 and 8 as their top policy priority. The District Government is also providing tax credits and free property leases to incentivize urban farming. DC Health provides significant grant funding to support federal and local programs that increase healthy food access, especially for pregnant women, infants, children and seniors. These programs include WIC, Produce Plus, Joyful Markets, and Healthy Corner Stores. And, DCPS and charter school students are learning about the importance of healthy eating through hands-on nutrition and cooking education programs and 134 active school gardens.

We know Washington, DC can further advance policies and programs that improve the District's food system and strengthen healthy food access for all residents. These Sustainable DC 2.0 food goals leverage the District's food policy infrastructure and momentum to catalyze innovative approaches to ensuring a healthier, more equitable, and sustainable food system.



Sustainable DC 2.0's actions on food have real benefits for Washington, DC at all levels:

INDIVIDUAL

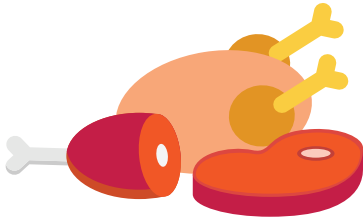
Making healthy, fresh food available and affordable for all District residents can help residents improve their health and well-being. Research shows that a nutritious diet can alleviate risk for chronic diseases like diabetes,³⁵ help children learn and behave better in school,³⁶ and improve people's quality of life.³⁷

NEIGHBORHOOD

A thriving community-driven food system contributes to increased community connectivity and ownership. Community gardens and farmers markets offer public spaces where neighbors can gather, share growing tips and recipes, and leave with healthy food for themselves and their families. Grocery stores and locally-owned restaurants offer employment for residents as well as fresh food and the opportunity to sample the ethnic foods that represent our diverse population.

DISTRICT

Providing healthy meals to kids in school, ensuring that every community has access to healthy food, and creating fair, sustainable jobs in the food sector all provide pathways to the middle class for District residents. Decreasing Washington, DC's food waste also makes more healthy food available for consumption and decreases the District's carbon footprint. A healthy city is a resilient city, and a thriving food system is necessary to meet the District's goals.



11.2% of DC households are food insecure meaning they lack consistent access throughout the year to enough food they need.^{xi}



134 District schools had active school gardens.^{xli}



The District has:

40
full service
grocery stores

71
healthy
corner stores

62
farmers markets

18
urban farms

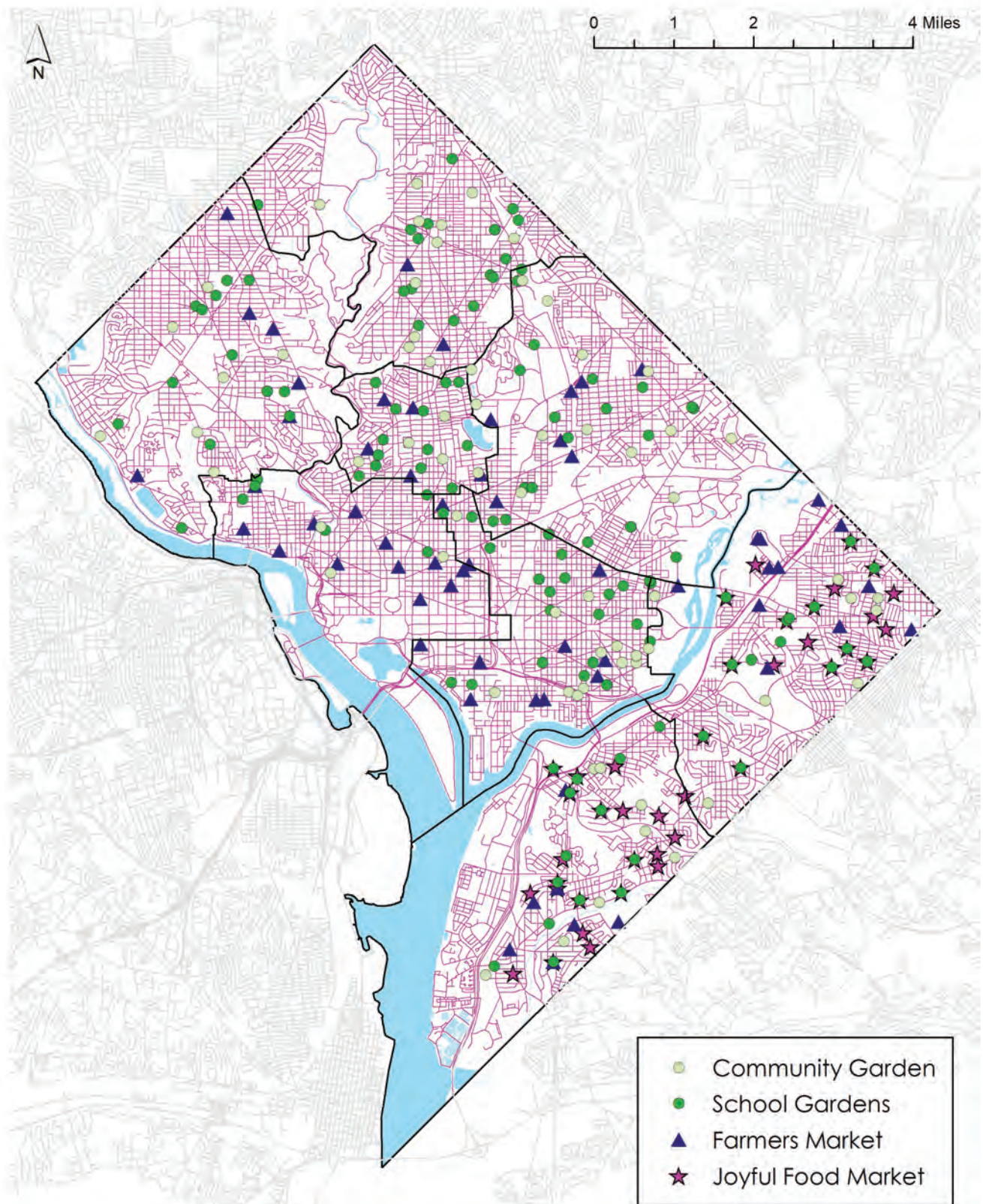
73
active community
gardens^{xlii}



135 tons of food waste was diverted through community composting in FY 2016.^{xliii}



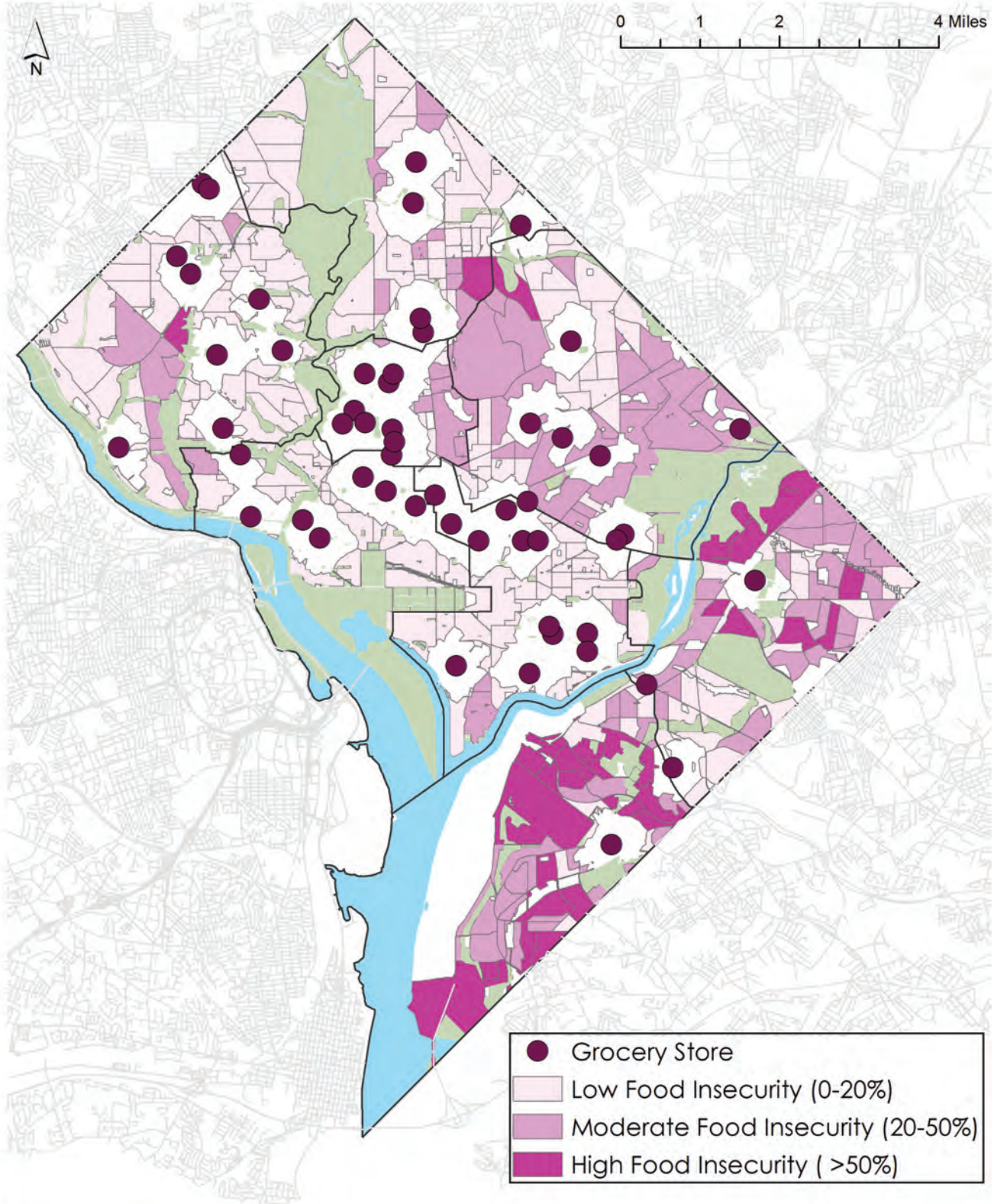
COMMUNITY FOOD ASSETS



Data Source: DC Food Policy Council & DC GIS

FOOD INSECURITY

Food security is defined as having consistent access to affordable, nutritious food throughout the year. Higher levels of food insecurity (darker shades) indicate areas with lower income. White areas surrounding grocery stores indicate walkable access to grocery stores so are considered food secure in this map.





GOAL 1

Expand agricultural uses and production within the District.



TARGET 1

By 2032, put 20 additional acres, including public right of way and rooftops, under cultivation for growing food.

FD1.1

Implement the “Urban Farming and Food Security Act” and expedite the process to make public and private lands available for a variety of urban agriculture uses.

The Department of General Services (DGS) coordinates with other agencies to implement the “Urban Farming and Food Security Act” through its Urban Farm Land Lease Program to lease available public land to District residents to develop urban farms. Private property owners that lease land and rooftops to urban farmers can also now receive significant property tax abatement. Additionally, the Department of Parks and Recreation (DPR) should continue to expand the number of community gardens in the District, as the demand now currently outstrips the supply. Many residents wait for years to get off the waitlist for their neighborhood garden.

TIMEFRAME

Short term

LEAD

DGS,
DPR

PARTNERS

DCFPC, DC Health, DCRA,
DDOT, DOEE, EOM OP

FD1.2

Develop food-producing landscaping on five acres of District public spaces distributed throughout all eight wards.

Developing orchards and other food-producing landscaping contributes to both the tree canopy and food production in the District. While 1.7 acres of District public space currently contain orchards and other food producing landscapes, many opportunities such as public right of way, parks, recreation centers, and schools remain. It will be important to work with the community around potential sites to determine the types of urban agriculture and to ensure that they are maintained.

TIMEFRAME

Medium term

LEAD

DGS

PARTNERS

DCFPC, DDOT,
DPR, DOEE, OP

FD1.3

Develop and support school gardens and garden-based food system education to engage DCPS and charter school students.

The benefits of school gardens are well documented, as they provide educational opportunities for children to better connect with their food system, and learn about environmental sustainability, nutrition, and health. The Office of the State Superintendent for Education (OSSE), DC Public Schools (DCPS), and the Department of Energy and the Environment (DOEE) will continue to develop school gardens and work with community partners to provide the resources for these gardens to thrive and for children to receive at least ten hours of garden-based learning per year at DCPS and public charters schools. While not all school facilities are equipped to have a school garden, the District Government will work to connect these schools with neighboring community or school gardens to provide access for students to garden-based learning.

TIMEFRAME Short term	LEAD OSSE	PARTNERS DCPS, DGS, DOEE
--------------------------------	---------------------	------------------------------------





GOAL 2

Ensure that all residents have access to affordable, quality, and nutritious food.



TARGET 2

By 2032, ensure that 75% of low-income residents live within a quarter mile of a quality full-service grocery store, with a focus on underserved communities.



TARGET 2 BASELINE

82%
(2017)

FD2.1

Identify and implement effective, innovative policies to recruit quality, full-service grocery stores to underserved areas.

Despite existing economic incentives intended for the development of grocery stores in underserved areas in the District, Wards 7 and 8 continue to have an inadequate number of grocery stores. While other wards have one grocery store for every 10,000 residents, Wards 7 and 8 have one grocery store for every 60,000 residents.³⁸ The DC Food Policy Council in collaboration with the District's Grocery Ambassador will examine the existing incentives provided thus far for grocery store development, determine why they have been ineffective, and then identify and implement more effective policies to attract full-service grocery stores to these areas.

TIMEFRAME

Medium term

LEAD

DCFPC, DMPED, OP

PARTNER

DSLBD

FD2.2

Provide financial support and technical assistance to small retailers and mobile food vendors to expand healthy, culturally appropriate food options for neighborhoods with limited access to fresh and healthy food.

In partnership with the Department of Small and Local Business Development (DSLBD) and local nonprofits, the District Government will launch a program providing financial and technical support for small retailers and mobile food vendors to offer healthier, culturally appropriate food options. Examples of mobile food vendors include healthy food trucks, produce stands, and mobile farmers markets. These innovative models are not substitutes for full-service grocery stores, but they can provide supplemental and diverse healthy food options.

TIMEFRAME

Short term

LEAD

DSLBD

PARTNER

DC Health

FD2.3

Expand and promote food assistance programs at grocery stores, farmers markets, and corner stores citywide.

In addition to supporting increased enrollment and participation in government food assistance programs and community food benefits in the District, the District Government will facilitate the expansion and use of those benefits in diverse retail settings. Benefits such as the Supplemental Nutrition Assistance Program (SNAP), Women, Infants, and Children Program (WIC), Produce Plus, and Produce Rx are currently accepted at a limited number of retail outlets. The District Government will assist in increasing acceptance of SNAP and WIC at all stores that offer the required variety of healthy food and will facilitate the use of Produce Plus and Produce Rx in grocery stores and corner stores in addition to farmers markets.

TIMEFRAME

Medium term

LEAD

DC Health

PARTNERS

DHS, DSLBD

FD2.4

Support evidence-based nutrition and cooking education efforts across all populations to help residents make healthier choices.

Even with increased access to healthy food, consumers need experiential learning, nutrition education, and tools to make healthy choices and improve long-term health outcomes for diet-related chronic conditions. Nutrition education and cooking courses can give residents some of the tools they need to make lifestyle changes and improve their health and the health of their families. The District Government will provide resources and support to nutrition and cooking courses that have been tested to improve healthy eating and cooking, particularly for seniors and other populations at increased risk of diet-related chronic diseases.

TIMEFRAME

Short term

LEAD

DC Health

PARTNERS

DCFPC, DSLBD, OP

FD2.5

Implement the Nutrition Education Plan to make nutrition education as comprehensive as possible and to nurture students' healthy eating habits.

The Nutrition Education Plan is a guide that will be used by OSSE when developing nutrition education-related programming for and providing technical assistance in schools. Community Based Organizations (CBOs), District agencies, schools, universities, and others delivering nutrition education to District students will be important partners participating in actions that support the plan's goals and objectives.

TIMEFRAME

Medium term

LEAD

OSSE

PARTNERS

DCFPC, DCPS, OP, UDC

FD2.6

Improve the quality of institutional food grown or purchased with District local funds, including in DCPS and public charter schools, childcare centers, jails, homeless shelters, and other institutional settings.

Washington, DC spends significant dollars to feed many District residents in institutional settings. Although schools and childcare centers have standards related to nutrition and sourcing, other institutional settings lack consistent standards. The District Government will analyze all of its institutional purchasing, and will develop and implement a strategy to make food procured for District institutions more nutritious and sustainable while supporting the local economy, businesses that have fair labor practices, and animal welfare.

TIMEFRAME

Medium term

LEAD

DCFPC

PARTNERS

DBH, DCPS, DHS, DOC, OCP, OSSE



GOAL 3

Develop and support the food industry as a vibrant and equitable sector of the local economy.



TARGET 3

By 2032, expand the food sector of the economy by 2,000 jobs that pay a living wage, offer safe working conditions, promote sustainability, and increase healthy food access for residents.



TARGET 3 BASELINE

71,300
people employed (2016)

FD3.1

Complete a comprehensive study of the District’s food system and recommend policies to improve the current system.

In accordance with the “DC Food Policy Council and Director Establishment Act of 2014,” the DC Food Policy Council will publish an annual analysis of Washington, DC’s food system. The report will include an assessment of the food-related policies, programs, and emerging trends within the District and provide recommendations to address opportunities for equitable and inclusive growth of the food economy, which contributes \$5.47 billion to the District’s economy.

TIMEFRAME

Ongoing

LEAD

DCFPC, OP

FD3.2

Collaborate regionally on the creation of a local food hub and other facilities for aggregation, processing, and distribution of local food products.

Due to rapid development in the District, historically robust food distribution hubs like Union Market have been displaced or repurposed, leaving Washington, DC with few wholesale distributors of regional food. Along with existing partners such as the Metropolitan Washington Council of Governments (MWCOG) and regional stakeholders, the District Government will support the creation of a local food hub and associated food production and manufacturing infrastructure within 100 miles of the District that will expand the accessibility of local grown products directly to food retailers and consumers. These projects will also catalyze the procurement of local food through the coordination and aggregation of smaller farmers, processors, and distributors.

TIMEFRAME

Medium term

LEAD

DCFPC, DMPED

PARTNER

OP

FD3.3

Develop a citywide workforce development strategy focused on expanding food sector jobs that promote public health and fair working conditions.

Currently, there is simultaneously unmet demand for skilled workers in some parts of the local food sector and significant unemployment in the District. Increasing the skilled workforce in the food industry can also create opportunities to improve healthy food access by increasing the supply and distribution of food in low food access communities. A workforce development strategy focused on the food sector can also help workers know their rights and demand fair working conditions. The District Government will analyze existing workforce development initiatives related to the food sector and develop a citywide workforce development strategy focused on expanding food sector jobs. The project will specifically focus on strategies to also improve the District's overall food system, including promoting public health, sustainability, and fair working conditions.

TIMEFRAME
Medium term

LEAD
DCFPC, DOES,
OP, WIC

PARTNERS
DOES, DMPED,
DSLBD



GOAL 4

Prevent, reduce, and recover food waste.



TARGET 4

By 2032, reduce food waste by 60%.



FD4.1

Conduct a food waste assessment to identify the types and quantities of food that are thrown away in the District.

Understanding the makeup of the food that goes to waste is the first step in better addressing the amount of food waste. The District Government will examine food waste in the Washington’s households and businesses, building upon initial research used for the 2017 District-wide compost feasibility study to pinpoint baseline levels of different types of food thrown away. This assessment will be used to develop recommendations on how to prevent and reduce food waste, and how to divert food waste from the solid waste stream.

TIMEFRAME Medium term	LEAD DPW	PARTNERS DCFPC, OP
---------------------------------	--------------------	------------------------------

FD4.2

Educate businesses and institutions on how to prevent food waste, recover unused food, and understand liability protections.

The District Government will work with nonprofit and private partners to inform them of existing District and federal policies protecting food donation. While these policies have existed for several decades, information gaps remain regarding liability protections and best practices. The District Government will also publish guidance for businesses on how to reduce excess food in their business practices. The District Government will also change any regulations on date labels that arbitrarily limit the sale or donation of food after its quality-related date has passed and health inspectors will provide education on current food donation best practices.

TIMEFRAME Medium term	LEAD DCFPC, DPW, DC Health	PARTNERS DPR, DOEE, OP, ORM
---------------------------------	---	--

FD4.3

Incentivize food donations by businesses, schools, and institutions through policy changes.

The District Government will encourage food donations from various institutions by providing incentives such as local tax credits and expanded liability protections for food donors. Incentives should be targeted to businesses that donate nutritious, fresh foods that are often the most difficult to donate but the most needed by the recipient organizations. The District Government will help coordinate opportunities for enhanced connections among institutions providing and institutions receiving the food donations, such as the EPA Food Recovery Challenge.

TIMEFRAME Medium term	LEAD DME, OTR	PARTNERS DCFPC, DCPS, DPW, DSLBD, OCTO OP
---------------------------------	----------------------------	--

FD4.4

Educate residents and food related businesses on proper buying, storing, and disposing of food to minimize waste.

Properly storing food can preserve the freshness and safety of food, so residents can save on their grocery bills while also preventing good food from being thrown away or composted. In partnership with community groups such as the DC Food Recovery Working Group, the District Government will create awareness of best practices for minimizing food waste in households and food-related businesses. Potential activities could include demonstrations at community locations such as grocery stores and farmers markets, and public awareness campaigns. Further, the District Government will work with community partners such as nutrition education providers to educate consumers about how to better read and use “sell by” and “use by” labels.

TIMEFRAME Medium term	LEAD DCFPC, DPW	PARTNERS DCPS, DC Health, DPR, DPW, DSLBD, OP
---------------------------------	------------------------------	--

HEALTH





HEALTH

One of Washington, DC's most important resources is the health of its residents, and DC is consistently ranked at the top of the country's healthiest and fittest cities. Yet significant disparities in health exist along the lines of race, income, and geography. For example, residents in ward 8 are four times as likely to have diabetes as compared to residents in other wards in the city, and black residents are almost 2.5 times more likely to have heart disease than white residents. Depending on which Ward you live in, your life expectancy can vary by up to ten years.³⁹ Further, many District residents suffer from the negative effects of air pollution, lack safe places to exercise, and are disproportionately at risk for chronic diseases such as diabetes and heart disease. Climate impacts, like asthma and heat-related injuries, compound these issues and often fall disproportionately and unfairly on low-income populations.

Sustaining a healthy way of life means thinking beyond hospitals and even individual behaviors as the main sources of our community's well-being. Good health for ourselves and our families starts in our homes, schools, workplaces, neighborhoods, and communities. Sustainable DC 2.0 builds upon the District's previous planning work, including DC Healthy People 2020, the Comprehensive Plan, the Health Systems Plan, Age Friendly DC, and the Health Equity Report, all of which are clear about the connection between health and having accessible, safe places to work, play, and move. To effectively address health disparities among populations, we must focus on factors like education, employment, income, housing, transportation, the food environment, preventative medical care, the outdoor environment, and community safety. Differences in factors across the city, including racial and economic segregation result in dramatic differences in life expectancy. By pinpointing actions to address these drivers, we have an opportunity to alleviate differences in health outcomes and achieve greater health equity for all residents.

Sustainable DC 2.0's actions on health have real benefits for Washington, DC at all levels:

INDIVIDUAL

Actions in this section focus on making the healthy choice the easy choice for all District residents, regardless of where they live, learn, work, or play. While recognizing that the choices we make are shaped by the choices we have, individuals have an important part to play through daily choices that are health promoting for themselves, as well as the wider community, such as how to get to work and whether to spend time outdoors.

