



FISCAL YEAR 2023 ANNUAL REPORT

ON MONTGOMERY COUNTY'S
CLIMATE ACTION PLAN



TABLE OF CONTENTS

A Message from the County Executive	4
Introduction	5
Why Should We Care	6
FY23 Action + FY24 Plan Highlights	8
Clean Energy	9
Buildings	13
Transportation	17
Carbon Sequestration	23
Climate Adaptation	26
Governance	31
Public Engagement, Partnerships, and Education	34
Legislative and Regulatory Policy Agenda	38
State + Federal Climate Action Priorities	40
FY24 Budget + Staffing	42
Greenhouse Gas (GHG) Emissions Inventory	44
FY23 Progress at a Glance	46
Letter of Appreciation	54

Acronyms

55

Citations

57

Contact Information

57

A MESSAGE FROM THE COUNTY EXECUTIVE

Montgomery County is committed to leading the way on bold, equitable climate solutions. Climate change involves long-term shifts in temperatures and weather patterns. We are all experiencing hotter summers, heavier rains, and more frequent extreme weather events. Last summer, when wildfire smoke from Canada blanketed our region, the eerie smoke-filled skies vividly demonstrated our changing climate.

Montgomery County declared a climate emergency in 2017 and set nation-leading goals of reducing greenhouse gas emissions (climate change pollution) by 80% by 2027 and 100% by 2035. Through extensive community input, the County created an ambitious, actionable Climate Action Plan (CAP) in 2021. The CAP charts the way to meet the County's climate change goals and become resilient while addressing environmental injustices. For too long low-income and communities of color bore more than their fair share of pollution and received less than their fair share of environmental benefits like parks and well-paying energy jobs.

I am proud to present the Fiscal Year 2023 Annual Report on the County's Climate Action Plan showcasing a span of key solutions from passage of landmark Building Energy Performance Standards (BEPS), completion of microgrids with solar power, and enhanced wetlands restoration. The County has started 77 of the 86 actions in Climate Action Plan and made significant progress on, or completed, 49 actions.

In fiscal year 2023, the County advanced racial equity and social justice through climate change solutions including funding to increase planting of urban trees and incentives for limited-income homeowners to reduce energy costs through the Montgomery County Homeowner Energy Efficiency Program (MEEP). This report also includes plans for fiscal year 2024. We will adopt BEPS regulations, expand rapid transit options, move toward Zero Waste, and provide students with hands-on educational experiences.

I have directed my departments, and the County Climate Change Officer, to be bold and relentless in pursuing climate solutions, but we need your help. Please look at your own day-to-day life and adopt practical, climate-friendly changes like taking a bus or a bike when you can, reducing and recycling, switching to energy efficient lightbulbs, and installing solar panels.

Together, let's confront this challenge head-on and usher in a greener, more sustainable future.

Sincerely,



Marc Elrich
County Executive



INTRODUCTION

The Montgomery County Climate Action Plan (CAP) is a strategic plan to cut greenhouse gas (GHG) emissions 80% by 2027 and 100% by 2035 and to reduce climate-related risks to the County's residents, businesses, and the built and natural environment.

This report has two purposes. First, it highlights efforts made by County departments and agencies, residents, and businesses to combat the climate emergency during the second year of the CAP, Fiscal Year 2023: July 1, 2022 - June 30, 2023 (FY23). Second, it looks to the year ahead by including a work plan of climate initiatives that are planned for the Fiscal Year 2024: July 1, 2023 - June 30, 2024 (FY24).

This annual report gives County departments and agencies the opportunity to course-correct as technology evolves, challenges surface, and additional funding becomes available, enabling the CAP to be a living document. The report also includes needed adjustments to CAP actions, a summary of the approved budget and staffing, a legislative and regulatory policy agenda, and racial equity and social justice steps the County will take while implementing the CAP.

Montgomery County Climate and Energy Goals

Climate Neutral and Climate Resilient by 2035

Cut Greenhouse Gas (GHG) Emissions



"I'm honored to lead Montgomery County's efforts to combat climate change. Together with our vibrant, dedicated, community members, we're making real progress. We are transforming our buildings, transit systems, green spaces, and creating green jobs, but we can't do it alone – we need your help. Visit our climate website [montgomerycountymd.gov/climate] to get involved and be part of the solution. We are not just confronting climate change – we are building a legacy of justice, progress, and possibility for generations to come."

*Sarah Kogel-Smucker
Montgomery County Climate Change Officer*

Why should we care?

Explanation of CAP Categories

As set out in Montgomery County's Climate Action Plan (CAP), this report is organized by eight CAP categories: **Clean Energy, Buildings, Transportation, Carbon Sequestration, Climate Adaptation, Governance, Public Engagement, Partnerships and Education, and Racial Equity and Social Justice** as a common thread for the other seven categories. We have chosen to plan, report, and act based on these eight topics to address both the environmental consequences and dangers of climate change and the human, and social ones.

The Buildings and Transportation categories are the heavy hitters in terms of Greenhouse Gas (GHG) emissions in the County, comprising 50% and a further 42%, respectively, of total emissions as of recent GHG Inventory data. The Buildings category comprises the emissions and corresponding efforts in residential and commercial infrastructure from electricity use and the burning of methane (also known as natural gas) to provide atmospheric heating, water heating, and for cooking.

Transportation accounts for all cars, buses, commuter trains, freight trains and off-road equipment within the County, owned privately and publicly. We take action to expand access to public transportation as an environmentally conscious step up from single occupancy vehicles, and furthermore to provide electric mass transit alternatives.

Addressing our emissions in these two expansive areas of life, will cut into 92% of all greenhouse gas emissions released within Montgomery County or as a result of the energy we use.

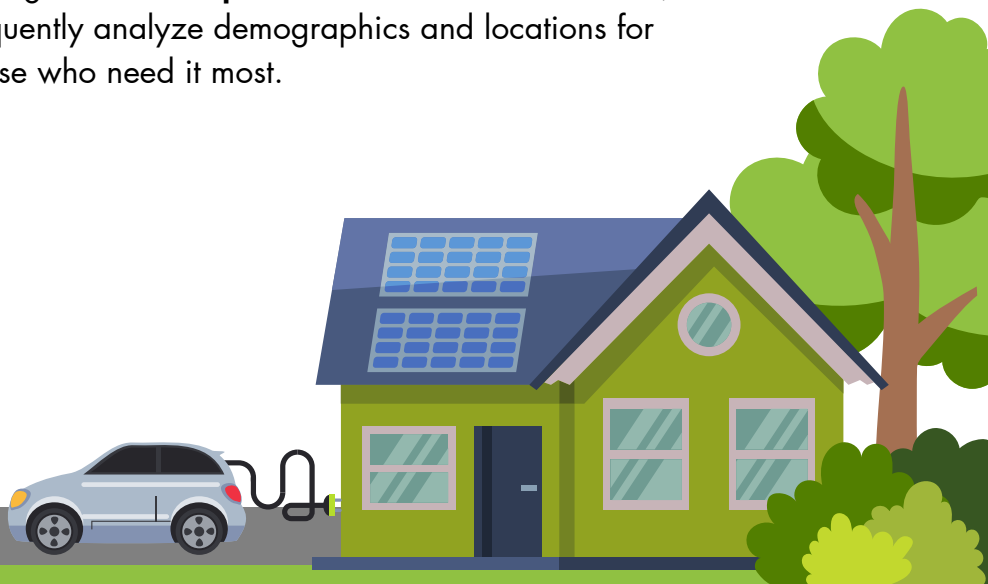


Clean Energy includes providing carbon neutral electricity to Montgomery County residents. Here, we examine the climate consequences of generating the energy we use. Steps taken in this CAP Category include decommissioning the coal Dickerson power plant in 2020, installing public and private solar, and now considering Community Choice Energy which could significantly green Montgomery County's electricity supply by allowing the County to control the "default" mix of energy purchased so it can be much greener.

While reducing countywide climate change pollution is essential, the **Carbon Sequestration** and **Climate Adaptation** CAP categories mitigate the harms of climate change as we experience it and build climate resilience to current and future climate related risks. **Carbon Sequestration** can include nature-based solutions, relying on investing and maintaining strength of key ecological areas or by planting trees, and technical solutions for removing carbon from the atmosphere. **Climate Adaptation** is the human counterpart to the environmental work of **Carbon Sequestration** and focuses on building resilience in infrastructure and our communities. In the county this adaptation may look like preparedness and mitigation of extreme weather events, founding and operation of community-oriented resilience hubs, and weather alert systems.

Governance and Public Engagement, Partnerships and Education revolve around educating and mobilizing those in government as well as county residents, on climate change and climate action. These categories are driven to effect change by bringing climate issues to the forefront of our attention and implementing workable solutions to achieve our climate goals.

Racial Equity and Social Justice is a key focus within the other seven CAP categories. Although climate change is a human driven ecological process that is affecting the whole of our planet, low-income groups and communities of color are, and will continue to, most pointedly feel its consequences unless we implement equitable and just solutions. We commit to pursuing **Racial Equity and Social Justice** to ensure that climate change solutions specifically address racial and social inequities and advance justice. This commitment may look like allocation of funding and seeking expertise from affected communities. We work to expand low-cost public transport and micro-mobility solutions so that we can fulfill the transportation needs of constituents who do not own private vehicles for both climate and justice reasons. When planning **Climate Adaptation** and resilience initiatives, County officials are working to more frequently analyze demographics and locations for their social vulnerability so as to help those who need it most.



FISCAL YEAR 2023 ACTIONS + FISCAL YEAR 2024 PLAN HIGHLIGHTS



The following section (pages 9-37), organized by the categories as designated in the Climate Action Plan (CAP), highlights the Fiscal Year 2023 accomplishments of the many Departments and Agencies within Montgomery County and their anticipated plans for Fiscal Year 2024.

At the end of these highlights you will find a chart that indicates the progress of each of the 86 actions detailed in the CAP; and a link to a worksheet that connects each action to the Departments and Agencies that contributed to this year's progress.



The Montgomery County Green Bank catalyzed 12 clean energy projects in FY23 with a total investment value of \$13 million. These projects consisted of distributed solar projects in the residential, commercial, condo, affordable rental, and faith-based sectors. The projects totaled almost 3 MW of clean energy.



12

Clean Energy Projects



\$13M

Total Investment Value



3MW

Of Clean Energy

The County continued to expand residential solar deployment in FY23 through the 2023 Capital Area Solar Switch (formerly known as the Solar Co-op). The 600+ committed solar installs for the 2023 Solar Switch program will be completed by January 2024.¹

The 2021 building code adoption cycle is underway, including the Montgomery County Energy Code and the International Green Construction Code. This sets the stage for the County to launch its e-solar program pilot (instant permit program) pilot. If successful, the County will expand the program throughout the year.



