



**Committee:** T&E  
**Committee Review:** Completed  
**Staff:** Keith Levchenko, Senior Legislative Analyst  
**Purpose:** To make preliminary decisions – straw vote expected  
**Keywords:** #Environmental Protection

AGENDA ITEM #48  
 May 10, 2023  
**Worksession**

**SUBJECT**

Department of Environmental Protection (DEP) FY24 Operating Budget (General Fund)

**EXPECTED ATTENDEES**

- Willie Wainer, Acting Director, Department of Environmental Protection (DEP)
- Vicky Wan, Acting Deputy Director, DEP
- Stan Edwards, Chief, Energy, Climate and Compliance Division, DEP
- Rich Harris, Fiscal and Policy Analyst, Office of Management and Budget

**FY24 COUNTY EXECUTIVE RECOMMENDATION**

Department of Environmental Protection	FY23 Approved	FY24 CE Recommended	Change from FY23 Approved
General Fund	\$7,569,048	\$9,985,668	31.9%
Personnel Costs	\$3,025,353 25.64 FTEs	\$3,975,714 33.65 FTEs	31.4% 31.2%
Operating Costs	\$4,543,695	\$6,009,954	32.3%

**COMMITTEE RECOMMENDATIONS**

- The Executive recommends increasing the DEP General Fund Budget by \$2.4 million (31.9 percent) in FY24. Including:
  - adding \$360,260 in technical adjustments. **The T&E Committee concurs.**
  - adding \$750,000 to the Tree Montgomery Program (source of funds: Tree Canopy Conservation Account) to match the latest approved expenditures for FY23. **The T&E Committee concurs.**
  - adding \$1.3 million in additional Climate Change-related expenditures in FY24. **The T&E Committee recommends adding these expenditures to the Reconciliation List as noted on the following chart.**

New FY24 Climate Change Related CE Recommendations	FY24 CE Recommended		T&E
	\$	FTEs	Recommendation
Climate Capacity Building for Community Organizations	250,000		RL - Priority
Energy Audits for Under-resourced Buildings Subject to BEPS	250,000		RL - Priority
Community Choice Energy Consultant Support	250,000		<b>RL - High Priority</b>
New Positions to Manage County Grant and Incentive Programs	174,924	2.0	<b>RL - High Priority</b>
Electric Vehicle Co-Op Management	100,000		RL - Priority
Consultant Support for Grant Identification and Applications	100,000		<b>RL - High Priority</b>
New Position for Solar Technical Expertise	90,718	1.0	RL - Priority
New Position for Residential Electrification	90,718	1.0	<b>RL - High Priority</b>
<b>Totals</b>	<b>1,306,360</b>	<b>4.0</b>	

“RL” = Reconciliation List

**This report contains:**

T&E Committee May 4, 2023 Staff Report

Pages 1-©86

**Alternative format requests for people with disabilities.** If you need assistance accessing this report you may [submit alternative format requests](#) to the ADA Compliance Manager. The ADA Compliance Manager can also be reached at 240-777-6197 (TTY 240-777-6196) or at [adacompliance@montgomerycountymd.gov](mailto:adacompliance@montgomerycountymd.gov)

T&E COMMITTEE #1,2,3  
May 4, 2023

**Worksession**

**MEMORANDUM**

May 1, 2023

TO: Transportation & Environment Committee

FROM: Keith Levchenko, Senior Legislative Analyst

SUBJECT: **FY24 Operating Budget: Department of Environmental Protection<sup>1</sup> (DEP) General Fund and Water Quality Protection Fund and Climate Change Planning Non-Departmental Account (NDA)**

PURPOSE: To review and make recommendations to the Full Council

**County Executive Recommended DEP Budget Summary**

- **General Fund**
  - \$9.99 million (an increase of \$2.4 million (31.9 percent) and 5.0 new positions
  - Climate Change-related initiatives = +\$1.3 million and +4.0 positions
- **Water Quality Protection Fund (WQPF)**
  - \$33.9 million (an increase of \$2.9 million (+9.4 percent) and five new positions
  - Equivalent Residential Unit (ERU) rate for the Water Quality Protection Charge (WQPC) to increase from \$119.50 to \$128.00
- **Climate Change Planning NDA**
  - \$691,677 (a decrease of \$100,038 or -14.5 percent)
  - Three positions shifted from the NDA to the DEP General Fund Budget (-\$397,632)
  - Climate Fellows Intern Program moved to the NDA from the DEP General Fund (+\$85,000)
  - An \$85,000 increase for the Climate Fellows and Interns
  - \$400,000 in operating costs for various Climate Change related initiatives continues into FY24

**Council Staff Recommendations**

- DEP General Fund: New expenditures for climate change-related initiatives and positions to be put on the Reconciliation List. Consider an increase in lapse based on recent history of high vacancies.
- Climate Change Planning NDA: Put the \$85,000 increase for the Climate Interns and Fellows on the Reconciliation List
- DEP WQPF: Approve the budget and the WQP Charge ERU rate as recommended by the County Executive

<sup>1</sup> #DEPBudget and Water Quality Protection Fund and Stormwater.

Participants Include:

- Willie Wainer, Acting Director, Department of Environmental Protection (DEP)
- Vicky Wan, Acting Deputy Director, DEP
- Stan Edwards, Chief, Energy Climate and Compliance Division, DEP
- Lindsey Shaw, Chief, Energy and Climate Section, DEP
- Anthony Skinner, Chief, Business Operations, DEP
- Frank Dawson, Chief, Watershed Restoration Division, DEP
- Amy Stevens, Chief, Planning Outreach and Monitoring Section, DEP
- Laura Miller, Tree Montgomery Program, DEP
- Pam Parker, Chief, Stormwater Inspection and Maintenance, DEP
- Ann English, RainScapes Program, DEP
- Rich Harris, Fiscal and Policy Analyst, Office of Management and Budget

Attachments to this Memorandum:

- County Executive's Recommended FY24 Operating Budget – DEP Section (©1-11)
- County Executive's Recommended FY24 Operating Budget – Climate Change Planning NDA Section (©12)
- County Executive's Recommended FY24 Operating Budget – Climate Change Section (©13-19)
- Racial Equity and Social Justice Operating Budget Equity Tool – DEP (©20-22)
- DEP Information Regarding Recommendations with Service Impacts in the FY24 Recommended WQPF Budget (©23-29)
- Public Hearing Testimony and Correspondence (©30-86)

The Department of Environmental Protection (DEP) includes four funds: The General Fund, Water Quality Protection Fund, and the Solid Waste Collection and Disposal Funds.

The Recycling and Resource Management Division (RRMD) which includes the Solid Waste Collection and Disposal Funds is reviewed separately (see T&E Committee Item #4).

For this budget review, the General Fund portion of DEP along with the Climate Change Planning Non-Departmental Account (NDA) (which is also supported by the General Fund) are presented. As in past years, the Council review process for tax-supported expenditures includes a "Reconciliation List" process whereby the Council will make final budget decisions on new and additional expenditures recommended by the County Executive and/or the Committee across County Government departments and outside agencies.

The Water Quality Protection Fund (WQPF) portion of the DEP Budget is also discussed in this memorandum. As a self-supporting fund, this budget is not part of the Reconciliation List process. However, Council actions increasing or decreasing WQPF expenditures could affect the Water Quality Protection Charge (the primary source of funds for the WQPF) the Council will approve (via resolution) for FY24.

## Department Overview

**Table #1  
DEP Expenditures and Positions/FTEs (General Fund and WQPF)**

Totals	Actual	Approved	CE Rec	Change FY24-FY23	
	FY22	FY23	FY24	\$\$\$	%
Personnel Costs	11,751,090	13,346,452	15,645,489	2,299,037	17.2%
Operating Expenses	20,641,490	25,213,096	28,253,391	3,040,295	12.1%
Capital Outlay	-	-	-	-	n/a
<b>Total</b>	<b>32,392,580</b>	<b>38,559,548</b>	<b>43,898,880</b>	<b>5,339,332</b>	<b>13.8%</b>
Full-Time Positions	97	121	131	10	8.3%
Part-Time Positions	1	1	1	-	n/a
FTEs	109.90	122.48	135.49	13.01	10.6%

For FY24, the Executive recommends total expenditures of \$43.9 million for the Department of Environmental Protection (General Fund plus Water Quality Protection Fund), a 14.4 percent increase from the FY23 Approved budget. No grant-funded expenditures are assumed in FY23 or FY24 at this time. Also, as noted earlier, the RRMD (Solid Waste) budget is to be reviewed separately by the Committee and is not included in the above numbers.

Overall, the WQPF is over 77 percent of the total DEP budget (not counting RRMD) for FY24. This ratio is down from 80.4 percent of the FY23 approved budget (because of increased climate change-related spending in the FY24 Recommended General Fund portion of the DEP budget). For comparison, the WQPF was less than half the DEP budget in FY06, prior to the major expansion in program expenditures to address the requirements of the County’s current National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit.

Not included in Table #1 are charges to the CIP. In addition to CIP current revenue, beginning in FY11, the WQPF began debt-financing some projects. As the debt financing has ramped up, the debt service requirement has as well. Per the Recommended Fiscal Plan (see ©11, “Transfers to Debt Service Fund” line), WQPF debt service in FY24 is estimated at about \$9.7 million. That number is projected to rise to \$17.8 million by FY29.

DEP also charges staffing and operating costs to the Solid Waste Collection and Disposal Funds for environmental monitoring activities of the Gude and Oaks closed landfills, as well as portions of staff time in the Director’s office related to administrative functions for the Recycling and Resource Management Division. For the recommended FY24 budget, these charges total 7.51 FTEs and a total of \$1.1 million; similar to the approved charges for FY23 (7.52 FTEs and \$1.1 million).

The focus of this Staff Report is on the FY24 DEP budget as recommended by the County Executive and the major changes from FY23 to FY24 by fund. Council Staff has suggested later in this memorandum various DEP-related issues that the Committee may wish to take up for discussion after budget.

### Vacant Positions

As part of the FY24 budget review, the Council has asked staff to review vacancy data for each department. In total, as of April 1, 2023, DEP (in total, including Recycling and Resource Management (RRM)) had 34 vacant positions out of 197 positions (a vacancy rate of 17.3 percent). Excluding RRM,

DEP had 29 vacancies out of 124 positions (a vacancy rate of 23.4 percent). As a result, the 2<sup>nd</sup> Quarterly Analysis for the DEP General Fund and WQPF budgets shows nearly \$1.7 million in personnel cost savings estimated for FY23.

DEP staff have noted the following:

- Two are the Director and Deputy-Director which are recruited by the County Executive's office.
- 15 are "In-progress" for creations and job class reviews.
- 14 are "Active" meaning they are being interviewed, awaiting job offer approval, or release of eligible list.
- 3 of the remaining positions are within the new Climate Programs section and will be created once the Section Manager position is filled.

*"DEP has implemented process and tools for tracking vacancies that allows every hiring manager to understand the status of filling the position and to ensure its clear who has the lead for taking the next step. This tool has allowed for improvement in the timeframe for filling the vacancies."*

These FY23 vacancy levels are much higher than in FY21 and FY22, when DEP reported an average number of vacancies each month of about 13. In April 2021, DEP had 15 vacancies. However, by April of 2022, DEP's vacancy count had risen to 25.

The FY24 Recommended Budget for DEP (General Fund and Water Quality Protection Charge) assumes approximately \$326,000 in lapse. This is an increase of about \$142,000 (or 75 percent) from the FY23 level of \$188,000. While this reflects a significant increase in lapse, it is still far below the estimated personnel cost savings expected in FY23.

The issue of high numbers of vacant positions (and very long lengths of time some of these positions have been vacant) is an issue which cuts across much of County Government. The Council may wish to consider a consistent approach across departments regarding lapse assumptions and whether to fund positions which have been vacant for an extended period of time.

For DEP, Council Staff suggests the Committee consider increasing lapse higher than the Executive's recommendation. Even assuming DEP is successful in speeding up its hiring processes, it may still be a huge challenge to get back to its previously typical level of 13 vacancies. Even at the 13-position vacancy level, that would still be about \$1.0 million in lapse savings across the General Fund and WQPF. **Council Staff recommends increasing the lapse total from the \$326,000 level in the Recommended Budget to \$600,000. Council Staff will work with DEP to appropriately allocate this between the General Fund and WQPF.**

### Racial Equity and Social Justice

The Office of Racial Equity and Social Justice (ORESJ) asked each County Government department to respond to its "Operating Budget Equity Tool" (OBET) which included a set of questions to help departments and decisionmakers consider the racial equity and social justice impacts of their budget decisions. DEP's response to the OBET is attached on ©20-22. DEP received a rating of "3" "Department-level budget demonstrates a strong commitment to advancing racial equity and social justice in Montgomery County."

Council Staff asked DEP for additional information on its RESJ efforts. DEP's response is below:

*“In addition to the specific work focused on responding to the questions from the County’s Racial Equity and Social Justice office about the FY24 Operating Budget, the Department has been working on raising awareness of issues associated with racial equity and identifying opportunities for addressing these issues. A RESJ working group has been working for several years and provides support to many ongoing initiatives by the Department including:*

- *Continue to work to improve the Development of Best Practices to Address Equity Issues in Hiring – identifies that there are some issues with the demographics of the DEP staff compared to the population we serve and provides some tools for beginning to address these issues.*
- *Completed the Translation Standard Operating Procedure – sets minimum expectations for translation of DEP materials and sets up an internal process for assigning translation of these materials to the DEP staff who are certified to translate and interpret.*
- *Initiation of development of a methodology for evaluating if/how DEP programs address equity and justice issues in implementation. DEP is partnering with DOT as they initiate this type of evaluation.*

#### Public Hearing Testimony and Correspondence

Letters/testimony (see ©30-86) were received from groups including the Montgomery County Advisory Committee on Climate, Energy, and Air Quality, the Climate Action Plan Coalition, Stormwater Partners, Nature Forward, and the Friends of Sligo Creek. Individual testimony was also received in support of accelerated action to meet the County’s Climate Change goals. In general, the groups and individuals are supportive of the recommended increases in the DEP budget for climate change and stormwater management-related activities and suggest additional focus/spending in certain areas. DEP staff will be available at the Committee meeting to discuss these recommendations.