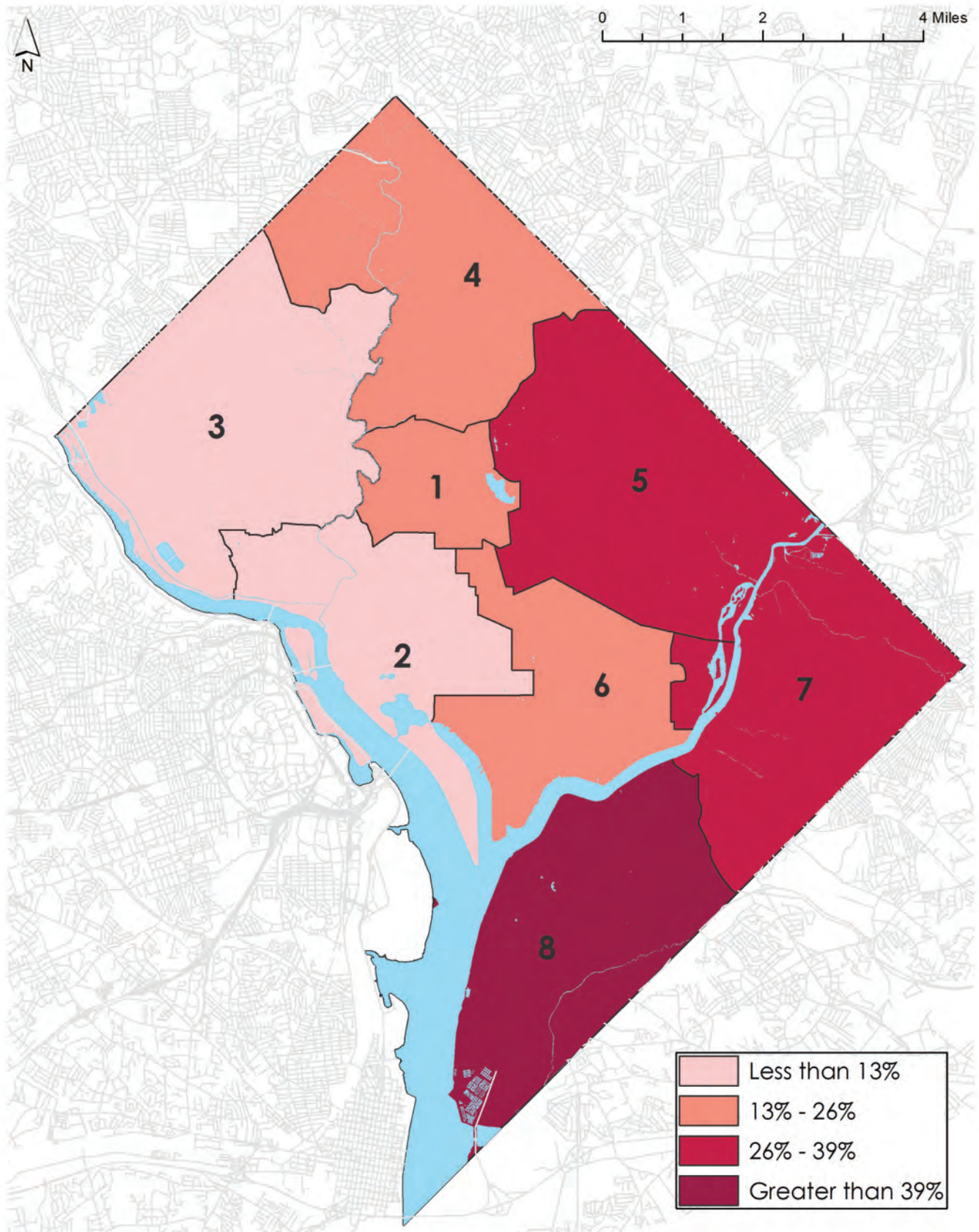
NEIGHBORHOOD

Growing an inclusive city means creating access to opportunity in all neighborhoods, including safe and welcoming places for outdoor recreation, as well as leveraging shared social responsibilities to address inequities.

DISTRICT

All residents should have the opportunity to make healthy and informed choices—including the ability to live active lifestyles—in neighborhoods where preventable health risks are eliminated.

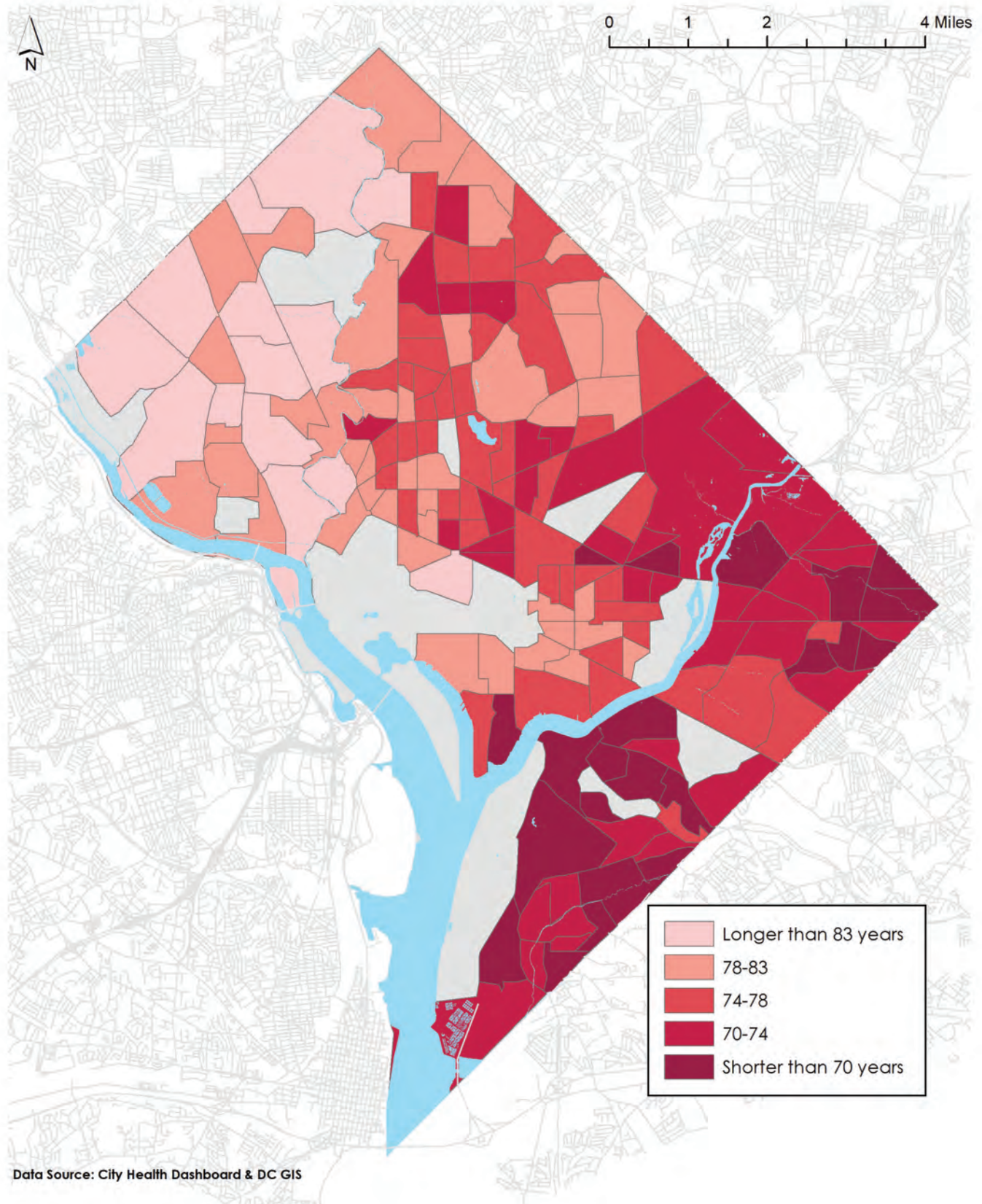
OBESITY PREVALENCE BY WARD



Data Source: DOH & DC GIS

LIFE EXPECTANCY AT BIRTH (AVERAGE)

Blank values represent data that are missing in data sources or are suppressed due to low numbers.



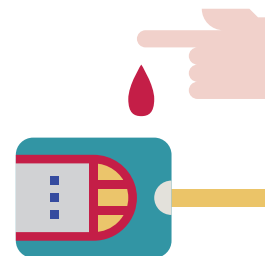
16% of children aged

10 to 17 in DC are considered obese.^{xlv}



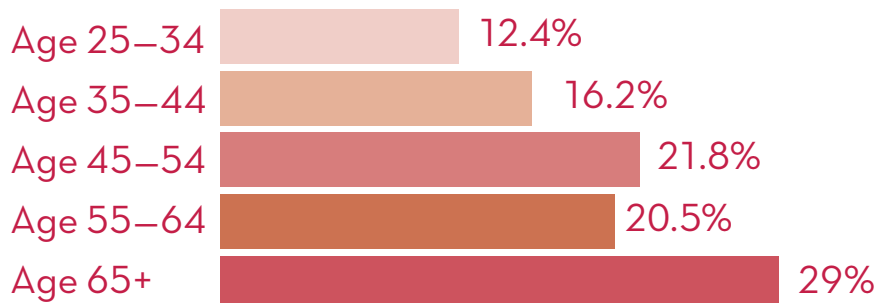
People with diabetes have medical expenses

2.3 times higher than people without diabetes. In DC this



translates to **\$367.5** million in excess health care expenditures annually.^{xlvi}

District Adults Who Did Not Exercise in the Past 30 Days by Age^{xlvii}



14.0%

of black adults in DC suffer from Asthma while only

5.9% of white adults do.^{xlviii}



97.7%

of DC residents have a park within a 10-minute walk.^{xlix}



37% of DC's homes have high potential for elevated lead risk.^l





GOAL 1

Provide residents with resources to achieve healthy, active lifestyles, regardless of income, ability, employment, or neighborhood.

HE1.1

Collect data at parks and recreation centers, particularly in areas of low-use and low income, to improve planning and programming decisions.

Improved data collection will allow the District Government and its partners to plan for a healthier and more active community. More robust data will help improve facilities usage and participation measurement, master planning, capital investment decisions, and programming decisions.

TIMEFRAME

Short term

LEAD

DPR

PARTNERS

DC Health, DGS, OCTO, OP

HE1.2

Prioritize community-driven strategies to support physical activity in unexpected but everyday spaces.

Childhood play is essential to physical, cognitive, creative, social, and emotional development. However, many children face barriers to play, such as a lack of safe spaces—either perceived or actual. The District Government and its partners will provide additional opportunities for play in everyday locations where kids and families already spend time, including bus stops, in grocery stores, or on sidewalks.

TIMEFRAME

Medium term

LEAD

DPR

PARTNERS

CAH, DDOT, OP

HE1.3

Design parks, open spaces, and recreational facilities to reflect the resident preferences and culture of the local population, and to accommodate a range of age groups and abilities.

The District Government will engage local communities through community partnerships and non-governmental organizations in the planning and design process to match park amenities to resident preferences and culture. Spaces will be designed with universal design principles; all people who use a public space will feel welcome, respected, safe, and accommodated, regardless of who they are, where they come from, their abilities, their age, or how they use the space.

TIMEFRAME

Long term

LEAD

DPR

PARTNERS

DBH, DC Health, DGS, OP



TARGET 1

By 2032, 65% of residents get at least 150 minutes per week of physical activity.



TARGET 1 BASELINE

57.7%
(2013)



GOAL 2

Provide high quality, safe, and sustainable places to be healthy and active.



TARGET 2

By 2032, reduce disparities in the quality of places contributing to disparate health outcomes by 15%.

HE2.1

Complete a new study on the intersection between the built environment and health to understand the social, environmental, and economic barriers to healthy outcomes.

Providing opportunities to engage in healthy lifestyles is only the first step towards ensuring a healthier and more active community. By first recognizing the barriers that prevent people from making healthy decisions such as environmental issues, social or cultural constraints, and/or economic factors such as affordable housing, the District Government will have a better understanding of how to encourage healthier choices and improve outcomes. The baseline information (such as form, density, connectivity, proximity, recreational facilities, pedestrian and bike amenities, traffic safety, aesthetics, personal safety, fresh food access, urban heat island, open space access) obtained from this study will allow the District Government to eliminate discrepancies in the opportunities for health in the built environment.

TIMEFRAME

Short term

LEAD

DC Health,
OP

PARTNERS

DBH, DDOT, DGS,
DOEE, DPR

HE2.2

Eliminate the human health impacts of contaminated sites in Washington, DC and identify areas where new authority is required.

The ability to reduce the health risks created by asthma and exposure to lead and other toxic substances is linked to curbing local and regional pollution emissions, remediating contaminated soils, and to making sure homes are free from mold, allergens, and other indoor hazards. The District Government will evaluate potential new policies and mechanisms for addressing these challenges.

TIMEFRAME

Long term

LEAD

DOEE

PARTNERS

DC Health,
DMPED, EOM

HE2.3

Improve public safety through the development and implementation of resident-driven design, programming, and maintenance of streetscapes, parks, and other public spaces.

Spaces designed to be defensive and uncomfortable to certain groups often become unwelcoming to everyone. The District Government and its partners will engage stakeholders to shift the emphasis from defensive public space design approaches that limit interaction, which might include elements like fencing, walls, or uncomfortable benches, to welcoming design approaches that increase opportunities for social activity.

TIMEFRAME

Medium term

LEAD

DDOT, DPR, OP

PARTNERS

DGS, MPD

HE2.4

Audit and eliminate environmental health threats (mold, lead, and carbon monoxide) in 100% of Washington, DC's public housing.

The Healthy Homes Program led by the District Department of Energy and Environment (DOEE) targets households with children suffering from severe asthma or with a blood lead concentration of concern as well as older properties in poor condition where a young child or pregnant woman is present. The District Government's Lead Safe Washington program provides funds from the Department of Housing and Community Development (DHCD) to identify and reduce lead-based paint hazards in low income homes. The District Government will work with the DC Housing Authority to reduce these threats, as well as additional contaminants, including lead in drinking water, in all District public housing.

TIMEFRAME

Long term

LEAD

DCHA

PARTNERS

DHCD, DOEE

HE2.5

Develop an interagency heat management strategy to minimize the injury rate associated with extreme cold and heat temperature days.

Exposure to temperatures much hotter or colder than those to which the population is accustomed can make residents more vulnerable to illnesses and death. The District Government will work to ensure that residents can prepare for these events by more broadly communicating extreme heat and cold response plans that clearly define specific roles and responsibilities of government and nongovernmental organizations before and during these events. Plans should identify local populations at high risk for extreme temperature related illness and death and determine the strategies that will be used to support such individuals during emergencies, particularly in disinvested communities. Further, the District Government and its partners should explore strategies, including the use of technology, to help build communities' adaptive capacity, before, during, and after extreme temperature days.

TIMEFRAME

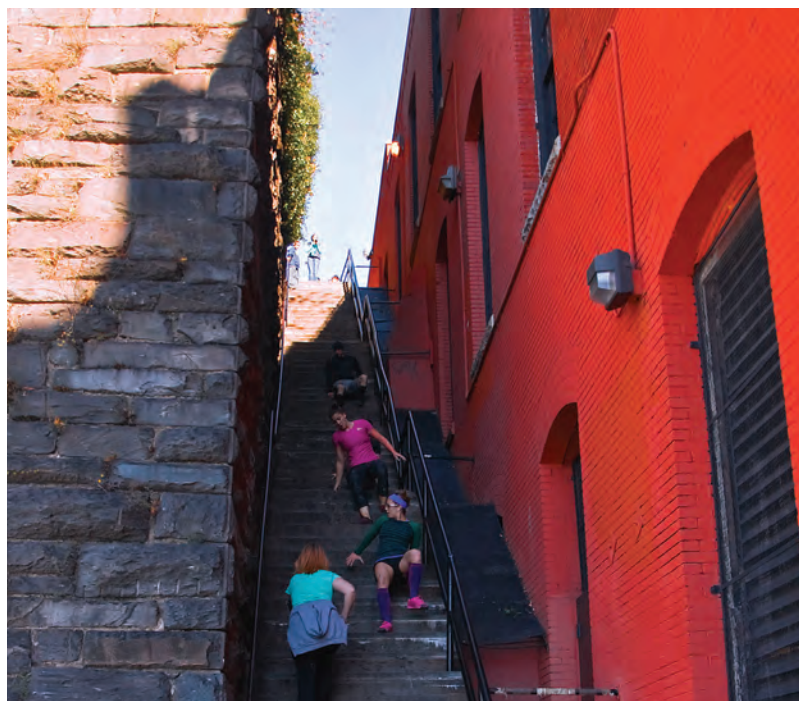
Short term

LEAD

DOEE,
HSEMA

PARTNERS

DBH, DDOT, DGS,
DC Health, DHS,
DPR, DPW, DC Water,
FEMS, OP, OUC





GOAL 3

Improve population health by systematically addressing the link between community health and place, including where we are born, live, learn, work, play, worship, and age.

HE3.1

Evaluate Health Impact Assessments as a tool for promoting health through new policies, practices, developments, and renovations.

Health Impact Assessments (HIAs) are a useful tool to measure the potential impacts of a change, including the built environment, on the population's health. The District Government will evaluate whether HIAs are an appropriate tool to help the decision makers, practitioners, and city's residents make choices that improve public health.

TIMEFRAME

Medium term

LEAD

DC Health, OP

PARTNERS

DMPED, DOEE



TARGET 3

By 2032, reduce racial disparities in life expectancy by 50%.

HE3.2

Study healthy community design principles for inclusion in all new affordable housing projects and major retrofits.

Healthy by Design programs provide guidance on the planning and design of communities that make it easier for people to live well. Healthy community design links traditional concepts of planning (such as land use, transportation, community facilities, parks, and open space) with health priorities (such as physical activity, public safety, access to parks and green spaces, healthy food access, psychological health, air and water qualities, and social equity issues).

TIMEFRAME

Short term

LEAD

DHCD

PARTNERS

DC Health, DDOT, DOEE, DPR, OP



TARGET 3 BASELINE

11.6
years

HE3.3

Launch a comprehensive multi-level health literacy campaign across the District.

Health literacy is the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions. The District and its partners will work to ensure that health information and services (health insurance literacy, health systems literacy, and health behaviors literacy) can be understood and used by all residents as they are accessing the right care at the right time in the right place.

TIMEFRAME

Short term

LEAD

DC Health

PARTNER

DBH

HE3.4

Increase public awareness campaigns concerning how to prevent bites and control diseases spread by mosquitoes, ticks, and fleas in all communities.

Vector-borne diseases (VBDs), such as Lyme disease and Zika, remain major threats to human health and well-being. Rising global temperatures can lengthen the season and increase the geographic range of disease-carrying insects. The District Government will continue to increase efforts to raise public awareness and encourage prevention of VBDs.

TIMEFRAME

Ongoing

LEAD

DC Health, DOEE



NATURE






NATURE

The District's population is rapidly growing. With an average increase in the District's population of 800 to 1,000 per month over the past five years,⁴¹ we must balance population growth and development with the conservation and management of natural resources. Washington, DC includes over 6,700 acres of National Park land and 900 additional acres of the District Government-owned parks.⁴² Since so much of DC's parkland is federally protected, the District Government works closely with the National Park Service and other federal landowners. The District is also home to two tidal rivers, the Potomac and the Anacostia. These waterways provide valuable habitat for wildlife, including nesting bald eagles and newly restored populations of American shad (DC's official state fish). Beyond the threats of urban development, extreme heat and weather events caused by climate change are also impacting the District's natural environment. Restoring, expanding, and protecting natural habitats in the District improves our air and water quality, helps manage stormwater, plays a critical role in safeguarding our biodiversity, and protects the city against the urban heat island effect, floods, and other impacts of climate change.

Despite being a highly urban area, the Trust for Public Land recognized the District as having the third highest-ranking park system in the country.⁴³ The District Government is committed to protecting our natural areas while also providing all residents convenient access to nature and green places. In 2016, Mayor Bowser signed important legislation, the "Fisheries and Wildlife Omnibus Amendment Act of 2016," to help protect critical wildlife habitats and better manage invasive species, as well as the "Tree Canopy Protection Amendment Act" that discourages the removal of healthy, mature trees. Within the District Government, DOEE is responsible for the conservation and management of all species of wildlife and their habitats. The District's State Wildlife Action Plan, last updated in 2015, is a comprehensive, ten-year roadmap for sustaining, conserving, and protecting Washington, DC's wildlife and habitats. In addition to this plan, the District's moveDC and Age Friendly DC plans also address access to green space.



Sustainable DC 2.0's actions on nature have real benefits for Washington, DC at all levels:

INDIVIDUAL

Sustainable DC 2.0 aims to protect and restore Washington, DC's natural environment and to create more opportunities for residents to have better access to high quality green spaces such as trails and parks. By enhancing access to nature, residents can enjoy the benefits of parks and natural areas, through reduced stress and improved health.

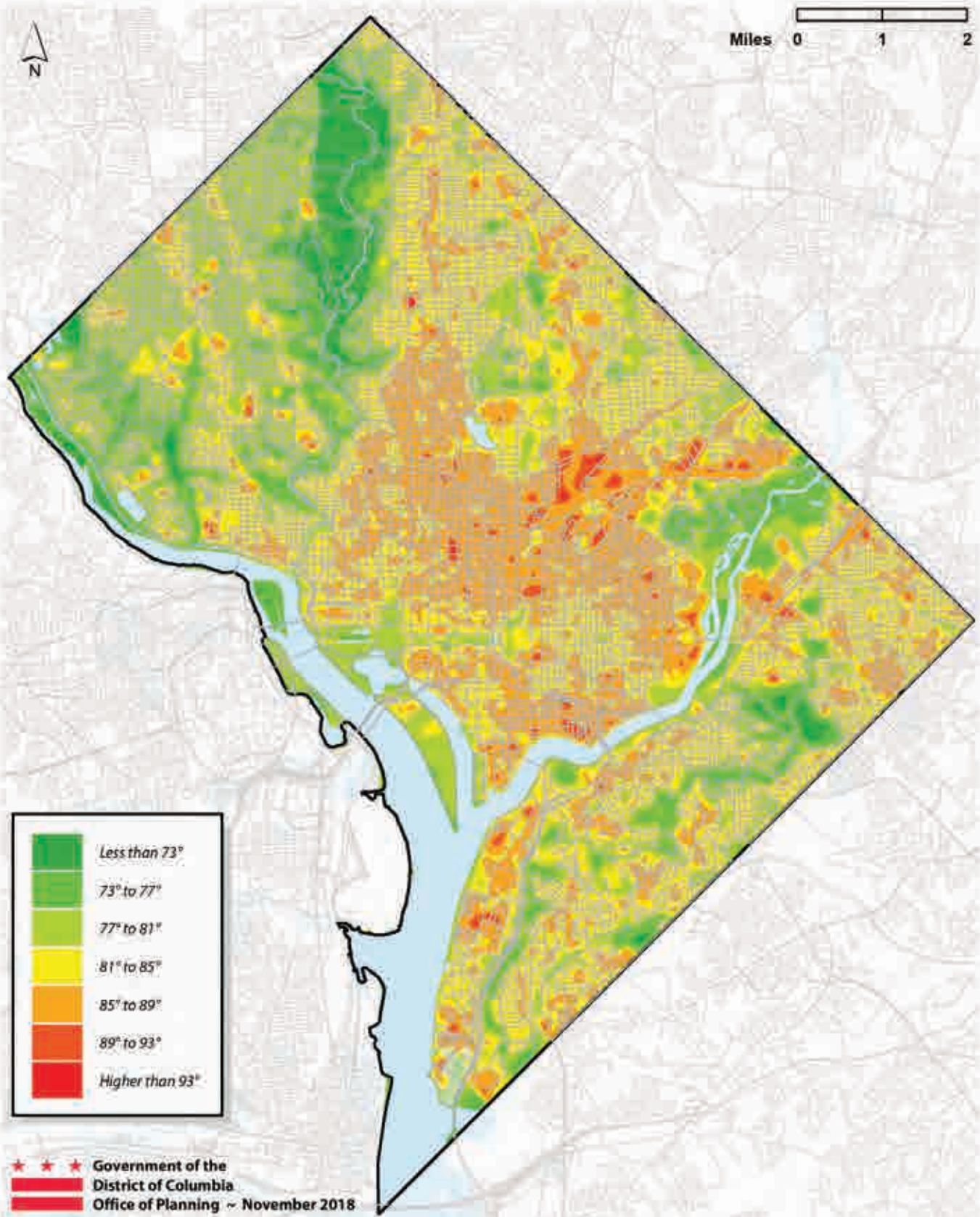
NEIGHBORHOOD

Sustainable DC 2.0 is focused on strengthening access to the natural environment for neighborhoods across Washington, DC, with a particular emphasis of improving access to small parks and natural spaces in underserved areas of the city with less access to these resources currently.