The Animal Shelter and Adoption Center microgrid project (including solar components) is completed and operational. The Shelter is the County's second resiliency hub that will be powered by renewable energy microgrids. In November 2022, a small plane was caught in the power lines in the County. Commissioned just ten days earlier, the microgrid delivered backup power seamlessly to the Shelter and allowed the Shelter to remain open and fully operational.

The Community Choice Aggregation work group sent revised draft regulations to the Public Service Commission on April 25, 2023. The Commission held a rulemaking session on June 1, 2023 to discuss the revised regulations. Because there remained several non-consensus issues, the Commissioners directed the workgroup to continue to work on the regulations and submit a revised set of regulations by June 30, 2023.

The County is developing a Clean Energy Action Plan expanding on content from the Climate Action Plan to outline changes for which the County needs to advocate to the state level to decarbonize the energy supply to achieve our climate goals.

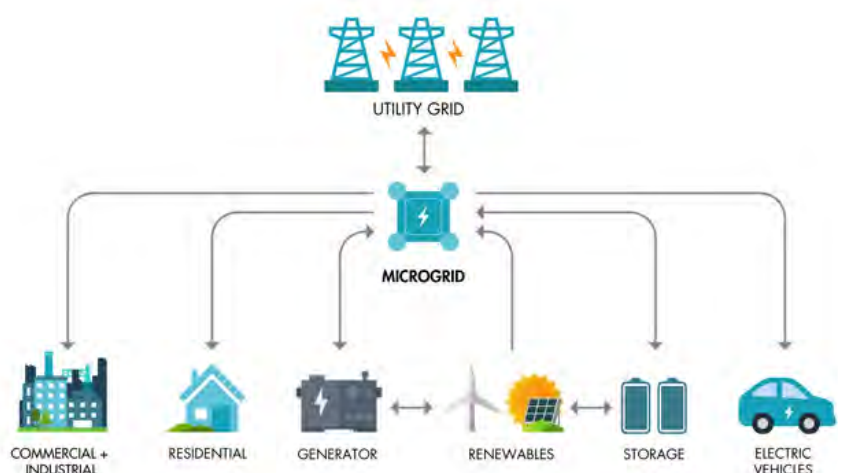
The County also completed the planning and design phase of the 6-megawatt (MW) Oaks Landfill solar photovoltaic project.

The Brookeville Smart Bus Depot's national award-winning microgrid (including solar panels - *pictured on page 12*) is complete and operational. It provides electrical charging requirements for the new fleet of electric buses. Having a microgrid increases confidence that during major climate events and grid outages, the electric bus fleet will continue to operate. This is the County's third microgrid project powered by renewable energy.

What is a microgrid?

A microgrid is a localized and self-contained energy system that can operate independently from the main power grid. When the grid goes down a microgrid can disconnect from the grid and continue to operate – providing much-needed power in emergencies.

Montgomery County is building microgrids with clean energy sources like solar and installing backup batteries to hold that clean energy.



Montgomery College is upgrading the thermal storage capacity at the Rockville and Takoma Park campuses. This technology allows the College to control electricity demand daily and reduce utility charges. In addition, the thermal storage technology allows the electric grid to maintain some level of reliability, which benefits County residents.

Montgomery County Public Schools continued work on the design of eight solar sites to be installed at schools (including one solar expansion of an existing school); installation is planned for FY24.

In addition, Montgomery County Public Schools is continuing its design work for a solar canopy pilot project in a parking lot to be installed in 2024, through a grant from the Maryland Energy Administration.

Maryland-National Capital Park & Planning Commission (M-NCPPC) installed a 66 kW solar system at Black Hill maintenance yard, to be completed in FY24. In addition, installation of two rooftop solar arrays have been completed on the Meadowbrook and Wheaton Maintenance Yards. The two systems combined are 122 kW rooftop arrays with an estimated annual production of 169,000 kWh.²

M-NCPPC is still constructing the SEED Classroom at Black Hill Regional Park that will serve as a public education piece on green buildings; the classroom will achieve net-zero through a 6 kW solar array.



Racial Equity + Social Justice

In 2021 the County installed the nation's largest community solar farm at the Oaks Landfill site. The Landfill, located on Riggs Road in Gaithersburg, is a 16-acre site that was once a landfill. Today the energy produced by this solar farm is 100% dedicated to low-to-moderate income residents, via PEPCO. Eligible residents who get their electricity from PEPCO can subscribe to this option and receive a 25% savings on their electricity costs every month. There's no cost to join and no fee to cancel.

*In FY23 the Montgomery County Green Bank catalyzed the financing of the County's largest rooftop solar project for the Seneca Village Apartments. Seneca Village is a 58-building, 684-unit affordable apartment complex in an Equity Emphasis Area. **The property will save 2,583,535 kWh in energy, generate more than \$300,000 in annual savings, and mitigate 2,000 metric tons of carbon dioxide greenhouse gas emissions per year.***

In FY23 the County advocated to Maryland State Legislators for the "Electricity – Community Solar Energy Generating Systems Program and Property Taxes." This State bill was passed and made the existing community solar pilot program permanent to support new projects. It also required more output for low-to-moderate income customers and limited customer charges.

LOOKING FORWARD TO FY24

At EMTOC, design work completed in FY23 will allow construction of solar arrays and battery storage, with charging infrastructure for battery electric buses in FY24-FY25. Following completion of construction, the County will move forward with an onsite solar powered hydrogen electrolyzer used to produce “green hydrogen.” Ultimately, the facility will be capable of fueling the Hydrogen Fuel Cell Electric Bus as part of the County’s Zero Emissions Bus Fleet Program.

In FY24 the County will receive “Permission to Operate” from the electric utility and become fully functional. The completed 6 MW Oaks Landfill solar (PV) project will provide 4 MW to Community solar and 2 MW for County facilities. The 6 MW solar PV project can meet the energy needs of 4,800 homes.

Construction will continue on the off-site ground-mounted solar located in the Pennsylvania-New Jersey-Maryland (PJM) region. It is expected to be operational in FY24. The PJM Interconnection coordinates the movement of electricity through all or parts of Maryland and has expanded to include the twelve nearby states (including the District of Columbia). The goal is to ensure grid reliability.

What is EMTOC?

EMTOC is the County’s Equipment Maintenance and Transit Operations Center. It is a collection of thirteen buildings and serves multiple departments including the Department of Transportation and the Department of General Services. The facilities include parking for 200 buses, bus maintenance, and fueling stations for buses and County heavy equipment. EMTOC includes solar lighting on the parking roof and more than four acres of vegetated roof, among other features. EMTOC has received numerous national awards and is a LEED GOLD certified project.





Holiday Park Senior Center Project, pictured above, generates clean, low-cost energy with annual greenhouse gas emissions reduction equal to: 35 homes powered, 70 cars off the road, and 8,496 trees planted.

The County participated in the Maryland Public Service Commission's grid Electrification Study Work Group, which will result in a report evaluating the electricity grid's ability to handle the anticipated increased electricity load from building electrification.

The Building Performance Improvement Board—the appointed advisory board that advises the County on building energy performance standards (BEPS) implementation—published their recommendations report on BEPS Executive regulations, due to be issued by December 31, 2023.

In July 2022, the County published a stakeholder recommendations report, describing their thoughts on how to incorporate a renewable energy allowance (REA) for Building Energy Performance Standards. The Proposed Building Energy Performance Standards Regulations that will be transmitted to the County Council by December 31, 2023.



The County also completed 36 energy-efficient projects for County owned properties to comply with BEPS and support the County's climate goals. These projects include 21 lighting and lighting control projects, 2 building automation system upgrades, and 14 monitoring based commissioning projects. The total cost of \$2.12 million was offset by \$1.27 million in state grant funding and utility incentives. These projects are estimated to deliver \$1.57 million in annual energy savings and 7,829 (MTOC2e) in annual greenhouse gas emission savings, the equivalent of 1,522 electric homes for one year.

The County launched "Electrify MC," the Residential Electrification Help Desk and Incentive Program. Electrify MC provides residents with a one-stop shop to help electrify their homes, including energy audits, recommendations for electrification add-ons, direct installation and assistance obtaining the financial incentives.³

In November 2022, the County Council passed the Comprehensive Building Decarbonization legislation (Bill 13-22), which will require the County to issue all-electric building standards by December 31, 2026.

What is The Montgomery County Green Bank?

It is a publicly chartered 501(c)3 nonprofit dedicated to accelerating energy efficiency, renewable energy and clean energy investment in Montgomery County.

*The corporation has catalyzed approximately **\$7.6 million in energy efficiency upgrades** across **34 projects** in residential, commercial, condo, affordable housing, and faith-based sectors.*

In 2023, The Montgomery County Green Bank expanded its Technical Assistance Program to include benchmarking and data verification in support of properties preparing for compliance with the County's new BEPS.



The Planning Board and County Council approved the Silver Spring Downtown and Adjacent Communities Plan, which encourages all new construction to exceed the County's minimum standards for energy efficiency.

On March 28-29, 2023, the County hosted the 10th annual Montgomery County Energy Summit at the Silver Spring Civic Building. Over 200 attendees came each day to learn how to prepare for compliance with energy benchmarking, building energy performance standards, and emerging building codes, as well as explore best practices for decarbonized buildings in Montgomery County.

Montgomery County Public Schools received a grant from the Maryland Energy Administration to continue planning for decarbonizing of existing school buildings. Plans are expected to be finalized next winter. The school system is also preparing a systemwide Greenhouse Gas Inventory Report using the same methodology as the County.

Montgomery County Public School are continuing to conduct Investment Grade Audits at 50 schools for energy savings and greenhouse gas emission reduction. These conservation projects will be implemented using a self-funding strategy, plus a small amount of capital budget funding and incentive rebate programs.



Racial Equity + Social Justice

The County's Montgomery County Homeowner Energy Efficiency Program (MEEP) provides incentives to limited-income homeowners to reduce energy costs. In FY23 eight single family homes, coordinated by Habitat for Humanity received all electric, upgraded appliances and systems. In addition, the Brooke Park Apartments received \$507K of all electric, upgraded appliances and systems for its complex.

In FY24 the County will receive federal Community Block Grant Funds to further support energy efficiency and electrification upgrades in low-income homes.