#### Issues for Discussion After Budget and during FY24

- Climate Change Planning Update
- Building Energy Performance Standards Regulation Development/Status
- Maryland Department of the Environment (MDE) Action on the Council’s Approved 2022-2031 Water and Sewer Plan
- Bill 40-21: Individual Water Supply and Sewage Disposal Systems – Amendments
- Bill 18-22: Noise Control – Leaf Removal Equipment - Amendments
- Unserved and Underserved Communities Bi-County Workgroup Report Implementation

## General Fund Budget

### Overview

**Table #2**  
**DEP Expenditures and Positions/FTEs**

General Fund	Actual	Approved	CE Rec	Change FY24-FY23	
	FY22	FY23	FY24	\$\$\$	%
Personnel Costs	2,147,768	3,025,353	3,975,714	950,361	31.4%
Operating Expenses	1,342,484	4,543,695	6,009,954	1,466,259	32.3%
Capital Outlay	-	-	-	-	-
<b>Total</b>	<b>3,490,252</b>	<b>7,569,048</b>	<b>9,985,668</b>	<b>2,416,620</b>	<b>31.9%</b>
Full-Time Positions	49	61	66	5	8.2%
Part-Time Positions	0	0	0	-	n/a
FTEs	16.29	25.64	33.65	8.01	31.2%

As shown in Table #2, for FY24, General Fund expenditures in the DEP budget are recommended at \$9.99 million (an increase of \$2.4 million (or 31.9 percent).

This large increase is almost entirely for new positions and operating costs for new and expanded climate change-related efforts (+\$1.3 million and 4 new positions) plus the doubling of expenditures for tree planting (+\$750,000). These items are discussed in more detail below. The remaining increases include the shifting of positions from the Climate Change Planning NDA and the County Executive’s Office to the DEP General Fund budget, and other technical adjustments such as FY24 compensation adjustments, annualizations of personnel costs, Risk Management, motor pool, printing and mail, etc.

For more details, please see the crosswalk of expenditure changes included in the Recommended General Fund budget for DEP (see ©7-8).

### General Fund Workforce

General Fund FTEs declined substantially over the past decade as many positions (or portions of staff charges) began charging to the WQPF. As a result, General Fund positions and FTEs declined from their peak of 48 positions and 37.8 FTEs in FY02. However, over the past several years, with the addition of more climate-change related positions, General Fund positions are now higher than that earlier peak.

Other than the administrative, management, and IT needs of the Department, the major policy areas of staffing for DEP in the Approved FY23 General Fund budget are:

- **Intergovernmental Affairs Division** (4 positions) – This function includes managing the County’s Water and Sewer Plan (and amendments/category changes requested) and coordinating with various outside agencies, such as WSSC, M-NCPPC, DCWater, and the Metropolitan Washington Council of Governments. These positions are funded primarily out of the General Fund, but with some charges to the Solid Waste Fund as well.
- **Energy, Climate, and Compliance Division** (24 positions including the Division Chief). This division has seen rapid growth in programs and staffing resulting from implementation of the Climate Action Plan. During FY23, the Office of Energy and Climate was split into two sections: Building and Transportation Programs and Climate Programs. The Environmental Compliance Section, is unchanged.



- **Environmental Compliance** (8 positions with 1 current vacancy) – This section enforces the County’s environmental laws; responding to cases involving water quality, indoor and outdoor air quality, illegal dumping, noise, general environmental assessments, and other miscellaneous environmental issues. This section also monitors the closed Oaks and Gude landfills and the Beantown dump. A portion of this section’s staff time is charged to the Water Quality Protection Fund (WQPF).
- **Building and Transportation Programs** (11 positions with 6 vacancies) –This section focuses on reducing energy use and GHG emissions from the private sector-built environment and private sector vehicle use. Programs include benchmarking and building energy performance standards, Montgomery Energy Connection and related residential energy and renewable energy programs, and programs designed to increase adoption of electric vehicles (EVs) and EV charging infrastructure.
- **Climate Programs** (4 positions with 1 vacancy) – This section includes a range of climate related programs including climate communications, State energy and climate policy work, natural climates solutions, solar energy initiatives, and energy and climate grant management.

### Tree Montgomery Program

The Tree Montgomery Program is funded completely out of the Tree Canopy Conservation Account that was established under Bill 35-12, adopted by the Council in July 2013. That account collects fees in lieu of tree planting when development requires a sediment control permit under Chapter 19 of the County Code.

Since its inception in FY16, the dedicated revenue for this program has grown from \$250,000 per year to \$750,000 per year in FY22 and FY23. The number of trees planted has also steadily grown.

On January 17, 2023, the Council approved a supplemental appropriation request for an additional \$750,000 for this program to allow DEP to order additional trees; increasing the number of trees to be planted in FY23 to over 3,800.

For FY24 the Executive is recommending \$1.5 million in spending (the same as the latest budgeted amount for FY23) for the planting of an estimated 4,000 trees.

**Council Staff is supportive of the increased spending recommended by the County Executive. Since the Tree Montgomery Program is funded with dedicated revenue, Council Staff DOES NOT recommend placing the additional expenditures on the Reconciliation List.**

*NOTE: Other expenses to support tree planting activities under the Tree Canopy Law (e.g., County Arborist, outreach staff, outreach materials, etc.) are paid for by funding sources other than the Tree Canopy Conservation Account.*

### Climate Change

The County’s [Climate Action Plan](#) was completed and publicly released in June 2021. This report represented the culmination of several years of work. That planning effort stemmed from the December 2017, Council approval of [Council Resolution 18-974, “Emergency Climate Mobilization.”](#) This resolution supported an ambitious goal of reducing greenhouse gas (GHG) emissions by 80 percent by

2027 and 100 percent by 2035, as well as to initiate “large scale efforts to remove excess carbon from the atmosphere.”

To date, according to [data](#) compiled by the Metropolitan Washington Council of Governments for its member jurisdictions, as of 2020, Montgomery County reduced its GHG emissions by 30 percent from its 2005 baseline (despite a 13 percent growth in population over that period). However, to meet its interim 2027 goal of an 80 percent reduction, GHG emissions will need to be much more steeply reduced over the next few years.

The Executive’s Recommended Budget includes substantial increases in the DEP General Fund budget for climate change-related activities. However, there are other ongoing and new Climate Change related activities funded in various departments outside of the DEP budget (see the Climate Change Section of the Recommended Operating Budget attached on ©13-19) as well as within the Climate Change Planning Non-Departmental Account (NDA) (discussed later, see Operating Budget excerpt on ©12). For a detailed listing of ongoing work by category and by department/agency, please see the [Montgomery County Climate Action Plan Progress Report for October – December 2022 \(Fiscal Year 2023 Quarter 2\)](#). **Council Staff suggests that the T&E Committee receive a briefing after budget from DEP on the County’s Climate Action Plan implementation.**

The new FY24 Climate Change-related items within the DEP budget are listed in the table below.

New FY24 Climate Change Related CE Recommendations	FY24	
	Rec \$	Rec FTEs
Climate Capacity Building for Community Organizations	250,000	
Energy Audits for Under-resourced Buildings Subject to BEPS	250,000	
Community Choice Energy Consultant Support	250,000	
New Positions to Manage County Grant and Incentive Programs	174,924	2.0
Electric Vehicle Co-Op Management	100,000	
Consultant Support for Grant Identification and Applications	100,000	
New Position for Solar Technical Expertise	90,718	1.0
New Position for Residential Electrification	90,718	1.0
<b>Totals</b>	<b>1,306,360</b>	<b>4.0</b>

DEP provided descriptions of each item which are provided below. All these items would continue beyond FY24 (i.e., are not one-time costs). Where new positions are involved, the FY24 costs assume an October 1, 2023 hire date per OMB policy. Therefore, for FY25, the costs for these new positions would need to be annualized.

**Add: Climate Capacity Building for Community Organizations** – Most community-based organizations in Montgomery County lack the resources and institutional capacity to focus their efforts on climate justice. The Climate Jumpstart Grants program would provide resources to community-based organizations (CBOs), enabling grant recipients to step into climate justice work. Climate Jumpstart Grants funding could be used by CBOs for a variety of purposes, such as hiring climate staff; training staff on climate change and climate justice issues; developing organizational priorities related to climate change and climate justice; and more deeply engaging with community members and County government on climate policies from conception to implementation.

**Add: Energy Audits for Under-resourced Buildings Subject to Building Energy Performance Standards** – A key element of the County’s Climate Action Plan is to reduce greenhouse gas (GHG)

*emissions from commercial and multi-family buildings. To help meet this goal, the County has adopted Building Energy Performance Standards (BEPS), which will require commercial and multi-family buildings 25,000 square feet or greater to meet energy performance standards over time. For some buildings, meeting the established standards will require retrofit or replacement of various building systems. The first step in this process is to conduct an energy audit of the building to understand how the building is currently using energy and assess options for increasing the efficiency of the building. Comprehensive energy audits examine the operating performance of individual building systems and evaluate options for increasing the efficiency of, or replacing, such systems.*

*Some buildings are equipped with monitoring systems that provide detailed information on energy use, as well as building engineers with sufficient expertise to maximize the performance of building systems and identify needed upgrades. These buildings are better positioned to meet BEPS requirements because they can develop long range plans to implement necessary upgrades. Under resourced buildings (defined by the BEPS law as including affordable housing, non-profit organizations, and small businesses) generally lack the monitoring systems and building staff to understand and address building inefficiencies in real time, much less develop a long-range plan that may be necessary to meet BEPS requirements. Furthermore, without sufficient knowledge of a building's operation, less efficient equipment that may prevent compliance with BEPS requirements may be installed when existing systems reach the end of their useful life. The proposed funding will pay for or subsidize the cost of energy audits in under resourced buildings to enable them to identify opportunities to increase building energy performance and prepare for system upgrades that will be necessary to comply with BEPS requirements.*

**Add: Community Choice Energy Consultant Support** – *A key action in the County's Climate Action Plan is the development of a Community Choice Energy (CCE) program (also known as Community Choice Aggregation or CCA). A CCE program would enable the County to become the electricity supplier to residential and small commercial electricity customers in the County. The goal of the program would be to provide electricity at a price that is competitive with the electricity offered through the three utilities serving the County that has a higher percentage of the supply produced by renewable energy sources. The County is working with a variety of stakeholders through a Maryland Public Service Commission (PSC) Work Group to develop regulations governing the program. Following the approval of regulations by the PSC, the County will need to develop a legally required Aggregation Plan describing key elements of the program for PSC approval, as well as solicit the services of an energy supplier to provide the electricity that will be offered through the program. All of these activities require expertise in the regulation of electricity in Maryland, the development and operation of CCE programs, and the procurement of electricity as part of a CCE program. The County does not have this expertise on staff. The proposed funding will enable continued use of consultants necessary to develop and implement a CCE program for Montgomery County.*

**Add: New Positions to Manage County Grant and Incentive Programs (Program Manager I & Program Manager II)** – *The County's ambitious greenhouse gas mitigation and climate resilience goals will require fiscal resources beyond that expected to be available in anticipated operating and capital budgets. Recently adopted federal legislation, including the Infrastructure Investment and Jobs Act (IIJA), promise to provide a wide variety of funding opportunities from federal and state agencies. In addition, many climate programs under development or proposed for future implementation will involve the distribution of County funds and/or incentives to residents and businesses. Staff are needed to identifying programs and activities in need of grant funding,*

*developing and submitting grant proposals, executing grant-related documents and reporting on grants, as well as developing and monitoring the distribution of County funds and incentives to residents and businesses associated with various climate programs. These Grants & Incentives Program positions will be critical to supporting these activities.*

***Add: Electric Vehicle Co-op Management*** – *A key element of the County’s Climate Action Plan is to reduce greenhouse gas (GHG) emissions from gas-powered vehicles by increasing the use of electric vehicles (EVs). Despite increased sales, EVs remain a relatively small percentage of the vehicles on the road. This is due in part to the cost of EVs, particularly at the lower end of the price range of available vehicles in the market today. The EV Purchasing Co-op, which began as a pilot in FY23, leverages consumer buying power to encourage dealerships to offer cost savings on electric vehicles without the need for direct incentives from the County. Additional resources are required to support full development of the EV co-op program. DEP will hire a contractor to administer this program, maintain a listing of available deals, conduct regular monthly correspondence with dealerships, develop training materials, deliver training to dealership partners, and develop marketing and communication content. Dedicated contractor support for this program will ensure fair treatment of all program participants and timely communication. Contract support for the EVPC will allow the program to conduct more proactive outreach to residents to recruit them into the program in the form of in-person events and informational materials. This is especially important to successfully reach underserved areas of the County (such as East County and other Equity Focus Areas) and residents that may be interested in electric vehicles but are harder to reach through regular communication channels.*

***Add: Consultant Support for Grant Identification and Grant Applications*** – *The County’s ambitious greenhouse gas mitigation and climate resilience goals will require fiscal resources beyond that expected to be available in anticipated operating and capital budgets. Recently adopted federal legislation, including the Infrastructure Investment and Jobs Act (IIJA), promise to provide a wide variety of funding opportunities from federal and state agencies. Detailed guidance for many of these opportunities has yet to be issued by the designated federal or state implementing agency. The process for identifying, applying for, and implementing grant opportunities can be complex. In order to receive the greatest benefit from these funding opportunities, it will be beneficial to have the expertise of consultants with the expertise to navigate these processes. The return on the investment to the County can be significant, as thousands of dollars in consulting expertise can translate into millions of dollars of federal or state resources. The proposed funding will enable the retention of consultants with expertise in grant identification, application, and implementation. This expertise will supplement the work of staff proposed to be hired in FY24 (discussed above).*

***Add: New Position for Solar Technical Expertise (Program Manager II)*** – *Increasing development of solar installations is a key element of the Climate Action Plan. This includes rooftop solar on residential and commercial properties, ground-mounted solar installations, community solar in various configurations, and utility scale solar. The County lacks a technical expert that understands all aspects of siting, installing, and paying for solar installations. This position would provide technical expertise related to the development of policies, programs, and outreach/engagement to residents and businesses related to solar energy installations.*

***Add: New Position for Residential Electrification (Program Manager II)*** – *Increasing electrification of residential buildings is a key element of the Climate Action Plan. Residential electrification focuses primarily on heating, air conditioning, and ventilation (HVAC) systems and*

*domestic hot water equipment, which in many residences are fueled by on-site combustion of natural gas, oil, or propane. Electrification of these systems is often challenging to homeowners due to technical questions and a lack of available information about available systems and methods for conversion. Contractors providing HVAC and hot water systems generally focus on replacing existing equipment with similar equipment (e.g., replacing gas systems with gas systems) rather than converting to electric systems. This position would provide technical expertise related to the development of policies, programs, and outreach/engagement to residents and contractors regarding residential electrification, including the applicability of grants, incentives, and financing opportunities to residential electrification.*

Most of the items are specifically referenced in the Climate Action Plan as priority actions or support stated goals in the Climate Action Plan such as advancing the County’s racial equity and social justice efforts. **Council Staff is supportive of each of them and per the Council President’s direction for budget reviews this year, recommends the Committee support putting all these items on the Reconciliation List.**

To assist future decisions regarding the Reconciliation List, Committees have been asked to identify items on the Reconciliation List which are high priorities.