DISTRICT

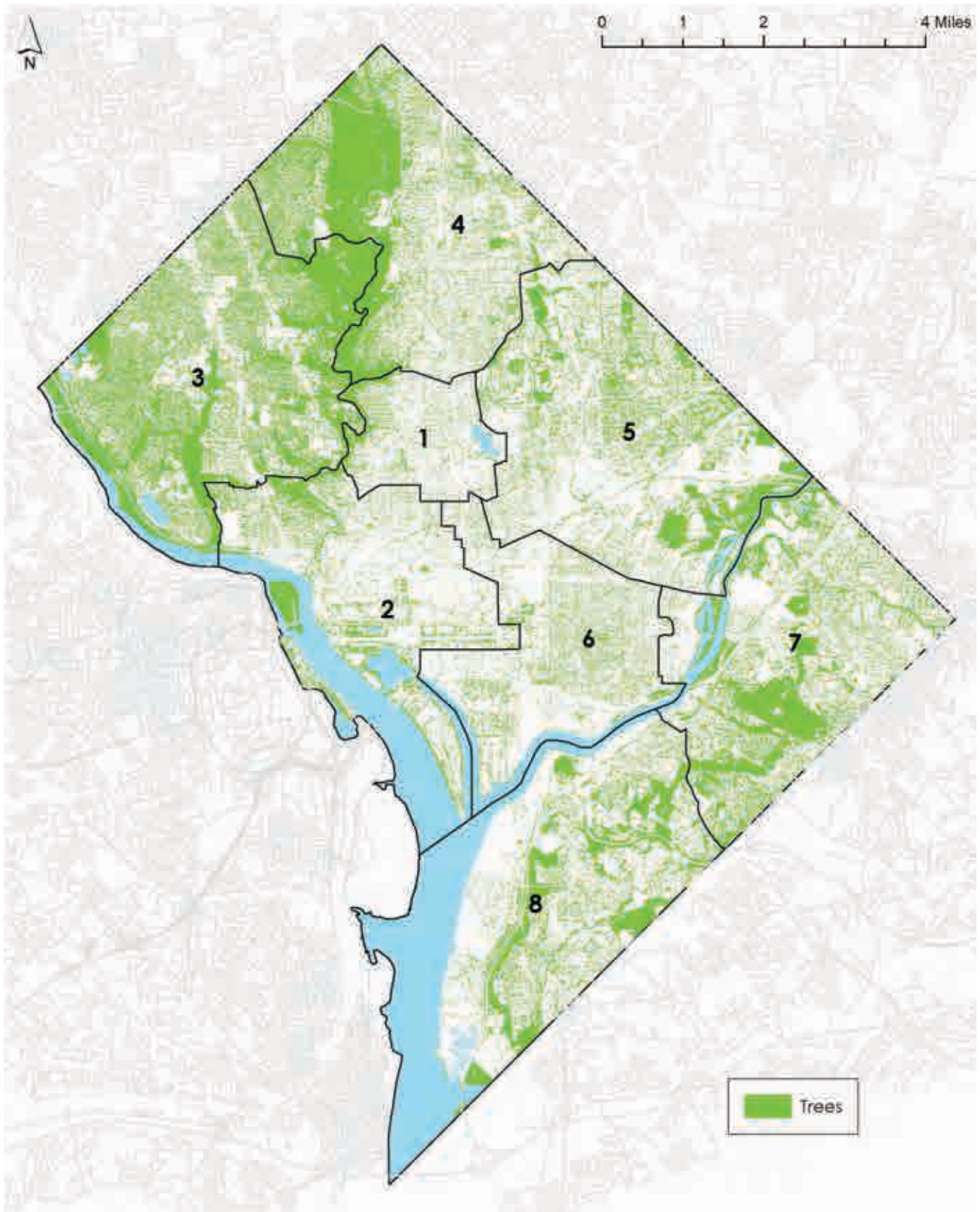
Actions in the Nature section of Sustainable DC 2.0 focus not only on protecting and restoring the District's unique natural environment, including our rivers, streams, and meadows, but also on expanding our tree canopy and creating new wetlands. Sustainable DC 2.0 seeks to weave the natural environment throughout Washington DC's urban footprint by incorporating access to nature in the places where we live, work, and play.

URBAN HEAT ISLAND IN THE DISTRICT



201805020401

TREE CANOPY



Diversity of Wildlife in DC^{li}



240
species of
birds



78
fish



32
mammals



21
reptiles

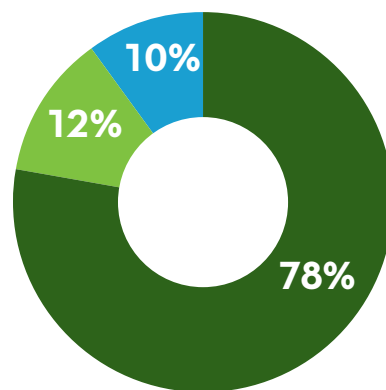


19
amphibians



1,000_s
of invertebrates

DC Surface Type^{lii}



- Developed land
- Undeveloped land
- Open waters (Potomac and Anacostia Rivers)



There are **289**
acres of wetlands in
the District.^{liii}

Planting shade trees
around your house can
reduce air conditioning
costs up to

30%.^{lvi}

Annual Tree
Plantings^{liv}
2012: **13,054**
2013: **9,544**
2014: **12,085**
2015: **15,044**
2016: **9,893**
2017: **12,441**



38% of
DC is covered
by a healthy
tree canopy.^{lv}



GOAL 1

Protect, restore, and expand aquatic ecosystems.



TARGET 1

By 2032, protect, restore, and create 1,000 acres of critical aquatic habitat.



TARGET 1 BASELINE

36.25
acres

NA1.1

Develop a Wetland Registry to facilitate restoration or creation of wetland habitat.

Wetlands—land consisting of marshes, bogs, vernal pools, swamps, and other similar areas—are among the most productive ecosystems and they are vital to the ecology of a healthy watershed. Wetlands provide a wealth of benefits to humans, reduce flooding, and support diverse animal and plant life. Beginning in the early 1900s, the Army Corps of Engineers began dredging the Anacostia River and filled in wetlands during the process. Due to continued urbanization, an estimated 450 acres of marshes were filled for dumpsites and approximately 90% of tidal marshes along the Anacostia were lost.⁴⁴ Approximately 289 acres of wetlands remain in the District. To better protect and restore the District's wetlands, the District Government will create a Wetland Registry, a publicly available map of each wetland location and baseline data to facilitate avoidance of disturbance and to identify wetlands that would benefit from restoration or enhancement. The registry will also identify potential locations for wetland creation that could be targeted for detailed site-specific suitability studies for mitigation.

TIMEFRAME

Long term

LEAD

DOEE

PARTNERS

DGS, DPR, OCTO

NA1.2

Plant and maintain an additional 150 acres of wetlands in targeted Conservation Opportunity Areas.

To offset the negative environmental impacts of development, the District Government will plant and maintain wetlands (land consisting of marshes or swamps) to help with overall water quality. These wetlands will be intentionally planned in Conservation Opportunity Areas—areas of the city which offer the best opportunity and potential for conservation in the District—as identified in the District's 2015 Wildlife Action Plan. By planting and maintaining an additional 150 acres of wetlands in these discrete areas, the District Government will maximize the environmental impact of its work to protect, restore, and expand our waterways.

TIMEFRAME

Long term

LEAD

DOEE

PARTNERS

DGS, DPR



NA1.3

Partner with developers to incorporate living shorelines in waterfront developments.

Developing land adjacent to waterways can increase flooding, erosion, sea level rise, and hurt aquatic habitats. One way to minimize these negative impacts is to construct living shorelines as part of waterfront developments. Living shorelines use native plants, trees, grasses, and other natural elements to stabilize a shoreline and help to minimize erosion along shorelines, reduce flooding, and help Washington, DC become more resilient to sea level rise. By partnering with developers early in the planning process, more living shorelines can be incorporated into waterfront developments.

TIMEFRAME Short term	LEAD DOEE	PARTNER OP
--------------------------------	---------------------	----------------------

NA1.4

Reduce threats to 75 aquatic species of greatest conservation need.

In a highly urban area such as Washington, DC, the largest threats for aquatic habitats are urban wastewater, invasive species, nitrification and sedimentation of waterbodies, and ecosystem modifications. In support of the 2015 Wildlife Action Plan, the District Government is strengthening its existing actions, such as restoring streams and invasive plant removal, to reduce these large threats to 75 aquatic species of greatest conservation need, including the American shad and the Hay’s Spring amphipod (a tiny shrimp-like crustacean that is only found in DC).

TIMEFRAME Long term	LEAD DOEE
-------------------------------	---------------------



GOAL 2

Protect, restore, and expand land ecosystems.



TARGET 2

By 2032, restore, protect, create, or improve 2,000 acres of critical land habitat.



TARGET 2 BASELINE

350
acres

NA2.1

Plant and maintain 10,500 new trees per year in priority areas to achieve 40% tree canopy cover by 2032.

Trees play a critical role in urban areas, including reducing flooding, improving air quality, and reducing temperatures. While the act of planting trees is important, without proper maintenance, the trees won't flourish. The District Government will plant and maintain 10,500 trees annually, and in addition will work with communities to shape tree plantings in their neighborhoods so that residents have a voice in the process. Innovation and best practices in urban tree plantings, such as using suspended pavement systems and ensuring there is sufficient tree box space, will be considered in the planning process. In order to prioritize tree plantings, the District Government will identify areas that experience vulnerabilities to climate change such as areas prone to flooding, the heat island effect, and areas lacking sufficient coverage and shade.

TIMEFRAME

Ongoing

LEAD

DDOT

PARTNERS

DGS, DOEE, DPR, OCTO

NA2.2

Remove invasive plants on 500 acres of critical habitat based on a strategic management plan.

Invasive plants are plants that are not native to an area that colonize habitats, create habitat loss, exclude native plants from surviving, and reduce plant biodiversity. In support of the 2015 Wildlife Action Plan, the District Government will develop a strategic management plan that addresses not introducing invasive species and prioritizes the removal of invasive plants from 500 acres of critical habitat.

TIMEFRAME

Medium term

LEAD

DOEE

PARTNER

DGS

NA2.3

Create or restore a minimum of 200 acres of meadow habitat.

Due to urbanization, meadow habit is destroyed and often replaced with buildings and manicured grass. Meadows are field habitats vegetated by grass and other non-woody plants (grasslands). Meadows are of ecological importance because they support a diversity of wildlife, including small mammals, birds, and reptiles. Healthy, productive meadows are composed of highly diverse herbaceous plants native to the region. Creating and restoring 200 acres of meadow habitat is one of the most important conservation actions detailed in the 2015 Wildlife Action Plan.

TIMEFRAME

Long term

LEAD

DOEE

PARTNERS

DCHA, DDOT, DGS, DHCD, DPR, OP

NA2.4

Incorporate biodiversity and the use of native plants in green infrastructure on District Government land.

Green infrastructure is an approach to water management that protects, restores, or mimics the natural water cycle. Green infrastructure includes practices such as rain gardens, trees, and permeable pavements. Green infrastructure captures rainfall, cools buildings and pavement, and creates natural pathways for wildlife. When designing green infrastructure projects that include plants or landscaping, the District Government will include a variety of biodiverse plant types and species and prioritize native plants that benefit pollinators. The District Government will also exclude non-native invasive plant species to maximize the benefits of these projects on the overall ecosystem.

TIMEFRAME

Short term

LEAD

DOEE, DDOT

PARTNERS

DGS, DPR, OP

NA2.5

Create a habitat connectivity plan to guide restoration of viable, native habitats throughout Washington, DC and in coordination with surrounding jurisdictions.

The survival of wildlife depends in large part on habitat connectivity—the ability to move safely throughout the environment to find food, reproduce, and migrate. Much of this connectivity has been lost in the District. The District Government and partners, therefore, will develop a habitat connectivity plan to guide habitat restoration projects in support of wildlife. The plan will be used to inform policy for integrating habitats and green space into future development projects throughout Washington, DC.

TIMEFRAME

Short term

LEAD

DOEE

PARTNERS

DDOT, DGS, DPR, OCTO, OP

NA2.6

Require the District Government to use native plants and trees in all landscaping and green infrastructure outside the roadway right-of-way.

The District Government will lead by example in only using native, pollinators, and hardy trees in its landscaping projects, green infrastructure, and restoration projects and will incorporate biodiverse plants and trees. Native plants are hardier and less likely to succumb to pests and diseases than non-native plants. They also tend to need less water than non-native plants. The District will develop and maintain a public facing directory of native plants to aid in the process of selecting appropriate plants in projects. As the number of species of trees that can survive adjacent to roadways is more limited, the right-of-way is exempted from this policy.

TIMEFRAME

Short term

LEAD

DOEE

PARTNERS

DDOT, DGS, OP



GOAL 3

Improve human access to and stewardship of nature.



TARGET 3

By 2032, provide access to the natural environment or quality green space within a 10-minute walk of all residents.

NA3.1

Improve the formal trail network for hiking and biking—prioritizing areas east of the Anacostia River—while balancing protection of habitat.

Access to green space in an urban setting is vital to mental health. Expanding the network of trails, while protecting wildlife habitat, will aid in better connecting residents with green space and nature in the District. A priority should be given to connecting the trail network in areas east of the Anacostia River where trail connections are not as well developed, as well as regionally integrating networks beyond the District’s borders.

TIMEFRAME

Medium term

LEAD

DDOT

PARTNERS

DPR, OP

NA3.2

Increase the number of “nature play spaces” at District playgrounds.

Nature play spaces incorporate the surrounding landscape such as logs, rocks, and water, to bring nature to children’s daily outdoor play areas. These nature play spaces are made from natural elements like wood and stone, and often include child-friendly educational signage. One example of a nature play space is at UDC’s East Capitol Urban Farm which has log benches, stumps for scrambling, and a vine labyrinth. Through these play spaces, children can benefit from connecting, playing, and learning in nature.

TIMEFRAME

Medium term

LEAD

DPR

PARTNERS

DCPS, DGS

NA3.3

Create or improve small parks and natural spaces in underserved areas.

Not all neighborhoods in Washington, DC have convenient access to green space including small parks and natural spaces such as woods or meadows. Small parks and natural spaces need to be connected to the communities they serve. The District should prioritize creating or improving parks and natural spaces in underserved areas of the city without sufficient green space and ensuring that these natural spaces are connected to the neighborhoods and communities which they serve. Schools grounds with natural spaces, for example, could be utilized for this purpose.

TIMEFRAME

Short term

LEAD

DPR

PARTNERS

DCPS, DDOT,
DGS, DOEE, OP

NA3.4

Provide informational resources on backyard wildlife habitats, native plant gardening, container and vertical gardening, and creating pollinator habitats.

The District Government should make it easy for residents to beautify their yards and create valuable habitat for butterflies, bees, and other pollinators by providing accessible and informative guidance on how to start and maintain gardens. Pollinators are important because they transfer pollen between plants, which helps the plants, including trees and agricultural crops, reproduce and thrive. By equipping residents with the knowledge and skills for how to start a backyard garden or balcony with native plants, the District will be supporting more pollinators that are necessary for a healthy and diverse ecosystem.

TIMEFRAME

Short term

LEAD

DOEE

PARTNERS

DC Health, DPR

NA3.5

The District Government will incorporate nature into the places we live, play, and work, to reduce stress and improve health—known as biophilic design.

Biophilic design is simply incorporating nature—plants, water, light, etc.—into our manmade spaces such as our homes and offices. For example, having indoor plants, fountains, and large, bird-safe windows in office buildings help connect employees to the natural environment while working indoors. By incorporating more traditionally natural elements into the built environment, the District Government will lead by example in its own projects and promote overall wellbeing and productivity and improve the mental health of residents. Washington, DC will also provide resources and guidance to other entities seeking to incorporate biophilic design into their current or future projects.

TIMEFRAME

Medium term

LEAD

DOEE

PARTNERS

DCPS, DGS



TRANSPORTATION





TRANSPORTATION

Everyone in Washington, DC relies on our transportation system every day to get where they need to go—to work, to school, to see family and friends—and to connect to what they need—food, healthcare, and nature. The District, more so than most cities, puts enormous strain on its transportation system. The District’s population is approximately 700,000, but grows by almost 80% during the weekday with commuters traveling from as far away as West Virginia and Delaware to their DC workplaces.⁴⁵ This enormous influx of people results in serious traffic congestion. The DC region has the sixth worst traffic congestion in the country with an average of 11 percent of driving time spent in congestion.⁴⁶

While buildings are the main source of greenhouse gas (GHG) emissions in the District, 21 percent of emissions come from transportation, making it the second largest source.⁴⁷ Many residents and workers enjoy convenient access to high quality sidewalks, bike lanes, and trails, however, access is unequal. Past practices like race-based redlining, land use, and development patterns have a lasting legacy, and some areas of Washington, DC have such inferior access to public transportation or are so disconnected from city amenities that walking and biking are not viable transportation options. Further, differing physical abilities restrict others from getting around conveniently. Regardless of where one lives or one’s physical ability, all residents should have good access to high quality transit and safe, well-maintained sidewalks. All residents should also be able to move safely, no matter what mode of transportation they choose. However, every trip—whether by bus, bike, car, or train—begins and ends with a walk so prioritizing pedestrians in transportation planning is important. Equally important is funding maintenance. Decades of deferred maintenance on the Metrorail system which has resulted in very expensive and inconvenient work to get the system back to a state of good repair.

An efficient, safe, and convenient transportation system is not just for people though. It fuels our economy through increased productivity, better supply chain management, and access to new workers and markets. The District is lucky to have one of the best transportation systems in the country despite its troubles. According to recent rankings, the District has the fourth best transit system, is the seventh most walkable, and the ninth most bicycle-friendly city in the United States.⁴⁸ However, it takes a lot of infrastructure to keep our city moving. In our 69 square mile city, there are 1,100 miles of streets, almost 1,500 miles of sidewalks, 85 miles of bicycles lanes, 241 bridges, 16 tunnels, and 278 Capital Bikeshare stations.⁴⁹ Sustainable DC offers four goals and 23 actions to help improve our transportation system. Beyond Sustainable DC, more detailed transportation planning regularly occurs. The District Department of Transportation (DDOT)'s moveDC plan is the District's comprehensive transportation plan and Vision Zero is the plan to eliminate transportation-related deaths. Clean Energy DC offers additional strategies for reducing emissions for our transportation sector.



Sustainable DC 2.0's actions on transportation have real benefits for Washington, DC at all levels:

INDIVIDUAL

Walking or biking to work—even if just part of the way—is one of the best ways to incorporate exercise into your daily routine. Just 30 minutes of walking—a 15 minute commute each way—is enough to reduce your risk of diabetes and high blood pressure.⁵⁰

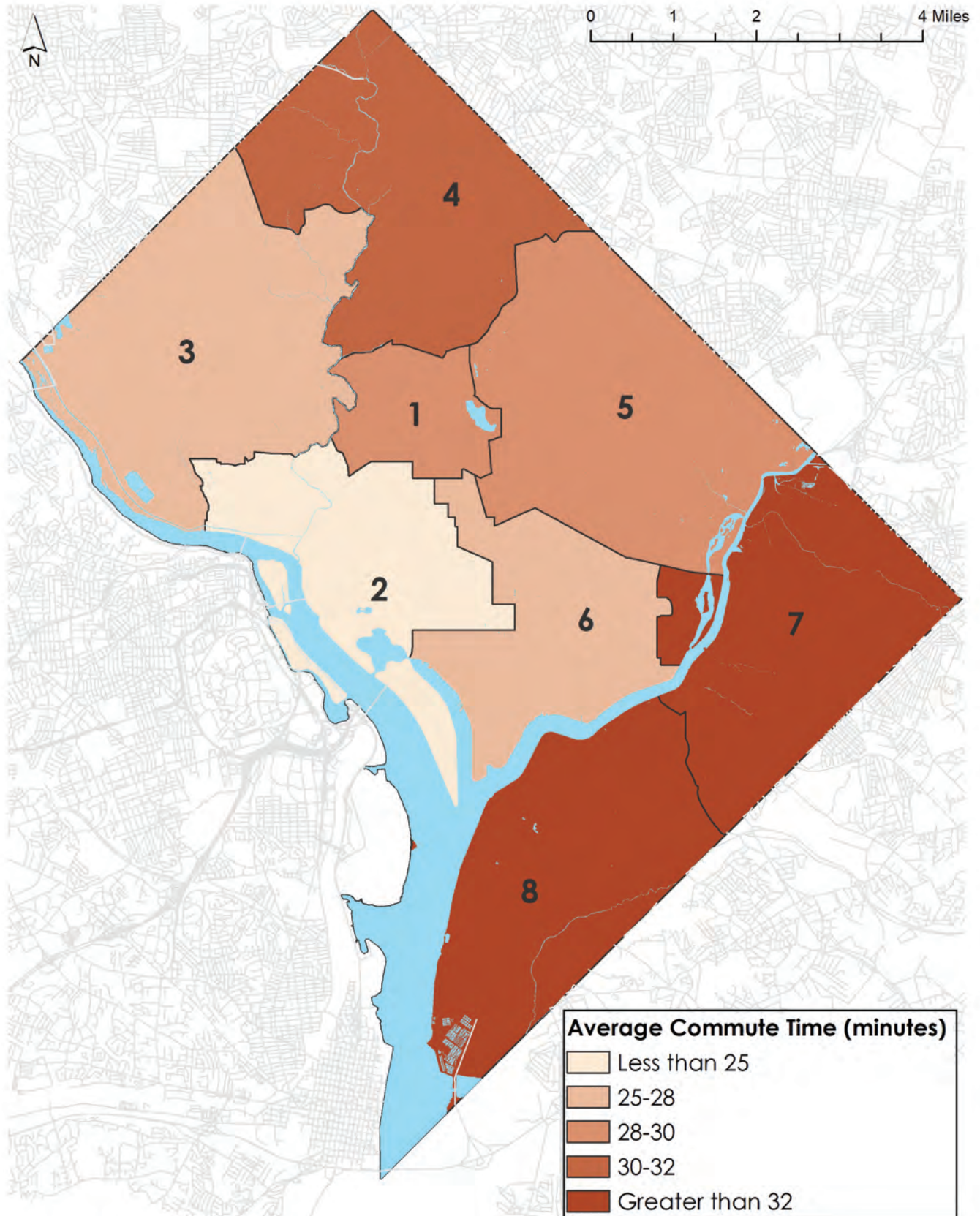
NEIGHBORHOOD

Walkable neighborhoods can support more local businesses because stores clustered together encourage customers to spend more money at multiple stores in the same area.⁵¹

DISTRICT

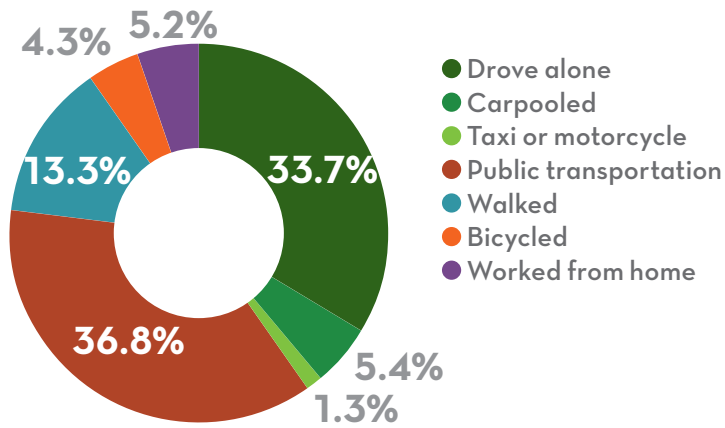
Traveling by public transportation is 10 times safer per mile than traveling by automobile.⁵² We each reduce the chance of being in a crash by more than 90 percent simply by taking public transit as opposed to commuting by car.⁵³

AVERAGE COMMUTE TIME BY WARD (2014)



Data Source: DC Economic Strategy & DC GIS

Commute Mode Share in DC (2016)^{lviii}

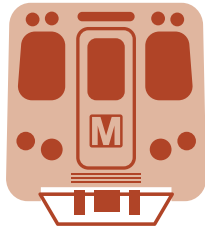


It costs between

\$30,000 to \$50,000 to build one underground parking space in DC.^{lx}



30% of residents are within walking distance of a Metrorail station.



IN 69 SQUARE MILE DC, THERE ARE:

1,100 miles of streets

1,595 miles of sidewalks

1,652 traffic signals

7,700 intersections

85 miles of bicycles lanes

60 miles of multi-use trails

241 bridges

16 tunnels

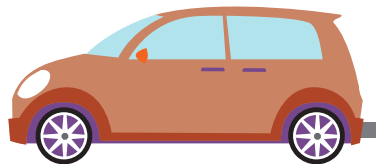
278 Capital Bikeshare stations^{lix}



Traveling by public transit is

10 times safer per mile than traveling by car.^{lxiii}

38% of DC households do not own a car.^{lxi}



21% of GHG emissions come from transportation.^{lxiv}



GOAL 1

Improve connectivity and accessibility through efficient, integrated and affordable transit systems.



TARGET 1

By 2032, increase use of public transit to 50% of all commuter trips in all wards.



TARGET 1 BASELINE

40.5%

TR1.1

Expand high capacity transit on high ridership corridors.

High capacity transit like Bus Rapid Transit or streetcar can provide faster and more reliable public transportation on high ridership corridors. Successful systems like Cleveland’s Healthline typically have dedicated bus lanes, stations spread further apart, transit signal priority, off-board fare collection, all-door boarding, and longer buses that often feel more like trains. Ongoing efforts, such as the expansion of the DC Streetcar, implementation of the 16th Street NW Transit Priority Project, keeping the DC Circulator free will help improve transit speed and reliability. By better understanding which high capacity corridors are the best candidates and what capital and operational investments it will take to make them successful, the District Government will be in a good position to start building high capacity transit corridors to better serve residents beyond walking distance (1/2 mile) of a Metrorail station.

TIMEFRAME

Medium term

LEAD

DDOT, WMATA

TR1.2

Improve transit connections to employment and activity centers from underserved areas.

Approximately 30% of residents are within walking distance (a half mile) of rapid transit like Metrorail.⁵⁴ To provide quality, convenient transit access to underserved areas—particularly new activity centers east of the Anacostia River such as MLK Gateway, Skyland, and St. Elizabeths—the District Government will prioritize connecting areas of the city east of the Anacostia River not currently within walking distance of rapid transit with direct routes to employment and activity centers.