In FY23 the County received funding to launch its HEECAP program in FY24. This Healthy, Efficient, Electrified, Climate-Adopted Pilot, grant program provides funds to retrofit income-eligible house for energy efficiency, a healthy indoor environment, climate resilience and all-electric appliances. A total of \$1.5 million will be made available to fund awards to eligible nonprofits serving low to moderate households in the County.

LOOKING FORWARD TO FY24

As required by the Comprehensive Building Decarbonization Law (Bill 12-32), the County will prepare a report regarding system capacity needs and investments required for an all-electric building code standard no later than September 30, 2024.

The County plans to implement over 30 energy-efficient projects: lighting and lighting controls, building automation system upgrades, and Monitoring Based Commissioning. The FY24 energy-efficiency projects are expected to deliver similar results as the FY23 projects.

Montgomery County Public Schools will finalize its report of Net Zero Energy for New and Existing Construction.

Based upon recommendations from its Investment Grade Audits, Montgomery County Schools will implement Energy Savings Projects at the initial 50 schools. It will start Investment Grade Audits on the next batch of 50 schools.

Montgomery County Green Banks's total stretch goal for FY24 is to catalyze \$50 million in climate investment.

The County's next Energy Summit is scheduled for April 15-16, 2024 at the Silver Spring Civic Building.



Together with Howard County, the County secured a Federal Congressional earmark for \$3.35 million to fund vehicles for an extension of the US29 Flash service to Columbia, MD.

The Flash bus service was initially designed to arrive every seven to eight minutes during rush hour, every 15 minutes during non-rush hours, with priority traffic light signaling and dedicated lanes. The buses offer free wifi and USB charging ports. Flash is part of a national movement known as Bus Rapid Transit Systems (BRT).⁴

Design is underway for the MD 355 and Veirs Mill Road Bus Rapid Transit (BRT) projects. The Veirs Mill Road project is in the design phase which will be completed in the Summer or Fall. The MD 355 project has completed preliminary engineering. National Environmental Policy Act (NEPA) work is progressing on both projects. NEPA for Veirs Mill is anticipated to be complete in early 2024 and for MD 355 in late 2024.

The recently approved Silver Spring Downtown and Adjacent Communities Plan recommends expanding Bus Rapid Transit service through the downtown on both Colesville Road and Georgia Avenue. The Plan also recommends studying opportunities to expand the VanGo circulator route to include Jesup Blair Park and Woodside Urban Park.



The County is continuing to advance tactical bus lanes along MD 97 (Georgia Avenue) in Silver Spring, MD 193 (University Boulevard) in Wheaton, and MD 586 (Veirs Mill Road) in Wheaton. Implementation of the University Boulevard project is planned for Summer/Fall 2023.

What is a tactical bus lane?

A tactical bus lane can be implemented quickly, does not require road reconstruction, and is typically implemented on the curb lane or a parking lane. Tactical bus lanes are created using red paint to designate the bus lane and with signage to communicate the bus lane restrictions.

The County's Ride On Reimagined Study continues. Phase 1 is completed; and Phase 2 is currently underway with proposed improvements and expansions. The Study is a comprehensive, forward-looking assessment of the bus network that will result in significant recommended changes to how transit operates in the County based on current and future needs.⁵



Two new limited stop services (Ride On ExtRa) are planned for the Great Seneca Life Sciences corridor in summer 2024. Service would include improved station and shelter locations, tactical bus lanes as well as transit signal priority.

The County received a Transportation Planning Board Transportation Land Use Connection (TLC) grant to plan for rethinking and restarting the FLEX micro-transit system operated by Ride On. This TLC study will evaluate travel behaviors and conditions, market opportunities, and service delivery options to reimagine FLEX for the future.

The current FLEX program operates similar to a ride-hailing service like Uber or Lyft; but is limited in service area boundaries and service hours. The service was discontinued during the Covid-19 emergency and has recently restarted.

Montgomery County Public Schools remain committed to increasing the electric school bus fleet, and currently has the **largest deployment of electric school buses in the nation**. Its "Moving the Future" program includes 206 electric buses within its current fleet of 1,418 buses.



In Silver Spring, eight Electric Vehicle (EV) charging station ports have been installed in Garage 58 and four were installed in Garage 7.

In Bethesda, four EV charging station ports were installed in Garage 40 and four have been installed in Garage 57.

In Wheaton, two EV charging station ports were installed in Lot 34.

Four EV Charging Stations were installed at the Carver Educational Services Building. Additional electric vehicle charging stations are under construction at Gaithersburg Middle School.

Montgomery County completed the first Commuter Survey since the Covid-19 emergency in the fall of 2022. The County received 9,600 responses. The survey is used to analyze how the County's Transportation Demand Management (TDM) efforts are progressing in meeting the goals of reducing reliance on solo driving for work trips and increasing use of alternative modes. A summary of the analysis is posted on the County's website in "Commuter Services." ⁶

In FY23, the County made 2,800 individual, direct contacts with employers and employees about commuting programs that can benefit both employers and employees, like FareShare, a transit- and vanpool- cost-reduction program offered by the County, and tax-credits available to businesses that participate.

Over 18,000 other outreach contacts were made using "broadcast" methods, including newsletters, e-blasts and social media.

In FY23, the County was recognized with a regional award from the Transportation Planning Board for its Employer Outreach programs.

Pledge to go electric!

Wow! In FY23, the County built on the successful implementation of the Electric Vehicle Purchasing Co-Op that launched in January 2022. By the end of FY23, the program had collected over 1,100 pledges from residents to make their next vehicle electric. Collectively, nearly one-third of Maryland's electric and plug-in hybrid vehicles are registered right here within Montgomery County!



Planning, design, and construction of several bike facility projects are on-going: Woodmont Avenue Cycletrack, Bethesda Avenue Cycletrack, Montgomery Avenue/Lane Cycletrack, Sandy Spring Bikeway, MD 355 Shared Use Path, Marinelli Road Separated Bikeway, Kensington Parkway Shared Use Path, Dr. Bird Shared Use Path, Fenton Street Cycletrack, Amherst Avenue Cycletrack, Bowie Mill Road Bikeway, Good Hope Road Shared Use Path, Good Hope Road Shared Use Path Extension, and Dale Drive Shared Use Path.

The County replaced 100% of its gas-powered leaf blowers with electric leaf blowers. In addition, the County has begun to use electric mowers in the Silver Spring area. Overall, M-NCPPC is currently on track to transition all handheld gas-powered lawn equipment to electric over the next two to six years.



Did you know?

BikeMatchMoCo is connecting people in Montgomery County who have a bike to donate with people who need one. Whether you have a bike in ready-to-ride condition to donate or need a bike, fill out the form on [MontgomeryCountyMD.gov](https://montgomerycountymd.gov) (search Bike Match) and we will do our best to match you. Both adults and childrens bicycles are available.





Racial Equity + Social Justice

The County conducted a whole-of-government effort to identify County sites for community electric charging stations and apply for the U.S. Federal Highway Administration's Charging and Fueling Infrastructure (CFI) Discretionary Grant. The County proposed 40 sites in its application, selecting based on the need to fill gaps in current infrastructure, expand access for equity areas and for residents of multi-family communities, connect electric vehicle charging stations with multi-modal transportation options, and support Montgomery County Government fleet operations, among other factors, surveys were conducted with the public on their preferences for locations and experiences.

Montgomery County sponsored a program with Capital Bikeshares, "CaBi for All" to offer free memberships for income-eligible participants who live or work in Montgomery County. The County's "Bike Match MoCo" bike donation program grew significantly in donations and matches during FY23. Working with Rockville Bike Hub, Kids on Bikes and many individual donors, a total of more than 500 bikes have been donated.

In FY24 the County will engage with car share operators and multi-family properties to explore and develop program concepts and partnerships, and identify funding opportunities, including grants. Many car share operators in the County drive EVs but live in multi-family apartment buildings that lack convenient access to EV charging. The County's engagement will seek to address this disparity.

The County's TravelSmart Ambassador Program received funding in FY23 and will launch in FY24. This program focuses on ensuring that residents, businesses, employees, organizations and visitors are award of all transportation programs and services in the County, with a special emphasis on equity to ensure that underserved and vulnerable populations are reached.

LOOKING FORWARD TO FY24

Planning has been completed for the US 29 BRT Phase 2. Preliminary engineering is underway.

Planning is underway for the New Hampshire Avenue BRT and the North Bethesda Transitway. The County anticipates recommending alternatives by Fall/Winter.

The Zero Emissions Bus Transition Plan Team works across county government and is continuing to evaluate, plan and analyze the use of Zero Emissions buses in coordination with the study Ride-On Reimagined. Once the Transition Plan is finalized later in 2024 a public report will be issued.

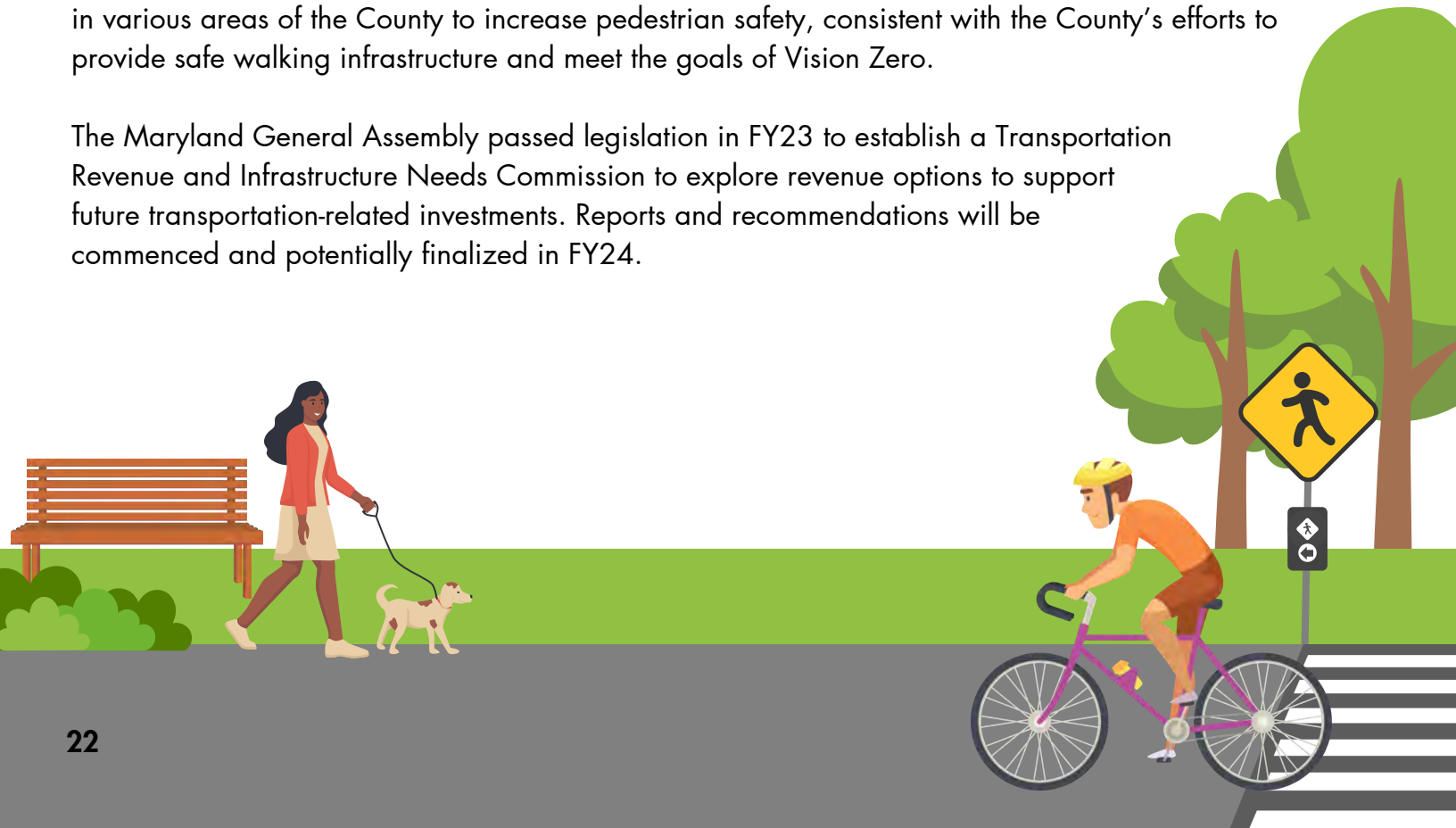
The County has finalized a grant agreement with the federal government to build a hydrogen fueling station and obtain thirteen hydrogen fuel cell buses. Design-build activities are underway, including a project to install a new micro-grid at the County's Gaithersburg bus depot.