**Council Staff recommends the following Reconciliation List items be “high priority:”**

- **High Priority**

- New Positions to Manage County Grant and Incentive Programs (\$174,924, 2 FTEs)
- Consultant Support for Grant Identification and Applications (\$100,000)

Both these items in coordination will provide DEP with the ability to better seek out and leverage outside funding opportunities which will be essential to the County’s success in meeting its climate goals.

- Community Choice Energy Consultant Support (\$250,000)

This initiative is one of the highest priorities noted in the Climate Action Plan and the regulations establishing this program are currently under review by a Public Service Commission Workgroup. The County does not have the in-house expertise to develop and implement this program and will need this consultant support to move forward with this effort.

### **Climate Change Planning NDA**

The FY24 Recommended Budget for the Climate Change Planning NDA is \$591,639 which is a decrease of \$100,038 (-14.5 percent). However there are shifts both in and out of the NDA as well as technical adjustments (such as FY24 compensation, non-profit contractor inflationary increases, annualizations, etc.) (see ©12 for the FY23 to FY24 budget crosswalk included in the Executive’s Recommended Budget). When removing all these other adjustments, net new spending is \$85,000.

Three positions which were originally approved as part of the FY22 budget and fully annualized in the FY23 budget are recommended to move to the DEP General Fund budget (-\$397,632 and -3 FTEs).

As recommended, the remaining personnel costs in the NDA (\$20,139) cover a portion of the Climate Change Officer’s personnel costs. **Council Staff recommends that these remaining personnel costs also be shifted to the County Executive’s office where the balance of the Climate Change Officer’s costs are budgeted.**

The NDA also includes \$400,000 in operating expenses (the same as in FY23) for professional services for various climate-related activities. In past years these dollars were used to fund the development of the Climate Action Plan and related studies. For FY24, DEP staff have noted that,

*“...funds will be used for new opportunities that arise during the fiscal year and to provide additional support where necessary in the activities recommended for specific funding. The Climate Change NDA may be used to support, among other things, studies and programmatic efforts related to clean energy, electric vehicle charging, zero emissions fleet transition, building codes, climate finance, residential home labeling, climate communications and engagement, and climate resilience.”*

The Executive recommends shifting \$85,000 for the Climate Fellows and Interns item from the DEP General Fund budget to the NDA. In addition, the Executive recommends adding funding \*another \$85,000), doubling the program. **The increase to \$170,000 would provide an equivalent of 4 full-time paid interns/fellows. Council Staff recommends that the additional \$85,000 be placed on the Reconciliation List (regular priority item).**

Last year, the T&E Committee discussed with DEP whether the NDA should be closed out and the expenditures and FTEs moved to the DEP General Fund. As noted above, the original planning intent of the NDA was completed (i.e., the Climate Action Plan was finalized in June 2021). Council Staff noted that it was unclear what the distinction is between the activities funded out of the NDA versus those funded out of the DEP budget. Both the DEP and the Climate Change NDA involve professional services expenditures to study issues of interdepartmental concern involving stakeholders both internal and external to County government.

Given the increases approved in FY23 and recommended by the County Executive in FY24 for Climate Change related planning work and staffing in the DEP General Fund budget, the issue of whether having a separate NDA for climate-change related spending remains. **Council Staff suggests the T&E Committee discuss this matter again with DEP staff this year.**

### Water Quality Protection Fund Budget

**Table #3  
DEP Expenditures and Positions/FTEs**

Water Quality Protection Fund	Actual	Approved	CE Rec	Change FY24-FY23	
	FY22	FY23	FY24	\$\$\$	%
Personnel Costs	9,603,322	10,321,099	11,669,775	1,348,676	13.1%
Operating Expenses	19,299,006	20,669,401	22,243,437	1,574,036	7.6%
Capital Outlay	-	-	-	-	-
<b>Total</b>	<b>28,902,328</b>	<b>30,990,500</b>	<b>33,913,212</b>	<b>2,922,712</b>	<b>9.4%</b>
Full-Time Positions	48	60	65	5	8.3%
Part-Time Positions	1	1	1	-	n/a
FTEs	93.61	96.84	101.84	5.00	5.2%

## Fiscal Summary

Expenditures in the WQPF are recommended at \$33.9 million (an increase of \$2.9 million or 9.4 percent). A crosswalk of all major expenditure changes is included in the Recommended budget (see ©8). New initiatives, and staffing increases are described by DEP on ©23-29 and discussed below.

## NPDES-MS4 Permit

The county's current [National Pollution Discharge Elimination System Municipal Separate Storm Sewer System \(NPDES-MS4\) Permit](#) was issued in November 2021. This permit includes an impervious area restoration requirement (1,814 acres over five years with annual milestones). The permit also includes requirements for the inspection and maintenance of existing facilities and other efforts previously included in prior permits. There are also new requirements (some involving other County departments as noted below) including:

- New data reporting and geodatabase requirements
- New requirements for Illicit Discharge, Detection, and Elimination
- New restoration goal and TMDL implementation plan update
- New prevention of flooding requirements: inspection & maintenance of conveyance and public education
- Salt management plan –DOT, DGS, DEP
- Good housekeeping plans –DGS
- New monitoring requirements

On March 14, 2023, the Council approved the latest Financial Assurance Plan for its permit; affirming that the County was budgeting sufficient resources (across both the CIP and Operating Budget) to meet the impervious acreage restoration requirements in the permit. For more details, see the Council Staff Report from the Council action [here](#).

## Water Quality Protection Fund Fiscal Plan and Charge

DEP's MS4 work (both operating and capital) is budgeted within the County's Water Quality Protection Fund (WQPF). This self-supporting fund draws its revenue primarily from the Water Quality Protection Charge (WQPC) (an estimated \$45.3 million in FY24) as well as from the County's bag tax (an estimated \$2.5 million in FY24).

The fund and charge were created in 2001, when the Council approved Bill 28-00. In 2013, the Council enacted Bill 34-12 and approved Executive Regulations 17-12AM and 10-13. The bill and regulations included a number of changes to the charge, such as: broadening the charge to include all non-residential properties, establishing a 7-tier rate structure for residential properties, establishing credits for on-site stormwater management practices, and establishing a hardship exemption for residential properties and non-profit organizations.

In June 2016, the Council approved legislation (Expedited Bill 11-16) which made changes to Water Quality Protection Charge credits, as well as other changes.

Most recently, in April 2022 the Council approved Executive Regulation 18-21. This regulation included a definition of the term "treatment" for purposes of determining eligibility for Water Quality Protection Charge credits. During the discussion of this regulation, some Councilmembers expressed an

interest in revisiting the Water Quality Protection Charge credit program in general. This item is noted as a potential after budget item for the Committee.

The Water Quality Protection Fund Fiscal Plan is attached on ©11. This chart shows estimated costs, revenues, and fund balance from FY23 Estimate through FY29. Some key facts regarding the fund are noted below:

- The Fiscal Plan assumes steady increases (\$8 to \$10 per year) in the ERU rate throughout the fiscal plan period.
- Bag tax revenue is assumed to remain steady at about \$2.5 million per year (the same as assumed in prior fiscal plans)
- Each dollar of ERU rate raises approximately \$360,000 in revenue.
- The Fiscal policy metrics for both debt service coverage ratio (net revenue/debt service) and end of year reserves as a percent of resources both appear to be well above the minimum policy levels during the fiscal plan period.

The Council is required to set the Equivalent Residential Unit (ERU) rate each year by resolution. A resolution was introduced on March 28 and a public hearing was held on April 18. The Executive recommends increasing the ERU rate from \$119.50 to \$128.00.

#### CE Recommended Increases to the FY24 Budget

The FY23 to FY24 crosswalk of expenditure changes in the WQPF in the Executive’s Recommended Budget is attached on ©8-9.

Technical adjustments make up about \$1.6 million of the changes. The largest technical adjustments include:

- **Prevailing Wage for Above-Ground Maintenance (+\$1,039,738)** – Bill 35-21 enacted on April 4, 2022, resulted in DEP’s above-ground and below-ground maintenance contracts being subject to prevailing wage requirements. The most-recent above-ground maintenance contract was awarded in February 2023.
- **Annualization of FY23 Personnel Costs (+\$328,874) and FY23 Compensation Increases (+\$282,335)**
- **FY24 Compensation Adjustment (+\$262,190)**
- **M-NCPPC Support for Water Quality Efforts (+\$241,183)** - The M-NCPPC Planning and Parks Departments’ FY23 budgets include about \$4.3 million combined in water quality-related work supported by the WQPF. For FY24, M-NCPPC requested an additional \$244,441 (+5.6 percent), which the Executive included in his recommendation.
- **Shift Monitoring and Gauge Expenditures to the Stormwater Management CIP (Current Revenue) (-\$778,000)** – See T&E Agenda Item #5 (Additional Stormwater Management CIP Amendments)

The following chart presents the major changes recommended by the County Executive which involve service impacts and new positions. These items total \$1.3 million and 5 FTEs.



FY24 WQPF CE Recommendations with Service Impacts	FY24	
	Rec \$	Rec FTEs
New Position and Operating Support for Illicit Discharge Detection and Elimination	369,206	1.0
Maintenance for Additional Above and Below Ground Stormwater Management Structures	262,867	
Increase Rainscapes Program Funding	200,000	
Add New Position for Above-Ground Maintenance	119,206	1.0
Add Additional Miles for Streetsweeping	92,049	
Add New Position for Pollutants Reductions on County Properties	84,206	1.0
Add New Position for Tree and Forest Programs	84,206	1.0
Add New Position for Water Quality and Monitoring	72,929	1.0
<b>Totals</b>	<b>1,284,669</b>	<b>5.0</b>

Further information from DEP on each of these items is attached on ©23-29. As noted in DEP’s descriptions of these additional funding requests, all are intended to help DEP meet its MS4 permit requirements (such as the Illicit Discharge position and operating support, new position for pollutant reductions on County properties, additional street sweeping miles, and the new position for water quality and monitoring), and/or provide the same level of effort to an increased number of assets (a new position and maintenance to address additional above and below ground stormwater management structures), or address the increased public demand for County programs (Tree and Forest programs and RainScapes).

**Council Staff is supportive of each of these increases. However, if the Committee is interested in seeking to reduce the FY24 increase in the WQP charge, Council Staff would prioritize the MS4 work and addressing the additional stormwater management assets first followed by the Tree and Forest programs and RainScapes increases.**

**Council Staff recommends approval of the ERU rate of \$128 for FY24 as recommended by the Executive.**



# Environmental Protection

**RECOMMENDED FY24 BUDGET**

**\$43,898,880**

**FULL TIME EQUIVALENTS**

**135.49**

 **ADRIANA HOCHBERG, ACTING DIRECTOR**

## MISSION STATEMENT

The mission of the Department of Environmental Protection (DEP) is to enhance the quality of life in our community by protecting and improving Montgomery County's air, water, and land in a sustainable, innovative, inclusive, and industry-leading way while fostering smart growth, a thriving more sustainable economy, and healthy communities.

## BUDGET OVERVIEW

The total recommended FY24 Operating Budget for the Department of Environmental Protection is \$43,898,880, an increase of \$5,339,332 or 13.85 percent from the FY23 Approved Budget of \$38,559,548. Personnel Costs comprise 35.64 percent of the budget for 131 full-time position(s) and one part-time position(s), and a total of 135.49 FTEs. Total FTEs may include seasonal or temporary positions and may also reflect workforce charged to or from other departments or funds. Operating Expenses account for the remaining 64.36 percent of the FY24 budget.

The debt service for the Water Quality Protection Fund is appropriated in the Debt Service Fund and is, therefore, not displayed in this section. To pay for the debt service, a transfer of funds from the Water Quality Protection Fund to the Debt Service Fund of \$10,716,140 is required in FY24 for Water Quality Protection Bonds.

In addition, this department's Capital Improvements Program (CIP) requires Current Revenue funding.

## COUNTY PRIORITY OUTCOMES

While this program area supports all seven of the County Executive's Priority Outcomes, the following are emphasized:

-  **A Greener County**
-  **Effective, Sustainable Government**

## INITIATIVES

-  Expand the County's climate change efforts, including new positions for residential electrification, solar power expertise, and to manage County-based grant and incentive programs. New operating support includes funds to advance Community Choice Energy, climate grants for community organizations, and for management of an electric vehicle purchasing co-op. In addition, new funding is provided to enhance the Tree Montgomery program, and a new position is added to help manage the increased rate of tree plantings.

- ★ Add new funding and a new position to identify and address illegal discharge of pollutants throughout the County. New positions are also added to ensure the County's stormwater management structures are inspected and maintained.
- ★ Partner with the United States Army Corps of Engineers to conduct flood risk management studies in four priority watersheds to provide the County with plans for reducing the risk of flooding to property owners and critical roadways. This study will occur under the Planning Assistance to States (PAS) program, which is designed to provide planning-level assistance to communities and partners for water resource related issues.
- ★ Enter Phase II of the development of Watershed Assessments for the County to better understand changes over time to our watershed, determine current conditions, adapt our management strategies, and help clearly guide DEP and the County's actions moving forward.

## INNOVATIONS AND PRODUCTIVITY IMPROVEMENTS

- ★ Coordinate the efforts of Tree Montgomery Program and the Stormwater Best Management Practice (BMP) Inspection and Maintenance Program to identify BMPs on public and private properties where trees can be planted, enhancing the stormwater treatment function and habitat.
- ★ Partner with the Federal Department of Homeland Security, Department of Transportation, and the Office of Emergency Management and Homeland Security to install flood sensors that will detect rising flood water levels during storm events and send early flood warnings to officials based on real-time monitoring
- ★ Transition Municipal Separate Storm Sewer System (MS4) geodata to the Maryland Department of the Environment-required MS4 geodatabase, which ensures that the County is compliant with the data submitted for the MS4 permit.

## PROGRAM CONTACTS

Contact Vicky Wan of the Department of Environmental Protection at 240.777.7722 or Richard H. Harris of the Office of Management and Budget at 240.777.2795 for more information regarding this department's operating budget.

## PROGRAM PERFORMANCE MEASURES

Performance measures for this department are included below (where applicable), with multi-program measures displayed at the front of this section and program-specific measures shown with the relevant program. The FY23 estimates reflect funding based on the FY23 Approved Budget. The FY24 and FY25 figures are performance targets based on the FY24 Recommended Budget and funding for comparable service levels in FY25.