TIMEFRAME

Medium term

LEAD

DDOT

PARTNER

WMATA

TR1.3

Define and secure permanent funding for transit planning and improvements.

Because transportation infrastructure investments are costly and take several years to complete—especially heavy rail infrastructure like Metrorail—the District needs a consistent, reliable source of funding to keep long-term projects moving. The District, together with transit partners, will create and implement a strategy for securing necessary funds to appropriately maintain and improve transit in the District and region. In a landmark step towards completing this action, the District Council passed the Dedicated Funding for the “Washington Metropolitan Area Transit Authority Emergency Act of 2018” to provide the District’s full \$178.5 million share in new, dedicated, and bondable funding for Metro. Maryland and Virginia also committed their share to meet the full \$500 million a year that Metro needs to operate and maintain Metrorail. Maintaining this commitment each year is the key to success.

TIMEFRAME

Short term

LEAD

DDOT

PARTNER

EOM

TR1.4

Develop design guidelines to ensure transit systems are resilient to climate change.

Unless action is taken, the effects of climate change on our transit system—buckling rail lines, cracked pavement, and traffic light outages—mean moving around the District will become more frustrating, costly, and dangerous. The District will design, operate, and maintain our transit infrastructure for resilience against increased flooding, high heat, and severe storms in addition to making sure transit operates reliably in everyday conditions. One good example of such design guidelines is the New York Port Authority’s 2015 guidelines to ensure that new agency infrastructure and buildings are designed to account for projected changes in temperature, precipitation, and sea level.

TIMEFRAME

Medium term

LEAD

DDOT

PARTNERS

DOEE, HSEMA, WMATA

TR1.5

Identify and remove the obstacles to families taking transit.

Many families with small children (or who require strollers) find using transit, particularly buses, difficult. By better understanding the specific obstacles making transit difficult for families, the District will be able to change policies or make physical changes to make riding transit convenient and safe for families. Changsha, China launched a Child Friendly City initiative, which included children in the design process to make transit more family friendly. Other jurisdictions charge a lower fare for children, which the District should also consider doing, building on the success of the Kids Ride Free for school age children.

TIMEFRAME

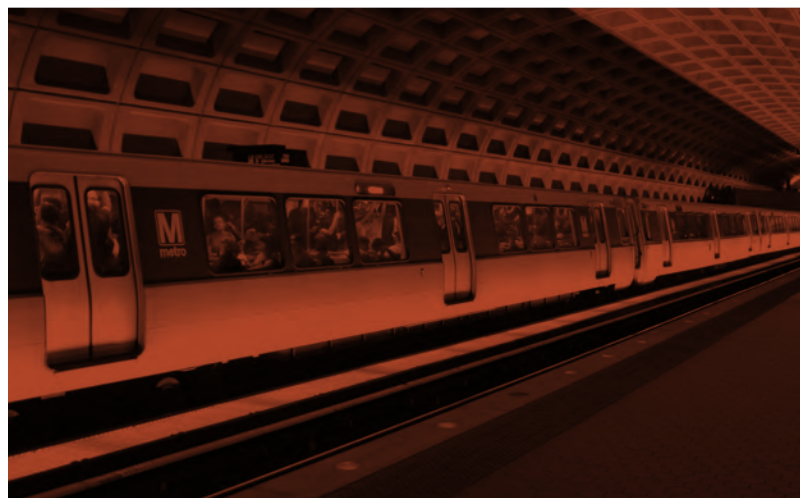
Medium term

LEAD

DDOT

PARTNER

WMATA





GOAL 2

Expand safe, connected infrastructure for pedestrians and cyclists.



TARGET 2

By 2032, increase biking and walking to 25% of all commuter trips in all wards.



TARGET 2 BASELINE

16.8%

TR2.1

Develop and maintain a safe and convenient citywide bicycle lane and trail network.

Washington, DC currently has 85 miles of bicycle lanes, including 10 miles of protected bicycle lanes and 60 miles of multi-use trails.⁵⁵ However, many residents do not have convenient access to this network or do not feel safe biking with traffic on the street. The District Government will expand the current system to a 130-mile⁵⁶ connected and convenient bicycle lane network, including 44 miles of protected bicycle lanes.⁵⁷ Additionally, the District will expand the trail network to 114 miles.⁵⁸ Bike lanes and trails will be prioritized in neighborhoods east of the Anacostia River where bicycle infrastructure is currently insufficient, and will do so in consultation with the community to ensure residents' concerns and desires are taken into account in planning.

TIMEFRAME

Long term

LEAD

DDOT

TR2.2

Grow the Capital Bikeshare program so that 75% of District residents have access to a station within a quarter mile of their home.

The Capital Bikeshare program has been extremely successful with nearly 21 million rides since it launched in 2010. The District Government will increase the system from its current 278 stations to 325 stations by 2020. Additional stations will be placed so that 75% of District residents are within 1/4 mile of a bike station focusing on neighborhoods with the least access to the system now, including areas east of the Anacostia River.

TIMEFRAME

Medium term

LEAD

DDOT

TR2.3

Increase bike, scooter and pedestrian safety education for drivers, cyclists, and pedestrians, and enforce laws protecting those who walk and use scooters and bicycles.

In order to eliminate traffic fatalities and serious injuries, the District Government will develop new partnerships with community organizations—such as the Washington Area Bicyclist Association, the American Automobile Association, and the Metropolitan Washington Council of Governments—to provide more education to all three groups so everyone understands their role in creating a safe transportation environment for pedestrians and cyclists. This includes educating drivers about the rights of cyclists and pedestrians, and making sure that cyclists and pedestrians are aware of their responsibilities in keeping our sidewalks and streets safe to achieve the District Government’s Vision Zero plan to eliminate transportation-related deaths. Backing up these education efforts is the force of the law: the District of Columbia will enforce laws that protect bikers, such as prohibition on cars and trucks parking in bike lanes and other laws that advance Vision Zero.

TIMEFRAME	LEAD	PARTNERS
Ongoing	DDOT	DMV, MPD

TR2.4

Collect data to improve understanding of cyclist and pedestrian travel patterns.

Without high quality data on bicycle and pedestrian travel patterns, it is difficult to plan for future users, allocate funding, or design and build new infrastructure. The District Government will leverage existing data and develop new methods of collecting this valuable data, such as bike counters installed at popular bike routes like the Met Branch Trail and the 15th Street NW cycle track. The District Government will also require access to data from private transportation providers, including dockless bike and scooter sharing programs, and utilize private sector data options, to better understand future program opportunities.

TIMEFRAME	LEAD
Short term	DDOT, OCTO

TR2.5

Program crosswalks and traffic lights for improved safety and convenience of pedestrians, prioritizing children, older adults, and people with disabilities.

Traffic and crosswalk signals should be timed to provide adequate time for pedestrians to safely cross the street, especially those with reduced mobility, such as children, older adults, and people with disabilities. The District Government will analyze traffic lights to provide safe and convenient travel for pedestrians, bicyclists, and vehicle traffic.

TIMEFRAME	LEAD
Short term	DDOT

TR 2.6

Ensure sidewalks are in good repair on at least 90% of District streets, prioritizing new sidewalk construction in pedestrian priority areas such as schools, parks, transit stops, and retail corridors.

Around 24% of the District’s linear streets are missing sidewalks on one or both sides of the street,⁵⁹ while additional segments of sidewalks are in poor shape, making it difficult to walk in some areas of the city, particularly in neighborhoods in Northwest and Southeast. In alignment with moveDC,⁶⁰ the District Government will maintain sidewalks in a state of good repair and install new sidewalks and pedestrian infrastructure on at least 90% of streets currently lacking them, starting with pedestrian priority areas such as those mentioned above. In general, pedestrians should be prioritized on all District sidewalks.

TIMEFRAME	LEAD
Medium term	DDOT



GOAL 3

Enhance affordable, convenient transportation options to reduce dependency on single occupant vehicles.



TARGET 3

By 2032, reduce commuter trips made by car to 25%.



TARGET 3 BASELINE

42.7%

TR3.1

Encourage carpooling and carsharing.

Trips in gasoline-powered single occupancy vehicles (SOV) are the most polluting form of transportation, but some people do not have convenient access to transit or have the ability to walk or bike. To accommodate people who need to drive, the District will make it more convenient and appealing for commuters to carpool (when two or more people share the ride to a similar or nearby destination) or carshare (a resource that makes car available in different locations). The District will work with partners to strengthen regional programs like the Metropolitan Washington Council of Government (MWCOG)'s Guaranteed Ride Home, and ridesharing matching programs could be expanded or marketed to encourage participation.

TIMEFRAME

Short term

LEAD

DDOT

PARTNER

DOEE

TR3.2

Encourage private businesses to offer incentives to employees for transit, biking, and walking.

Eighteen percent of the District's greenhouse gas emissions come from private passenger vehicles, which are also responsible for a significant amount of traffic congestion in the city. The District Government will build on the goDCgo program to work with businesses to develop a suite of incentives that private businesses can offer to their employees to encourage clean commuting, such as including facilities for showering after biking and walking and subsidizing Metro SmarTrip cards. To make sure existing required benefits are available to those entitled, the District Government will also ensure all employers comply with the existing transit benefits law.

TIMEFRAME

Medium term

LEAD

DDOT, DOEE, DOES

TR3.3

Complete a study to understand the best strategies for reducing congestion for all without unfairly burdening residents with low incomes.

The District has some of the worst traffic congestion in the country, particularly during the morning and evening commute. The average DC driver is stuck in traffic congestion for 63 hours each year, costing the District an estimated \$6.1 billion.⁶¹ There are many potential methods of reducing congestion—a downtown congestion fee like London’s or demand-based parking that charges a price for parking based on current demand. However, there could also be unintended consequences to these strategies that unfairly burden residents with low incomes or harm the economy. To understand the best strategies for reducing congestion in an equitable way, the District Government will study available options and make recommendations for those that best fit the needs of District residents.

TIMEFRAME

Medium term

LEAD

DDOT, DOEE

PARTNER

OP

TR3.4

Develop a strategy in response to autonomous vehicles

Autonomous vehicles—or self-driving vehicles—are already in operation in many cities and will likely disrupt many of our current transportation systems and paradigms creating both new opportunities and challenges. In 2019, the District Government will complete a study of how autonomous vehicles will affect transportation in the District. The study will include impacts on congestion, transit, fleet storage and maintenance, parking and the use of public space.

TIMEFRAME

Short term

LEAD

DDOT, DMPED

PARTNERS

DOEE, DPW

TR3.5

Encourage and promote telecommuting and alternative work schedules for District Government employees.

Some commuters in the DC region commute several hours each way resulting in increased congestion, stress, and vehicle emissions.⁶² The District Government already has teleworking and alternative work schedules for employees, but many employees are discouraged or disallowed from using the benefit. As a signal to private employers, the District will lead by example in making teleworking and alternative work schedules available and actively encouraging their use, helping managers understand how to ensure accountability, and making sure production stays high.

TIMEFRAME

Short term

LEAD

DCHR

PARTNER

DOEE





GOAL 4

Reduce greenhouse gas emissions and air pollution from the transportation sector.



TARGET 4

Reduce greenhouse gas emissions from transportation by 60%.



TARGET 4 BASELINE

1.73
metric tons

TR4.1

Strictly limit idling engines.

Cars, trucks, buses, and other motor vehicles are a large source of toxic air contaminants such as carbon monoxide, which contribute to asthma and other respiratory diseases. The District Government will increase enforcement of existing anti-idling regulations (focusing on areas where idling often occurs like the National Mall and areas with high concentrations of vulnerable populations such children and the elderly), strengthen its engagement with bus and truck companies, incorporate citizen reporting, and increase its anti-idling marketing efforts.

TIMEFRAME

Short term

LEAD

DOEE

PARTNER

DDOT

TR4.2

Require the District Government to purchase green fleet and passenger vehicles.

Because the District Government procures its own vehicles, it has control over which vehicles to purchase, creating an excellent opportunity to lead by example. Except in special cases, the District Government will require all agencies to purchase zero to low-emission vehicles and will prioritize placing green vehicles that spend most of their time in one area (such as police cruisers and buses) in areas with high concentrations of vulnerable populations.

TIMEFRAME

Medium term

LEAD

DPW, MPD, OSSE

PARTNERS

DDOT, DOEE

TR4.3

Encourage network of electric vehicle charging stations throughout the city.

Electric vehicles (EVs) have a battery instead of a gasoline tank, and an electric motor instead of an internal combustion engine, which means they do not emit pollution from their tailpipes. There is still limited infrastructure to charge EVs. The District Government will partner with the private sector, Pepco, and other relevant players to facilitate the development of convenient, publicly accessible EV charging stations (for example in designated spaces on appropriate streets or in parking structures). Electrification opportunities will be evaluated based on their ability to reduce GHGs, maximize public benefit and investment from the private sector, and equity.

TIMEFRAME

Medium term

LEAD

DDOT, DOEE

PARTNERS

DFHV, DPW, OP, PSC, WMATA

TR4.4

Fully electrify District-controlled buses, and work with regional bus systems to reduce regional bus emissions.

While the Washington Metro Area Transit Authority owns most of the Metrobuses operating in the District, there is an opportunity for the District to expand electrification of the DC Circulator, and potentially Metrobus. Twenty percent of the DC Circulator fleet are now zero emission vehicles, and the District Government can continue to expand this share in the future. The District Government will build the necessary infrastructure to fully electrify all District Government-controlled buses to eliminate tailpipe emissions from these large vehicles. Because most District buses are less than five years old and procurement for new buses is a lengthy process, this action will be accomplished in the medium term.

TIMEFRAME

Medium term

LEAD

DDOT, OSSE, WMATA

PARTNERS

DOEE, DPW



WASTE





WASTE

Over the past 50 years, our ecological footprint—one measure of our consumption of natural resources—has increased by about 190%.⁶³ Much of this natural resource consumption is in the production of everyday consumer goods (such as furniture, clothing, and food). As Washington, DC’s population continues to grow, the demand for goods also grows. Unfortunately, the lifecycle of most of those goods follows a path that could be best described as “take, make, waste”—natural resources are taken to make goods and disposed of after usage. Further, while recycling is relatively convenient in the District, many residents find properly sorting waste unclear and confusing. In addition, the District’s location at the intersection of three state-level jurisdictions and two regional rivers means the District Government is faced with managing waste coming from outside of our city. To address growing challenges in managing waste, the District will have to not only reduce waste at the source but also develop systems and infrastructure to recover the value of unwanted goods. Creating a more sustainable system will require a new perspective: unwanted goods are not waste but simply wasted resources.

Sustainable DC was the first pronouncement of the District’s bold waste diversion goal: divert at least 80% of our waste away from landfill and waste-to-energy by 2032. In the five years since, there has been a dramatic shift in how we think about our discarded materials—not as trash but as potentially valuable resources. The District Government created an Office of Waste Diversion within the Department of Public Works (DPW) which now publishes an annual waste diversion report. District Council passed several significant new laws: banning the use of expanded polystyrene containers (commonly known as Styrofoam), banning electronics from our waste stream, and adding a fee to the distribution of disposable bags. The District Government has also established new programs to more

sustainably manage waste including a more for producers to take responsibility for old paint and used electronics and a city-wide food waste composting drop-off program. Through an interagency effort, the District Government launched Zero Waste DC, which developed a universal list of recyclable and compostable items. This universal list has helped reduce residents' confusion as to how to properly sort their waste. Moving forward, the District Government is also scoping out a comprehensive Zero Waste Plan that will examine the programs, initiatives, and plans that contribute to the diversion of waste in the District. The plan will tie together existing activities and inform the development and evaluation of further policies.



Sustainable DC 2.0's actions on waste have real benefits for Washington, DC at all levels:

INDIVIDUAL

Individuals have a role to play in reducing waste at its source by taking actions like eliminating single-use plastics and embracing reuse. Reducing waste at its source will mean less waste polluting the District neighborhoods, parks and waterways, enhancing the desire for communities to make use of their community assets.

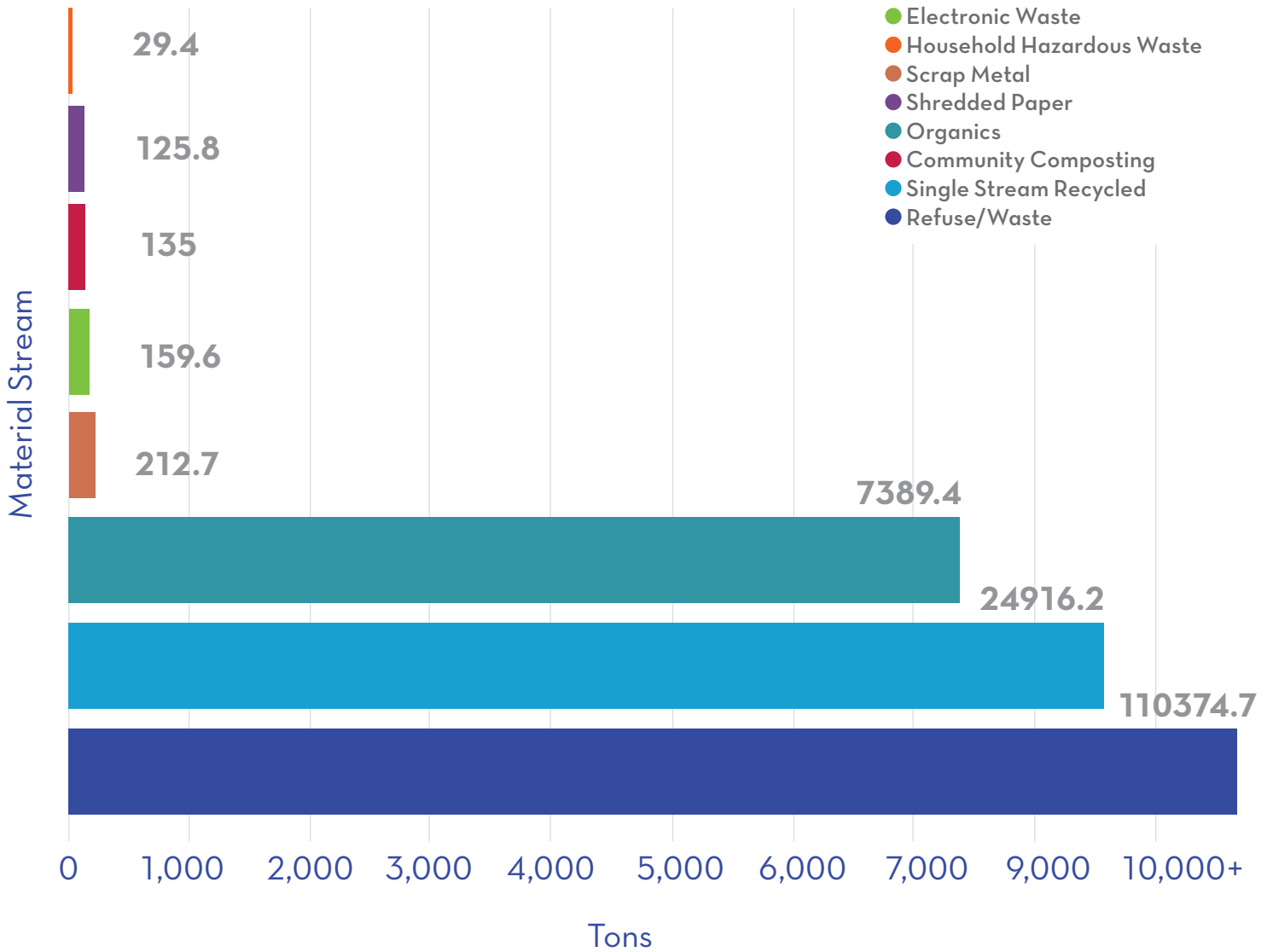
NEIGHBORHOOD

Communities will benefit from clean, litter-free streets and access to clean and attractive green spaces.

DISTRICT

Seeing our waste as a commodity can help grow the local economy by providing additional streams of income for local residents and providing materials for growing local enterprises. By separating the District's waste into identifiable clean waste streams that can be used in the manufacturing of new products, we conserve natural resources, reduce greenhouse gases, and can spur innovation in reuse to help create local businesses.

2016 City-wide waste composition



2016 City-wide Residential Waste Diversion Rate:^{lxv}

22.98%



2018

Food Waste Drop-Off Sites^{lxvii}

47,500

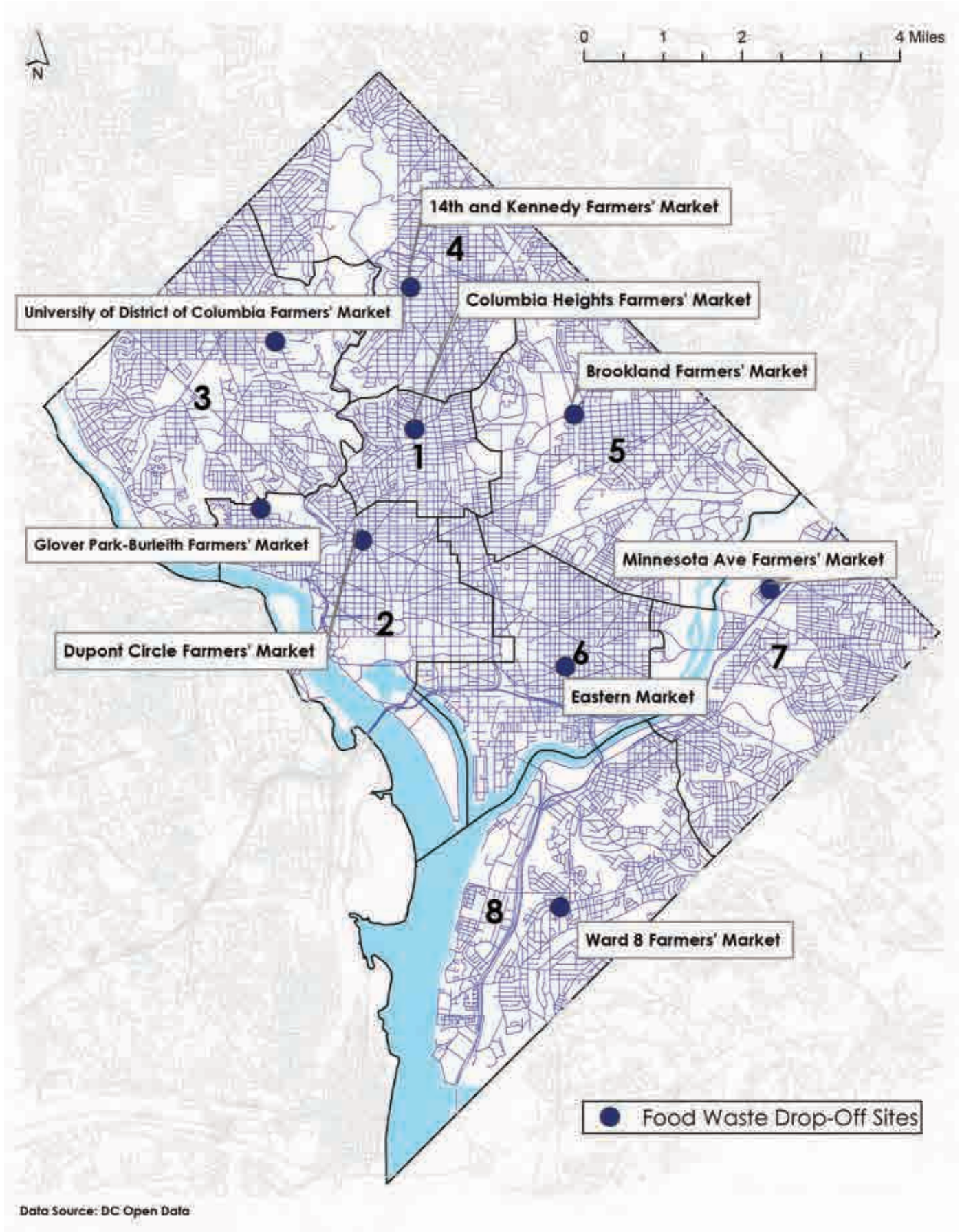
participants

309,700

lbs. collected



FOOD WASTE DROP-OFF LOCATIONS





GOAL 1

Reduce waste generated per capita in the District.



TARGET 1

By 2032, reduce per capita waste generation by 15%.



TARGET 1 BASELINE

7.61

lbs per capita per day

WS1.1

Develop a comprehensive Zero Waste plan with the objective of decreasing all citywide waste streams and achieving source reduction goals.

The “Sustainable Solid Waste Management Amendment Act of 2014” requires the development of a Zero Waste Plan for Washington, DC. The development of such a Plan would tie together existing activities and inform the development and evaluation (including carbon impacts) of further policies so that the District can strategically achieve zero waste citywide, defined as 80% diversion of all solid waste from landfill and waste-to-energy.