The County will engage with food truck operators to explore the potential to replace gas powered generators with electric battery generators.

Learn-to-Ride bike and e-scooter classes continue to be held in various locations around the County in the fall, and many more will be offered in the spring. The cost is \$10 per class and includes the use of equipment and helmets during class. Demand is growing.

Installation of additional Pedestrian Hybrid Beacons (PHB) and mid-block crossing signals are planned in various areas of the County to increase pedestrian safety, consistent with the County's efforts to provide safe walking infrastructure and meet the goals of Vision Zero.

The Maryland General Assembly passed legislation in FY23 to establish a Transportation Revenue and Infrastructure Needs Commission to explore revenue options to support future transportation-related investments. Reports and recommendations will be commenced and potentially finalized in FY24.





In the first full fiscal year of instituting a three-year rotation for preventative tree maintenance, M-NCPPC successfully addressed the health of 1,127 trees in 53 different parks, contributing to the overall retention of the County's canopy.

The Tree Montgomery program achieved a record number of tree plantings, completing the planting of almost 3,800 trees in FY23. This is a record number of trees planted through this program which began in 2015.

The Montgomery County Forestry Board and the County's Tree Montgomery program worked closely with Rocky Hill Middle School's environmental club to plant eight shade trees at the school. This planting was part of a larger effort to add 45 new shade trees around the school. Grant funding was provided through the Chesapeake Bay Trust from the State's 5- Million Tree Initiative. The students were planting for their future.

M-NCPPC's Reforestation Program successfully planted approximately 250 trees across 5.2 acres in Watts Branch Stream Valley Park and an additional 40 trees at Good Hope Tributary in FY23.



What is Carbon Sequestration?

Carbon sequestration refers to the long-term storage of carbon dioxide (CO₂) and other greenhouse gases in various reservoirs to mitigate or offset their release into the atmosphere. The primary goal is to reduce the concentration of these gases in the atmosphere, thereby mitigating the impacts of climate change. Carbon sequestration can occur naturally or be implemented through human activities and technologies.

The second annual M-NCPPC Urban Wood Sale generated approximately \$43,000 in revenue, supporting the green waste recycling program.

M-NCPPC initiated a new program focused on managing small, historically unmanaged forest patches that hold ecological value for communities. The Stewartown Park's urban forest patch, identified through the program, was planted with native trees and shrubs.



The County Council approved amendments to the Forest Conservation Law, aiming for "No Net Loss of Forest." These amendments incentivize strategic protection of existing forests, encourage new plantings in areas with insufficient cover, and expand options for creating resilient forest ecosystems.

The adoption of the Silver Spring Downtown and Adjacent Communities Plan was unanimously approved, recommending the implementation of a Green Loop concept and an increase in overall tree canopy coverage.

The Weed Warriors Program, in FY23, played a crucial role in saving over 15,800 trees and shrubs from non-native invasive (NNI) vines, contributing to the preservation of the natural landscape.



Racial Equity + Social Justice

M-NCPPC is using data from the 2022 Urban Heat Island Mapping Campaign to assess heat distribution patterns located within or adjacent to Equity Focus Area for opportunities to plant trees to mitigate climate impacts within these communities. In addition to the Tree Montgomery Program, the County received additional grant funds to install shade tree in Equity Focus Areas and at Montgomery County Public Schools.

LOOKING FORWARD TO FY24

In FY24, M-NCPPC intends to expand the Urban Forest Patches Program, identifying and managing more small forest patches that hold ecological significance. This expansion may involve additional mapping, removal of invasive species, and community engagement in tree planting efforts.

Meadow restoration projects, such as the ongoing project in Rachel Carson Conservation Park, will be expanded to include a total of 25 acres by FY24.

FY24 plans are underway for Little Bennett Regional Park, which includes restoration of its wetlands and removal of its non-native invasive vines.

M-NCPPC's Urban Forestry Program is implementing a 3 to 5-year rotation of preventative tree pruning and maintenance. This strategy aims to retain the current canopy by improving overall tree health, focusing on approximately 50 parks in FY24.

The Urban Tree Summit is scheduled to be held in September, providing a platform for discussions, knowledge-sharing, and community engagement related to urban forestry.

The third annual Urban Wood Sale is scheduled for December 10 and 11, providing an opportunity for the community to engage in sustainable practices by purchasing urban wood products.

Want to be a Weed Warrior?

This volunteer program was started in 1999 to teach community members to properly identify and manage specific species of non-native invasive plants. Volunteers have logged over 140,000 hours of service since 1999. There are two ways to get involved. Volunteers can join a Group Weed Warrior Workday or become a Certified Weed Warrior Volunteer. Visit the County's website and search for "Weed Warrior" for details.





A total of 35 flood sensors were installed at the County's frequently flooded sites, providing real-time data to various agencies and jurisdictions, enhancing flood response and management.

The County's first Resiliency Hub microgrid and battery backup was set up at The Bette Carol Thompson Scotland Neighborhood Recreation Center. Plans for further collaboration, prioritization of resilient infrastructure, and community engagement are underway.

Montgomery County's transportation department secured additional funding for the design and construction of storm drain programs. Rehabilitation projects for Vandever St. Outfall and Georgian Forest Local Park storm drains are scheduled for completion in the calendar year 2023. In addition, the County repaired or replaced failing stormwater systems at 49 locations, including installation of 2,259 linear feet of pipe.

The County initiated work on a Comprehensive Flood Management Plan. Phase 1 of the project is underway and deals with summarizing the existing framework related to flooding impacts, regulations and policies, and responsibilities.



The County's Thriving Earth Exchange Project to map urban heat island effect, tree canopy, impervious surfaces and social vulnerability for resource prioritization is ongoing, with completion of the tool anticipated in Spring of 2024.

What is an Urban Heat Island?

The National Geographic Society defines an urban heat island as a metropolitan area that's a lot warmer than the rural areas surrounding it. Heat is created by energy from all the people, cars, buses, and trains in big cities like New York, Paris, and London.

Heat islands are also not spread out evenly within cities. According to EPA, communities with lower-income and with higher populations of people of color, have neighborhoods with higher temperatures relative to adjacent neighborhoods in the same city. This difference is due to historic failure to plant trees, develop parks and other greenery, equitably, within urban areas. The County's Climate Action Plan includes actions to reduce the urban heat island effect and provide communities with trees and greenspaces.



The County drafted a 2024 Hazard Mitigation Plan.

A public meeting was held on November 1, 2023 to introduce the plan and mitigation actions. The Plan will be submitted to the Maryland Department of Emergency Management for review and approval.

The County applied for a Hazard Mitigation Assistance Grant to fund: 1) scoping methods for public engagement in hazard mitigation and vulnerability data, and 2) to study the vulnerability of watersheds and provide mitigation actions.

The County continued to generate temperature alerts for the public through Alert Montgomery during extreme heat and cold events. The alert system, boasting 236,763 registered contacts, remains the largest mass notification system in Maryland. ⁷

The first advanced weather station in the Maryland State Mesonet Program was installed in Montgomery County in the spring of 2024. This will provide real time microclimate, local level data to assist in preparation for extreme weather events of a localized nature and will help provide local-level, Montgomery County specific weather data moving forward.

What is a Mesonet?

A Mesonet refers to a network of weather monitoring stations strategically placed across a region. These stations collect real-time data on various atmospheric conditions like temperature, humidity, wind speed, and precipitation. The information gathered from Mesonets helps meteorologists and scientists, study and understand local weather patterns, enabling more accurate and timely weather forecasts. Mesonets are valuable tools for monitoring and responding to changes in weather conditions, especially in specific areas or communities.

M-NCPPC is making substantial strides toward achieving its requirement to restore 20% of the County's impervious surfaces (e.g., asphalt or concrete) with green elements to reduce water runoff by 2025.

TM-NCPPC is already planning for restoration projects beyond 2025 and aligning with the Maryland Department of the Environment's recommendation for additional restoration equivalent to 10% of the current baseline by 2030.

The County supported community gardening through \$100,000 in distributed funds across 10 organizations, fostering local agriculture.



Racial Equity + Social Justice

The recently approved Silver Spring Downtown and Adjacent Communities Plan is the first Sector Plan to follow the passage of the County's Racial Equity and Social Justice Act. After engaging with stakeholders four themes are woven throughout the Plan: Diversity, Resiliency, Connectivity, and Community Health. For example, the Plan calls for building codes that exceed the County's minimum standard for energy efficiency, expansion of Bus Rapid Transit and Van Go, increases to the tree canopy, and recommends expanded parks and open spaces within a five-minute walk for ALL residents, including those in adjacent communities.