## PROGRAM DESCRIPTIONS

### ★ Administration

The Office of the Director provides for overall management of departmental programs to ensure safe and efficient operations, including contract administration management for the department, continuity of operations, and oversight of operational programs at the County's Integrated Solid Waste Management System (ISWMS). The Director's Office manages the revenue from the Water Quality Protection Charge, which funds many environmental programs around the County. The Director's Office also oversees the development of the solid waste charges which are a fee for service to County residents related to programs and operations of the ISWMS.

The Office provides strategic direction and support on IT systems and infrastructure for departmental operations and programs, oversees the human resources, contract management, and communication and engagement activities. The Office provides for management of partnerships with multiple County departments with which the department cooperates, including Permitting Services, Transportation, and General Services, as well as external groups including faith-based institutions, the Maryland National Capital Park and Planning Commission, and the Washington Suburban Sanitary Commission. The Office develops water and wastewater policies and updates the County's comprehensive water and sewer plan.

FY24 Recommended Changes	Expenditures	FTEs
<b>FY23 Approved</b>	<b>1,664,132</b>	<b>9.70</b>
Shift: Transfer of Climate Funding and Data Analyst from CEX to DEP	80,765	1.00
Increase Cost: Three Percent Inflationary Adjustment to Non-Profit Service Provider Contracts	9,302	0.00
Increase Cost: Communications & Public Engagement	4,421	0.00
Increase Cost: FTE Allocation Adjustment	1,059	0.01
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	176,237	(1.01)
<b>FY24 Recommended</b>	<b>1,935,916</b>	<b>9.70</b>

## Energy, Climate and Compliance

The Energy, Climate, and Compliance Division enforces County laws and regulations related to air and water pollution, illegal dumping, noise control, pesticides, and other environmental laws. The Division implements programs that educate and assist County residents with ensuring their properties are energy efficient. These programs include extensive outreach and assistance with understanding tools and financing available to increase energy efficiency. The Division is responsible for oversight and implementation of the Benchmarking Law which requires certain commercial property owners to benchmark the energy efficiency of their properties and report it to the County. The Division develops programs that will assist with reducing greenhouse gas emissions in the County, including support to the working groups for clean energy and building efficiency, created as part of the initiative to develop a Climate Action and Resiliency Plan. It also oversees programs that provide financial support to commercial property owners to improve energy efficiency such as Property-Assessed Clean Energy Financing (PACE) and the Green Bank, and manages the Green Business Certification Program which recognizes businesses that adapt practices to enhance sustainability.

Program Performance Measures	Actual FY21	Actual FY22	Estimated FY23	Target FY24	Target FY25
Percent of commercial buildings in compliance with the building benchmarking law	93%	86%	88%	88%	88%
Average days to close environmental cases	28	34	34	34	34
Percent of customers rating themselves as satisfied with DEP's response to environmental complaints	81%	82%	80%	80%	80%

FY24 Recommended Changes	Expenditures	FTEs
<b>FY23 Approved</b>	<b>5,026,457</b>	<b>15.00</b>
Shift: Reassign Three Positions from Climate Change Planning NDA to DEP	397,632	3.00
Add: Climate Capacity Building for Community Organizations	250,000	0.00
Add: Energy Audits for Under-resourced Buildings Subject to Building Energy Performance Standards	250,000	0.00
Add: Community Choice Energy Consultant Support	250,000	0.00
Add: New Positions to Manage County Grant and Incentive Programs (Program Manager I & Program Manager II)	174,924	2.00

<b>FY24 Recommended Changes</b>	<b>Expenditures</b>	<b>FTEs</b>
Add: Electric Vehicle Co-op Management	100,000	0.00
Add: Consultant Support for Grant Identification and Grant Applications	100,000	0.00
Add: New Position for Solar Technical Expertise (Program Manager II)	90,718	1.00
Add: New Position for Residential Electrification (Program Manager II)	90,718	1.00
Increase Cost: Environmental Compliance Efforts	12,069	0.00
Decrease Cost: Reduction in High Road Economic Development	(32,653)	0.00
Shift: Funding for Climate Fellows and Interns to Climate Change Planning NDA	(85,000)	0.00
Decrease Cost: Adjust Lapse to Better Reflect Vacancy Rate	(142,446)	0.00
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	(2,573)	1.01
<b>FY24 Recommended</b>	<b>6,479,846</b>	<b>23.01</b>

## Watershed Restoration

The Watershed Restoration Division leads the County's efforts to improve stream health and water quality through the targeted planning, design, construction, inspection, and maintenance of best management practices (BMP) built to manage stormwater runoff. The Watershed Restoration Division supports watershed-based monitoring and reporting to achieve County stream protection goals (Montgomery County Code Chapter 19, Article IV) and comply with the Federal Clean Water Act NPDES Municipal Separate Storm Sewer System (MS4) permit. Staff conduct baseline stream monitoring, storm drain discharge monitoring, and public outreach activities that increase awareness and promote citizen involvement in stream stewardship. The program also assesses land development impacts on water resources and the effectiveness of BMPs that mitigate those impacts within the County's designated "Special Protection Areas." The Division implements programs to extend stewardship and BMPs beyond streams and facilities by targeting private property owners. These programs include Tree Montgomery (Chapter 55, Article 3), RainScapes, and pet waste. The Division oversees the carry out bag tax program, which helps address issues with litter in streams.

The Watershed Restoration Division successfully implements these programs through extensive partnerships with the Maryland Department of Natural Resources; Maryland Department of the Environment; Maryland Department of Agriculture; Montgomery County Public Schools; Montgomery County Departments of Transportation and General Services; Maryland-National Capital Park and Planning Commission; the Towns of Chevy Chase, Kensington, Somerset and Poolesville; the Villages of Chevy Chase and Friendship Heights; watershed organizations; homeowner associations; businesses; and private property owners. The long-term goal is to protect and improve water resources for Montgomery County residents and the Chesapeake Bay.

Revenue for this program is generated by the Water Quality Protection Charge, applied to all residential and non-residential properties except for those owned by the State and County government and those in the cities of Gaithersburg, Rockville, and Takoma Park. Revenue from the carry out bag tax is also provided to support these programs.

<b>Program Performance Measures</b>	<b>Actual FY21</b>	<b>Actual FY22</b>	<b>Estimated FY23</b>	<b>Target FY24</b>	<b>Target FY25</b>
Percent of stormwater management triennial inspections completed <sup>1</sup>	94%	94%	90%	95%	100%
Percent of stormwater management facility maintenance work orders completed	82%	82%	89%	90%	100%
Percent of the impervious acreage control goal met	56%	59%	62%	74%	81%

<sup>1</sup> Does not include triennial inspections of BMPs on Single Family Residential (SFR) properties, which are covered under a separate inspection program.

FY24 Recommended Changes	Expenditures	FTEs
<b>FY23 Approved</b>	<b>31,868,959</b>	<b>97.78</b>
Increase Cost: Prevailing Wage for Above Ground Maintenance	1,039,738	0.00
Enhance: Tree Canopy Conservation	750,000	0.00
Add: New Position and Operating Support for Illicit Discharge Detection and Elimination (Program Manager I)	369,206	1.00
Add: Maintenance of Above- and Below-ground Stormwater Management Structures	262,867	0.00
Increase Cost: M-NCPPC Support for Water Quality Efforts	241,183	0.00
Add: RainScapes Program Funding	200,000	0.00
Add: New Position for Above Ground Maintenance (Planning Specialist III)	119,206	1.00
Increase Cost: Inspection Services	111,407	0.00
Add: Additional Miles for Street Sweeping	92,049	0.00
Add: New Position for Pollutants Reductions on County Properties (Program Manager I)	84,206	1.00
Add: New Position for Tree and Forest Programs (Program Manager I)	84,206	1.00
Add: New Position for Water Quality and Monitoring (Water Quality Specialist I)	72,929	1.00
Increase Cost: Department of Transportation Chargeback -- Street Sweeping	37,660	0.00
Increase Cost: Three Percent Inflationary Adjustment to Non-Profit Service Provider Contracts	33,390	0.00
Increase Cost: Tree Montgomery Program	26,300	0.00
Increase Cost: PRISM Anti-invasive Species Program Funding	20,000	0.00
Increase Cost: Water Quality Planning & Monitoring	13,617	0.00
Increase Cost: Stream Gauges Cost Share	9,431	0.00
Increase Cost: Stream Restoration Maintenance	8,197	0.00
Increase Cost: Special Protection Area Best Management Practice Monitoring	6,890	0.00
Decrease Cost: Finance Chargeback	(111,220)	0.00
Shift: Monitoring and Gauge Expenditures to Current Revenue: WQP	(778,000)	0.00
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	920,897	0.00
<b>FY24 Recommended</b>	<b>35,483,118</b>	<b>102.78</b>

## BUDGET SUMMARY

	Actual FY22	Budget FY23	Estimate FY23	Recommended FY24	%Chg Bud/Rec
<b>COUNTY GENERAL FUND</b>					
<b>EXPENDITURES</b>					
Salaries and Wages	1,701,811	2,395,047	1,669,084	3,144,226	31.3 %
Employee Benefits	445,957	630,306	394,616	831,488	31.9 %
<b>County General Fund Personnel Costs</b>	<b>2,147,768</b>	<b>3,025,353</b>	<b>2,063,700</b>	<b>3,975,714</b>	<b>31.4 %</b>
Operating Expenses	1,342,484	4,543,695	4,543,695	6,009,954	32.3 %
<b>County General Fund Expenditures</b>	<b>3,490,252</b>	<b>7,569,048</b>	<b>6,607,395</b>	<b>9,985,668</b>	<b>31.9 %</b>
<b>PERSONNEL</b>					
Full-Time	49	61	61	66	8.2 %
Part-Time	0	0	0	0	—

## BUDGET SUMMARY

	Actual FY22	Budget FY23	Estimate FY23	Recommended FY24	%Chg Bud/Rec
FTEs	16.29	25.64	25.64	33.65	31.2 %
<b>REVENUES</b>					
Other Licenses/Permits	15,125	20,000	20,000	20,000	—
Other Charges/Fees	348,889	60,400	60,400	60,400	—
Other Fines/Forfeitures	18,450	15,000	15,000	15,000	—
Tree Canopy	807,250	750,000	750,000	1,500,000	100.0 %
<b>County General Fund Revenues</b>	<b>1,189,714</b>	<b>845,400</b>	<b>845,400</b>	<b>1,595,400</b>	<b>88.7 %</b>

### WATER QUALITY PROTECTION FUND

<b>EXPENDITURES</b>					
Salaries and Wages	7,555,622	7,816,284	7,273,060	8,884,109	13.7 %
Employee Benefits	2,047,700	2,504,815	2,324,440	2,785,666	11.2 %
<b>Water Quality Protection Fund Personnel Costs</b>	<b>9,603,322</b>	<b>10,321,099</b>	<b>9,597,500</b>	<b>11,669,775</b>	<b>13.1 %</b>
Operating Expenses	19,299,006	20,669,401	20,825,004	22,243,437	7.6 %
<b>Water Quality Protection Fund Expenditures</b>	<b>28,902,328</b>	<b>30,990,500</b>	<b>30,422,504</b>	<b>33,913,212</b>	<b>9.4 %</b>

#### PERSONNEL

Full-Time	48	60	60	65	8.3 %
Part-Time	1	1	1	1	—
FTEs	93.61	96.84	96.84	101.84	5.2 %

#### REVENUES

Bag Tax	2,993,028	2,500,000	2,500,000	2,500,000	—
Water Quality Protection Charge	42,454,564	43,414,720	43,414,720	45,307,330	4.4 %
Investment Income	58,383	500,000	1,266,820	1,266,820	153.4 %
Other Charges/Fees	357,702	47,500	47,500	47,500	—
<b>Water Quality Protection Fund Revenues</b>	<b>45,863,677</b>	<b>46,462,220</b>	<b>47,229,040</b>	<b>49,121,650</b>	<b>5.7 %</b>

### GRANT FUND - MCG

<b>EXPENDITURES</b>					
Salaries and Wages	0	0	0	0	—
Employee Benefits	0	0	0	0	—
<b>Grant Fund - MCG Personnel Costs</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>—</b>
Operating Expenses	350,998	0	0	0	—
<b>Grant Fund - MCG Expenditures</b>	<b>350,998</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>—</b>

#### PERSONNEL

Full-Time	0	0	0	0	—
Part-Time	0	0	0	0	—
FTEs	0.00	0.00	0.00	0.00	—

#### REVENUES

Federal Grants	198,282	0	0	0	—
----------------	---------	---	---	---	---

## BUDGET SUMMARY

	Actual FY22	Budget FY23	Estimate FY23	Recommended FY24	%Chg Bud/Rec
<b>Grant Fund - MCG Revenues</b>	<b>198,282</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>—</b>
<b>DEPARTMENT TOTALS</b>					
<b>Total Expenditures</b>	<b>32,743,578</b>	<b>38,559,548</b>	<b>37,029,899</b>	<b>43,898,880</b>	<b>13.8 %</b>
<b>Total Full-Time Positions</b>	<b>97</b>	<b>121</b>	<b>121</b>	<b>131</b>	<b>8.3 %</b>
<b>Total Part-Time Positions</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>—</b>
<b>Total FTEs</b>	<b>109.90</b>	<b>122.48</b>	<b>122.48</b>	<b>135.49</b>	<b>10.6 %</b>
<b>Total Revenues</b>	<b>47,251,673</b>	<b>47,307,620</b>	<b>48,074,440</b>	<b>50,717,050</b>	<b>7.2 %</b>