TIMEFRAME

Short term

LEAD

DPW

PARTNERS

DOEE, DGS, DPR, OP

WS1.2

Study the feasibility of an equitably priced collection billing structure (like Save-As-You-Throw).

The cost of residential waste management is equally shared amongst District households receiving DPW-provided collection service, regardless of the amount that each household generates. Establishing a Save-As-You-Throw system for DPW-serviced households in the District would provide an incentive for residents to reduce the volume of waste generated, and would more appropriately and fairly charge residents for collection services. The pricing structure should minimize disproportionate impact on low-income communities and avoid incentivizing illegal dumping.

TIMEFRAME

Short term

LEAD

DPW

PARTNER

DOEE

WS1.3

Expand current bans and fees on waste products like expanded polystyrene and disposable bags.

Banning the use of expanded polystyrene containers (commonly known as Styrofoam™) and adding fees to the distribution of plastic bags at the point of sale has been an effective means of decreasing the occurrence of these hard-to-recycle items in our waste stream. Broadening the polystyrene ban to include packing materials, adding additional points-of-sale (supermarkets, big box retailers, and suppliers), and increasing fees on plastic bags will bolster our efforts to keep these items out of the waste stream and serve as an incentive for the use or development of alternative products.

TIMEFRAME

Medium term

LEAD

DOEE

PARTNERS

DPW, EOM

WS1.5

Increase purchases of Environmentally Preferable Products and Services.

The District Government has an award-winning Sustainable Purchasing Program that provides resources to facilitate the purchase of Environmentally Preferable Products and Services (EPPS). The program, however, is sorely underutilized. Increasing the robustness of the program by including additional product categories, making the resources more accessible, training more District employees on the use of the product specifications and making EPPS the default through our purchasing systems would increase the percentage of District purchases that conform to the EPPS requirements and ultimately reduce waste resulting from conventional purchasing.

TIMEFRAME

Short term

LEAD

DOEE, OCP

WS1.4

Work with surrounding jurisdictions to develop and implement a regional approach to reducing plastic waste.

Washington, DC sits at the intersection of three jurisdictions and the confluence of two rivers. Goods (including items that eventually become plastic waste) flow freely into and out of the city carried not only by our waterways, but also by residents, commuters and visitors. Implementing District-specific initiatives will only go so far. Regional cooperation is required to insure that the policies and practices of the neighboring jurisdictions are aligned with the District's efforts.

TIMEFRAME

Long term

LEAD

DOEE, DPW

PARTNER

EOM





GOAL 2

Facilitate local reuse and recovery of materials to capture their economic and social value.

WS2.1

Reuse or recycle 50% of all commercial construction waste.

While the District has experienced rapid growth, including the redevelopment of entirely new neighborhoods, the construction sector has not been incentivized to account for their waste. Requiring the reuse or recycling of commercial construction waste creates a requirement that aligns with existing green building codes and standards.

TIMEFRAME

Medium term

LEAD

DOEE

PARTNERS

DCRA, DGS, DPW

WS2.2

Reuse 5% of total non-hazardous residential building materials.

Over the last 5 years, residential construction and renovations have continued to increase. The Residential Technical Advisory Group (RESTAG) recommended a reuse standard for building materials that will begin to redirect building materials away from the waste stream. This action is consistent with the standard, and sets a minimum for diversion efforts including interior commercial remodeling. This effort will be supported by providing more resources to assist small-scale residential developers and homeowners to use recycled and salvaged building materials.

TIMEFRAME

Long term

LEAD

DOEE

PARTNERS

DCRA, DPW



TARGET 2

By 2032, reuse 20% of all waste produced in the District.

WS2.3

Develop a greenhouse gas impact calculator for specific waste streams to support the development of a circular economy and guide further policy development.

As waste diversion policy evolves, decision makers need a method for weighing the impact of potentially competing approaches to waste minimization and diversion. Focusing on circularity (an economy that is restorative and regenerative by design), a calculator will help quantify the greenhouse gas impact of various actions and help us minimize waste products and services through thoughtful design.

TIMEFRAME

Short term

LEAD

DOEE

PARTNER

DPW

WS2.4

Support the development of a locally based, circular economy by facilitating the separation of waste into commodity streams.

Bringing circularity to local economies calls for the establishment of circular systems. Separating the District's waste at its source into identifiable and commodifiable, clean waste streams spurs innovation by allowing material to be used in the manufacture of new products and encourages exploration of economic opportunities for handling "hard to recycle" items.

TIMEFRAME

Short term

LEAD

DOEE

PARTNER

DPW





GOAL 3

Achieve zero waste citywide.



TARGET 3

By 2032, achieve 80% waste diversion citywide without the use of landfills, waste-to-energy or incineration.



TARGET 3 BASELINE

28.46%

WS3.1

Provide District Government-served households with three, right-sized bins for collecting compostable materials, recyclable items, and trash.

Discarded food and other organic, compostable material make up as much as 30 percent of the District's waste stream. On Earth Day 2017, the District launched the Food Waste Drop-Off program, which is now available in all eight wards. A residential, curbside, three-bin system will provide the most convenient point of disposal for food and yard waste and will increase the value of all materials collected at the curb. Right sizing curbside bins to reflect our waste diversion goals will enable increased recovery of valuable materials (recycling and compost) and support behavior change.

TIMEFRAME

Medium term

LEAD

DPW

PARTNER

DOEE

WS3.2

Establish a new organics processing facility (composting, anaerobic digestion, or co-digestion pre-processing) in the District to capture food and other organic waste.

Washington, DC and surrounding Maryland and Virginia counties, lack sufficient capacity/infrastructure to process large volumes of organic materials. A 2017 compost feasibility study concluded that an in-District facility would be the most cost-effective and sustainable means of extracting the full value from organic materials. The facility would process organics via composting, anaerobic digestion, co-digestion pre-processing, or a combination of multiple options.

TIMEFRAME

Medium term

AGENCY

DPW

PARTNERS

DC Water, DGS, DOEE, OP

WS3.3

Increase the number of co-located (trash and recycling) receptacles that are publically accessible.

Ensuring opportunities to recycle, by increasing the number of disposal points in all areas of the city, will support waste diversion messaging and reinforce behavior change that is needed for achievement of the District-wide zero waste goal. The District Government will expand recycling in District parks, recreation centers, and libraries, as well as work with partners like Business Improvement Districts to increase the amount of public space recycling receptacles in commercial establishments, multifamily buildings, and public spaces (i.e., street cans).

TIMEFRAME
Medium term

AGENCY
DPW

PARTNERS
DCPL, DGS,
DOEE, DPR, OP

WS3.4

Aggressively enhance educational resources and outreach campaigns that educate residents, workers and visitors on waste minimization, recycling, and composting.

Creating new outreach and compliance assistance to reinforce both the waste diversion and anti-littering messaging and behavior change will create pathways for success. Washington, DC has a number of well thought out educational resource and initiatives. Developing additional creative methods for engaging residents, with a particular focus on residents and communities that do not consistently engage with the sustainability community, will broaden our reach and impact.

TIMEFRAME
Short term

AGENCY
DPW

PARTNERS
DCPL, DOEE,
DPR, OCC, OP

WS3.5

Expand Washington, DC's product stewardship program to include additional product streams.

Washington, DC is successfully implementing product stewardship programs for paint and electronics. The models from these programs are transferrable to other specific waste streams (e.g., pharmaceuticals, batteries, mattresses).

TIMEFRAME
Medium term

AGENCY
DOEE

PARTNERS
DGS, DPW, OP

WS3.6

Bolster enforcement efforts to ensure that commercially-serviced businesses and multifamily buildings comply with the requirements to provide adequate and timely on-site recycling and trash collection.

Better enforcement of the requirement for all commercial and multifamily buildings to make recycling available to residents and visitors, along with improvements to the enforcement labor force, will increase commercial property diversion rates.

TIMEFRAME
Medium term

AGENCY
DPW

PARTNERS
DCPL, DGS,
DOEE, DPR, OP

WATER






WATER

Washington, DC is home to two tidal rivers, the Anacostia and the Potomac, and 47 miles of shoreline.⁶⁴ While the District's waterways have started to make a remarkable comeback, our rivers are still in poor health. Poor water quality makes rivers and streams unsuitable for recreation, threatens wildlife, exposes people to dangerous contaminants, and requires costly and energy-intensive treatment. The poor water quality of our rivers is largely to the District's large amounts of impervious surfaces that do not soak in water such as parking lots, streets, and buildings. Additionally, the pumping, treatment, and distribution of water is extremely energy-intensive—often 30 to 40 percent of a city's energy consumption.⁶⁵

The District Government is committed to improving the quality of its waterways and is at the forefront of implementing innovative technologies and programs to better manage our stormwater throughout the city. By improving the District's waterways, we are in turn improving the habitat and quality of life for the District's wildlife. In 2018, for the first time in ten years, the Anacostia River received a passing grade on an annual health check by a local advocacy group, the Anacostia Watershed Society.⁶⁶ DC Water's \$2.6 billion Clean Rivers Project is contributing to the river's improved quality by reducing the amount of combined sewer overflows by 96% through the construction of larger underground tunnel systems. In addition, under the District's Municipal Separate Storm Sewer System (MS4) permit, issued by the EPA, the District Government is required to manage and reduce stormwater pollution by installing green infrastructure, such as permeable pavements and rain gardens, and tracking pollutant loads. The District Government has also launched cutting edge programs, such as the Stormwater Retention Credit Trading Program, that allows property owners to earn revenue for projects that reduce harmful stormwater runoff by installing green infrastructure or removing impervious surfaces. In 2014, the District Government also launched a long-term project, "A Cleaner Anacostia River," to remediate the Anacostia River's contaminated sediments and has allocated \$45 million to this project.⁶⁷ The restoration of five streams that flow into the Anacostia River has also helped improve river water quality. Finally, the passage of multiple laws such as the foam ban and bag law, have all worked to improve the Anacostia River's water and recreational quality.



Sustainable DC 2.0's actions for water have real benefits for Washington, DC at all levels:

INDIVIDUAL

Actions in Sustainable DC 2.0's Water section focus on making the District's rivers a resource for everyone to enjoy. By restoring these waterways, residents will have more opportunities for healthy recreation and physical activities such as fishing, boating, and swimming.

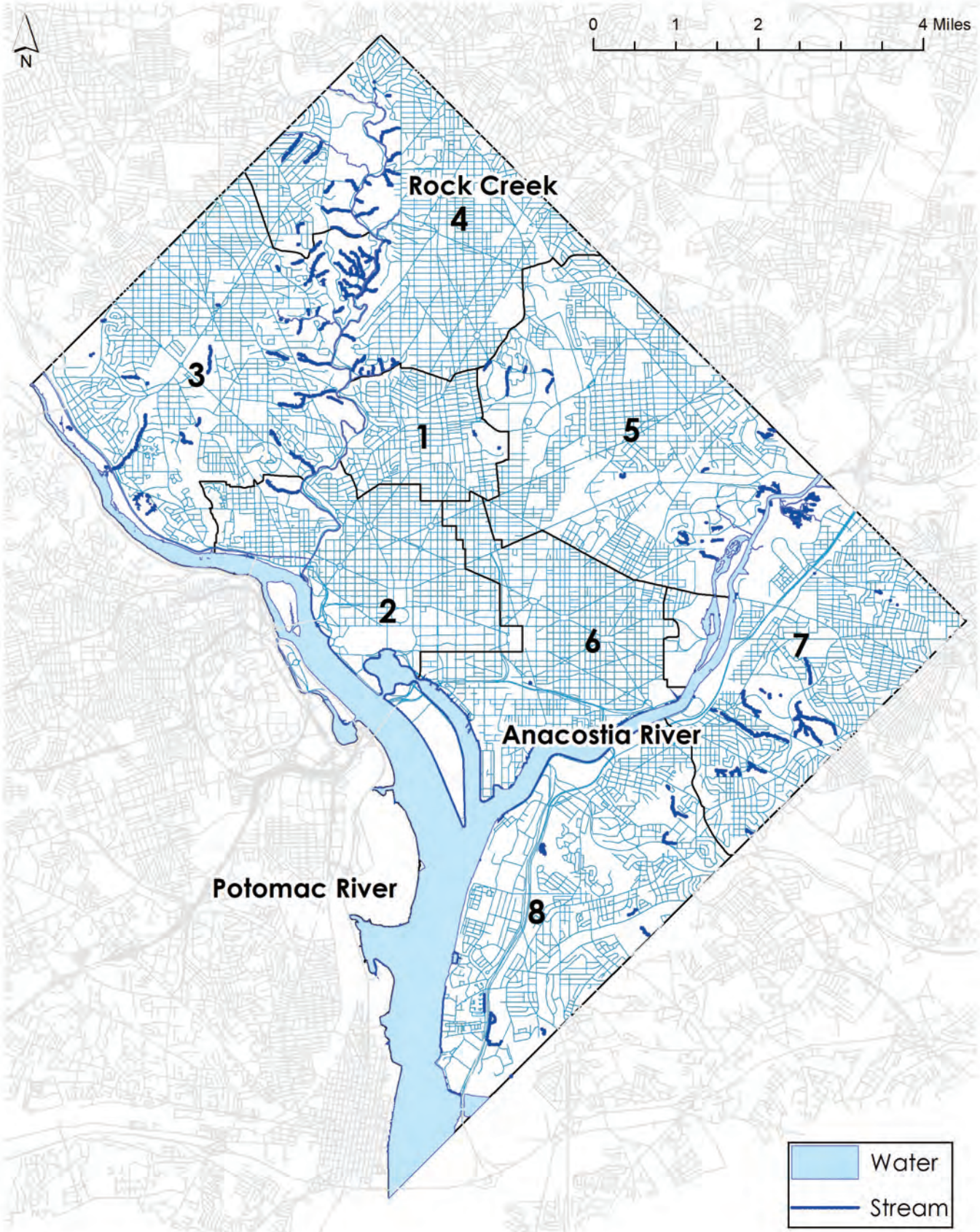
NEIGHBORHOOD

To better manage the risk of neighborhood flooding, Sustainable DC 2.0's water section pushes the District to innovate at the neighborhood level by incorporating more small-scale stormwater collection in order to more efficiently capture stormwater.

DISTRICT

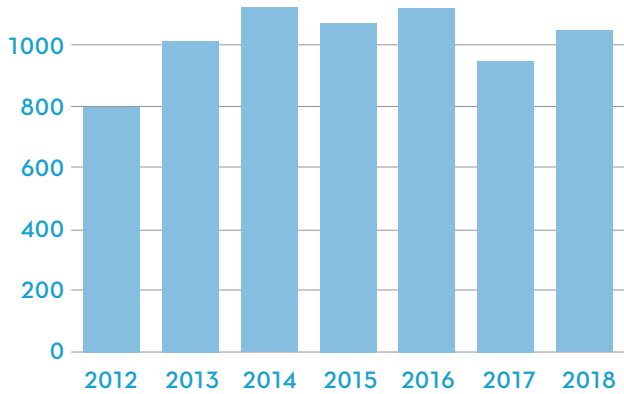
As the District continues to rapidly grow in population, innovative programs like the stormwater credit trading program help reduce stormwater runoff to keep our rivers and streams clean while allowing new housing and business to meet current demand.

STREAM RESTORATION SITES

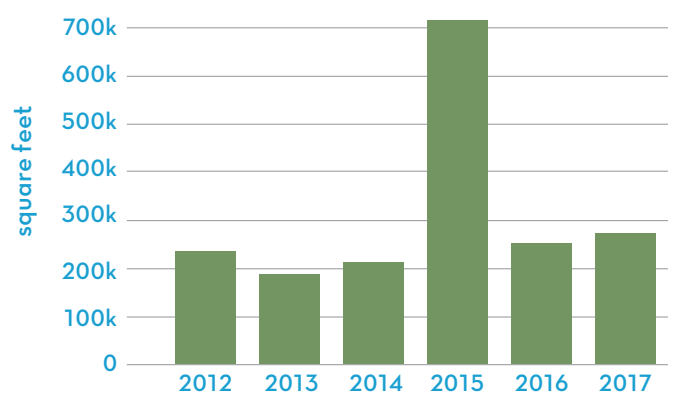


Data Source: DOEE & DC GIS

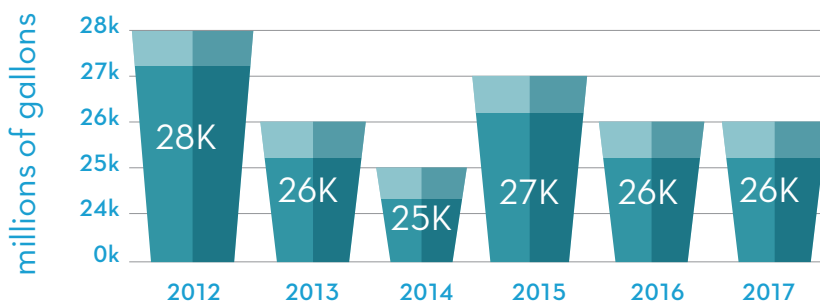
DC homes in RiverSmart Homes program^{lxviii}



Green roofs installed per year in DC^{lxx}



Community water consumption (in gallons)^{lxxii}



DC Water provides more than **100** million gallons of drinking water to DC region each day.^{lxxiv}

DC's **9** trash traps prevent over **10,000** lbs of trash from entering the Anacostia River each year.^{lxxi}



Since 2012, the RiverSmart Homes program has installed:^{lxxix}

Rain barrels:
3,953

Shade trees:
5,128

Rain gardens:
945



Conservation landscapes:
1,349

Permeable pavers:
371



Bottled water is **2,000** times more expensive than tap water.^{lxxiii}



GOAL 1

Improve the quality of waterways to standards suitable for fishing and swimming.



TARGET 1

By 2032, make 100% of District waterways fishable and swimmable.



TARGET 1 BASELINE

0%

WT1.1

Encourage reduced use of personal care products, pesticides, and fertilizers that contain existing and emerging contaminants.

Emerging contaminants are chemicals discovered in the water supply that had not previously been detected. These chemical contaminants pose a risk to human health and the environment and can be found in pharmaceuticals, personal care products, pesticides, and fertilizers. The District Government should develop an educational campaign to inform consumers about the health and environmental impacts of widespread use and improper disposal of these products and to identify less harmful alternative products. The District Government, in collaboration with other jurisdictions, should also consider banning the use of products of greatest impact that contain emerging or existing contaminants in order to improve overall water quality.

TIMEFRAME

Long term

LEAD

DOEE

PARTNERS

DC Water, DPW

WT1.2

Create and adopt a salt management strategy for snow and ice removal that minimizes the use of road salt, and study alternatives to reduce Washington, DC's reliance on road salt.

The application of rock salts to roads in winter harms trees and pollutes waterways. Reducing the road salt used per mile would limit pollution in snowmelt. In order to transition away from road salts, the District Government will study alternative products and technologies and develop an overall strategy for snow and ice removal that is more environmentally friendly. The District Government will also work with Business Improvement Districts, Main Streets, and large property owners to help them to refine their snow removal and salt strategies.

TIMEFRAME

Short term

LEAD

DOEE, DPW

PARTNERS

DC Water, DDOT

WT1.3

Provide education on how people can reduce stormwater pollution through good housekeeping, vehicle maintenance, property lawn care, and pet waste management.

A 2017 survey found that District residents want more information on how to live sustainable lifestyles. One practical way to do this is by equipping residents with the knowledge and skills on how to help reduce stormwater pollution (the rainwater that flows over the ground and into a waterbody) on their own properties. The District Government will work to improve the overall water quality of our rivers by providing resources and education to residents, such as tips on how to sustainably take care of a lawn by mowing higher and leaving grass clippings on top to allow for nitrogen and other nutrients to return to the soil, as an alternative to applying fertilizers.

TIMEFRAME

Medium term

LEAD

DOEE

WT1.4

Develop and implement an Anacostia River remediation work plan that restores fish and wildlife habitat while improving public access to the river.

Decades of industrial and urban activities throughout the Anacostia River watershed have increasingly compromised the water quality of the river. High concentrations of hazardous substances are present in sediment throughout the river, posing a risk to aquatic organisms and to humans. The District Government is leading an effort—the Anacostia River Sediment Project—to clean up the river and allow for better public access to the river for the public.

TIMEFRAME

Long term

LEAD

DOEE

WT1.5

Increase public access to water quality monitoring data for public waterways and develop partnerships to expand the scope of water quality monitoring.

The District Government should provide convenient access to up-to-date water quality monitoring data for public waterways for residents and visitors so that they can make informed decisions before swimming, fishing, and boating in District waterways. In order to expand the scope of monitoring data, the District Government should forge partnerships with residents, non-profits, and other partners to both sample and report on environmental water quality in the District.

TIMEFRAME

Medium term

LEAD

DOEE

WT1.6

Restore 10 miles of streams in the District.

Since 2012, the District has restored over two miles of streams including Pope Branch, Nash Run, Alger Park, Springhouse Run, Linnean Park, and Broad Branch. The District's stream projects aim to improve conditions within the stream related to hydrology, erosion, water quality, and aquatic life. Stream restoration projects often use stone, wood, and a variety of native plants to create a naturalized and stable stream within the District's urban environment. Restoration projects improve water quality as well as habitat conditions both within the project area and in downstream receiving water bodies.

TIMEFRAME

Long term

LEAD

DOEE



GOAL 2

Reduce the volume of stormwater runoff.



TARGET 2

By 2032, implement green infrastructure practices to capture, retain, or reuse stormwater from at least 10% of the District’s land area.



TARGET 2 BASELINE

1.53%

WT2.1

Install and maintain four million new square feet of green roof.

In 2017, the Washington region had the greatest square footage of green roof installations in North America.⁶⁸ Green roofs retain rainfall to reduce the volume and rate of stormwater running into the sewer system. Green roofs also provide habitat for birds and insects, insulate buildings to reduce energy use, and cool neighborhoods by reducing heat absorption. Increasing the installation of green roofs across the city—and in creative ways such as row houses working together to share green roofs across rooftops—can be another tool in the suite of strategies to protect District streams and rivers from pollution and flooding.

TIMEFRAME

Medium term

LEAD

DCRA, DOEE, DGS

WT2.2

Audit 1,200 properties per year via the RiverSmart Homes program and increase participation in areas of the city where enrollment has been historically low.

The RiverSmart Homes program offers incentives to homeowners who want to reduce stormwater runoff (the rainwater that flows over the ground and into a waterbody) from their properties by offering low-cost rain barrel installations, planting trees and rain gardens, and removing impervious surfaces on properties. Demand for RiverSmart Homes has been high and must be expanded to reach participants from across the District, with a focus on areas where enrollment has been historically low. In order to increase participation in these areas, the District Government will devise population-specific strategies based on each community it is trying to reach and adapt the strategies over time to reflect lessons learned in the engagement process.

TIMEFRAME

Short term

LEAD

DOEE

WT2.3

Incorporate neighborhood-scale stormwater collection into large-scale planning efforts early in the redevelopment process, including public right of way and parks.

Stormwater is primarily managed through underground pipes across a city. Uncontrolled stormwater has many negative impacts on the environment, wildlife and humans, including flooding, eroding stream banks, damaging fish and aquatic life, and threatening public health. Instead of managing stormwater solely at the city level through pipes, the District Government will incorporate more small-scale stormwater collection technology into development projects, including adding green infrastructure to public right of ways (like medians and sidewalks) and developing multi-use spaces such as parks and basketball courts that can capture rainwater during large downfalls, in order to spread out and more efficiently capture stormwater across the District.

TIMEFRAME

Medium term

LEAD

DDOT

PARTNERS

DC Water, DGS,
DOEE, DPR, OP

WT2.4

Grow the Stormwater Retention Credit Trading program.

The District Government's Stormwater Retention Credit Trading (SRC) program is an innovative program where property owners can generate and sell credits to earn revenue for projects that reduce harmful stormwater runoff by installing green infrastructure or by removing impervious surfaces. Credits can be sold in an open market to properties that have regulatory requirements for managing stormwater, or sold to the Department of Energy & Environment (DOEE). To grow the program, the District Government will enhance and expand the use of the list of sites where property owners are willing to have green infrastructure installed on their property, including information about priority locations, in order to encourage partnerships between SRC-generating businesses and property owners, thereby reducing the volume of stormwater runoff.

TIMEFRAME

Short term

LEAD

DOEE

WT2.5

Streamline and coordinate incentive programs for combined green roofs and solar projects.

How can a rooftop in the District include both solar panels and a green roof? The District Government will provide new guidance and clarity and streamline the process for permitting both practices, so that a property owner can easily take advantage of emerging technology that integrates both green roofs and solar. By making this process clearer, more properties will be able to incorporate both environmental practices.

TIMEFRAME

Short term

LEAD

DOEE

PARTNER

DCRA

WT2.6

Pilot a large scale network of green infrastructure with smart controls to better understand performance and inform future project designs.