LOOKING FORWARD TO FY24

The County is actively identifying additional Resiliency Hub locations. The release of a Request for Proposals in FY24 is anticipated to accelerate the establishment of these critical hubs.

In addition, the County will plan a training session for spring 2024, focusing on best practices for developing resiliency hubs. This includes site prioritization, collaboration with government and nonprofit entities, community outreach, and funding mechanisms, with support from the Maryland Emergency Response System.

M-NCPPC will continue to work with the transportation department to identify and help prioritize the County's storm drain outfall projects. Four other projects will be in the planning stages in FY24.

In FY24, the Community Gardens Program is set to deepen its impact through extensive data analysis, procedural enhancements, increased educational outreach, and the integration of technology.

Interested in Community Gardens?

Interested in Community Gardens? The 2024 waitlist is open! This program offers residents County park land for local food production. There are currently 14 community garden locations. Search for "Community Gardens" on the County's webpage.



The Montgomery County Green Bank received expanded authorities from the County Council. A stakeholder engagement process during FY24 will identify key areas for Green Bank support, focusing on climate adaptation actions.

The Washington Suburban Sanitation Commission (WSSC) will apply for the Maryland Chesapeake Coastal Grant Gateway to assist with the Commission's flood vulnerability mitigation plans for several sites, to be implemented in FY25.

The Commission will continue to assess and purchase property as recommended to ensure a reliable water supply.

What is a Resiliency Hub?

A Resiliency Hub, like the one at the Scotland Neighborhood Recreation Center, provides power for essential community needs when there is an extended power outage in the area. In this location the power is provided by a microgrid. Resiliency Hubs can be established in neighborhood facilities such as community centers, athletic facilities, schools, libraries, or faith-based institutions.



Did you know?

The Scotland Community is a historic, predominantly African American community in Montgomery County. Its roots date back to the late 19th century when formerly enslaved Marylanders bought land in Potomac, MD. Descendants of its founders still live in the community today. The Scotland Community is one of about forty such communities in the County. Each year the Community hosts a major Juneteenth celebration, including an art show, a film festival, a concert, and a Big Train baseball game with players wearing the historic Scotland Eagles baseball jerseys.





Good Governance requires the right staff in the right positions.

In FY23, the County hired new staff to help support the BEPS program, including a Senior Engineer and Multifamily Energy Performance Outreach Manager. The County also filled two new positions; one focusing on electrification and decarbonization; the second position focusing on green buildings and the International Green Building Code. In addition, a Hydrologist was added to the team to help with flood management planning and a Climate Action Program Manager was hired to increase communications to vulnerable communities regarding climate related emergency management.

M-NCPPC hired a new fleet manager to manage the electrification of its fleet and assist with its greenhouse gas reduction goals. In addition, two new staff were added to the Reforest Montgomery team.

The County entered into a contract with the University of Washington on the “Climate Smart Capital Improvement Plan” modeling tool. The tool has the following modules: Decarbonization, Resilience and Social Equity. This tool, once fully implemented, will inform the County capital budget.



The County is upgrading its Permitting database system to capture more information in support of the Climate Action Plan; including building profile data. This tool will inform many of the County's climate action goals.

In June 2023 the County hosted an Integrated Emergency Management Course in partnership with the Federal Emergency Management Administration. At the conclusion of this course, the County conducted a functional exercise with a weather-based scenario. This training will contribute to the County's ability to respond to climate events in the region.

Over 40 county employees participated in a FLOW leadership class (24 hours of learning) to provide them with a framework, strategies and tactics to facilitate the flow of climate change ideas into implementation.

In FY23 the County's Climate Ambassadors Program conducted lunch and learns and worked to develop a strategic framework to include the intersections of climate with mitigation, resilience, and equity into its planning. The Program includes 150 Ambassadors from the County government's workforce and its partner agencies.

Montgomery College has an MC Green Team that meets monthly to discuss climate change activities college wide. The team includes students, faculty, and staff.

M-NCPPC implemented a plastic film recycling pilot for its Wheaton Headquarters. The pilot was successful and resulted in a permanent plastic film recycling program. Recycling in the workplace is a County-wide mission.

In FY23 M-NCPPC developed a method for doing Climate Assessments as required by Bill 3-22, including estimating GHG emissions associated with Master Plans and Zoning Text Amendments, estimating carbon sequestration, and making recommendations for community resilience. These methods, templates and new processes were presented to the Planning Board and are being implemented in the Master Plans for Takoma Park, Fairland- Briggs Chaney and Great Seneca.





Racial Equity + Social Justice

The County established a new Climate Action Team to raise awareness about the intersection between climate, health, equity and populations served by the County's Health and Human Services Department. The Team includes staff from the African American Health Program, the Asian American Health Initiative and the Latino Health Initiative.

M-NCPPC updated its Sustainability Standards (Practice 6-40) that set agency-wide policy on sustainability practices for doing operations and business. The Practice incorporates three pillars of sustainability: Environmental Responsibility, Social Equity, and Economic Vitality as guiding principles for the development of Sustainability Plans.

LOOKING FORWARD TO FY24

The County's new Farm to Foodbank Program will be launched in FY24. It strives to provide fresh, diverse produce to food assistance recipients in the County, create new market opportunities for local farmers, and reduce food waste.

In FY24 the County Ambassador Program will develop the Climate Ready Office pilot program to help all County workers pursue ambitious climate actions and qualitatively measure their progress.

The County's next Greenfest is scheduled for Wednesday, April 27, 2024.



The County partnered with Community CHEER, M-NCPPC, and the Long Branch Community Center to host an MLK community cleanup at Long Branch Community Center. Over 40 community members learned about recycling and waste reduction.

The County's Montgomery Energy Connection completed 176 in person and virtual events resulting in 12,367 interactions with residents, 306 Quick Home Energy Checkup referrals, 3,286 incandescent bulbs swapped for energy efficient LEDs, and 2,219 compact fluorescent bulbs properly recycled.⁸

Working with Delegate Lorig Charkoudian, the County participated in Power in the Park in the Long Branch community where over 250 residents received energy information from various community groups.

The County continues to co-lead the Maryland Coalition of Counties and Cities for Climate Action (MC4A), a statewide climate coalition of local governments that meets regularly to discuss state and local policy and programmatic issues.



The County hosted Student Environmental Volunteer Day on Wednesday, November 1, 2022. Students learned about sustainability and help beautify the community. They also worked to enhance the health of the environment by planting native plants and trees in local stormwater management gardens.

The Montgomery County Public Schools (MCPS) held its second annual Youth Climate Summit which took place on April 22, 2023 at Tilden Middle School. This is the first in-person Youth Climate Summit. The full-day summit was designed to educate MCPS students about climate change and equip them with the tools to create climate action projects in their communities. This was a student-led event.

Green Schools leaders within the Montgomery County Public School System and partner agencies (including the Maryland Association for Environmental and Outdoor Education (MAEOE), Nature Forward formerly the Audubon Naturalist Society, and the Montgomery County Council of Parent-Teacher Associations, MCCPTA) continue working together to support increasing the number of certified Green Schools in the County. MAEOE announced the successful submissions for recertification and new applications on April 21, 2023. Eight new schools will be certified this year bringing the total of certified Green Schools to 96, or nearly 46%.

By 2024 50% of the County's schools will be Green School Certified and by 2035 100% of public schools in the County will be certified.

Montgomery County Public Schools expanded its partnerships with Parent Teacher Associations to reinforce the concept that everything students do at schools for the climate is consistent with what students can do at home for the climate.

The Gudelsky Institute at Montgomery College is building a new HVAC control laboratory. The College partnered with the University of Maryland on a grant proposal submitted to the US Department of Energy's Building Training and Assessment Centers program. The University of Maryland will provide training to engineers, while the College will train technicians in the new Controls Lab. The College's certification program to train new technicians has won national recognition.

What is Project Porchlight?

Project Porchlight, a new initiative, launched where Energy Ambassadors go door-to-door offering to swap out incandescent/CFL light bulbs with energy efficient bulbs LEDs for free. Through this program, new bulbs to residents in over 6 neighborhoods which accounted for over 3,500 homes being visited and provided with information on programs to lower their utility costs.



This year the County initiated a new Climate Portal as an information hub for County climate planning, updates, opportunities for community members to get involved, climate communications including all climate related communications, press releases and news coverage.

Many departments in the County assigned staff to the County's Climate Change Communication's Coalition (C4) to collaborate with County partners on outreach efforts to engage the public in implementing changes to reduce emissions and adapt to climate change. The C4 team initiated a set of communication tools that will be rolled out in 2024. In addition, the C4 team writes articles for the County's Executives weekly newsletter, ensures connectivity between departments, and keeps whole of government informed on climate issues.

The County continues to host and engage with the Climate, Energy and Air Quality Advisory Committee. This Committee was established to provide an ongoing dialogue between the County and members of the community regarding climate change.

The Civilian Conservation Corps provided staff to implement stormwater management bioretention improvements at Gaithersburg High School.



Racial Equity + Social Justice

The Montgomery County Public School system developed and successfully piloted an Environmental Justice course that includes research, investigation, and action focused on the disparate effects of climate change on people of color and those living in lower income areas. The course was piloted at Walt Whitman High School.

For National Preparedness Month in September, the County placed an emphasis on older adults, who are at particularly high risk from the health impacts of climate change. Events were held weekly at senior centers and recreation centers, including distribution of materials in multiple languages. Specific events were conducted in both Spanish and Vietnamese.

The Community Justice Academy development is still underway with the County partnering with frontline organizations and community members to develop a strategy and programming for equitable resilience. The partners meet regularly and have been making progress on power building & belonging and moving towards community ownership of climate resilience initiatives.

The County hosted the first of its Climate Stories Film Festivals. "Our Grain of Sand/Nuestro Granito" was shown at the AFI Silver Theatre, in both English and Spanish followed by panel discussions.