### FY24 RECOMMENDED CHANGES

	Expenditures	FTEs
<b>COUNTY GENERAL FUND</b>		
<b>FY23 ORIGINAL APPROPRIATION</b>	<b>7,569,048</b>	<b>25.64</b>
<b><u>Changes (with service impacts)</u></b>		
Enhance: Tree Canopy Conservation [Watershed Restoration]	750,000	0.00
Add: Climate Capacity Building for Community Organizations [Energy, Climate and Compliance]	250,000	0.00
Add: Energy Audits for Under-resourced Buildings Subject to Building Energy Performance Standards [Energy, Climate and Compliance]	250,000	0.00
Add: Community Choice Energy Consultant Support [Energy, Climate and Compliance]	250,000	0.00
Add: New Positions to Manage County Grant and Incentive Programs (Program Manager I & Program Manager II) [Energy, Climate and Compliance]	174,924	2.00
Add: Electric Vehicle Co-op Management [Energy, Climate and Compliance]	100,000	0.00
Add: Consultant Support for Grant Identification and Grant Applications [Energy, Climate and Compliance]	100,000	0.00
Add: New Position for Solar Technical Expertise (Program Manager II) [Energy, Climate and Compliance]	90,718	1.00
Add: New Position for Residential Electrification (Program Manager II) [Energy, Climate and Compliance]	90,718	1.00
<b><u>Other Adjustments (with no service impacts)</u></b>		
Shift: Reassign Three Positions from Climate Change Planning NDA to DEP [Energy, Climate and Compliance]	397,632	3.00
Increase Cost: Annualization of FY23 Lapsed Positions	235,729	0.00
Increase Cost: FY24 Compensation Adjustment	120,581	0.00
Increase Cost: Annualization of FY23 Compensation Increases	101,104	0.00
Shift: Transfer of Climate Funding and Data Analyst from CEX to DEP [Administration]	80,765	1.00
Increase Cost: Three Percent Inflationary Adjustment to Non-Profit Service Provider Contracts [Watershed Restoration]	33,390	0.00
Increase Cost: Printing and Mail	17,303	0.00
Increase Cost: Environmental Compliance Efforts [Energy, Climate and Compliance]	12,069	0.00
Increase Cost: Motor Pool Adjustment	11,848	0.00
Increase Cost: Three Percent Inflationary Adjustment to Non-Profit Service Provider Contracts [Administration]	9,302	0.00
Increase Cost: FTE Allocation Adjustment [Administration]	1,059	0.01
Decrease Cost: Retirement Adjustment	(245)	0.00



## FY24 RECOMMENDED CHANGES

	Expenditures	FTEs
Decrease Cost: Reduction in High Road Economic Development [Energy, Climate and Compliance]	(32,653)	0.00
Shift: Funding for Climate Fellows and Interns to Climate Change Planning NDA [Energy, Climate and Compliance]	(85,000)	0.00
Decrease Cost: Adjust Lapse to Better Reflect Vacancy Rate [Energy, Climate and Compliance]	(142,446)	0.00
Decrease Cost: Elimination of One-Time Items Approved in FY23	(200,000)	0.00
Decrease Cost: Annualization of FY23 Personnel Costs	(200,178)	0.00
<b>FY24 RECOMMENDED</b>	<b>9,985,668</b>	<b>33.65</b>

### WATER QUALITY PROTECTION FUND

	FY23 ORIGINAL APPROPRIATION	30,990,500	96.84
<b><u>Changes (with service impacts)</u></b>			
Add: New Position and Operating Support for Illicit Discharge Detection and Elimination (Program Manager I) [Watershed Restoration]	369,206		1.00
Add: Maintenance of Above- and Below-ground Stormwater Management Structures [Watershed Restoration]	262,867		0.00
Add: RainScapes Program Funding [Watershed Restoration]	200,000		0.00
Add: New Position for Above Ground Maintenance (Planning Specialist III) [Watershed Restoration]	119,206		1.00
Add: Additional Miles for Street Sweeping [Watershed Restoration]	92,049		0.00
Add: New Position for Pollutants Reductions on County Properties (Program Manager I) [Watershed Restoration]	84,206		1.00
Add: New Position for Tree and Forest Programs (Program Manager I) [Watershed Restoration]	84,206		1.00
Add: New Position for Water Quality and Monitoring (Water Quality Specialist I) [Watershed Restoration]	72,929		1.00
<b><u>Other Adjustments (with no service impacts)</u></b>			
Increase Cost: Prevailing Wage for Above Ground Maintenance [Watershed Restoration]	1,039,738		0.00
Increase Cost: Annualization of FY23 Personnel Costs	328,874		0.00
Increase Cost: Annualization of FY23 Compensation Increases	282,335		0.00
Increase Cost: FY24 Compensation Adjustment	262,190		0.00
Increase Cost: M-NCPPC Support for Water Quality Efforts [Watershed Restoration]	241,183		0.00
Increase Cost: Inspection Services [Watershed Restoration]	111,407		0.00
Increase Cost: Annualization of FY23 Lapsed Positions	70,096		0.00
Increase Cost: Motor Pool Adjustment	68,592		0.00
Increase Cost: Department of Transportation Chargeback -- Street Sweeping [Watershed Restoration]	37,660		0.00
Increase Cost: Tree Montgomery Program [Watershed Restoration]	26,300		0.00
Increase Cost: PRISM Anti-invasive Species Program Funding [Watershed Restoration]	20,000		0.00
Increase Cost: Water Quality Planning & Monitoring [Watershed Restoration]	13,617		0.00
Increase Cost: Stream Gauges Cost Share [Watershed Restoration]	9,431		0.00
Increase Cost: Stream Restoration Maintenance [Watershed Restoration]	8,197		0.00
Increase Cost: Special Protection Area Best Management Practice Monitoring [Watershed Restoration]	6,890		0.00
Increase Cost: Communications & Public Engagement [Administration]	4,421		0.00
Increase Cost: Printing and Mail	904		0.00
Decrease Cost: Retirement Adjustment	(4,572)		0.00

## FY24 RECOMMENDED CHANGES

	Expenditures	FTEs
Decrease Cost: Finance Chargeback [Watershed Restoration]	(111,220)	0.00
Shift: Monitoring and Gauge Expenditures to Current Revenue: WQP [Watershed Restoration]	(778,000)	0.00
<b>FY24 RECOMMENDED</b>	<b>33,913,212</b>	<b>101.84</b>

## PROGRAM SUMMARY

Program Name	FY23 APPR Expenditures	FY23 APPR FTEs	FY24 REC Expenditures	FY24 REC FTEs
Administration	1,664,132	9.70	1,935,916	9.70
Energy, Climate and Compliance	5,026,457	15.00	6,479,846	23.01
Watershed Restoration	31,868,959	97.78	35,483,118	102.78
<b>Total</b>	<b>38,559,548</b>	<b>122.48</b>	<b>43,898,880</b>	<b>135.49</b>

## CHARGES TO OTHER DEPARTMENTS

Charged Department	Charged Fund	FY23 Total\$	FY23 FTEs	FY24 Total\$	FY24 FTEs
<b>COUNTY GENERAL FUND</b>					
NDA - Climate Change Planning	General Fund	283,021	3.00	0	0.00
<b>WATER QUALITY PROTECTION FUND</b>					
CIP	Capital Fund	2,489,857	18.40	2,627,566	18.40
<b>Total</b>		<b>2,772,878</b>	<b>21.40</b>	<b>2,627,566</b>	<b>18.40</b>

## FUNDING PARAMETER ITEMS

CE RECOMMENDED (\$000S)

Title	FY24	FY25	FY26	FY27	FY28	FY29
<b>COUNTY GENERAL FUND</b>						
<b>EXPENDITURES</b>						
<b>FY24 Recommended</b>	<b>9,986</b>	<b>9,986</b>	<b>9,986</b>	<b>9,986</b>	<b>9,986</b>	<b>9,986</b>
No inflation or compensation change is included in outyear projections.						
<b>Annualization of Positions Recommended in FY24</b>	<b>0</b>	<b>118</b>	<b>118</b>	<b>118</b>	<b>118</b>	<b>118</b>
New positions in the FY24 budget are generally assumed to be filled at least two months after the fiscal year begins. Therefore, the above amounts reflect annualization of these positions in the outyears.						
<b>Labor Contracts</b>	<b>0</b>	<b>141</b>	<b>141</b>	<b>141</b>	<b>141</b>	<b>141</b>
These figures represent the estimated annualized cost of general wage adjustments, service increments, and other negotiated items.						
<b>Subtotal Expenditures</b>	<b>9,986</b>	<b>10,244</b>	<b>10,244</b>	<b>10,244</b>	<b>10,244</b>	<b>10,244</b>

## FUNDING PARAMETER ITEMS

CE RECOMMENDED (\$000S)

Title	FY24	FY25	FY26	FY27	FY28	FY29
<b>WATER QUALITY PROTECTION FUND</b>						
<b>EXPENDITURES</b>						
<b>FY24 Recommended</b>	<b>33,913</b>	<b>33,913</b>	<b>33,913</b>	<b>33,913</b>	<b>33,913</b>	<b>33,913</b>
No inflation or compensation change is included in outyear projections.						
<b>Annualization of Positions Recommended in FY24</b>	<b>0</b>	<b>134</b>	<b>134</b>	<b>134</b>	<b>134</b>	<b>134</b>
New positions in the FY24 budget are generally assumed to be filled at least two months after the fiscal year begins. Therefore, the above amounts reflect annualization of these positions in the outyears.						
<b>Elimination of One-Time Items Recommended in FY24</b>	<b>0</b>	<b>(70)</b>	<b>(70)</b>	<b>(70)</b>	<b>(70)</b>	<b>(70)</b>
Items recommended for one-time funding in FY24, including vehicles for new positions, will be eliminated from the base in the outyears.						
<b>Labor Contracts</b>	<b>0</b>	<b>240</b>	<b>240</b>	<b>240</b>	<b>240</b>	<b>240</b>
These figures represent the estimated annualized cost of general wage adjustments, service increments, and other negotiated items.						
<b>Subtotal Expenditures</b>	<b>33,913</b>	<b>34,216</b>	<b>34,216</b>	<b>34,216</b>	<b>34,216</b>	<b>34,216</b>

### ANNUALIZATION OF FULL PERSONNEL COSTS

	FY24 Recommended		FY25 Annualized	
	Expenditures	FTEs	Expenditures	FTEs
New Position for Illicit Discharge Detection and Elimination (Program Manager I)	84,206	1.00	111,855	1.00
New Position for Tree and Forest Programs (Program Manager I)	84,206	1.00	111,855	1.00
New Position for Water Quality and Monitoring (Water Quality Specialist I)	72,929	1.00	96,326	1.00
New Position for Above Ground Maintenance (Planning Specialist III)	84,206	1.00	111,855	1.00
New Position for Pollutants Reductions on County Properties (Program Manager I)	84,206	1.00	111,855	1.00
New Position for Residential Electrification (Program Manager II)	90,718	1.00	120,822	1.00
New Position for Grants and Incentive Programs (Program Manager II)	90,718	1.00	120,822	1.00
New Position for Grants and Incentive Programs (Program Manager I)	84,206	1.00	111,855	1.00
New Position for Solar Technical Expertise (Program Manager II)	90,718	1.00	120,822	1.00
<b>Total</b>	<b>766,113</b>	<b>9.00</b>	<b>1,018,067</b>	<b>9.00</b>

FY23-29 PUBLIC SERVICES PROGRAM: FISCAL PLAN							
FISCAL PROJECTIONS	FY23 Estimate	FY24 CE Rec	FY25 Projection	FY26 Projection	FY27 Projection	FY28 Projection	FY29 Projection
<b>ASSUMPTIONS</b>							
Indirect Cost Rate	18.35%	17.96%	17.96%	17.96%	17.96%	17.96%	17.96%
CPI (Fiscal Year)	2.91%	2.11%	2.18%	2.21%	2.23%	2.34%	2.33%
Investment Income Yield	3.25%	5.00%	4.00%	3.50%	3.00%	2.50%	2.50%
Number of Equivalent Residential Units (ERUs) Billed	368,000	368,000	368,000	368,000	368,000	368,000	368,000
Water Quality Protection Charge (\$/ERU)	\$119.50	\$128.00	\$136.50	\$145.00	\$153.50	\$162.00	\$170.50
Target Debt Service Coverage Ratio	125.0%	125.0%	125.0%	125.0%	125.0%	125.0%	125.0%
<b>BEGINNING FUND BALANCE</b>	<b>8,666,696</b>	<b>10,653,392</b>	<b>6,108,799</b>	<b>5,760,568</b>	<b>6,852,348</b>	<b>9,317,739</b>	<b>12,019,229</b>
<b>REVENUES</b>							
Charges For Services	43,414,720	45,307,330	49,639,440	52,751,800	55,864,160	58,922,920	62,035,280
Bag Tax Receipts	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
Miscellaneous	1,314,320	1,314,320	1,348,560	1,348,561	1,348,562	1,348,563	1,348,564
<b>Subtotal Revenues</b>	<b>47,229,040</b>	<b>49,121,650</b>	<b>53,488,000</b>	<b>56,600,361</b>	<b>59,712,722</b>	<b>62,771,483</b>	<b>65,883,844</b>
<b>INTERFUND TRANSFERS (Net Non-CIP)</b>							
Transfers To General Fund	(1,893,920)	(2,095,891)	(2,162,980)	(2,162,980)	(2,162,980)	(2,213,600)	(2,213,380)
Transfers to Debt Service Fund (Non-Tax)	(9,787,920)	(10,716,140)	(12,451,470)	(14,626,820)	(16,264,570)	(18,045,920)	(18,753,540)
<b>WQPF Required Debt Service</b>	<b>(8,844,600)</b>	<b>(9,772,900)</b>	<b>(11,509,550)</b>	<b>(13,683,500)</b>	<b>(15,321,250)</b>	<b>(17,104,000)</b>	<b>(17,810,500)</b>
<b>TOTAL RESOURCES</b>	<b>44,213,896</b>	<b>46,963,011</b>	<b>44,982,349</b>	<b>45,571,129</b>	<b>48,137,520</b>	<b>51,829,702</b>	<b>56,936,153</b>
<b>CIP CURRENT REVENUE APPROPRIATION</b>							
<b>PSP OPER. BUDGET APPROP/ EXP'S.</b>							
Operating Budget	(30,422,504)	(33,913,212)	(34,316,781)	(34,416,781)	(34,516,781)	(35,324,474)	(35,321,022)
<b>FFIs (Future Fiscal Impacts) Requested &amp; Projected</b>							
CPI-Fiscal Year for OE (= OE w/o FC x CPI)						(525,878)	(523,631)
Park Staffing Increase			(100,000)	(200,000)	(300,000)	(300,000)	(300,000)
Elimination of one-time Items			70,000	70,000	70,000	70,000	70,000
CPI - PC Adjustment						(281,814)	(280,610)
Annualizations of New Positions			(133,993)	(133,993)	(133,993)	(133,993)	(133,993)
Labor Contracts			(238,388)	(238,388)	(238,388)	(238,388)	(238,388)
Labor Contracts Other			(1,188)	(1,188)	(1,188)	(1,188)	(1,188)
<b>Subtotal PSP Oper Budget Approp / Exp's</b>	<b>(30,422,504)</b>	<b>(33,913,212)</b>	<b>(34,316,781)</b>	<b>(34,416,781)</b>	<b>(34,516,781)</b>	<b>(35,324,474)</b>	<b>(35,321,022)</b>
<b>OTHER CLAIMS ON FUND BALANCE</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL USE OF RESOURCES</b>	<b>(33,560,504)</b>	<b>(40,854,212)</b>	<b>(39,221,781)</b>	<b>(38,718,781)</b>	<b>(38,819,781)</b>	<b>(39,810,474)</b>	<b>(39,807,022)</b>
<b>ACFR YEAR END FUND BALANCE</b>							
Fund Balance Designed for Encumbrances - Restricted	10,653,392	6,108,799	5,760,568	6,852,348	9,317,739	12,019,229	17,129,131
Fund Balance Reserved for Transfer To CIP - Restricted							
<b>YEAR END FUND BALANCE ADJUSTMENT FOR GASB 54</b>	<b>10,653,392</b>	<b>6,108,799</b>	<b>5,760,568</b>	<b>6,852,348</b>	<b>9,317,739</b>	<b>12,019,229</b>	<b>17,129,131</b>
<b>END-OF-YEAR RESERVES AS A PERCENT OF RESOURCES</b>							
	24.1%	13.0%	12.8%	15.0%	19.4%	23.2%	30.1%
<b>NET REVENUE</b>	<b>14,912,616</b>	<b>13,112,547</b>	<b>17,008,239</b>	<b>20,020,600</b>	<b>23,032,961</b>	<b>25,233,409</b>	<b>28,349,442</b>
<b>DEBT SERVICE COVERAGE RATIO</b>	<b>1.52</b>	<b>1.34</b>	<b>1.48</b>	<b>1.46</b>	<b>1.50</b>	<b>1.48</b>	<b>1.59</b>