The District Government will pilot green infrastructure technologies that have smart controls, such as sensors, that can collect and analyze performance. The city of Chicago, for example, installed sensors in green infrastructure that allows for live collection and analysis of how the green infrastructure captures stormwater runoff when it rains. The green infrastructure sensors collect and transmit data on soil moisture while a weather station simultaneously collects rainfall data. By using smart sensors, the District Government can improve future green infrastructure designs and maximize their performance which will ultimately help reduce the volume of stormwater in Washington, DC.

TIMEFRAME

Medium term

LEAD

DOEE

PARTNER

DGS



GOAL 3

Reduce demands for potable water and increase rainwater reuse.



TARGET 3

By 2032, decrease per capita potable water use by 20%.



TARGET 3 BASELINE

44,262
gallons

WT3.1

Update the District building codes to increase water-efficiency standards and allow the use of alternative water systems.

The majority of the water we consume is used inside buildings for drinking, cooking, washing, air conditioning, and cleaning. Water efficiency technologies such as low-flow toilets, faucets, and high efficiency washing machines significantly reduce water use. The District Government should continue to update the Construction Code's water-efficiency standards to continue to reduce potable water consumption in the District. In addition, the District's building codes should continue to allow for the optional use of alternative water systems such as gray water (wastewater collected in buildings from showers, bathtubs, clothes washers, and lavatory faucets) in order to reduce demands for potable water consumption.

TIMEFRAME

Medium term

LEAD

DCRA

PARTNER

DOEE

WT3.2

Develop incentives for water-efficiency measures in landscaping and buildings.

The District Government will develop and institute water-efficiency incentives to reduce consumption, encourage low and zero-water technologies, and promote water-efficient landscape design using native species and green infrastructure.

TIMEFRAME

Long term

LEAD

DOEE

PARTNERS

DCRA, DC Water

WT3.3

Pilot water efficiency projects in the District Government to lead by example.

The District Government will lead by example by being at the forefront of testing new water efficiency technology such as rainwater harvesting systems. By taking the lead on these new technologies, the District Government will be able to share lessons learned and help spread adoption of these technologies across different sectors.

TIMEFRAME

Short term

LEAD

DGS

PARTNERS

DOEE, OCTO



GOAL 4

Ensure safe, accessible drinking water.



TARGET 4

By 2032, ensure 100% of District residents have access to clean, affordable drinking water.

WT4.1

Identify and implement the most effective steps to improve the resilience of the drinking water system to natural and human disasters.

District residents depend on clean and safe drinking water. With a rapidly changing climate, it is imperative for the District Government to increase the resilience of our drinking water system by ensuring that it is equipped to handle and bounce back from a range of natural and human disasters. It is also critical that District residents feel confident in the drinking water at all times, but particularly in times of emergency, to reduce use of plastic bottles.

TIMEFRAME

Medium term

LEAD

DC Water, DOEE

PARTNERS

EOM, HSEMA

WT4.2

Eliminate all lead service lines and plumbing from District Government-owned buildings.

Lead service lines were predominately installed prior to the mid-1950s in the District, but there are records of lead service lines being installed as late as 1977. Lead can cause serious health problems if too much enters the body from drinking water. The District Government should lead by example and remove all lead service lines and premise plumbing (all plumbing within the property line with direct connection to the potable water system) from its District-owned buildings to ensure the safety of water in these buildings. This will require additional funding and strong coordination with DC Water.

TIMEFRAME

Long term

LEAD

DGS

PARTNER

DC Water

WT4.3

Replace at least 1% of water pipes each year.

Pressurized water mains have an expected life of 100 years. In order to keep pace with aging water infrastructure, DC Water will commit to replacing at least 1% of the District’s water pipes each year to keep pace with each pipe’s 100-year lifespan. These efforts will improve water quality and system reliability, increase water pressure, and maintain adequate flows.

TIMEFRAME

Long term

LEAD

DC Water

WT4.4

Work with the Washington Aqueduct to ensure that the District’s drinking water is of the highest possible quality by protecting source water, addressing emerging contaminants, and upgrading drinking water treatment processes.

The Potomac River, via the Washington Aqueduct, is the District’s source of drinking water. DC Water, the water utility for the District, should work closely with the Aqueduct to examine the vulnerability of the system, determine if there is an opportunity to upgrade the Aqueduct’s treatment process to a state-of-the-art facility, and develop strategic plans to ensure that the water source is protected from emerging contaminants and threats.

TIMEFRAME

Long term

LEAD

DC Water



THANK YOU!

The development of Sustainable DC 2.0 was a huge undertaking and the collective effort of the entire community. Hundreds of residents participated in working groups, community meetings, focus groups, and hundreds of others provided thoughtful comments on the Sustainable DC 2.0 Outline and Draft Plan. Twenty five District Government agencies participated in the development of the plan and provided constructive comments over four rounds of edits. All this time and effort has resulted in a strong, thoughtful updated sustainability plan for the District. Thank you! In order to make Washington, DC the healthiest, greenest, most livable city for all residents, the real work of implementing the Sustainable DC 2.0 plan is just getting started. We hope you will join us in working together to implement the 167 actions and 36 goals over the next 15 years. For more recommendations on how to get involved, please visit www.sustainabledc.org.

LESSONS LEARNED

Sustainable DC 2.0 was a 20 month process during which the planning team learned several valuable lessons that are worth sharing:

Lead with community engagement. Spend capacity hitting the streets and showing up where people are. This is especially true for those members of the community who are not familiar with sustainability. Their opinions matter.

Representation matters. It is important to be intentional about balancing the voice and priorities of the full District community with those of technical experts.

Equity is not equality. Equity requires giving people what they need to succeed. While sustainability is not the answer to all of the challenges, it is a lens through which solutions can be created. Sustainability should not compromise the ability for individuals and neighborhoods to sustain themselves in the place they call home.

Leverage the working groups. The foundation of Sustainable DC 1.0 and 2.0 were the working groups. For that reason, it is important that these groups are representative of the District's demographics.

Good planning take time matters. Good planning and strong community engagement takes a lot of time. Allotting more time than you think you will need for working with community partners, researching, editing, talking to implementing agencies, and repeating is critical to success.

Write everything down. Good thoughts are often lost and are not easily rediscovered once a meeting ends.

Ask for help. Enlist the support of partner agencies, fellows, interns, and colleagues early in the process.

Have fun. The update will take many months and can tire out everyone involved—staff, volunteers, and community participants—if you do not enjoy doing the work that matters!

ACTIONS SUMMARY





ACTION	TIMEFRAME	LEAD AGENCY	PARTNER AGENCY
--------	-----------	-------------	----------------

GOAL 1: Expand District Government leadership to implement the Sustainable DC 2.0 Plan.

● **TARGET 1: Implement 100% of the Sustainable DC actions by 2032.**

GV1.1 Dedicate District Government staff and funding to implement the <i>Sustainable DC 2.0 Plan</i> , track progress, and make results publicly available.	Ongoing	DOEE, OP	
GV1.2 Strengthen the existing process to collect, analyze, and report data to make progress towards goals and targets by prescribed dates.	Ongoing	DOEE, OP	
GV1.3 Identify existing laws, regulations, and policies that conflict with sustainability goals and areas where new authority is required.	Ongoing	DOEE, OP	
▲ GV1.4 Expand sector-based sustainability partnerships and pledges to promote adoption of sustainable practices.	Ongoing	DOEE, OP	
● GV1.5 Increase federal and regional collaboration by partnering with the federal government and regional council of governments.	Ongoing	DOEE, OP	DCRA, DDOT, DMPED, EOM
● GV1.6 Designate a sustainability lead in every District Government agency to coordinate efforts across government.	Short term	DOEE, OP	
● GV1.7 Develop a citywide strategy for greening internal District Government operations to save money and improve environmental performance.	Short term	DOEE, OP	DDOT, DGS, DPR, DPW, OCA, OCP
● GV1.8 Ensure that all <i>Sustainable DC 2.0 Plan</i> actions promote population health to address health disparities.	Short term	DC Health, OP	DCPS, DOEE

EQUITY



ACTION	TIMEFRAME	LEAD AGENCY	PARTNER AGENCY
EQ1.1 Create an Equity Impact Committee to guide equity in the development and implementation of the <i>Sustainable DC 2.0 Plan</i> .	Short term	DOEE	DC Health, DPR, EOM, OHR
EQ1.2 Develop an Equity Impact Assessment Tool to help the District immediately address racial inequities related to sustainability.	Short term	DOEE	
EQ1.3 Provide equity-focused training for all District Government employees.	Medium term	DOEE, DCHR	OHR
EQ1.4 Focus community engagement on communities that have been historically under-represented.	Medium term	DOEE	EOM



🏠 | BUILT ENVIRONMENT

ACTION	TIMEFRAME	LEAD AGENCY	PARTNER AGENCY	RELATED PLAN SECTIONS
--------	-----------	-------------	----------------	-----------------------

▲ **GOAL 1:** Sustainably and equitably accommodate future population growth within the District.

▲ **TARGET 1:** By 2032, accommodate the District’s projected population growth while maintaining quality and affordability for those who need it most.

▲ BE1.1 Create and preserve energy- and water-efficient affordable housing (including low-income and workforce housing) that accommodates different family sizes.	Ongoing	DMPED	DCHA, DCHFA, DHCD, DOEE, OP	👤💧
BE1.2 Expand brownfield redevelopment incentives.	Medium term	DOEE	DHCD, DMPED	❤️

▲ **GOAL 2:** Strengthen existing neighborhoods to be vibrant and walkable, while maintaining their historic character.

▲ **TARGET 2:** By 2032, provide essential services within a quarter-mile walk and a variety of services and amenities within a half-mile walk of all residents.

● BE2.1 Enhance programs to support businesses to open and operate in neighborhood commercial corridors, focusing on vacant and underused spaces.	Short term	DCRA	DHCD, DMPED, DSLBD, EOM, OP	💰
▲ BE2.2 Encourage the development of affordable live-work units.	Medium term	DHCD	DMPED, OP	💰
▲ BE2.3 Locate affordable, high-density housing close to commercial zones and high capacity transit.	Long term	DHCD	DCHFA, DMPED, OP	💰🚲
▲ BE2.4 Expand the Great Streets program to five streets east of the Anacostia River to strengthen walkable, accessible, and vibrant commercial corridors. =	Long term	DHCD, DMPED, DSLBD	DDOT, OP	💰🚲





ACTION	TIMEFRAME	LEAD AGENCY	PARTNER AGENCY	RELATED PLAN SECTIONS
--------	-----------	-------------	----------------	-----------------------

GOAL 3: Improve the performance of existing buildings by reducing energy and water use, advancing health, and increasing livability.

TARGET 3: By 2032, audit 100% of existing commercial and multi-family buildings and implement improvements to achieve energy reduction goals.

BE3.1 Rehabilitate public housing to be energy- and water-efficient, equipped to meet net-zero energy standards, and provide a healthy environment for occupants.	Long term	DCHA	DMPED, DOEE	
BE3.2 Develop a green building workforce by training built environment professionals and building operations staff in the latest green skills.	Short term	DOES	DCPS, DGS, DOEE	
BE3.3 Build public-private partnerships to expand best practices for building operations and maintenance.	Short term	DGS	DCPS, DOEE, OP3, UDC	
BE3.4 Retrofit and maintain all buildings owned by the District Government to reduce energy use by 50% and maximize the installation of renewable energy technology.	Long term	DGS	DOEE	
BE3.5 Complete energy assessments of all District homes and buildings.	Medium term	DOEE		

GOAL 4: Ensure the highest standards of building performance and operation for all new construction, including net-zero energy use, while advancing health and overall livability.

TARGET 4: By 2032, meet net-zero energy use standards with all new construction projects and develop policies or regulation to improve the sustainability, livability, and resilience of new development.

BE4.1 Require higher levels of energy efficiency, renewable energy requirements, net zero standards for new construction, and broader sustainability metrics for public projects.	Long term	DOEE	DCPS, DCRA, DGS, OCA	
BE4.2 Provide incentives for new building projects to achieve net-zero energy.	Medium term	DOEE, DCRA, OTR	DMPED, EOM	
BE4.3 Incorporate sustainability best practices into neighborhood planning.	Ongoing	OP	DMPED, DOEE	
BE4.4 Continuously adopt the latest green construction codes.	Short term	DCRA	DCPS, DGS, DOEE, EOM	
BE4.5 By 2026, update the building energy codes to require that all new buildings achieve net-zero energy use or better.	Medium term	DCRA	DOEE	



CLIMATE



ACTION	TIMEFRAME	LEAD AGENCY	PARTNER AGENCY	RELATED PLAN SECTIONS
--------	-----------	-------------	----------------	-----------------------

▲ **GOAL 1: Reduce greenhouse gas emissions from all local sources to put us on track to eliminate emissions by 2050. r**

TARGET 1: By 2032, reduce greenhouse gas emissions by 50%.

▲ CL1.1 Build awareness and provide resources to empower people and organizations to take actions to reduce their share of greenhouse gas emissions. r	Short term	DOEE	OCTO	
▲ CL1.2 Report District emissions annually to track the reductions that can be attributed to specific initiatives. r	Ongoing	DOEE	DCRA, DDOT, DGS, DPW, OPC	
● CL1.3 By 2020, develop a plan to achieve carbon neutrality by 2050. o	Short term	DOEE	DDOT, DGS, DPW	
● CL1.4 Measure and eliminate methane gas leaks into the atmosphere throughout the District. o	Long term	DOEE	OPC	

GOAL 2: Advance physical adaptation and human preparedness to increase the District’s resilience to climate change.

▲ **TARGET 2: By 2032, require 100% of new buildings, major infrastructure, and neighborhood plans to consider climate risks and identify adaptation solutions. r**

▲ CL2.1 Evaluate and reduce the vulnerability of the District’s transportation, energy, water, and telecommunications infrastructure to the anticipated impacts of climate change. r	Medium term	DOEE	DC Water, DDOT, DGS, EOM, HSEMA, OCTO, OP, OUC	\$
▲ CL2.2 Improve emergency and community preparedness to respond to climate change events including extreme heat, storms, and flooding, with a focus on the most at-risk populations. r	Medium term	HSEMA	DCHA, DC Water, DOEE, DPW, FEMS, MPD, OP	
▲ CL2.3 Require all new development projects to assess climate risks and incorporate climate adaptation solutions. r	Medium term	OP	DOEE	
● CL2.4 Fully implement and regularly update the <i>Climate Ready DC Plan</i> , the District’s plan to adapt to the changing climate. o	Ongoing	DOEE		

\$ | ECONOMY



ACTION	TIMEFRAME	LEAD AGENCY	PARTNER AGENCY	RELATED PLAN SECTIONS
--------	-----------	-------------	----------------	-----------------------

GOAL 1: Grow and diversify the District’s economy, focusing on sustainability, climate, and resilience industries.



TARGET 1: By 2032 develop two times as many small District-based businesses.



EC1.1 Provide training, financial assistance, and marketing for jobs in sustainability business start-ups, targeting strategic populations.	Medium term	DOEE, DSLBD	DHCD, DMGEO, DMPED		●
EC1.2 Coordinate with anchor institutions such as hospitals and universities to encourage purchasing from local sustainability-related businesses.	Medium term	DOEE	DSLBD, OCP		▲
EC1.3 Work with private partners to support new incubators and “maker spaces” with a focus on communities most in need.	Medium term	DSLBD, DMPED	DCPL, DMGEO, OP		●
EC1.4 Increase the number of businesses that offer sustainable products and services by connecting them to third party certification programs.	Short term	DOEE	DSLBD, DMPED		●
EC1.5 Provide training and connect District businesses to financial resources to operate more sustainably.	Short term	DOEE	DSLBD, DMPED		●
EC1.6 Launch the DC Green Bank by 2020.	Short term	DOEE			●

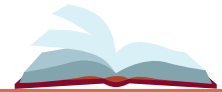
GOAL 2: Train District residents to be competitive for livable wage jobs in growing industries such as sustainability, the environment, and resilience.



TARGET 2: By 2032, cut citywide unemployment by 50% in severely unemployed populations.



EC2.1 Partner with the Workforce Investment Council to identify the fastest growing sustainability fields for future job training programs.	Short term	DOEE, DOES	DMGEO, DMPED, WIC		▲
EC2.2 Help connect underemployed residents with jobs in sustainability with opportunities in growing fields.	Medium term	DHS, DOEE	DMPED, DOEE		●
EC2.3 Create new paid job opportunities in sustainability fields for young adults and high school students, focusing on populations with highest unemployment rates.	Medium term	DOEE	DCPS, DOES, OSSE		▲
EC2.4 Track the economic impact of jobs in sustainability on the local economy.	Short term	DOEE, OP	DMPED, DOES		●



ACTION	TIMEFRAME	LEAD AGENCY	PARTNER AGENCY	RELATED PLAN SECTIONS
--------	-----------	-------------	----------------	-----------------------

▲ **GOAL 1: Ensure that every student in the District graduates with the knowledge to protect and restore their local environment.**



▲ **TARGET 1: By 2032, teach 100% of children in the District about environmental and sustainability concepts.**



▲ ED1.1 Modernize all public school buildings, recreation centers, and libraries to reduce their environmental footprint and integrate sustainable and healthy practices into their operations.	Medium term	DGS	DCPL, DCPS, DOEE, DPR	🏠
● ED1.2 Implement a program to encourage all District schools to adopt healthy, green, and sustainable practices.	Long term	DOEE, OSSE	DCPS	🏠 🎓 🌳 ❤️
▲ ED1.3 Implement the Environmental Literacy Plan.	Short term	OSSE	DCPS, DOEE	
● ED1.4 Provide adequate support so that every student will have access to meaningful environmental experiences in elementary, middle, and high school.	Long term	DOEE, OSSE	DCPS, DOEE	🌳
● ED1.5 Provide dedicated scholarship funding to allow District residents of color to major in sustainability programs in higher education.	Long term	EOM	OSSE, DCPS, DOEE, UDC	💰

● **GOAL 2: Expand community education and engagement on sustainability practices that will help residents live green lifestyles and save money.**



▲ **TARGET 2: By 2032, leverage resources to expose 100% of District residents living in underserved and underrepresented communities to sustainability events and initiatives in their neighborhood.**

▲ ED2.1 Increase District residents' awareness of sustainable living using culturally-relevant and community-driven materials.	Short term	DOEE	OP	
● ED2.2 Increase participation of people of color in Sustainable DC community events, planning efforts, and implementation of programs and policies.	Short term	DOEE	DMGEO, EOM, OP	
▲ ED2.3 Recognize residents and community leaders for their sustainability achievements with awards and in public sustainability campaigns.	Short term	DOEE	EOM	
● ED2.4 Develop a list of actions that residents should take to help reach our sustainability goals based on data.	Short term	DOEE	DDOT, DPW, OP	
● ED2.5 Create and promote accessible opportunities for adults to learn and build connections to the natural world.	Short term	DOEE	DMGEO, DPR, UDC	💰 🌳



ACTION	TIMEFRAME	LEAD AGENCY	PARTNER AGENCY	RELATED PLAN SECTIONS
--------	-----------	-------------	----------------	-----------------------

GOAL 1: Improve the efficiency of District-wide energy use to reduce overall consumption.

TARGET 1: By 2032, cut per capita energy use District-wide by 50%.

EN1.1 Expand regular tracking and disclosure of energy performance.	Short term	DOEE	DGS	
EN1.2 Establish a Building Energy Performance Standard for existing large buildings.	Short term	DOEE	DCRA	
EN1.3 Replace all street and public lighting with high efficiency fixtures that protect public health, reduce light pollution, and do not harm wildlife.	Short term	DDOT	DCPS, DPR, DGS	
EN1.4 Fully fund, implement, and regularly update the <i>Clean Energy DC Plan</i> , the plan to achieve the District's greenhouse gas reduction goals.	Medium term	DOEE	DGS, EOM	
EN1.5 By 2020, launch a citywide educational and behavioral campaign to lower citywide energy use and expand awareness of the District's resources for efficiency and renewable energy.	Short term	DOEE	DCHA, EOM	
EN1.6 Launch a program to accelerate deep energy retrofits in at least 20% of all buildings.	Short term	DOEE	DCHA, DGS	

GOAL 2: Increase the proportion of energy sourced from both clean and renewable supplies.

TARGET 2: By 2032, increase renewable energy to make up 50% of the District's energy supply.

EN2.1 Reduce the use of fossil fuels for electricity generation and heating, and eliminate the dirtiest fuels by 2023.	Medium term	DOEE	OPC	
EN2.2 Build and support commercial and residential renewable energy projects sufficient to get at least 5 percent of citywide electricity from local generation.	Long term	DOEE	DC Water	
EN2.3 Provide residents with renewable energy by default, sourced from regional wind and solar farms by 2023.	Medium term	DOEE		
EN2.4 Expand the use of renewable sources of heating and cooling.	Ongoing	DOEE	DGS, OP, DC Water	

GOAL 3: Modernize energy infrastructure for improved efficiency and resilience.

TARGET 3: By 2032, 100% of residents live within walking distance of a facility offering clean backup power to serve critical needs during power outages.

EN3.1 Use smart meters and smart grid infrastructure to collect data on electricity use.	Ongoing	DOEE	DDOT, DGS, OCTO, OP, OPC	
EN3.2 Improve the reliability and resilience of the transmission and distribution of electricity, using smart grid technologies and distributed energy resources.	Medium term	DOEE	DDOT, OPC OCTO, OP,	
EN3.3 Remove all barriers to modernizing electricity infrastructure to enable the deployment of neighborhood-scale energy systems and distributed energy resources.	Medium term	DOEE	DC Water, DDOT, OP, OCTO, OPC	
EN3.4 By 2020, complete and begin implementing a neighborhood-scale energy system development plan to target high load growth areas and at risk communities.	Short term	DOEE	DC Water, OP, OPC	




| FOOD










ACTION	TIMEFRAME	LEAD AGENCY	PARTNER AGENCY	RELATED PLAN SECTIONS
▲ GOAL 1: Expand agricultural uses and production within the District.				\$ ❤️
▲ TARGET 1: By 2032, put 20 additional acres, including public right of way and rooftops, under cultivation for growing food.				\$ ❤️ 🌳
▲ FD1.1 Implement the “Urban Farming and Food Security Act” and expedite the process to make public and private lands available for a variety of urban agriculture uses.	Short term	DGS, DPR	DCFPC, DC Health, DCRA, DDOT, DOEE, OP	\$ ❤️ 🌳
▲ FD1.2 Develop food-producing landscaping on five acres of District public spaces distributed throughout all eight wards.	Medium term	DGS	DCFPC, DDOT, DPR, DOEE, OP	\$ ❤️ 🌳
▲ FD1.3 Develop and support school gardens and garden-based food system education to engage DCPS and charter school students.	Short term	OSSE	DCPS, DGS, DOEE	📖 ❤️
▲ GOAL 2: Ensure that all residents have access to affordable, quality, and nutritious food.				🏠 \$ ❤️
▲ TARGET 2: By 2032, ensure that 75% of low-income residents live within a quarter mile of a quality full-service grocery store, with a focus on underserved communities.				🏠 \$ ❤️
● FD2.1 Identify and implement effective, innovative policies to recruit quality, full-service grocery stores to underserved areas.	Medium term	DCFPC, DMPED, OP	DSLBD	🏠 \$ ❤️
● FD2.2 Provide financial support and technical assistance to small retailers and mobile food vendors to expand healthy, culturally-appropriate food options for neighborhoods with limited access to fresh and healthy food.	Short term	DSLBD	DC Health	🏠 \$ ❤️
▲ FD2.3 Expand and promote food assistance programs at grocery stores, farmers markets, and corner stores citywide.	Medium term	DC Health	DHS, DSLBD	🏠 \$ ❤️
● FD2.4 Support evidence-based nutrition and cooking education efforts across all populations to help residents make healthier choices.	Short term	DC Health	DCFPC, DSLBD, OP	📖 ❤️
● FD2.5 Implement the Nutrition Education Plan to make nutrition education as comprehensive as possible and to nurture students’ healthy eating habits.	Medium term	OSSE	DCFPC, DCPS, OP, UDC	\$ 📖 ❤️
▲ FD2.6 Improve the quality of institutional food grown or purchased with District local funds, including in DCPS and public charter schools, childcare centers, jails, homeless shelters, and other institutional settings.	Medium term	DCFPC	DBH, DCPS, DHS, DOC, OCP, OSSE	📖 ❤️



ACTION	TIMEFRAME	LEAD AGENCY	PARTNER AGENCY	RELATED PLAN SECTIONS
--------	-----------	-------------	----------------	-----------------------

GOAL 3: Develop and support the food industry as a vibrant and equitable sector of the local economy.   

TARGET 3: By 2032, expand the food sector of the economy by 2,000 jobs that pay a living wage, offer safe working conditions, promote sustainability, and increase healthy food access for residents.   












































FD3.1 Complete a comprehensive study of the District’s food system and recommend policies to improve the current system.	Ongoing	DCFPC, OP		  
FD3.2 Collaborate regionally on the creation of a local food hub and other facilities for aggregation, processing, and distribution of local food products.	Medium term	DCFPC, DMPED	OP	  
FD3.3 Develop a citywide workforce development strategy focused on expanding food sector jobs that promote public health and fair working conditions.	Medium term	DCFPC, DOES, OP, WIC	DOES, DMPED, DSLBD	  

GOAL 4: Prevent, reduce, and recover food waste.   