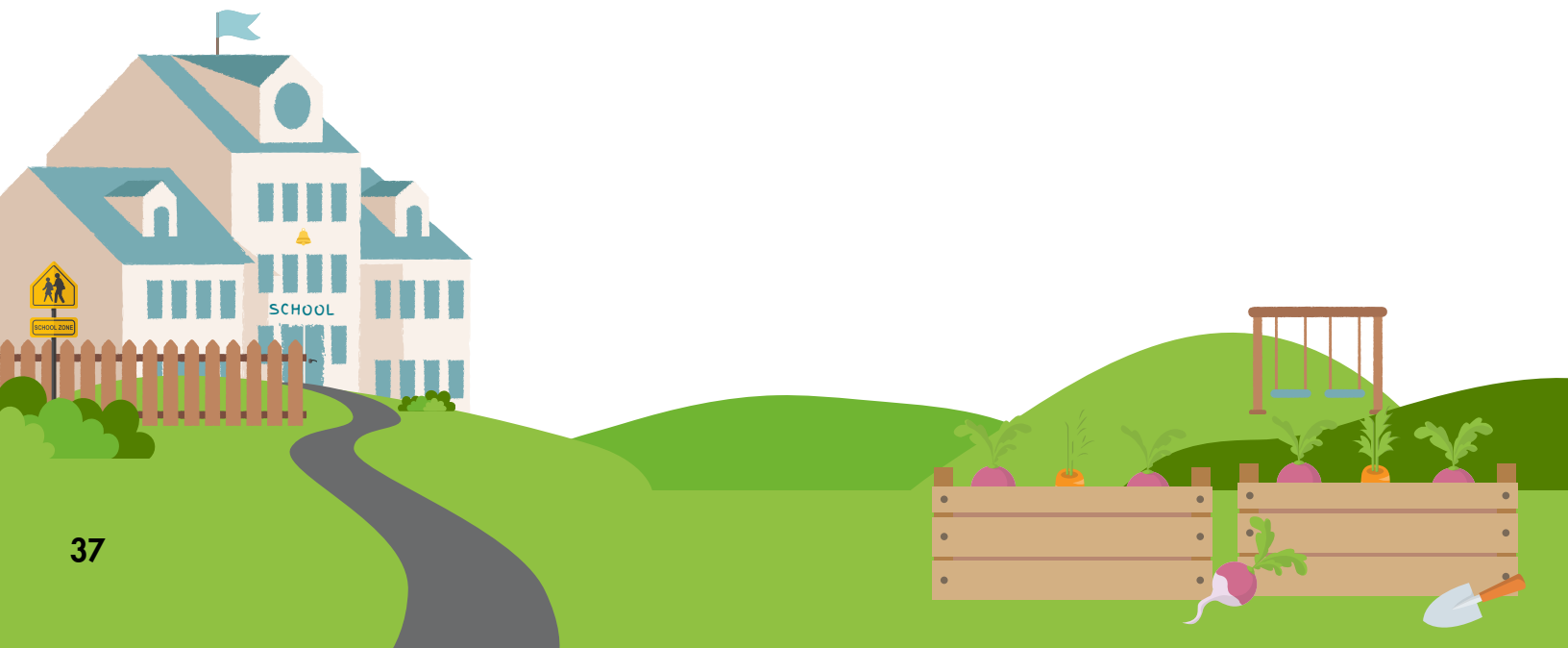
LOOKING FORWARD TO FY24

The County will be distributing 500 Home Comfort Kits for cold and warm weather in FY24.

The County and the Public School System will partner to establish a novel, new pilot program to develop a central Resilience, Education, Action, Climate and Habitat (REACH) Hub. The goal is to establish an urban farm at a school to support food production and educational resources accessible to multiple schools and families in the neighborhood.

In FY24 the County will continue to develop its Climate Action Portal, climate communications work and regular County-wide messaging by the County Executive to both internal County workforce and external stakeholders and citizens.

The County will be working with the Arts and Humanities Council of Montgomery County on a Climate Resilience art project to strengthen the ties of community.



LEGISLATIVE + REGULATORY POLICY AGENDA

FY23 Legislative and Regulatory Accomplishments, include:

MAR 2022

C-Pace Financing Program, Bill 46-12 PASSED

Requires the Montgomery County Green Bank to use best efforts to contract for services with minority-owned, local, small businesses.



JUL 2022

Climate Assessments Legislation, Bill 3-22 PASSED

Requires a climate assessment for pending policy recommendations, helping to ensure that all legislative decisions are made with consideration of the County's climate goals.



NOV 2022

Comprehensive Building Decarbonization, Bill 12-32 PASSED

Requires the County Executive to issue all-electric building standards for new construction, major renovations and additions by December 31, 2026.



APR 2023

Environmental Sustainability – Green Bank, Bill 2-23 PASSED

Allows the Montgomery County Green Bank to engage in activities related to climate resilience in the same manner as energy efficiency and renewable energy.



APR 2023

The Forest Conservation Law, Bill 25-22 PASSED

The law was amended to require greater forest planting and forest conservation with the goal of no net loss.



JUN 2023

Community Choice Aggregation Program



Anticipated ruling by the Public Service Commission to approve.

STATE + FEDERAL CLIMATE ACTION PRIORITIES

Maryland General Assembly Legislative Climate Action Priorities include:

Reform EmPOWER Maryland – Direct the Public Service Commission to evolve and scale up the EmPOWER Maryland program with support from a more equitable funding source to help buildings achieve all cost-effective behind-the-meter energy and GHG reduction opportunities. Shift the program focus to GHG reduction and incentivize movement from combustion and inefficient electric heating to high-performance heat pumps. Eliminate public financial incentives for the installation of combustion equipment in all new and existing buildings.

Adopt all-electric building code requirements – Adopt state-level building code requirements that will result in high-performance, all-electric buildings in all new construction and appropriate major renovation projects. Ensure funding to train local code enforcement officials.

Invest in clean energy – Increase support for the development of offshore wind in already identified areas as well as in-state solar energy projects to help the State meet 100% of its electricity needs with clean energy sources by 2035, in alignment with goals stated by Governor Moore. Include grid investments in energy storage, demand response, transmission, and distribution systems.

Reform the RPS – Reform Maryland’s Renewable Portfolio Standard to require utilities to procure 100% of the electricity they supply to MD customers from clean, renewable, zero net carbon energy sources by 2040. Include guidance to collaborate with other states to reduce the carbon emissions cap under the Regional Greenhouse Gas Initiative (RGGI) to net zero by 2040.

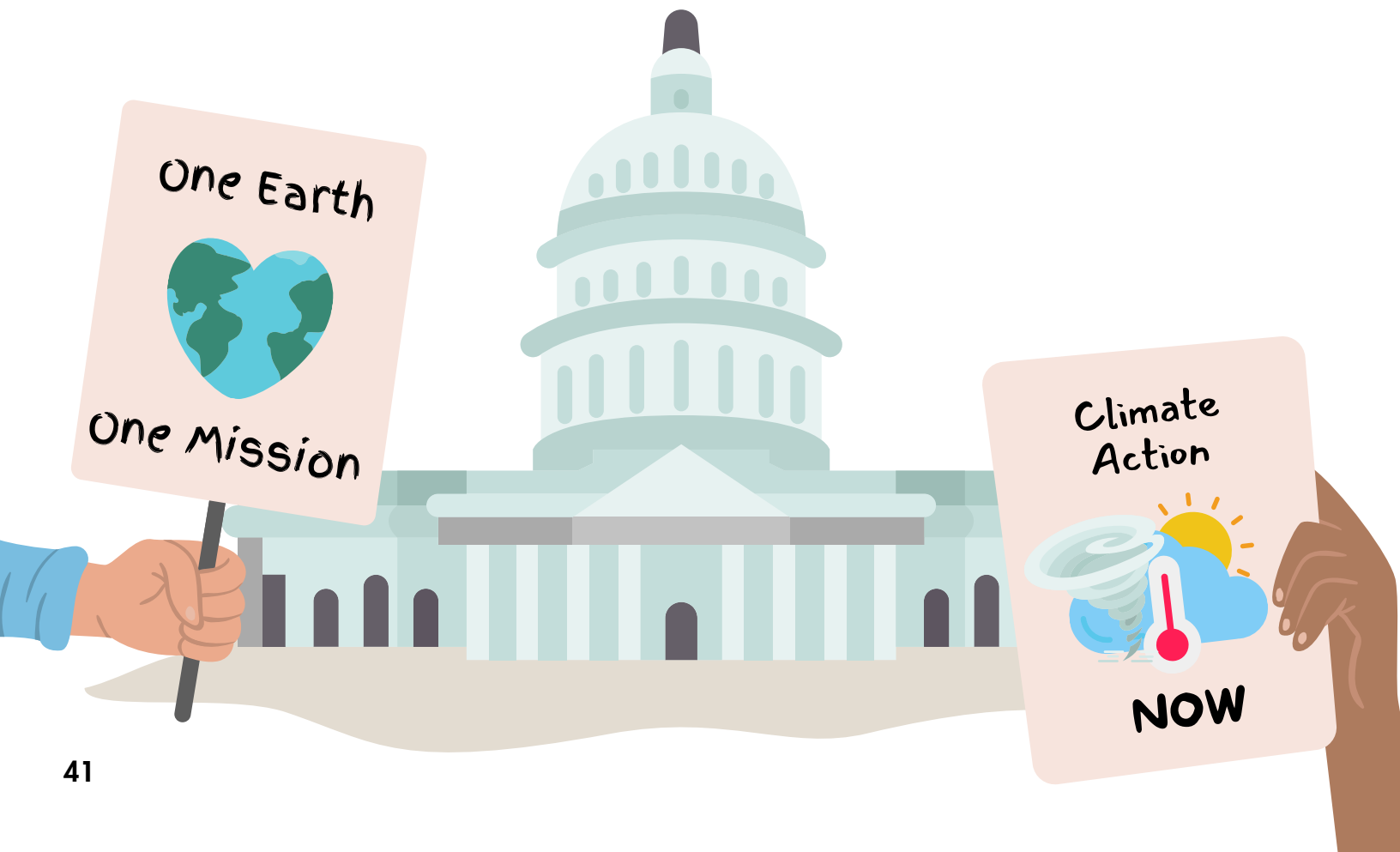
Enable clean energy for common ownership communities – Ease requirements to allow a majority of the board of directors or the HOA council to approve the installation of leased clean energy equipment, including solar panels and electric vehicle charging infrastructure.

Identify equitable funding strategy for energy decarbonization – Direct the PSC to reform utility rates to more equitably secure revenue needed to support investments in front-of-the-meter and behind-the-meter energy improvements. Commission a study to identify a more equitable revenue strategy to support widespread electrification and deep energy efficiency and demand response building improvements.