**Assumptions:**

1. These projections are based on the County Executive's Recommended operating budget and include the revenue and resource assumptions of that budget. The projected future expenditures, revenues, and fund balances may vary based on changes to fee or tax rates, usage, inflation, future labor agreements, and other factors not assumed here.
2. Stormwater facilities transferred into the maintenance program will be maintained to permit standards as they are phased into the program.
3. Operating costs for new facilities to be completed or transferred and Operating Budget Impacts of Stormwater CIP projects between FY25 and FY29 have been incorporated in the future fiscal impact (FFI) rows.
4. The Operating Budget includes planning and implementation costs for compliance with the new Municipal Separate Storm Sewer System (MS-4) permit issued by the Maryland Department of the Environment in 2021. Debt service on bonds and loans that will be used to finance the CIP project costs of MS-4 compliance has been shown as a transfer to the Debt Service Fund. The Department of Finance issued \$37.8 million in Water Quality Protection Charge Revenue Bonds dated July 18, 2012 (Series 2012A), \$46.5 million dated April 6, 2016 (Series 2016A) and \$28.6M Series 2023. In December 2019, the County closed on \$50.7 million in Water Quality State Revolving Fund (WQSRF) Loans from the MD Department of the Environment (MDE). The actual debt service costs for the Series 2012A and 2016A bond issuances and the anticipated MDE Water Quality Revolving Loan debt service in years FY25-29 are included in the fiscal plan, as well as anticipated debt payments for loans issued to the Maryland-National Capital Park and Planning Commission issued in FY24. Actual debt service costs may vary depending on the size and timing of future loan and bond issues. Current revenue may be used to offset future borrowing requirements. Future WQPC rates are subject to change based on the timing and size of future debt issuance, State Aid, and legislation.
5. Charges are adjusted to fund the planned service program and maintain net revenues sufficient to cover 1.25 times debt service costs.
6. The Water Quality Protection fund balance minimum policy target is 5% of resources.

Washington Community Foundation (GWCF), was charged with building an equitable, high-quality, accessible, and sustainable early childhood system to support the well-being of children and families in the County. The COA is also charged with identifying and impacting systemic inequities and structurally violent practices, and structures that create access barriers for vulnerable, racially, and ethnically diverse populations. The COA's charge is supported and directed by a 21 voting member board comprised of parents/guardians, center-based providers, family childcare providers, employers, philanthropy, non-profit organizations, Montgomery College, Universities at Shady Grove, and ex officio appointees from Montgomery County Public Schools, Department of Health and Human Services, Office of Management and Budget, and County Council.

FY24 Recommended Changes	Expenditures	FTEs
<b>FY23 Approved</b>	<b>0</b>	<b>0.00</b>
Shift: Cost from Children's Opportunity Fund NDA to Children's Opportunity Alliance NDA	425,000	0.00
Shift: Cost from Children's Opportunity Fund program in HHS General Fund to Children's Opportunity Alliance NDA	290,637	0.00
Increase Cost: Three Percent Inflationary Adjustment to Non-Profit Service Provider Contracts	12,750	0.00
<b>FY24 Recommended</b>	<b>728,387</b>	<b>0.00</b>

### Climate Change Planning

This NDA provides funding for the prioritization of greenhouse gas reduction strategies and the development of an implementation plan to meet the County's goal of an 80 percent reduction in greenhouse gas emissions by 2027 and a 100 percent reduction by 2035. Funding in this NDA can also be used to develop climate change adaptation strategies. Any excess appropriation available after the above work is completed may be used to fund other climate change-related initiatives.

FY24 Recommended Changes	Expenditures	FTEs
<b>FY23 Approved</b>	<b>691,677</b>	<b>3.05</b>
Add: New Funding for Climate Fellows and Interns	85,000	0.00
Shift: Funding for Climate Fellows and Interns from Department of Environmental Protection	85,000	0.00
Increase Cost: FY24 Compensation Adjustment	12,363	0.00
Increase Cost: Three Percent Inflationary Adjustment to Non-Profit Service Provider Contracts	1,500	0.00
Shift: Reassign Three Positions from NDA to Department of Environmental Protection	(397,632)	(3.00)
Multi-program adjustments, including negotiated compensation changes, employee benefit changes, changes due to staff turnover, reorganizations, and other budget changes affecting multiple programs.	113,731	0.00
<b>FY24 Recommended</b>	<b>591,639</b>	<b>0.05</b>

### Climate Response

This program supports the County's mission to provide an effective and efficient transportation system to ensure the safe and convenient movement of persons, bicycles and vehicles throughout the County in response to winter snow storms and severe wind/rain events.

Budgeted funds for this program support the costs for the Department of Transportation and Department of General Services when actual expenditures exceed their individual snow removal and storm cleanup budgeted amounts, which is a circumstance that occurs every year.

The snow removal and storm cleanup program is an integral part of coordinating the response to emergencies and severe weather events through the preparation, active response, and post storm/emergency cleanup. Tasks performed during these operations



# Climate Change

## LINKAGE TO COUNTY RESULTS AREAS

- A Greener County
- A Growing Economy
- Thriving Youth and Families
- Effective, Sustainable Government

## PROGRAM CONTACTS

Contact Adriana Hochberg, Climate Change Officer, at 240-620-3005; Vicky Wan, Acting Deputy Director of the Department of Environmental Protection at 240.777.7722; or Richard H. Harris, Office of Management and Budget at 240.777.2795 for more information.

### **What's New for FY24:**

The County's FY24 budget for climate initiatives provides new resources that supplement the climate resources provided in the FY23 budget. (To review the FY23 climate budget, visit: <https://apps.montgomerycountymd.gov/basisoperating/Common/Chapter.aspx?ID=CC> ).

### **Accelerate Nature-based Carbon Sequestration**

- DEP's Tree Montgomery program is being expanded to plant additional shade trees and increase the County's tree canopy. The Tree Montgomery program provides free shade trees for planting on private properties across the County.
- DEP will be adding a new Program Manager position for Tree and Forest programs in FY24. This position will enhance the Tree Montgomery program, expand efforts in equity areas, and expend grant funds awarded to the County.
- DEP is receiving funding to expand the RainScapes Rewards rebates to properties. RainScapes are green infrastructure techniques that help reduce stormwater runoff from individual properties and sequester carbon by improving soil health. Projects include rain gardens, conservation landscapes, green roofs, water harvesting, permeable pavement, and pavement removal. Demand for the program continues to exceed its budget, and the program provides MS4 (Municipal Separate Stormwater Sewer System) credits on privately-owned land.

### **Support Clean Energy Efforts**

- DEP is receiving funding for the continued use of technical consultants to assist staff with developing and implementing a Community Choice Energy program for Montgomery County. A Community Choice Energy program would enable the County to become the electricity supplier to residential and small commercial electricity customers in the County, with a goal of providing electricity at a price that is competitive with the electricity offered through the three utilities serving the County and that has a higher percentage of the supply produced by renewable energy sources. The County is working with a variety of stakeholders through a Maryland Public Service Commission Work Group to develop regulations governing the program.

- 
- DEP is gaining funding for a Solar Technical Program Manager to provide technical expertise related to the development of policies, programs, and outreach/engagement to residents and businesses related to solar energy installations. Increasing development of solar installations is a key element of the Climate Action Plan. This includes rooftop solar on residential and commercial properties, ground-mounted solar installations, community solar in various configurations, and utility scale solar.

### **Support Greenhouse Gas Reduction in Existing Residential Buildings**

- DEP is receiving funding to provide energy audits in under-resourced buildings subject to Building Energy Performance Standards (BEPS). Comprehensive energy audits examine the operating performance of individual building systems and evaluate options for increasing the efficiency of, or replacing, such systems. Under-resourced buildings (defined by the BEPS law as including affordable housing, non-profit organizations, and small businesses) generally lack the monitoring systems and building staff to understand and address building inefficiencies in real time, much less develop a long-range plan that may be necessary to meet BEPS requirements. This funding will enable covered buildings to identify opportunities that will increase building energy performance and prepare for system upgrades that may be necessary to comply with BEPS requirements.
- DEP is gaining a Residential Electrification Program Manager to provide technical expertise related to the development of policies, programs, and engagement to residents and contractors regarding residential electrification, including the applicability of grants, incentives, and financing opportunities to residential electrification. Residential electrification focuses primarily on heating, air conditioning, and ventilation (HVAC) systems and domestic hot water equipment, which in many residences are fueled by on-site combustion of methane or "natural" gas, oil, or propane. Electrification of these systems is often challenging to homeowners due to technical questions and a lack of available information about available systems and methods for conversion.

### **Support Greenhouse Gas Reduction in the Transportation Sector**

- DEP is gaining funding to expand the EV Purchasing Cooperative program. The EV Purchasing Co-op, which began as a pilot in FY22, leverages consumer buying power to encourage dealerships to offer cost savings on electric vehicles without the need for direct incentives from the County. DEP plans to hire a contractor to administer this program, maintain a listing of available deals, conduct regular monthly correspondence with dealerships, develop training materials, deliver training to dealership partners, and develop new marketing and communication content.
- MCDOT is receiving funding to purchase three zero-emission Bethesda Circulator buses over a twelve-year period. The Bethesda Circulator is a free bus service managed by the Bethesda Urban Partnership and is used by County residents, private and public workers, and other individuals.

### **Enhance the County's Climate Governance Capacity**

- DEP is gaining two new Grants & Incentives Program Managers to identify programs and activities in need of grant funding, develop and submit grant proposals, execute grant-related documents and report on grants, as well as develop and monitor the distribution of County funds and incentives to residents and businesses associated with various climate programs. Recently adopted federal legislation, including the Inflation Reduction Act and Infrastructure Investment and Jobs Act, promise to provide opportunities for a wide variety of funding opportunities from federal and state agencies. In addition, many climate programs under development or proposed for future implementation will involve the distribution of County funds and/or incentives to residents and businesses.
- DEP is gaining funding to enable the retention of consultants with expertise in grant identification, application, and implementation. The process of identifying, applying for, and implementing grant opportunities can be complex. In order to receive the greatest benefit from these funding opportunities, it will be beneficial to have the expertise of consultants to navigate these processes. The return on the investment to the County can be significant, as thousands

---

of dollars in consulting expertise can translate into millions of dollars of federal or state resources.

- The Climate Change Non-Departmental Account is gaining funding for paid fellows and interns to support the County's climate and energy initiatives. Climate fellows and interns provide research, outreach, and communications support to multiple departments.

### **Support Climate Capacity Building for Community Organizations**

- DEP is receiving funding to be granted to community-based organizations (CBOs) for climate capacity building. Most CBOs in the County lack the resources and institutional capacity to focus their efforts on climate-related activities, particularly related to climate justice. The grant funding could be used by CBOs for a variety of purposes, such as hiring climate staff, training staff on climate change and climate justice issues, developing organizational priorities related to climate change and climate justice, and more deeply engaging with community members and County government on climate policies from conception to implementation.

### **Support Zero Waste Efforts**

- DEP is gaining two new Zero Waste Planner positions to establish a unit focused on Countywide zero waste efforts. Zero waste initiatives include waste reduction, reuse, and recycling efforts, adding to the kinds of materials that can be recycled, drafting legislation and regulations, conducting research and data analysis, and evaluating the effectiveness of the new efforts.

### **Climate Change Non-departmental Account (NDA)**

- Funds in this NDA are used to implement the Climate Action Plan. In FY24, the Climate Change NDA will support studies and programmatic efforts related to clean energy, electric vehicle charging, zero emissions fleet transition, building codes, climate finance, residential home labeling, climate communications and engagement, and climate resilience. The NDA will also be used to support paid climate fellows and interns.

### **Ongoing Work of County Departments**

#### **Community Use of Public Facilities (CUPF)**

CUPF covers the personnel cost of an energy management position in Montgomery County Public Schools (MCPS) to monitor community use of school buildings and control the HVAC settings in each school based on the weekly schedule. CUPF continuously fine tunes the MCPS' weekly energy management schedule to reduce unneeded energy use. CUPF makes every possible effort to consolidate community use into buildings by not placing groups in an empty building when a building nearby already has scheduled use.

#### **Department of Correction and Rehabilitation (DOCR)**

The Department's diversion community service work crews remove debris/waste, and work crews paint electric car ports at County facilities and use green chemicals to remove county graffiti. The department has recently implemented a Food Waste Composting initiative within its Kitchen/Dietary Services.

#### **Department of Environmental Protection (DEP)**

DEP provides leadership for the County's actions on reducing greenhouse gas emissions and adapting to a changing climate. DEP administers the County's Benchmarking Law, whereby commercial and multifamily building owners with properties greater than 25,000 square feet use a standard metric to measure energy usage, identifying energy savings opportunities. DEP manages a new zero-emissions vehicle outreach and engagement program to help residents and businesses electrify their ride



---

and continues to provide residential energy programs to assist county residents with energy efficiency opportunities. DEP also administers the Montgomery Energy Connection, a merger-funded program whose goal is to be a trusted source of information about home energy efficiency and renewable energy options for residents.