TARGET 4: By 2032, reduce food waste by 60%.   

FD4.1 Conduct a food waste assessment to identify the types and quantities of food that are thrown away in the District.	Medium term	DPW	DCFPC, OP	 
FD4.2 Educate businesses and institutions on how to prevent food waste, recover unused food, and understand liability protections.	Medium term	DCFPC, DC Health, DPW	DPR, DOEE, OP, ORM	 
FD4.3 Incentivize food donations by businesses, schools, and institutions through policy changes.	Medium term	DME, OTR	DCFPC, DCPS, DPW, DSLBD, OCTO, OP	  
FD4.4 Educate residents and food related businesses on proper buying, storing, and disposing of food to minimize waste.	Medium term	DCFPC, DPW	DCPS, DC Health, DPR, DPW, DSLBD, OP	 







ACTION	TIMEFRAME	LEAD AGENCY	PARTNER AGENCY	RELATED PLAN SECTIONS
GOAL 1: Provide residents with resources to achieve healthy, active lifestyles, regardless of income, ability, employment, or neighborhood.				 
TARGET 1: By 2032, 65% of residents get at least 150 minutes per week of physical activity.				 
● HE1.1 Collect data at parks and recreation centers, particularly in areas of low-use and low income, to improve planning and programming decisions.	Short term	DPR	DC Health, DGS, OCTO, OP	 
▲ HE1.2 Prioritize community-driven strategies to support physical activity in unexpected but everyday spaces across Washington, DC.	Medium term	DPR	CAH, DDOT, OP	  
● HE1.3 Design parks, open spaces, and recreational facilities to reflect the resident preferences and culture of the local population, and to accommodate a range of age groups and abilities.	Long term	DPR	DBH, DC Health, DGS, OP	  
GOAL 2: Provide high quality, safe, and sustainable places to be healthy and active.				
TARGET 2: By 2032, reduce disparities in the quality of places contributing to disparate health outcomes by 15%.				
▲ HE2.1 Complete a new study on the intersection between the built environment and health to understand the social, environmental, and economic barriers to healthy outcomes.	Short term	DC Health, OP	DBH, DDOT, DGS, DOEE, DPR	   
● HE2.2 Eliminate the human health impacts of contaminated sites in Washington, DC and identify areas where new authority is required.	Long term	DOEE	DC Health, DMPED, EOM	 
● HE2.3 Improve public safety through the development and implementation of resident-driven design, programming, and maintenance of streetscapes, parks, and other public spaces.	Medium term	DDOT, DPR, OP	DGS, MPD	 
▲ HE2.4 Audit and eliminate environmental health threats (mold, lead, and carbon monoxide) in 100% of Washington, DC's public housing.	Long term	DCHA	DHCD, DOEE	
● HE2.5 Develop an interagency heat management strategy to minimize the injury rate associated with extreme cold and heat temperature days.	Short term	DOEE, HSEMA	DBH, DDOT, DGS, DC Health, DHS, DPR, DPW, DC Water, FEMS, OP, OUC	  
GOAL 3: Improve population health by systematically addressing the link between community health and place, including where we are born, live, learn, work, play, worship, and age.				 
TARGET 3: By 2032, reduce racial disparities in life expectancy by 50%.				 
● HE3.1 Evaluate Health Impact Assessments as a tool for promoting health through new policies, practices, developments and renovations.	Medium term	DC Health, OP	DMPED, DOEE	   
● HE3.2 Study healthy community design principles for inclusion in all new affordable housing projects and major retrofits.	Short term	DHCD	DC Health, DDOT, DOEE, DPR, OP	   
● HE3.3 Launch a comprehensive multi-level health literacy campaign across the District.	Short term	DC Health	DBH	  
● HE3.4 Increase public awareness campaigns concerning how to prevent bites and control diseases spread by mosquitoes, ticks, and fleas in all communities.	Ongoing	DC Health, DOEE		   



ACTION	TIMEFRAME	LEAD AGENCY	PARTNER AGENCY	RELATED PLAN SECTIONS
--------	-----------	-------------	----------------	-----------------------

GOAL 1: Protect, restore, and expand aquatic ecosystems.

TARGET 1: By 2032, protect, restore, and create 1,000 acres of critical aquatic habitat.

NA1.1 Develop a Wetland Registry to facilitate restoration or creation of wetland habitat.	Long term	DOEE	DGS, DPR, OCTO	
NA1.2 Plant and maintain an additional 150 acres of wetlands in targeted Conservation Opportunity Areas.	Long term	DOEE	DGS, DPR	
NA1.3 Partner with developers to incorporate living shorelines in waterfront developments.	Short term	DOEE	OP	
NA1.4 Reduce threats to 75 aquatic species of greatest conservation need.	Long term	DOEE		





GOAL 2: Protect, restore, and expand land ecosystems.

TARGET 2: By 2032, restore, protect, create, or improve 2,000 acres of critical land habitat.

NA2.1 Plant and maintain 10,500 new trees per year in priority areas to achieve 40% tree canopy cover by 2032.	Ongoing	DDOT	DGS, DOEE, DPR, OCTO	
NA2.2 Remove invasive plants on 500 acres of critical habitat based on a strategic management plan.	Medium term	DOEE	DGS	
NA2.3 Create or restore a minimum of 200 acres of meadow habitat.	Long term	DOEE	DCHA, DDOT, DGS, DHCD, DPR, OP	
NA2.4 Incorporate biodiversity and the use of native plants in green infrastructure on District Government land.	Short term	DOEE, DDOT	DGS, DPR, OP	
NA2.5 Create a habitat connectivity plan to guide restoration of viable, native habitats throughout Washington, DC and in coordination with surrounding jurisdictions.	Short term	DOEE	DDOT, DGS, DPR, OCTO, OP	
NA2.6 Require the District Government to use native plants and trees in all landscaping and green infrastructure outside the roadway right-of-way.	Short term	DOEE	DDOT, DGS, OP	

GOAL 3: Improve human access to and stewardship of nature.

TARGET 3: By 2032, provide access to the natural environment or quality green space within a 10-minute walk of all residents.






NA3.1 Improve the formal trail network for hiking and biking—prioritizing areas east of the Anacostia River—while balancing protection of habitat.	Medium term	DDOT	DPR, OP	 
NA3.2 Increase the number of “nature play spaces” at District playgrounds.	Medium term	DPR	DCPS, DGS	
NA3.3 Create or improve small parks and natural spaces in underserved areas.	Short term	DPR	DCPS, DDOT, DGS, DOEE, OP	
NA3.4 Provide informational resources on backyard wildlife habitats, native plant gardening, container and vertical gardening, and creating pollinator habitats.	Short term	DOEE	DC Health, DPR	
NA3.5 The District Government will incorporate nature into the places we live, play, and work, to reduce stress and improve health—known as biophilic design.	Medium term	DOEE	DCPS, DGS	

| TRANSPORTATION

ACTION	TIMEFRAME	LEAD AGENCY	PARTNER AGENCY	RELATED PLAN SECTIONS
--------	-----------	-------------	----------------	-----------------------






GOAL 1: Improve connectivity and accessibility through efficient, integrated and affordable transit systems.

▲ **TARGET 1: By 2032, increase use of public transit to 50% of all commuter trips in all wards.**

▲ TRI.1 Expand high capacity transit on high ridership corridors.	Medium term	DDOT, WMATA		
▲ TRI.2 Improve transit connections to employment and activity centers from underserved areas.	Medium term	DDOT	WMATA	 \$
▲ TRI.3 Define and secure permanent funding for transit planning and improvements.	Short term	DDOT	EOM	
▲ TRI.4 Develop design guidelines to ensure transit systems are resilient to climate change.	Medium term	DDOT	DOEE, HSEMA, WMATA	
● TRI.5 Identify and remove the obstacles to families taking transit.	Medium term	DDOT	WMATA	

▲ **GOAL 2: Expand safe, connected infrastructure for pedestrians and cyclists.**

▲ **TARGET 2: By 2032, increase biking and walking to 25% of all commuter trips in all wards.**

▲ TR2.1 Develop and maintain a safe and convenient citywide bicycle lane and trail network.	Long term	DDOT		 
▲ TR2.2 Grow the Capital Bikeshare program so that 75% of District residents have access to a station within a quarter mile of their home.	Medium term	DDOT		
▲ TR2.3 Increase bike, scooter and pedestrian safety education for drivers, cyclists, and pedestrians, and enforce laws protecting those who walk and use scooters and bicycles.	Ongoing	DDOT	DMV, MPD	
▲ TR2.4 Collect data to improve understanding of cyclist and pedestrian travel patterns.	Short term	DDOT, OCTO		
▲ TR2.5 Program crosswalks and traffic lights for improved safety and convenience of pedestrians, prioritizing children, older adults, and people with disabilities.	Short term	DDOT		
● TR2.6 Ensure sidewalks are in good repair on at least 90% of District streets, prioritizing new sidewalk construction in pedestrian priority areas such as schools, parks, transit stops, and retail corridors.	Medium term	DDOT		\$ 



ACTION	TIMEFRAME	LEAD AGENCY	PARTNER AGENCY	RELATED PLAN SECTIONS
--------	-----------	-------------	----------------	-----------------------

GOAL 3: Enhance affordable, convenient transportation options to reduce dependency on single occupant vehicles.



TARGET 3: By 2032, reduce commuter trips made by car to 25%.



TR3.1 Encourage car-pooling and car-sharing.	Short term	DDOT	DOEE		
TR3.2 Encourage private businesses to offer incentives to employees for transit, biking, and walking.	Medium term	DDOT, DOEE, DOES			
TR3.3 Complete a study to understand the best strategies for reducing congestion for all without unfairly burdening residents with low incomes.	Medium term	DDOT, DOEE	OP		
TR3.4 Develop a strategy in response to autonomous vehicles.	Short term	DDOT, DMPED	DOEE, DPW		
TR3.5 Encourage and promote telecommuting and alternative work schedules for District Government employees.	Short term	DCHR	DOEE		

GOAL 4: Reduce greenhouse gas emissions and air pollution from the transportation sector.



TARGET 4: Reduce greenhouse gas emissions from transportation by 60%.



TR4.1 Strictly limit idling engines.	Short term	DOEE	DDOT		
TR4.2 Require the District Government to purchase green fleet and passenger vehicles.	Medium term	DPW, MPD, OSSE	DDOT, DOEE		
TR4.3 Encourage network of electric vehicle charging stations throughout the city.	Medium term	DDOT, DOEE	DFHV, DPW, OP, PSC, WMATA		
TR4.4 Fully electrify District-controlled buses, and work with regional bus systems to reduce regional bus emissions.	Medium term	DDOT, OSSE, WMATA	DOEE, DPW		

| WASTE

ACTION	TIMEFRAME	LEAD AGENCY	PARTNER AGENCY	RELATED PLAN SECTIONS
--------	-----------	-------------	----------------	-----------------------

▲ **GOAL 1: Reduce waste generated per capita in the District.**

▲ **TARGET 1: By 2032, reduce per capita waste generation by 15%.**

▲ WS1.1 Develop a comprehensive Zero Waste plan with the objective of decreasing all citywide waste streams and achieving source reduction goals.	Short term	DPW	DOEE, DGS, DPR, OP	
▲ WS1.2 Study the feasibility of an equitably priced collection billing structure (like Save-As-You-Throw).	Short term	DPW	DOEE	
▲ WS1.3 Expand current bans and fees on waste products like expanded polystyrene and disposable bags.	Medium term	DOEE	DPW, EOM	\$ 🌱 💧
▲ WS1.4 Work with surrounding jurisdictions to develop and implement a regional approach to reducing plastic waste.	Long term	DOEE, DPW	EOM	
WS1.5 Increase purchases of Environmentally Preferable Products and Services.	Short term	DOEE, OCP		\$ 📖

▲ **GOAL 2: Facilitate local reuse and recovery of materials to capture their economic and social value.** \$

▲ **TARGET 2: By 2032, reuse 20% of all waste produced in the District.**

▲ WS2.1 Reuse or recycle 50% of all commercial construction waste.	Medium term	DOEE	DCRA, DGS, DPW	🏠
▲ WS2.2 Reuse 5% of total non-hazardous residential building materials.	Long term	DOEE	DCRA, DPW	🏠
● WS2.3 Develop a greenhouse gas impact calculator for specific waste streams to support the development of a circular economy and guide further policy development.	Short term	DOEE	DPW	🌐 🧑‍🔧 \$
▲ WS2.4 Support the development of a locally based, circular economy by facilitating the separation of waste into commodity streams.	Short term	DOEE	DPW	\$

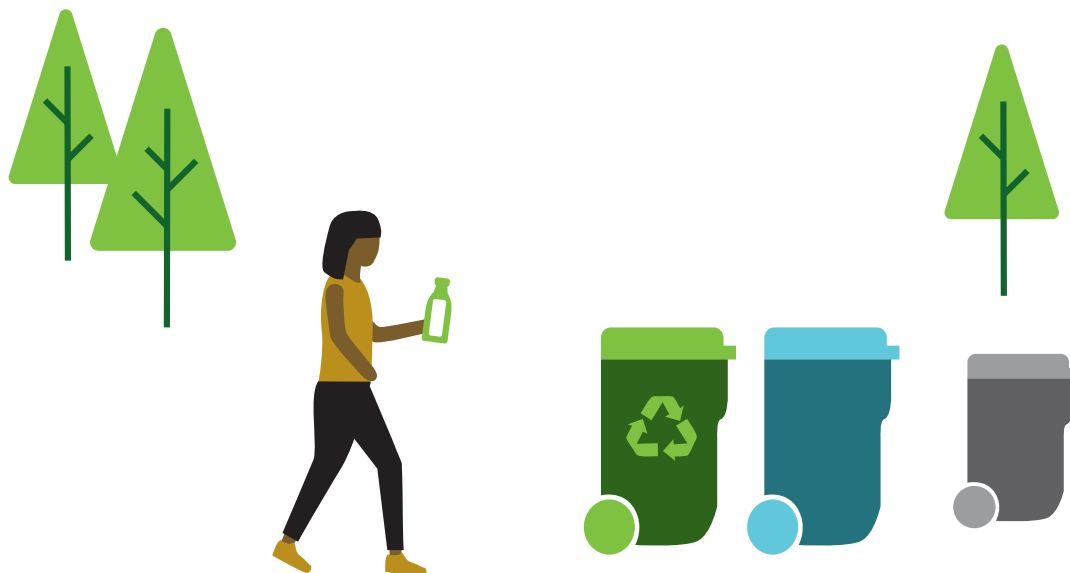


ACTION	TIMEFRAME	LEAD AGENCY	PARTNER AGENCY	RELATED PLAN SECTIONS
--------	-----------	-------------	----------------	-----------------------

GOAL 3: Achieve zero waste citywide.

TARGET 3: By 2032, achieve 80% waste diversion citywide without the use of landfills, waste-to-energy or incineration.






WS3.1 Provide District Government-served households with three, right-sized bins for collecting compostable materials, recyclable items, and trash.	Medium term	DPW	DOEE	🚲
WS3.2 Establish a new organics processing facility (composting, anaerobic digestion, or co-digestion pre-processing) in the District to capture food and other organic waste.	Medium term	DPW	DC Water, DGS, DOEE, OP	🏠
WS3.3 Increase the number of co-located (trash and recycling) receptacles that are publically accessible.	Medium term	DPW	DCPL, DGS, DOEE, DPR, OP	🏠
WS3.4 Aggressively enhance educational resources and outreach campaigns that educate residents, workers and visitors on waste minimization, recycling, and composting.	Short term	DPW	DCPL, DOEE, DPR, OCC, OP	📖
WS3.5 Expand Washington, DC's product stewardship program to include additional product streams.	Medium term	DOEE	DGS, DPW, OP	\$
WS3.6 Bolster enforcement efforts to ensure that commercially-served businesses and multifamily buildings comply with the requirements to provide adequate and timely on-site recycling and trash collection.	Medium term	DPW	DCPL, DGS, DOEE, DPR, OP	



ACTION	TIMEFRAME	LEAD AGENCY	PARTNER AGENCY	RELATED PLAN SECTIONS
--------	-----------	-------------	----------------	-----------------------


GOAL 1: Improve the quality of waterways to standards suitable for fishing and swimming.

TARGET 1: By 2032, make 100% of District waterways fishable and swimmable.

▲ WT1.1 Encourage reduced use of personal care products, pesticides, and fertilizers that contain existing and emerging contaminants.	Long term	DOEE	DC Water, DPW	
▲ WT1.2 Create and adopt a salt management strategy for snow and ice removal that minimizes the use of road salt, and study alternatives to reduce Washington, DC's reliance on road salt.	Short term	DOEE, DPW	DC Water, DDOT	
● WT1.3 Provide education on how people can reduce stormwater pollution through good housekeeping, vehicle maintenance, property lawn care, and pet waste management.	Medium term	DOEE		
● WT1.4 Develop and implement an Anacostia River remediation work plan that restores fish and wildlife habitat while improving public access to the river.	Long term	DOEE		
● WT1.5 Increase public access to water quality monitoring data for public waterways and develop partnerships to expand the scope of water quality monitoring.	Medium term	DOEE		
● WT1.6 Restore 10 miles of streams in the District.	Long term	DOEE		

▲ **GOAL 2: Reduce the volume of stormwater runoff.**

▲ **TARGET 2: By 2032, implement green infrastructure practices to capture, retain, or reuse stormwater from at least 10% of the District's land area.**

▲ WT2.1 Install and maintain four million new square feet of green roof.	Medium term	DCRA, DOEE, DGS		
▲ WT2.2 Audit 1,200 properties per year via the RiverSmart Homes program and increase participation in areas of the city where enrollment has been historically low.	Short term	DOEE		
● WT2.3 Incorporate neighborhood-scale stormwater collection into large-scale planning efforts early in the redevelopment process, including public right of way and parks.	Medium term	DDOT	DC Water, DGS, DOEE, DPR, OP	
● WT2.4 Grow Washington, DC's Stormwater Retention Credit Trading program.	Short term	DOEE		
● WT2.5 Streamline and coordinate incentive programs for combined green roofs and solar projects.	Short term	DOEE	DCRA	
● WT2.6 Pilot a large scale network of green infrastructure with smart controls to better understand performance and inform future project designs.	Medium term	DOEE	DGS	



ACTION	TIMEFRAME	LEAD AGENCY	PARTNER AGENCY	RELATED PLAN SECTIONS
--------	-----------	-------------	----------------	-----------------------

GOAL 3: Reduce demands for potable water and increase rainwater reuse.

TARGET 3: By 2032, decrease per capita potable water use by 20%. ▲

WT3.1 Update the District building codes to increase water-efficiency standards and allow the use of alternative water systems.	Medium term	DCRA	DOEE	
WT3.2 Develop incentives for water-efficiency measures in landscaping and buildings.	Long term	DOEE	DCRA, DC Water	
WT3.3 Pilot water efficiency projects in the District Government to lead by example.	Short term	DGS	DOEE, OCTO	●

GOAL 4: Ensure safe, accessible drinking water. ●

TARGET 4: By 2032, ensure 100% of District residents have access to clean, affordable drinking water. ●

WT4.1 Identify and implement the most effective steps to improve the resilience of the drinking water system to natural and human disasters.	Medium term	DC Water, DOEE	EOM, HSEMA	● ●
WT4.2 Eliminate all lead service lines and plumbing from District Government-owned buildings.	Long term	DGS	DC Water	● ●
WT4.3 Replace at least 1% of water pipes each year.	Long term	DC Water		● ●
WT4.4 Work with the Washington Aqueduct to ensure that the District's drinking water is of the highest possible quality by protecting source water, addressing emerging contaminants, and upgrading drinking water treatment processes.	Long term	DC Water		● ●

REFERENCES

SETTING THE SCENE

1. DC Office of Planning: https://planning.dc.gov/sites/default/files/dc/sites/op/publication/attachments/Forecasting%20DC%20Growth%202015-2045%20-%20Results%20and%20Methodology%20-%20FINAL_011217.pdf
2. U.S. Census Bureau: <https://www.census.gov/quickfacts/fact/table/dc>
3. U.S. Census Bureau: <https://www.census.gov/quickfacts/fact/table/dc>
4. U.S. Census Bureau: <https://www.census.gov/quickfacts/fact/table/dc>
5. U.S. Census Bureau: <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkms>
6. DC's Economic Strategy Dashboard: <http://dceconomicstrategy.com/household-income/>
7. U.S. Census Bureau: <https://www.census.gov/quickfacts/fact/table/dc/PST045217#PST045217>
8. DC's Economic Strategy Dashboard: <http://dceconomicstrategy.com/household-income/>
9. The Washington Post: https://www.washingtonpost.com/local/as-dc-families-get-richer-staggering-disparities-persist-report-finds/2017/04/17/8fa41700-238a-11e7-b503-9d616bd5a305_story.html?utm_term=.41f9d4369aa3
10. Georgetown University: https://www.georgetown.edu/sites/www/files/The%20Health%20of%20the%20African%20American%20Community%20in%20the%20District%20of%20Columbia.pdf#_ga=2.99727326.1573850186.1497270516.1454094264.1480960495
11. Georgetown University: https://www.georgetown.edu/sites/www/files/The%20Health%20of%20the%20African%20American%20Community%20in%20the%20District%20of%20Columbia.pdf#_ga=2.99727326.1573850186.1497270516.1454094264.1480960495

EQUITY

12. Brookings Institute: <https://www.brookings.edu/research/time-for-justice-tackling-race-inequalities-in-health-and-housing/>
13. 2017 American Community Survey 1-year estimates
14. DC Fiscal Policy Institute: <https://www.dcfpi.org/all/dcs-growing-prosperity-is-not-reaching-black-residents-census-data-show/>

CLIMATE

15. Department of Energy and Environment Greenhouse Gas Inventory
16. Source: (https://www.ghgprotocol.org/sites/default/files/ghgp/Global-Warming-Potential-Values%20%28Feb%2016%202016%29_1.pdf)

ECONOMY

17. DC's Economic Strategy: http://dceconomicstrategy.com/wp-content/uploads/2017/03/Econ-Strategy_Full-Report-for-Distribution_03.07.17-1-1.pdf
18. Department of Employment Services: https://does.dc.gov/sites/default/files/dc/sites/does/page_content/attachments/Aug.2018_EmpStatus_DC.pdf
19. U.S. Bureau of Labor Statistics: <https://data.bls.gov/timeseries/LNS14000000>
20. DC Department of Employment Services: https://does.dc.gov/sites/default/files/dc/sites/does/page_content/attachments/Ward.2017_BM.pdf
21. Economic Policy Institute: <https://www.epi.org/publication/state-race-unemployment-2018q1/>
22. DC's Economic Strategy: http://dceconomicstrategy.com/wp-content/uploads/2017/03/Econ-Strategy_Full-Report-for-Distribution_03.07.17-1-1.pdf
23. Department of Energy and Environment: <https://doee.dc.gov/service/solar-works-dc>
24. 2017 U.S. Energy and Employment Report: <https://www.energy.gov/downloads/2017-us-energy-and-employment-report>
25. Department of Energy and Environment: <https://doee.dc.gov/release/doee-and-does-launch-solar-works-dc>

26. Gallup News: <https://news.gallup.com/businessjournal/178787/why-new-companies-fail-during-first-five-years.aspx>
27. Economic Policy Institute: <https://www.epi.org/publication/state-race-unemployment-2018q1/>

EDUCATION

28. Sustainable DC survey conducted summer 2017
29. Diverse Green: https://www.diversegreen.org/wp-content/uploads/2015/10/FullReport_Green2.0_FINAL.pdf

ENERGY

30. Department of Energy and Environment Greenhouse Gas Inventory
31. Clean Energy DC Plan: <https://doee.dc.gov/cleanenergydc>
32. US Department of Energy: <https://www.energy.gov/energysaver/save-electricity-and-fuel/lighting-choices-save-you-money/led-lighting>
33. Nature Magazine: <https://www.nature.com/articles/d41586-018-00568-7>

FOOD

34. IssueLab: <https://www.issuelab.org/resources/27621/27621.pdf>
35. DC Food Policy Council: <https://dcfoodpolicy.org/>
36. Food Research & Action Center: <http://www.frac.org/wp-content/uploads/breakfast-for-behavior.pdf>
37. Food Research & Action Center: <http://www.frac.org/wp-content/uploads/hunger-health-impact-poverty-food-insecurity-health-well-being.pdf>
38. IssueLab: <https://www.issuelab.org/resources/27621/27621.pdf>

HEALTH

39. District of Columbia Behavioral Risk Factor Surveillance System (DC BRFSS): <https://dchealth.dc.gov/sites/default/files/dc/sites/doh/publication/attachments/DC%20BRFSS%202015%20Annual%20Report%20-%20Web%20Edition.pdf>
40. This would be measured by an index of urban design elements (see Action HW2.1 for the data which would be included).