Ongoing Federal Climate Action Priorities, include:

Montgomery County has established nation-leading ambitious and important goals to reduce energy use and climate pollution and enhance climate resilience, joining with hundreds of jurisdictions across the country with goals to combat climate change. Through local policy, investment, and community partnerships, the County is taking many significant steps toward the goal of eliminating greenhouse gas emissions. However, the County has limited authority in several key areas including power generation, regional infrastructure investments, and standards for new buildings, vehicles, and equipment. Federal leadership and partnership is critical to enable Montgomery County and communities across the nation to achieve our climate goals. We encourage the federal government to expeditiously enact more robust:

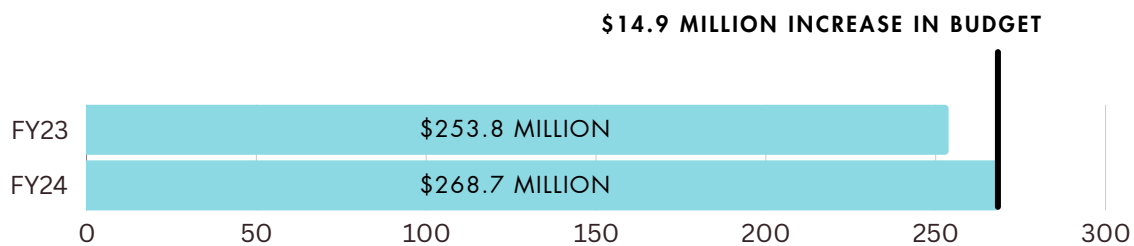
- Power plant emissions standards
- Vehicle fuel efficiency / emissions standards
- Energy-using equipment efficiency standards (e.g., furnaces, water heaters)
- Investment in federal resilience programs (e.g., National Flood Insurance Program)
- Successful and full implementation of the Bipartisan Infrastructure Law, the Inflation Reduction Act and the CHIPS and Science Act
- Federal investment and reforms to accelerate the just and equitable development of interstate electricity transmission infrastructure and utility-scale energy storage development



FY24 BUDGET + STAFFING

The FY24 approved budget includes \$268.7 million for Climate Actions. This is a \$14.9 million (or 5.9%) increase over the FY23 approved budget. The increased funding is spread throughout the operating and capital improvement budgets of the County, and funds the following efforts:

- Accelerates Nature-based Carbon Sequestration
- Supports Clean Energy Efforts
- Supports Greenhouse Gas Reduction in Existing Residential Buildings
- Supports Greenhouse Gas Reduction in the Transportation Sector
- Enhances the County's Climate Governance Capacity
- Supports Climate Capacity Building for Community Organizations
- Supports Zero Waste Efforts
- Climate Change Non-Departmental Account (NDA)
- New climate staff:
 - Seven new climate staff positions within Department of Environmental Protection to enhance governance capacity.
 - Two part-time climate interns and three full-time climate fellows



The Approved FY24 Capital Budget, which looks forward to FY28 includes substantial investments for climate-related infrastructure development and construction projects over the five-year period.

This includes:

- \$9 million for the Department of Environmental Protection (DEP) to expand the County's Tree Montgomery program.
- \$18.6 million to the Montgomery County Green Bank, towards helping County homeowners, businesses, and property owners to make affordable energy efficiency and clean energy investments in their properties.
- \$33.9 million for the Water Quality Protection Fund
- \$142 million for DEP's Recycling and Resource Management Division

In FY24, the County will explore grant funding opportunities being made available through the Bipartisan Infrastructure Law and the Inflation Reduction Act.



RACIAL EQUITY + SOCIAL JUSTICE

Nearly \$1.4 million grant programs supporting low-income and minority community. The Energy Efficiency program assists low-income residents to reduce home energy use by providing energy inspections, air leak identification, insulation, and energy efficient lighting.

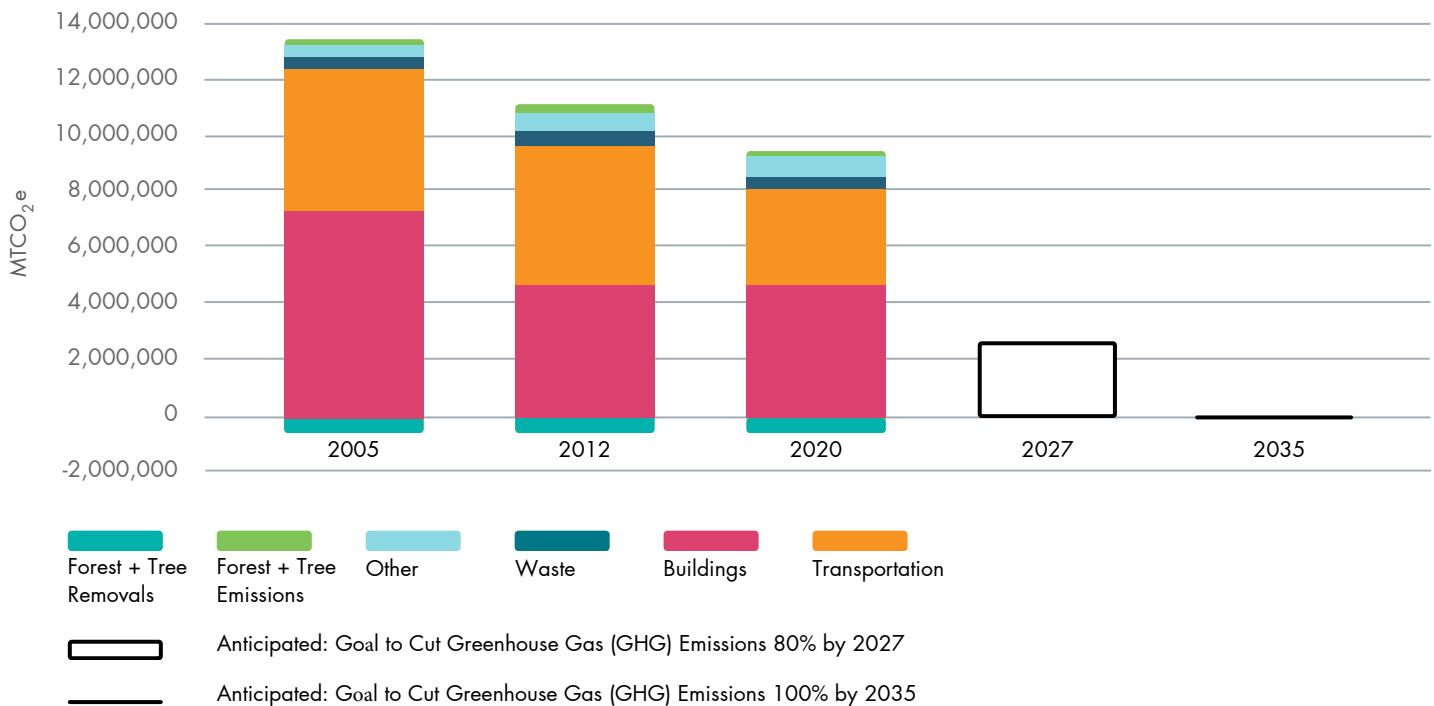
GREENHOUSE GAS (GHG) EMISSIONS INVENTORY

The Metropolitan Washington Council of Governments (MWCOG) conducts greenhouse gas (GHG) emission inventories for Montgomery County. These inventories have been completed for the years 2005, 2012, 2015, 2018, and 2020. They analyze emissions from the Montgomery County community, which includes both the County government and its residents.

Between 2005 and 2020, Montgomery County's community-wide greenhouse gas (GHG) emissions saw a 30% reduction, despite a 13% increase in population. In 2020, the county's forests and trees absorbed over 419,000 metric tons of CO₂ equivalent (MTCO₂e), addressing 5% of the total emissions. In 2020, residential and commercial energy usage contributed to 49% of the measured emissions, while transportation-related emissions made up 40%.

Community-wide Greenhouse Gas Inventory Summary

Data provided by the Metropolitan Washington Council of Governments for Montgomery County



Note: Other refers to emissions associated with the release of Hydrofluorocarbons, emissions resulting from natural gas system losses within the community, as well as emissions from Agriculture.

Emissions Summary

- GHG emissions in Montgomery County decreased by 30% from 2005 to 2020.
- Despite a 13% growth in population during this period, GHG emissions decreased.
- In 2020, forests and trees sequestered over 419,000 metric tons of CO₂ equivalent (MTCO₂e), representing 5% of total emissions.

Inventory Background and Methodology

The Metropolitan Washington Council of Governments (MWCOG) conducts GHG inventories for all 24 local government members, as well as northern Virginia and the metropolitan Washington area as a whole. These inventories adhere to both the U.S. Communities Protocol for Accounting and Reporting Greenhouse Gas Emissions (USCP) and the Global Protocol for Community-Scale Greenhouse Gas Inventories (GPC). They measure GHG-emitting activities conducted by residents, businesses, industry, and government entities located in metropolitan Washington, including emissions from visitors.

Next steps for the GHG Emissions Inventory:

MWCOG intends to perform the upcoming GHG emissions inventory for the calendar year 2023, with the findings expected to be accessible by the conclusion of 2025.

For more detailed information on Montgomery County GHG emissions are available at:

GHG Summary Fact Sheet

<https://www.montgomerycountymd.gov/climate/Resources/Files/climate/ghg/ghg-summary-factsheet.pdf>

GHG Inventory Data

<https://www.montgomerycountymd.gov/climate/Resources/Files/climate/ghg/ghg-inventory-data-summary.xlsx>

GHG Contribution Analysis Tool

<https://www.montgomerycountymd.gov/climate/Resources/Files/climate/ghg/ghg-contribution-tool.xlsx>

FY23 PROGRESS AT A GLANCE

Progress Legend

Not Started	
Initial Steps Taken	
Significant Progress	
Completed or Institutionalized	














Clean Energy

E-1: Community Choice Energy Program	
E-2: Private Building Solar Photovoltaic Code Requirements	
E-3: Promote Private Solar Photovoltaic Systems	
E-4: Public Facility Solar Photovoltaic Installations and Groundwork	
E-5: Advocate for a 100% Renewable Portfolio Standard by 2030	

Carbon Sequestration

S-1: Retain and Increase Forests	
S-2: Retain and Increase Tree Canopy	
S-3: Restore and Enhance Meadows and Wetlands	
S-4: Regenerative Agriculture	
S-5: Restore Soil Fertility, Microbial Activity, and Moisture Holding Capacity	
S-6: Whole-System Carbon Management and Planning	









Transportation

T-1: Expand Public Transit	
T-2: Expand Active Transportation and Shared Micromobility Network	
T-3: Private Vehicle Electrification Incentives and Disincentives	
T-4: Constrain Cars in Urban Areas, Limit New Road Construction	
T-5: Zero Emission Public Buses and School Buses	
T-6: Electrify County and Public Agencies Fleet	
T-7: Expand the Electric Vehicle Charging Network	
T-8: Transportation Demand Management and Telework Strategies	
T-9: Traffic Management Systems	
T-10: Electric Vehicle Car Share Program for Low-Income Communities	
T-11: Off-Road Vehicle and Equipment Electrification	
T-12: Advocate for a Vehicle Carbon Gas Tax or VMT Tax	
T-13: Advocate for Rail Alternative Fuels	