DEP administers the Tree Montgomery program, a program that plants shade trees for property owners, free of charge. Additional programs for tree planting are implemented in partnership with MCDOT. DEP also administers the RainScapes program which provides rebates to properties to install green infrastructure.

DEP provides curbside collection services to all single-family residences for recyclables including cardboard and paper, and commingled material such as plastics, glass, and yard trim. These materials are then sorted and marketed to recycling processors or turned into compost material and sold to customers, keeping large volumes of material out of the waste stream.

DEP is supporting the development of a Flood Management program for the County, including development of comprehensive strategies for planning for, responding to, and communicating about flooding issues; and the identification of areas at high risk of flooding due to the built environment. Phase II of the plan was funded in the County Executive's recommended Amended FY23-29 CIP.

### **Department of General Services (DGS)**

DGS' Office of Energy and Sustainability ensures County operations are environmentally sensitive and integrates sustainability into County decision making. Over 7.6 megawatts (MW) of electricity are generated from solar panels on County facilities. A 6.0 MW installation is underway at the decommissioned Oaks Landfill and in FY23 DGS has completed Phase I of the Brookville Bus Depot electric bus charging station installation which will include a 2.0 MW solar installation and microgrid. DGS also leads the initiative to transition to a zero emissions fleet of County vehicles and buses.

### **Department of Health and Human Services (DHHS)**

The various public-facing HUBs within the County are building community resiliency. Through its focus on the social determinants of health, the DHHS minority programs are keenly aware of the impact of climate change on communities of color and are committed to better incorporating climate and the environment into its work. A Climate Action Team within the Office of Community Affairs has developed a Climate and Health Lunch & Learn training for staff and will continue to develop capacity building opportunities for department stakeholders.

The Latino Health Initiative (LHI) has conducted a series of Latino community conversations to assess the knowledge, attitudes, and practices of a sample of Latino community members regarding environment-related practices associated to consumer waste and recycling and will continue to incorporate climate into health promotion activities. LHI will develop a Climate and Health education workshop series in coordination with climate focused community partners.

### **Department of Housing and Community Affairs (DHCA)**

The Energy Efficiency program assists homeowners and low-income residents in reducing home energy use by providing energy inspections, air leak identification, insulation, and energy efficient lighting.

### **Office of Human Resources**

The Office of Human Resources has rolled out the County's Telework Policy to encourage MCG staff to reduce vehicle miles traveled. The Office conducts virtual trainings related to climate change and works to build awareness among all County staff about climate change.

### **Department of Permitting Services (DPS)**

Through the Sustainability, Energy, and Mechanical program reviews, DPS enforces the County's requirement for new construction, additions, and alterations to conform to the State-adopted International Energy Construction Code. New

---

commercial construction and additions of 5,000 square feet or greater must conform to the State-adopted International Green Construction Code.

### **Department of Transportation (MCDOT)**

MCDOT continues to build an extensive network of bikeway facilities including protected bike lanes, particularly in areas associated with the Purple Line and Bethesda Metro Station projects, and those in BiPPA and master plan areas. Capital Bikeshare offers stations throughout the County, providing a low-carbon alternative for short trips. The shared E-bike and E-scooter pilot program provides additional low-carbon, low-cost options for residents, employees, and visitors for short trips and to connect with transit.

Ride On, the county's public bus system, provides an affordable alternative to driving. MCDOT facilitates and encourages the use of public transportation with programs like FareShare, which works through employers to assist employees with their commuting costs, and the Commuter Choice Tax Credit. These programs provide incentives for employers to buy-down the cost of transit and vanpooling for their employees. Express bus programs including FLASH on US 29 and Ride On extRa on MD 355 provide fast, reliable bus service along major County corridors.

### **Office of Agriculture (OAG)**

OAG supports the farm community in its utilization of renewable energy through accessory solar and regenerative agricultural practices such as no till farming, crop rotation, and others. OAG promotes Best Management Practices (BMP) such as cover cropping to help sequester carbon. The Soil Conservation District works with local farmers in promoting conservation practices that help to reduce greenhouse gases such as conservation tillage. Conservation tillage reduces trips across fields by use of equipment that produces greenhouse gases. In addition, the OAG Soil Amendment program offers free deliveries of Leafgro to farmers to increase the organic material in the soil, retain moisture, and promote soil health. By supporting County table food and beverage producers and helping expand their markets, OAG is encouraging local purchasing of food and beverages, which reduces the amount of fossil fuel energy needed to transport these products. Finally, OAG encourages farmers to have nutrient management plans, which help make sure that farmers do not use more fossil fuel-derived fertilizers than necessary.

### **Office of the County Executive**

The Climate Change Officer leads the County-wide implementation of the Climate Action Plan.

### **Office of Emergency Management and Homeland Security (OEMHS)**

OEMHS is working closely with County departments to prepare for the current and future impacts climate change will have on weather-related disasters. OEMHS has a Climate Adaptation Program Manager who collaborates with DEP and other County agencies to pursue State and Federal grants to prepare for the effects of climate change. OEMHS works with County departments and community partners to identify areas at high risk for urban heat island effect and helps guide the County's mitigation and response efforts, including the development of resiliency hubs.

As climate change increases the intensity of rain events, OEMHS has a hydrologist position to help identify areas that will become prone to flooding and help the County prepare for, mitigate, and respond to the impacts. The office also identifies critical infrastructure that may be vulnerable to climate change, such as dams, roads, and structures, and works with owners of the infrastructure to prepare for and mitigate those vulnerabilities. OEMHS is updating the County's Hazard Mitigation Plan, which will incorporate how climate change affects the County's natural hazards and vulnerabilities.

### **Office of Procurement**

The Office of Procurement works with other County departments to employ sustainable procurement practices and specifications to help reduce environmental impacts and total cost of ownership. Examples include: (1) language incensing

meatless menu options as well as local produce sourcing in cafeteria solicitation, and (2) responsible disposal or donation of County surplus to maximize return and reduce waste for the County.

**Public Libraries (MCPL)**

MCPL partners with other County and community partners, including DEP, DHHS, and Pepco to place informational and resource tables at libraries to inform residents about access to energy assistance and energy conservation programs. MCPL also partners with DEP to make items such as compost bins, thermal cameras, reusable and recyclable bags available to residents. MCPL offers climate change educational programs and workshops for residents of all ages. For adults and seniors, these include workshops to help residents manage energy usage and explore energy efficient technology. Programs are planned for large audiences to disseminate the information in a wider manner as well as for small groups, where conversations about the personal impact on climate change and energy saving of individual residents can be explored. For children, teens, and families, MCPL offers educational programs about the impact of climate change on oceans and the creatures that inhabit them in support of the 2022 Summer Reading Challenge!, "Oceans of Possibilities." As part of this program, children and teens had the opportunity to make tangible contributions towards conserving the Chesapeake Bay by planting trees, oysters, and providing healthy habitats for Bay animals.

**Climate Change Efforts in the County Executive's FY24 Recommended Budget**

The chart below details the budget numbers associated with the initiatives and programs discussed in this chapter. The County Executive's Recommended FY24 Operation Budget dedicates \$272.6 million to climate change efforts.

Department	Program	FY24 CE Recommended				
		GF	CIP	Other Operating Funds	RideOn	Non-County
Office of Agriculture	Agricultural Business Development Specialist Position	\$128,029				
	Cover Crop Program			\$70,000		
	Soil Amendment Program	\$14,000				
	<b>Subtotal Office of Agriculture</b>	<b>\$142,029</b>		<b>\$70,000</b>		
	<b>Total Office of Agriculture</b>	<b>\$212,029</b>				
County Executive's Office	Climate Change Officer	\$30,043		\$201,062		
	<b>Subtotal County Executive's Office</b>	<b>\$30,043</b>		<b>\$201,062</b>		
	<b>Total County Executive's Office</b>	<b>\$231,105</b>				
Climate Change Planning NDA	Climate Action Plan Implementation	\$591,639				
	<b>Total Climate Change Planning NDA</b>	<b>\$591,639</b>				

Department	Program	FY24 CE Recommended				
		GF	CIP	Other Operating Funds	RideOn	Non-County
Department of Environmental Protection	Increase Tree Canopy Conservation Appropriation -- New FY24	\$750,000				
	Community Choice Energy Consultant -- New FY24	\$250,000				
	Residential Electrification Manager -- New FY24	\$90,718				
	Grants and Incentive Program Managers -- New FY24	\$174,924				
	Climate Capacity Funding for Community Organizations -- New FY24	\$250,000				
	Electric Vehicle Co-op Management -- New FY24	\$100,000				
	Support for State and Federal Grant Availability and Applications -- New FY24	\$100,000				
	Solar Technical Expertise -- New FY24	\$90,718				
	Energy Audits for Under-resourced Buildings Subject to Building Energy Performance Standards -- New FY24	\$250,000				
	Community Justice Academy	\$300,000				
	Efficiency and Climate Resiliency for Low- and Moderate-Income Housing	\$675,000				
	BEPS Program Operating Funding	\$700,000				
	High Road Economic Development Implementation	\$100,096				
	Project Equity Worker Coop Implementation	\$132,749				
	Sustainability Zoning and Code Review	\$150,000				
	The County's Benchmarking Law: DEP offers assistance to building owners with compliance	\$39,999				
	Decision Support Tool License	\$20,000				
	Electrification Incentive Program	\$1,000,000				
	Broadscale Climate - Alert Montgomery Communications Campaign	\$150,000				
	Agrivoltaic Tech Assistance	\$50,000				
	Tree Montgomery Program	\$1,199,408				
Staff focused on climate efforts	\$2,990,006					
Staff support for climate-focused programs	\$703,139					
County Recycling Programs				\$64,412,777		
Energy Connection					\$423,483	
	<b>Subtotal Environmental Protection</b>	<b>\$10,266,757</b>		<b>\$64,412,777</b>		<b>\$423,483</b>
	<b>Total Environmental Protection</b>	<b>\$75,103,017</b>				
Department of General Services	Office of Energy and Sustainability: Ensures County operations are environmentally sensitive and integrates sustainability into County decision making.	\$841,422	\$150,000			
	Brookville Bus Depot Microgrid	\$2,247,307				
	Green Fleet: DGS is pursuing an all-electric fleet of County vehicles and buses.			\$3,200,000		
	Increase the availability of electric vehicle charging stations at public parking facilities and other County locations.			\$277,000		
	<b>Subtotal General Services</b>	<b>\$3,088,729</b>	<b>\$150,000</b>	<b>\$3,477,000</b>		
	<b>Total General Services</b>	<b>\$6,715,729</b>				
Department of Housing and Community Affairs	Program Energy Efficiency Program: Assists homeowners and low-income residents in reducing home energy use by providing energy inspections, air leak identification, insulation, and energy efficient lighting. <sup>1</sup>					\$295,685
	<b>Total Housing and Community Affairs</b>					<b>\$295,685</b>
Department of Permitting Services	The Commercial Sustainability, Energy Section and Green Building Program Review: Enforces the County's requirement for new construction, additions, and alterations to conform to the International Energy Construction Code. New commercial construction and additions of 5,000 square feet or greater must conform to the International Green Construction Code.			\$1,187,496		
	<b>Total Permitting Services</b>			<b>\$1,187,496</b>		
Department of Transportation	Bethesda Electric Circulator -- New FY24			\$308,000		
	Chesapeake Bay Trust Urban Street Trees Grant					\$148,233
	Ongoing Urban Forest Efforts	\$5,707,834	\$3,100,000			
	Capital Bikeshare, e-scooters, and e-bikes: Capital Bikeshare offers stations throughout the County, providing a low-carbon alternative for short trips. The E-bike and E-scooter Pilot Program are another option for residents and visitors.	\$1,650,604				
	Green Fleet: Electric bus replacements.			\$17,040,000		
	Commuter Services: Facilitate and encourage the use of public transportation through Transportation Demand Management and programs like FareShare, the Commuter Choice Tax Credit, and Get In.			\$5,137,025		
	RideOn Bus service, including express bus programs.				\$155,085,954	
	<b>Subtotal Transportation</b>	<b>\$7,358,438</b>	<b>\$20,140,000</b>	<b>\$5,445,025</b>	<b>\$155,085,954</b>	
	<b>Total Transportation</b>	<b>\$188,029,417</b>				
OEMHS	Staff and programs on hazard mitigation planning.	\$263,602				
	<b>Total Emergency Management and Homeland Security</b>	<b>\$263,602</b>				
Countywide Total	<b>Subtotal Montgomery County</b>	<b>\$21,741,237</b>	<b>\$20,290,000</b>	<b>\$74,793,360</b>	<b>\$155,085,954</b>	<b>\$719,168</b>
	<b>Total Montgomery County (CIP and PSP)</b>	<b>\$272,629,719</b>				

submission showcased actionable items taking place in each of the three areas of the GARE framework. However, explanations lacked specific detail about how the budget would enable staff participation in GARE conferences or the completion of an organizational assessment. In its explanation, the department shared persistent resources challenges related to increased workloads and persistent vacancies.

## Environmental Protection

### Department Level OBET Questions

1. How will your overall budget support the department's commitment to advancing racial equity and social justice? To aid you in the formulation of your response, we've offered a list of activities, using the GARE framework, that demonstrate department-level commitments to racial equity and social justice. More information about the GARE framework is below and here.

**Normalize** - Establish racial equity as a key value by developing a shared understanding of key concepts across the department and create a sense of urgency to make changes

- ★ Form a Racial Equity CORE Team.
- ★ Allocate or support the use of staff time for CORE team activities.
- ★ Develop a racial equity vision statement (and/or racial equity and social justice mission, values, or guiding principles).

DEP has incorporated interview questions as part of our interview questions templates that highlights the importance of racial equity. DEP has developed an internal Translations Policy to ensure materials are being translated to other languages. Racial equity information are included in all DEP's internal communications and also available on the department's intranet. DEP has created learning opportunities and encourages all staff to participate.

**Organize** - Build staff and organizational capacity, skills, and competencies through training while also building infrastructure to support the work, like internal organizational change teams and external partnerships with other institutions and community.

- ★ Implement a plan or policy requiring all staff and leadership to complete "Advancing Racial Equity: the Role of Government" and "the Racial Equity Institute's Groundwater Approach: building practical understanding of structural racism" trainings.
- ★ Designate permanent and sustainable staff resources, with an FTE or similar investment, to organize and lead the department's commitment to racial equity and social justice.
- ★ Designate resources for staff participation in GARE conferences and other department-specific racial equity and social justice professional development.



- ★ Develop a strategy to engage communities in planning, design, or other decision-making processes.