NATURE

41. Office of Planning's State Data Center
42. Department of Energy and Environment's 2015 Wildlife Action Plan: https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/02%202015%20WildlifeActionPlan%20Ch1%20Introduction.pdf
43. Trust for Public Land: <https://www.tpl.org/media-room/trust-public-land-releases-2018-parkscore%20AE-index-ranking-park-systems-100-largest-us#sm.00003rklsp5jof40q0s1evrbkjkem>
44. District Department of Energy & Environment (DOEE): <https://doee.dc.gov/service/history-wetlands-district>

TRANSPORTATION

45. Greater Greater Washington: <https://gwwash.org/view/34772/dcs-daytime-population-is-over-a-million>
46. INRIX Global Traffic Scorecard: <http://inrix.com/scorecard/>
47. Department of Energy and Environment Greenhouse Gas Inventories: <https://doee.dc.gov/service/greenhouse-gas-inventories>
48. WalkScore: <https://www.walkscore.com/cities-and-neighborhoods/>
49. District Department of Transportation
50. Harvard Medical School: <https://www.health.harvard.edu/staying-healthy/walking-your-steps-to-health>
51. The Washington Post: https://www.washingtonpost.com/news/where-we-live/wp/2017/10/09/walkable-neighborhoods-provide-health-environmental-and-financial-benefits/?utm_term=.b3e78f120bf0
52. American Public Transportation Association: <https://www.apta.com/mediacenter/pressreleases/2016/Pages/Hidden-Traffic-Safety-Solution.aspx>
53. American Public Transportation Association: <https://www.apta.com/mediacenter/pressreleases/2016/Pages/Hidden-Traffic-Safety-Solution.aspx>
54. Office of Planning analysis
55. District Department of Transportation

- 56. moveDC states 136 miles of bike lane will exist by 2039 (with a baseline of 60 miles in 2014). That would be 3.04 miles of bike lane/year x 15 years = 45.6 + 85 (baseline) = 130.6 miles of bike lane by 2032
- 57. moveDC states 72 miles of protected bike lane will exist by 2039 (with a baseline of 3 miles in 2014). That would be 2.76 miles of protected lane/year x 15 years = 41.4 + 3 (baseline) = 44.3 miles of protected bike lane by 2032
- 58. moveDC says 135 miles of trails will exist by 2039 (using 60 miles 2018 as baseline). That would be 3.6 miles of trail/year x 15 = 53.6 miles + 60 (baseline) = 113.6 miles of trail by 2032
- 59. moveDC: Pedestrian element, pg P-2
- 60. moveDC: Pedestrian element Recommendation A-4
- 61. INRIX: <http://inrix.com/press-releases/scorecard-2017/>
- 62. Society for Human Resources Management: <https://www.shrm.org/resourcesandtools/hr-topics/technology/pages/study-examines-benefits-of-telework.aspx>

WASTE

- 63. WWF Living Planet Report 2018: https://s3.amazonaws.com/wwfassets/downloads/lpr2018_summary_report_spreads.pdf

WATER

- 64. Resurgence of the Anacostia Waterfront 15 Year Progress Along the Anacostia River (2003-2018): https://planning.dc.gov/sites/default/files/dc/sites/op/publication/attachments/Anacostia%20Waterfront%2015%20Year%20Progress%20Report_web.pdf
- 65. Congressional Research Service: <https://fas.org/sgp/crs/misc/R43200.pdf>
- 66. Anacostia Watershed Society: https://www.washingtonpost.com/local/after-10-years-of-flunking-anacostia-river-passes-annual-health-check-with-d-rating/2018/06/13/42932710-6f21-11e8-bf86-a2351b5ece99_story.html?utm_term=.947221715ba8
- 67. Resurgence of the Anacostia Waterfront 15 Year Progress Report Along the Anacostia River (2003-2018): <https://planning.dc.gov/sites/default/files/dc/sites/op/publication/attachments/Anacostia%20Waterfront%20>
- 68. Green Roofs for Healthy Cities: <https://livingarchitecturemonitor.com/news/2018/7/25/2017-green-roof-industry-survey-shows-washington-dc-in-top-spot-for-most-green-roofs-installed>

INFOGRAPHICS

- i. Department of Energy and Environment records and Sustainable DC: <http://www.sustainabledc.org/in-dc/planprogress/>
- ii. K. Kijakazi et al., The Color of Wealth in the Nation's Capital, Urban Institute, 2016 (The source data disaggregates Black Americans by ancestral origin (US or recent African/ Caribbean immigrants)
- iii. Washington Post: <http://apps.washingtonpost.com/g/documents/local/report-african-american-employment-population-and-housing-trends-in-washington-dc/2579/>.
- iv. DC Fiscal Policy Institute: <https://www.dcfpi.org/wp-content/uploads/2016/12/DCFPI-Broken-Foundation-Housing-Report-12-8-16.pdf>
- v. DC Office of Planning
- vi. USA Today: <https://www.usatoday.com/story/money/2015/02/15/cheat-sheet-states-poverty/23325629/>
- vii. Baltimore Business Journal: <https://www.bizjournals.com/baltimore/news/2018/06/04/baltimore-ranks-among-20-metros-with-the-highest.html>
- viii. Walkscore-City Health Dashboard: <https://www.cityhealthdashboard.com/dc/washington/city-view>
- ix. DC Office of Planning
- x. Zillow
- xi. U.S. Green Building Council: <https://www.usgbc.org/articles/washington-dc-named-first-lead-platinum-city-world>
- xii. Department of Energy and Environment
- xiii. Climate Ready DC: https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/CRDC-Report-FINAL-Web.pdf
- xiv. Climate Ready DC https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/CRDC-Report-FINAL-Web.pdf
- xv. Department of Energy and Environment
- xvi. Department of Energy and Environment
- xvii. Climate Ready DC: https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/CRDC-Report-FINAL-Web.pdf
- xviii. Environmental Protection Agency: <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>
- xix. Climate Ready DC: https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/CRDC-Report-FINAL-Web.pdf

- xx. Department of Employment Services: <https://does.dc.gov/node/184512>
- xxi. U.S. Bureau of Labor Statistics: <https://www.bls.gov/eag/eag.dc.htm>
- xxii. Economic Policy Institute: <https://www.epi.org/publication/state-race-unemployment-2018q1/>
- xxiii. DC Economic Strategy: <http://dceconomicstrategy.com/percent-job-postings-dont-require-4-year-degree/>
- xxiv. Gallup: <https://news.gallup.com/poll/141785/gov-employment-ranges-ohio.aspx>
- xxv. Department of Energy and Environment: <https://doee.dc.gov/service/solar-works-dc>
- xxvi. U.S. Department of Energy: <https://www.energy.gov/downloads/2017-us-energy-and-employment-report>
- xxvii. Department of Small and Local Business Development
- xxviii. Xxviii: Green 2.0: https://www.diversegreen.org/wp-content/uploads/2015/10/FullReport_Green2.0_FINAL.pdf
- xxix. U.S. Census Bureau: <https://www.census.gov/quickfacts/dc>
- xxx. Department of General Services
- xxxi. Office of the State Superintendent of Education
- xxxii. Office of the State Superintendent of Education
- xxxiii. Mapdwell Solar System: <https://www.mapdwell.com/en/solar/dc>
- xxxiv. Clean Energy DC: <https://doee.dc.gov/cleanenergydc>
- xxxv. Energy Star: https://www.energystar.gov/products/lighting_fans/light_bulbs
- xxxvi. Department of Energy and Environment
- xxxvii. Union of Concerned Scientists: https://www.ucsusa.org/clean_energy/our-energy-choices/how-is-electricity-measured.html#.XAV3y2hKHPY
- xxxviii. United States Energy Information Administration: <https://www.eia.gov/tools/faqs/faq.php?id=105&t=3>
- xxxix. DC Food Policy Council
- xl. USDA: <https://www.ers.usda.gov/publications/pub-details/?pubid=90022>
- xli. Office of the State Superintendent of Education: <https://osse.dc.gov/node/1368096>
- xlii. DC Food Policy Council
- xliii. District Department of Public Works
- xliv. District of Columbia Behavioral Risk Factor Surveillance System (DC BRFSS) survey
- xlv. Youth Risk Behavior Surveillance System (YRBSS), 2017
- xlvi. State of Obesity: <https://stateofobesity.org/healthcare-costs-obesity/>
- xlvii. District of Columbia Behavioral Risk Factor Surveillance System (DC BRFSS) survey, 2015
- xlviii. TBD
- xlix. City Health Dashboard: <https://www.cityhealthdashboard.com/dc/washington/city-view>
- l. City Health Dashboard: <https://www.cityhealthdashboard.com/dc/washington/city-view>
- li. 2015 District of Columbia Wildlife Action Plan
- lii. 2015 District of Columbia Wildlife Action Plan
- liii. 2015 District of Columbia Wildlife Action Plan
- liv. Department of Energy & Environment
- lv. Department of Energy & Environment
- lvi. Arbor Day Foundation
- lvii. DC Economic Strategy: <http://dceconomicstrategy.com/commute-times/>
- lviii. U.S. Census Bureau: <https://www.census.gov/>
- lix. District Department of Transportation (website and staff): <https://ddot.dc.gov/page/ddot-numbers>
- lx. Washington City Paper: <https://www.washingtoncitypaper.com/news/housing-complex/blog/13122696/park-it>
- lxi. Wall Street Journal: <https://blogs.wsj.com/economics/2014/01/21/vital-signs-more-households-dont-own-a-car/>
- lxii. American Public Transportation Association: <https://www.apta.com/mediacenter/pressreleases/2016/Pages/Hidden-Traffic-Safety-Solution.aspx>
- lxiii. Office of Planning analysis
- lxiv. Department of Energy and Environment 2016 Greenhouse Gas Inventory
- lxv. Department of Public Works
- lxvi. Department of Public Works
- lxvii. Department of Public Works
- lxviii. Department of Energy & Environment
- lix. Department of Energy & Environment
- lxx. Department of Energy & Environment
- lxxi. Department of Energy & Environment
- lxxii. DC Water
- lxxiii. Business Insider: <https://www.businessinsider.com/bottled-water-costs-2000x-more-than-tap-2013-7>
- lxxiv. DC Water

GLOSSARY

Alternative water systems: Sustainable sources of water, not supplied from fresh surface water or groundwater, that offset the demand for freshwater. Examples include harvested rainwater from roofs and waste water from baths, bathroom sinks, washing machines, etc.

Autonomous vehicle (AV): A vehicle that can guide itself without a human driver.

Biodiversity: The variety of life in an area. It is measured by the variety of different species of plants and animals in the environment.

Biophilic design: An innovative way to design places where we live, work, and learn that incorporates nature and creates healthy and productive habitats for people.

Bus Rapid Transit (BRT): High-quality bus transit system that delivers fast, comfortable, and cost-effective services similar in feel to a Metro train, which often includes dedicated bus lanes, stations that are spread further apart, pre-boarding fare collection, and faster boarding.

Carbon emissions: The release of carbon dioxide into the atmosphere. Carbon dioxide is released when burning carbon based fuels such as coal, oil and gas that are used in places such as homes and power stations.

Carbon neutrality: Achieving a state in which the net amount of carbon dioxide or other carbon compounds emitted into the atmosphere is reduced to zero because it is balanced by actions to reduce or offset these emissions.

Carpool: An arrangement in which two or more people drive together to a designated location (in contrast to one person driving in a car alone known as a single occupant vehicle).

Carshare: A model of car rental where people rent cars for short periods of time, often by the hour (e.g., Zipcar, Car2go).

Circular economy: An alternative to the current take-make-dispose model, a circular economy extracts the maximum value from products while in use, then recovers and regenerates products and materials at the end of each service life.

Clean energy: Energy derived from renewable, zero-emission sources (i.e., renewables), as well as energy saved through energy efficiency measures.

Climate adaptation: Being prepared for a changing climate by taking action to reduce the potential impacts of climate change to people, buildings, and infrastructure like water systems, roads, and electricity and natural gas networks.

Compostable materials: Organic matter that biodegrades completely, such as food scraps, leaves, and shredded paper.

Congestion fee: A financial charge to drivers using particularly crowded roads or areas of a city in an attempt to reduce especially heavy traffic.

Conservation Opportunity Areas: Land areas which offer the best opportunity and potential for wildlife conservation. In the District, these areas are identified in the 2015 Wildlife Action Plan.

Demand-based parking: Parking that charges a price based on how desired spots are during a given time period.

Disproportionate impact: Practices that affect one group of people of a protected characteristic (i.e., race) more than another.

Ecosystem modifications: Changes, or modifications, to wildlife habitats due to the development of recreational infrastructure and ongoing recreational activities that threatens land habitats systems.

Electric Vehicle (EV): A vehicle that has a battery instead of a gasoline tank, and an electric motor instead of an internal combustion engine.

Emerging contaminants: Chemicals discovered in the water supply that have not previously been detected.

Environmentally preferable products and services: Products and services that have a lesser or reduced effect on human health and the environment.

Environmental Literacy Plan: A road map that will lay the foundation for District-wide implementation and integration of environmental education into the K-12 curriculum.

Erosion: Removal of surface material, primarily soil and rock debris, by wind, water, or other natural agents.

Fertilizers: Any material of natural or synthetic origin that is applied to soils or plants to supply one or more plant nutrients essential to the growth of plants.

Floor area: The area, measured as square feet or square meters, taken up by a building or part of it.

Fossil fuels: A fuel, such as coal, oil or natural gas, formed from the remains of dead plants and animals.

Gray water: relatively clean waste water from baths, bathroom sinks, washing machines, etc.

Greenhouse Gas Emissions (GHGs): Gases that trap heat in the atmosphere and contribute to the greenhouse effect, including carbon dioxide, methane, ozone, and fluorocarbons.

Green building: A building that via its design, construction, or operation, reduces or eliminates negative effects and can create positive impacts for the environment.

Green ceiling: The unseen, yet unbreakable barriers that keeps racial minorities from attaining employment and rising to the upper ranks in environmental organizations, regardless of their qualifications or achievements.

Green infrastructure: An approach to managing wet weather impacts that reduces and treats stormwater at its source while providing environmental, social, and economic benefits. Examples of green infrastructure include rain gardens and green roofs.

Green job: Any job or self-employment that genuinely contributes to sustainability, climate, or resilience.

Green roofs: A roof on a building that is partially or completely covered with vegetation and a growing medium, planted over a waterproofing membrane.

Green washing: Pretending to be environmentally-friendly to attract new customers.

Green Zone Employment Program: A short term summer job program that provides District youth with an opportunity to learn about energy and environmental issues, complete community-based environmental work projects, and prepare for careers.

Health Impact Assessments (HIAs): A process that helps evaluate the potential health effects of a plan, project, or policy before it is built or implemented.

Heavy rail: Traditional subway/Metro trains powered by a third rail with a designated right of way (in contrast to light rail).

High capacity transit: Public transportation (usually buses) that is able to carry a larger number of passengers by using larger vehicles or more frequent service than a standard bus system.

High load growth areas: An area with high electricity demand, which increases the likelihood of a power outage as residents and businesses draw large amounts of power at the same time (like during heat waves when everyone runs their air conditioning).

Housing Production Trust Fund: A special revenue fund that is used to produce and preserve affordable housing in the District.

HVAC: An acronym that stands for heating, ventilation, and air conditioning. These systems provide heating and cooling services to buildings.

Impervious surfaces: Surfaces such as parking lots, driveways, roads, and sidewalks that are covered by dense, impenetrable materials such as asphalt, brick, and concrete. Impervious surfaces do not allow rainwater to infiltrate into the ground.

Inclusionary Zoning Affordable Housing Program: A program that requires new residential developments to have a certain number of affordable units that are only available to people whose incomes fall below a certain level.

Incubator: A space to support newly formed businesses often including affordable work space, shared services, trainings, marketing support, and sometimes access to financing.

Light-emitting diode (LED): Lighting products that produce light approximately 90% more efficiently than incandescent light bulbs.

Light rail: Trains that are usually smaller in size than traditional subway/Metro trains and are often powered by overhead wires, but still have designated right of way (in contrast to heavy rail).

Livable wage: The hourly wage or annual income that allows a family to meet basic needs, including food, housing, child care, transportation, health care, clothing, and household expenses.

Living shorelines: A protected shoreline that is made of natural materials such as plants, sand, or rock used to stabilize coasts, bays, or tributaries.

Maker space: A place for people who create things to gather, exchange ideas, and often access related tools or trainings on shared interests related to creating things.

Marginalized communities: A group confined to minimal participation in the economic, social, and political life of the society in which they live.

Master Naturalist: Trained residents who have completed a science based course that focuses on the plants and animals of the Anacostia River Watershed and how human activity has impacted the river over time.

Meadows: Land that is covered mostly with grass.

Methane: A greenhouse gas that is emitted during the production and transport of coal, natural gas, and oil.

Mobile food vendors: Healthy food trucks, produce stands, and mobile farmers markets.

Native plants: Plant species that occurs naturally in a particular region, state, ecosystem, or habitat without direct or indirect human actions.

Net-Zero energy buildings: These buildings combine energy efficiency and renewable energy generation to consume only as much energy as can be produced onsite through renewable resources over a specified time period.

Nutricification: The process in which excess phosphorous and nitrogen pollutants from stormwater runoff and sewage overflows enter waterbodies and causes damage such as killing fish.

Nutrition Education Plan: The Office of the State Superintendent of Education's plan that focuses on enhancing students' acceptance and consumption of healthy food items, as well as their knowledge on nutrition concepts and how to apply these concepts to their daily routine.

Pedestrian: A person travelling on foot.

Pesticides: Substances used to destroy insects or other organisms that are harmful to cultivated plants or animals.

Population health: The health outcomes of a group of individuals, including the distribution of such outcomes within the group.

Power Purchase Agreements (PPAs): A legal contract between an electricity generator (provider) and a power purchaser (buyer).

Premise plumbing: All plumbing within the property line with direct connection to the potable water supply system.

Product stewardship: A product-centered approach to environmental protection that calls on those in the product life cycle—manufacturers, retailers, users, and disposers—to share responsibility for reducing the environmental impacts of products.

Racial equity: Results in a society where race doesn't determine your outcome (e.g., income, health, employment, and education).

Racism: Prejudice, discrimination, or antagonism which regards one racial group as inferior or superior to another racial group in any way.

Rain garden: A landscaped area designed to temporarily hold and soak in stormwater runoff that flows from roofs, driveways, patios, or lawns.

Renewable energy: Energy that is collected from renewable resources which are naturally replenished on a human timescale, including sunlight, wind, rain, tides, waves, and geothermal heat.

Renewable Energy Credits (RECs): Tradable commodities that represent proof that energy has been generated from renewable sources such as solar or wind power.

Renewable Portfolio Standard (RPS): A policies designed to increase generation of electricity from renewable resources that require or encourage electricity producers within a given jurisdiction to supply a certain minimum share of their electricity from designated renewable resources.

Retrofit: To install new or modified equipment in something previously manufactured or constructed.

Rideshare: An arrangement in which a passenger travels in a private vehicle driven by its owner, either for free or for a fee, often arranged online or via a mobile phone app.

RiverSmart Homes program: A voluntary program run by the Department of Energy and Environment that offers incentives to homeowners interested in reducing stormwater runoff from their properties. Homeowners receive a free stormwater audit, which determines their eligibility for subsidies to adopt one or more landscape enhancements.

Severely unemployed: A population or community with an unemployment rate higher than 10 percent. In the District, this would include African-Americans, residents of Wards 7 and 8, and residents whose educational attainment level is high school or did not finish high school.

Single occupancy vehicle: A motor vehicle containing only the driver (in contrast to a car pool).

Stormwater: Excessive rainfall that does not soak into the ground, but instead flows over the land's hard surface into the nearest water body through storm drains.

Stormwater pollution: When it rains, the water that runs off hard surfaces picks up pollution such as trash and oil, that is then carried into a nearby waterbody.

Stream restoration: A set of activities that improve the health of a stream by using stone, wood, and a variety of native plants to create a naturalized and stable stream within an urban environment.

Streetscapes: The visual elements of a street, including the road, adjoining buildings, sidewalks, street furniture, trees, and open spaces that combine to form the street's character.

Stormwater Retention Credit Trading program: An innovative program run by the Department of Energy and Environment to manage stormwater in the District where property owners generate stormwater credits by installing green infrastructure that captures and retains runoff. After DOEE certifies credits, owners can sell the credits in an open market to buyers who can use them to meet regulatory requirements for retaining stormwater.

Sustainability-related job/business: A job that produces a sustainable product (e.g., reusable packaging or energy efficiency equipment) or performs a sustainability-related service (e.g., installing solar or maintaining rain gardens).

Sustainable DC Ambassadors: A volunteer program that helps build community around the Sustainable DC plan and shares the benefits of living a more sustainable lifestyle.

Tax abatements: A temporary reduction or elimination of property taxes.

Tidal river: A river whose flow and level are influenced by tides.

Urban Farm Land Lease Program: A program run by the Department of General Services to facilitate agriculture production on vacant lands owned by the District Government in order to contribute to a resilient food system for residents.

Urbanization: The process of becoming more like a city through development.

Walking distance: A distance convenient to reach on foot (typically one quarter mile to a half mile).

Waste diversion: The process of diverting waste from landfills through recycling and source reduction activities (such as not creating waste to begin with).

Watershed: A land area that channels rainfall and snowmelt to creeks, streams, and rivers, and eventually to outflow points such as reservoirs, bays, and the ocean.

Watershed Stewards: Trained residents who have been equipped to recognize and address local pollution problems in their nearby streams and rivers.

Weatherization: Low-cost improvements to save energy and money. Typical weatherization measures include insulation, duct sealing, heating and cooling systems repairs or replacement, air infiltration mitigation, and reducing electric base load consumption through measures such as energy efficient lighting and appliances.

Wetland: Land consisting of marshes, bogs, vernal pools, swamps, and other similar areas.

Wraparound services: Additional services to help ensure a person is successful, such as mental health counseling, food, housing, and soft skills training like communication and professional etiquette.

Vector-borne disease: A disease that results from an infection transmitted to humans and other animals by blood-feeding arthropods, such as mosquitoes, ticks, and fleas.

Vision Zero: An international movement to eliminate all traffic fatalities and severe injuries.

Zero Waste plan: A plan that will outline the steps that the District can take to achieve, at least, an 80% waste diversion rate.

Full service grocery store: A store that is licensed as a grocery store, sells at least six different food categories, dedicates either 50% of the store's total square feet or 6,000 square feet to selling food, and dedicates at least 5% of the selling areas to each food category.

Meaningful Watershed Educational Experience (MWEE): Learner-centered experiences that actively engage students in building knowledge and meaning through hands-on investigation of local environmental issues.

Social Determinants of Health: The conditions in which people are born and live and the wider set of forces and systems shaping the conditions of daily life."

ACRONYM	DEPARTMENT NAME
CAH	Commission on the Arts and Humanities
DBH	Department of Behavioral Health
DC Health	DC Health
DC Water	District of Columbia Water and Sewer Authority
DCFA	DC Housing Finance Agency
DCFPC	DC Food Policy Council
DCHA	District of Columbia Housing Authority
DCHD	Department of Housing and Community Development
DCHR	Department of Human Resources
DCPL	District of Columbia Public Library
DCPS	District of Columbia Public Schools
DCRA	Department of Consumer and Regulatory Affairs
DDOT	District Department of Transportation
DGS	Department of General Services
DHS	Department of Human Services
DME	Office of the Deputy Mayor for Education
DMGEO	Office of the Deputy Mayor for Greater Economic Opportunity
DMPED	Office of the Deputy Mayor for Planning and Economic Development
DOC	Department of Corrections
DOEE	Department of Energy and Environment
DPR	Department of Parks and Recreation
DPW	Department of Public Works
DSLBD	Department of Small and Local Business Development
EOM	Executive Office of the Mayor
FEMS	District of Columbia Fire and Emergency Medical Services Department
HSEMA	Homeland Security and Emergency Agency
MPD	Metropolitan Police Department of the District of Columbia
OCA	Office of the City Administrator
OCP	DC Office of Contracting and Procurement
OCTO	Office of the Chief Technology Officer
OHR	Office of Human Rights
OP	Office of Planning
OP3	Office of Public-Private Partnership
OPC	Office of the People's Council
ORM	Office of Risk Management
OSSE	Office of the State Superintendent Education
OTR	DC Office of Tax and Revenue
OUC	Office of Unified Communications
PSC	Public Service Commission
UCC	Office of the Clean City
UDC	University of the District of Columbia
WIC	Workforce Investment Council
WMATA	Washington Metropolitan Area Transit Authority

For a list of photo credits, please visit sustainabledc.org/SDC2photocredits



www.sustainabledc.org
202.535.2600
sustainable.future@dc.gov
@SustainDC

WE ARE WASHINGTON GOVERNMENT OF THE
DISTRICT OF COLUMBIA
DC MURIEL BOWSER, MAYOR