Climate Adaptation

A-1: Water Infrastructure Resilience	
A-2: Repair and Enhancement of Stormwater Conveyance Systems	
A-3: Temperature Monitoring and Alerts	
A-4: Extreme Weather Energy Efficiency Building Code	
A-5: Climate-Adapted Housing Incentives/Subsidies	
A-6: Green/Cool/PV Roof and Pavement Code	
A-7: Green Public Spaces	
A-8: Harden Emergency Shelters and Install Resilience Hubs	
A-9: Mold Protection and Remediation	
A-10: Green Infrastructure	
A-11: Climate Adapted Development Standards	
A-12: Storm Water Retention Credit Training	





Climate Adaptation, *continued*

A-13: Ban Stormwater Management Requirement Waivers	
A-14: Update Floodplain Maps	
A-15: Water Supply Protection	
A-16 Flood Rescue Resources	
A-17: On-Site Water Reuse	
A-18: Expanded Community Gardens	
A-19: Advocacy for Off-River Water Storage	
A-20: Study Potential for Buildings in the County to Flood and Possible Remedies	








Governance

G-1: Build awareness among all Montgomery County Government staff about climate change	
G-2: Establish a Climate Change Academy to integrate Climate Change Training into the Professional Development of MCG staff	
G-3: Incorporate climate competencies into Montgomery County Government job descriptions and Performance Plans	
G-4: Identify and create new positions that are needed for the County government to prepare for and respond to climate hazards, implement climate adaptation measures, and reduce greenhouse gas emissions	
G-5: Establish a cross departmental Climate Innovation Lab to develop, fund and implement climate and resiliency initiatives	
G-6: Designate Climate Ambassadors within each County department	
G-7: Evaluate and update County planning, policy, and operations activities to account for the risks of climate change impacts and prioritize the needs of vulnerable residents	
G-8: Evaluate and update County planning, policy, and operations activities to reduce GHG	
G-9: Incorporate climate considerations into the County's budgeting processes	
G-10: Develop financing strategies for implementing climate actions and incorporate climate considerations into County finance practices	
G-11: Develop climate, energy, health and racial equity metrics and a data driven assessment and reporting process	
G-12: Formalize the Climate Leadership Team to guide the implementation of climate plan actions	

Governance, *continued*

G-13: Update the County's teleworking and transit benefit policies to encourage MCG staff to reduce vehicle miles traveled	
G-14: Establish Montgomery County Government Carbon Fund for Air Travel	
G-15: Consolidate County climate data	
G-16: Conduct climate vulnerability detailed assessments	








Buildings

B-1: Electrification Requirements for Existing Commercial and Public Buildings	
B-2: Electrification Requirements for Existing Residential	
B-3: Energy Performance Standard for Existing Commercial and Multifamily Buildings	
B-4: Electrification Incentives for Existing Buildings	
B-5: All-Electric Building Code for New Construction	
B-6: Disincentivize and/or Eliminate Natural Gas in New Construction	
B-7: Net Zero Energy Building Code for New Construction	

Public Engagement, Partnerships, and Education

P-1: Undertake vigorous public outreach campaign aimed at empowering the public with information on how to reduce emissions and adapt to the impacts from climate change	
P-2: Conduct an outreach campaign that uses evidence-based communications strategies	
P-3: Form a Climate Change Communication Coalition	
P-4: Enhance County websites to focus more sharply on climate change	
P-5: Establish a Community Justice Academy in which Graduating Community Ambassadors Representing their Neighbors Conceive and Co-create Integrated Health, Equity and Quality of Life Solutions Directly Applicable to their Communities.	
P-6: Use Climate Energy and Air Quality Advisory Committee as a resource to advise the County	
P-7: Facilitate ongoing input from community members on the CAP's implementation	
P-8: Engage County artists through public art installations to raise awareness, discussion, and action on climate change	
P-9: Support the efforts of community organizations, businesses, and associations that promote and operationalize equitable climate action	
P-10: Establish a statewide coalition of local governments and youth groups focused on advancing ambitious state climate policy by collectively advocating their positions before the state legislature, Public Services Commission, and the utility companies	
P-11: Establish partnerships with federal agencies located within the County's boundaries on GHG mitigation and climate resiliency efforts	
P-12: Advocate for the continued integration of climate change education into the existing school curriculum	

Public Engagement, Partnerships, and Education, *continued*

P-13: Develop a standardized climate change curriculum across public schools and recommend the same for private schools and home schools	
P-14: Provide professional development for educators on climate change topics	
P-15: Use school gardens or other outdoor learning facilities as a jumping off point to address a multitude of climate related topics	
P-16: Develop increased opportunities for students to participate in climate change learning experiences outside of the classroom	
P-17: Develop sustainability goals for schools to reach and provide incentives to do so	
P-18: Encourage climate change action at home	
P-19: Establish cross departmental partnership to facilitate implementation of climate goals at County schools	

Climate Action Detailed Tables

Additional data for each CAP action that the County has accomplished in FY23 and plans to make progress on during FY24 is available in the Montgomery County Climate Portal www.montgomerycountymd.gov/climate. See FY23 Itemized CAP Action Tables

LETTER OF APPRECIATION

Thank you to the many contributions to the creation of the Fiscal Year 23 Climate Action Plan Report. Most importantly, thank you to the many staff members of Montgomery County Government, the Maryland National Capital Park and Planning Commission, Montgomery County Public Schools, Washington Suburban Sanitation Commission and the Montgomery County Green Bank for their continued support and dedication to making this Report possible. My sincere appreciation goes out to the following individuals.

Montgomery County Government

Bryan Bomer	Garrett Fitzgerald	Tina Laboy	Ruth Semple
Sandra Brecher	Samuel Frushour	Ansu Mathew	Lindsey Shaw
Scott Bruton	Rich Harris	Maycel Palansky	Melanie Wenger
David Del Pozo	Luke Hodgson	Mara Parker	
Stan Edwards	Barry Hudson	Mike Scheffel	
Nancy Feldman	Calvin Johnson	Donald Scheuerman	

Montgomery County Green Bank

Stephen Morel

Montgomery College

Mike Whitcomb

Montgomery County Public Schools

Lynne Zarate

WSSC Water

Diane McGahagan

M-NCPPC Parks

Kayla Hickman

M-NCPPC Planning

Carl Morgan

Haute Haus Agency

Heather Mahoney

In addition, I am most grateful to the numerous residents, neighborhood groups, non-profit organizations, and partners that support and enact climate solutions here in Montgomery County. The County is striving to be a model for jurisdictions around the country and around the world. We could not make the progress we've made, and the progress we're planning, without the broad and consistent support of our citizens.

Sincerely,



Sarah Kogel-Smucker

Montgomery County Climate Change Officer



ACRONYMS

AAHP: African American Health Program
AHFP: Agricultural History Farm Park
BDS - Business development specialist
BEPS: Building Energy Performance Standards
BOE: Board of Education - CAA: Community Action Agency
CAI: Community Advocacy Institute
CAP: Climate Action Plan
CBT: Chesapeake Bay Trust
CCE: Community Choice Energy
CEAQAC: Climate, Energy, and Air Quality Advisory Committee
CE: County Executive
CEX: County Executive Office
CIP: Capital Improvements Program
C-PACE: Commercial Property Assessed Clean Energy
DEP: Department of Environment Protection
DGS: Department of General Services
DPS: Department of Permitting Services
EV: Electric Vehicle
FEMA: Federal Emergency Management Agency
FIN: Department of Finance
FTA: Federal Transit Administration
FY: Fiscal Year
GHG: Greenhouse Gas
HAWK: High-Intensity Activated crosswalk
HHS: Department of Health and Human Services
HOA: Homeowners Association
HOC: Housing Opportunities Commission
IECC: International Energy Conservation Code
ILSR: Institute for Local-Self Resilience
IGCC: International Green Construction Code
KW: kilowatt(s)
KWH: kilowatt hour(s)
LHI: Latino Health Initiative
LLC: Limited Liability Company
MCCPTA: Montgomery County Council of Parent-Teacher Association
MCDOT: Montgomery County Department of Transportation
MCG: Montgomery County Government

Acronyms, continued...

MCPD: Montgomery County Police Department
MCPS: Montgomery County Public Schools
MDOT: Maryland Department of Transportation
M-NCPPC: Maryland-National Capital Park and Planning Commission
MCRA: Montgomery County Revenue Authority
MORE: Montgomery County Racial Equity FY22 Climate Work Plan Quarter 2 Updates 63
MOU: Memorandum of Understanding
MSDE: Maryland State Department of Education
MTA: Maryland Transportation Authority
MW: Megawatt(s)
NOAA: National Oceanic and Atmospheric Administration
NREL: National Renewable Energy Laboratory
NSA: Naval Support Facility
OAG: Office of Agriculture
OEMHS: Office of Emergency Management and Homeland Security
OHR: Office of Human Resources
OIR: Office of Intergovernmental Relations
OMB: Office of Management and Budget
OPI: Office of Public Information
PEPCO: Potomac Electric Power Company
PSC: Public Service Commission
PV: Photovoltaic
RAISE: Rebuilding American Infrastructure with Sustainability and Equity
RFP: request for proposal
SHA: State Highway Administration
SSL: Student Service Learning
TPB: Transportation Planning Board
UMD: University of Maryland
UME: University of Maryland Extension
USDOT: United States Department of Transportation
WMATA: Washington Metropolitan Area Transit Authority
WSSC: Washington Suburban Sanitary Commission

CITATIONS

1. Data provided by DEP
2. Data provided by M-NCPPC-Parks
3. Electrify MC Information Page:
<https://www.montgomerycountymd.gov/dep/energy/homes/electrify-mc.html>
4. Flash Bus Information Page: <https://www.montgomerycountymd.gov/dot-transit/flash/>
5. Ride On Reimagined study being conducted by MCDOT:
<https://www.montgomerycountymd.gov/DOT-Transit/reimagined/>
6. MCDOT Commuter Survey: <https://www.montgomerycountymd.gov/dot-dir/commuter/commuter-survey-results.html>
7. Figure provided by OEMHS
8. Montgomery Energy Connection Page: <https://montgomeryenergyconnection.org>

CONTACT

Climate action plans, appendices, work plans, press releases, and factsheets are available via the Montgomery County Climate Portal that is available at montgomerycountymd.gov/climate.

For questions or comments about this report, reach us at: climate@montgomerycountymd.gov.