No Data

**Operationalize** - Put theory into action by implementing new tools for decision-making, measurement, and accountability like a Racial Equity Tool and developing a Racial Equity Action Plan.

- ★ Field a staff survey and or conduct focus groups to identify areas of strength and opportunity in recruiting, retaining, and advancement of a diverse and representative workforce.
- ★ Conduct an organizational assessment to identify areas of strength and opportunity for advancing racial equity in policies, programs, and practices.
- ★ Track program access and service outcomes by race, ethnicity, and other relevant demographic or socioeconomic characteristics.
- ★ Using or creating department-specific racial equity tools or maps to support analysis (of policy, program, practice, procedure) or resource decisions.

DEP has created an internal translation assignment tool to help facilitate staff request for translation services. DEP's translation policy also includes links to data sources that helps staff understand the population in specific areas to better serve those communities.

2. How does your department's budget allocate funds towards ensuring that public documents (including websites and related apps), policies, plans, meetings, and hearings are readily accessible to the public? Please use the checkboxes below to indicate which activities your department budget will enable. Then, in the text box that follows, please describe how your budget targets resources towards these activities.

- ★ Translating documents and marketing material to relevant languages based on the project impact area. Completed in partnership or at the advisement of the Office of Community Partnerships.
- ★ Ensuring interpretation services (ASL and closed-captioning) are available to the public in all relevant places and programs (such as service desks, service phone lines, open houses, public meetings, etc.).
- ★ Ensuring accessibility for people with disabilities using Section 508 of the Rehabilitation Act; Web Content Accessibility Guidelines; and compliance with the Americans with Disabilities Act as a minimum standard.

DEP has created an internal translation assignment tool to help facilitate staff request for translation services. DEP is looking into staff augmentation contracts with local nonprofit agencies to provide translation services at Department events.

3. What persistent gaps or limitations could inhibit your department's ability to advance racial equity and social justice?

The County could provide more support with faster turnaround times to locate translators and translate documents. Additional resources to gather necessary data to implement the GARE framework.

ORESJ Rating

3-Department-level budget demonstrates a strong commitment to advancing racial equity and social justice in Montgomery County



## ORESJ Justification


Based on department-level responses, the departmental budget will enable commitments and actions to take place in each major area of the GARE framework, however explanations centered on translation policies and practices. Further, responses lacked supplemental information and data; did not indicate how fiscal resources are being targeted to achieve the actions outlined in the responses, nor was there mention of engagement with the community in any of these efforts. The final department-level score reflects acknowledgment of activities selected from those provided in the tool, however there is little supporting evidence to confidently categorize DEP as demonstrating a strong commitment.

# Ethics Commission

## Department Level OBET Questions

1. How will your overall budget support the department's commitment to advancing racial equity and social justice? To aid you in the formulation of your response, we've offered a list of activities, using the GARE framework, that demonstrate department-level commitments to racial equity and social justice. More information about the GARE framework is below and here.

**Normalize** - Establish racial equity as a key value by developing a shared understanding of key concepts across the department and create a sense of urgency to make changes

 We're doing something else and will use the text box to describe.

The Ethics Commission, by its mandate assures impartiality in execution of government. Our programs do not have a targeted racial equity component, but equity is fundamentally built into our mission and our actions.

**Organize** - Build staff and organizational capacity, skills, and competencies through training while also building infrastructure to support the work, like internal organizational change teams and external partnerships with other institutions and community.

 We're doing something else and will use the text box to describe.

The Ethics Commission has a personnel compliment of two persons, and our total time is devoted to the furtherance and execution of the mission of the organization, which is to promote the public's trust of County government through the independent administration, including enforcement, of laws designed to ensure the impartiality of County employees, including elected officials, in the execution of their responsibilities. We haven't made any commitments beyond those contained within our mission statement, which seeks to treat all persons equally, equitably, and fairly.

**Operationalize** - Put theory into action by implementing new tools for decision-making, measurement, and



**Additional Information from DEP Regarding FY24 CE Recommendations with Service Impacts for the Water Quality Protection Fund**

**Add: New Position and Operating Support for Illicit Discharge Detection and Elimination (Program Manager I) - \$369,206 [PMI = \$84,206 + vehicle = \$35,000+ consultant \$250,000 = \$369,206]**

The County’s MS4 permit requires the County have an “inspection program to ensure that all discharges into, through, or from the MS4, that are not composed entirely of stormwater, are either issued a permit by [MDE] or eliminated [by the County through enforcement].” This is called our Illicit Discharge Detection and Elimination (IDDE) program, and it is in place to ensure that pollutants are not discharged to our county’s streams. The permit requires 150 outfalls inspected each year and visual surveys of commercial and industrial areas.

DEP-ECC compliance and enforcement staff have done the outfall inspection and work for many years, however, over the last few years they have found that their compliance case load has increased and are unable to adequately conduct the IDDE inspections and surveys.

To ensure the County continues to be compliant with the MS4 Permit requirements, DEP is asking for one program manager to oversee the work of the consultant that will conduct the outfall inspections and surveys of commercial and industrial areas (see below). When illicit discharges are found through the consultant inspection and surveys, the Program Manager I will turn the case over to ECC for enforcement. This position will also ensure the database tracking and reporting requirements are fulfilled for the MS4 annual report. This position will also conduct field work as necessary when illicit pollutant discharges are identified by DEP staff and residents. The position will also maintain the standard operating procedures, database, plans, schedules, and prepare the reporting required by the permit. The position is expected to be in the field and a vehicle was added to support this expectation. This position will be filled in FY24.

***Operating support for IDDE:*** To be compliant with the County’s MS4 permit, DEP is asking for \$250,000 for consultant services for the following:

***Illicit Discharge Detection and Elimination - \$120,000:***

In FY22 and FY23, DEP funded consultant work to complete the 150-outfall screening due to a staff shortage in DEP-ECC. This was very successful, and DEP determined that to remain compliant with the permit, the County should use contract services permanently to conduct the IDDE inspections and surveys. The cost for the IDDE outfall inspections was \$60,000. It is assumed that the cost to do the commercial and industrial areas inspections will cost the same amount. Therefore, DEP is requesting \$120,000 for IDDE consultant services for ongoing support of this work.

***Good House Keeping Plans and Salt Management Plans - \$130,000:***

The permit requires the County develop good housekeeping plans for County-owned properties not required to be covered under Maryland SW Industrial General Permit. These good housekeeping plans must be submitted MDE in November 2024. DEP is working with several



MS4 jurisdictions and COG to develop the template for the good housekeeping plans. In FY24, DEP will hire a consultant to complete the plans using the template developed by COG. DEP is estimating that it will cost the County \$100,000 to develop the plans. This funding may also be used to provide training as required by the permit on pollution prevention for County staff.

The County is also required to develop Salt Management Plan to be submitted to MDE in November 2024. DOT has a salt management plan developed for roadway operations. DEP anticipates using the same consultant developing the good housekeeping plans to prepare additional information that must be added to DOT's salt management for salting operations on sidewalks and parking lots. In addition, the salt management plan must include information on developing and distributing best salt management practices outreach for educating business in the County. DEP is estimating that preparation of these additions to the salt management plan will cost approximately \$30,000

**Add: Maintenance of Above Ground and Below Ground Stormwater Management Structures (\$148,000 for maintenance of below ground assets added in FY22, and \$114,867 added for maintenance of above ground assets added in FY22) Total \$262,867**

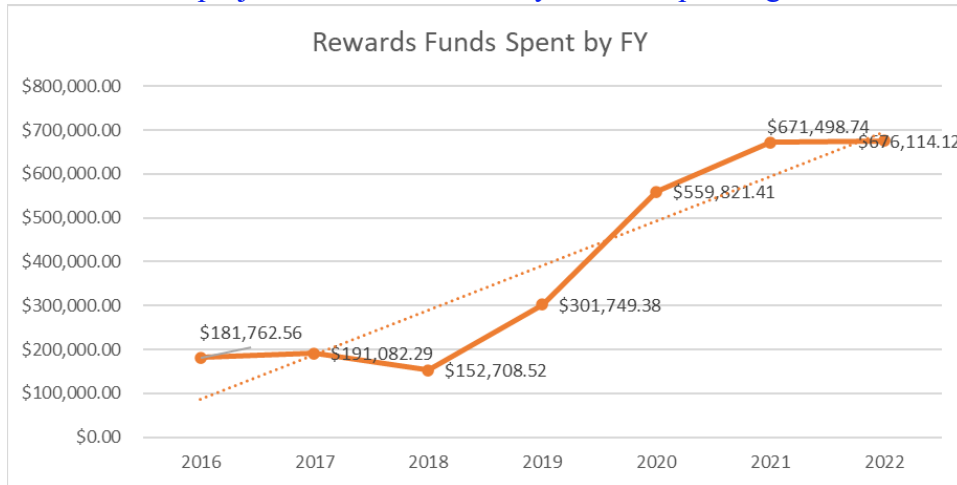
FY24 increase- In FY22, 819 SWM BMPs under County jurisdiction were constructed and added to DEP's Infor asset management system. DEP's Below Ground Stormwater BMP Maintenance program is legally responsible for the maintenance of 161 of these assets, and DEP's Above Ground Stormwater BMP Maintenance program is legally responsible for the maintenance of 136 of these assets, either because they are on publicly owned property, or on properties receiving drainage from residential areas. The yearly cost to maintain the new below ground assets totals \$148,000, and the yearly cost to maintain the new above ground assets totals \$114,867. A total of \$262,867 must be added to the base budget to maintain current level of effort (i.e. State law, County Code and the County's MS4 Permit require the County to perform preventative maintenance of SWM BMPS for which DEP has maintenance responsibility).

Preventative maintenance is critical to assure proper functioning of the facilities and to prevent pollution of receiving streams and waterways.

**Add: RainScapes Program Funding \$200,00**

RainScapes is part of the DEP/Montgomery County approach to incentivizing voluntary retrofits to reduce runoff from or on private properties. County property owners that pay into the WQPC are eligible to participate as well as HOA and Institutional properties. This has been a flexible approach that has allowed the program to meet its part of the County MS4 Permit requirements, and has provided substantial education and outreach to County residents. The demand remains strong and the need to expand into more areas is pressing due to increased intensity rain events. Demand to pay for Rebate projects has exceeded the allocated budget for that line item in the budget for over three years, as is shown in the graph below. By limiting applications, we have flattened the expenditure, but the demand remains. This means that funds which might be used

for more training of consumers and professionals as well as for demonstration projects have been redirected to support the RainScapes Rewards. Those other program elements, such as generalized outreach and focused outreach to front line communities or installation of demonstration projects have been severely curtailed pending more staff and funding.

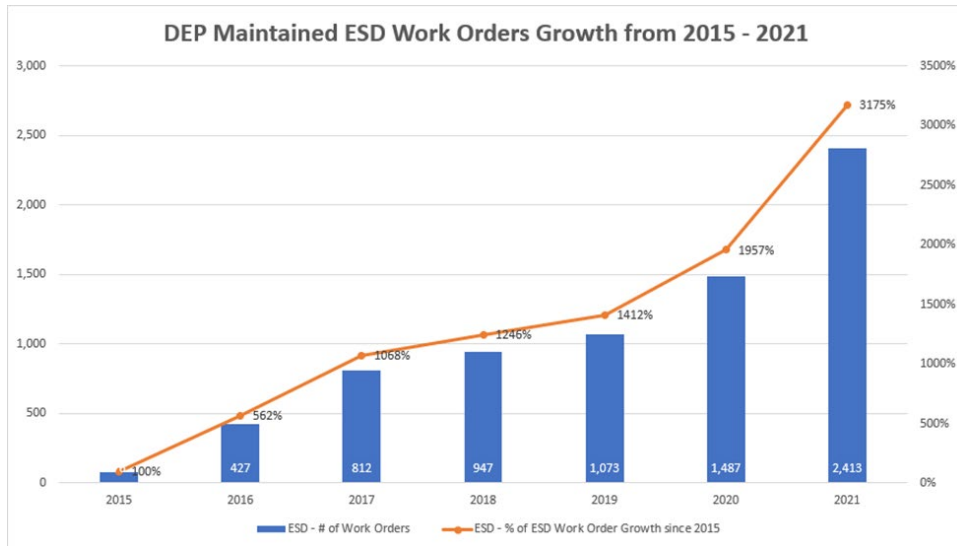


We are requesting an additional \$200K in funding to allow the RainScapes program to maintain services and meet demand. Failure to add funding reduces the number of projects that will be supported and will constrain our ability to meet County equity goals. These projects help the County meet its MS4 obligations both from the number of projects installed that improve water quality and for the outreach benefit to the County. The additional funds will also allow us to resume other RainScapes efforts to reach residents of the county and provide technical assistance on their lot level drainage issues, hands on training and demonstration projects which are close to communities and in general, continue the work of educating county residents and professionals on how to use RainScapes to ecologically manage their stormwater for the benefit of the health of our communities.

**Add: New Position for Above Ground Maintenance (Planning Specialist III) \$84,206 Personnel Costs and \$35,000 for a vehicle. Total \$119,206**

Preventative maintenance is critical to assure proper functioning of the stormwater management best management practices (BMPs) and to prevent pollution of receiving streams and waterways. DEP uses contractors to maintain and repair SWM BMPs where DEP is legally responsible for maintenance. DEP is responsible for maintenance and repair of ESD BMPs on publicly owned properties.

Since 2015, the number of publicly owned ESD BMPs have increased. The larger number of assets means greater inspection and maintenance needs and an increased need for oversight of the maintenance contractors' work.



*Growth in the Number of Work orders for Routine Maintenance of ESD SWM BMPs from 2015 to 2021*

Currently DEP has four different contracts to accomplish the maintenance of different types of ESD BMPs. The number of work orders issued for publicly owned ESD BMPs has increased greatly, making oversight of contractor work challenging. In addition to the number of crews, the work is often done on a monthly basis, adding to the oversight demand. DEP currently has only one Planning Specialist III who is responsible for approving contractor work and assuring that the work is done in conformance with contract specifications. The Planning Specialist II also provides other programmatic support. DEP requires another Planning Specialist III to conduct the contractor oversight, and provide program support. Currently DEP lacks the field staff to adequately perform the contractor oversight required. This position will be filled in FY24.

**Add: Additional Miles for Street Sweeping \$92,049**

Funding for increases in street sweeping costs because the route mileage has increased to meet the requirements of the MS4 permit.

**Add: New Position for Pollutants Reductions on County Properties (Program Manager I) \$84,206**

This position will coordinate with County department and agencies and oversee the consultant developing the good housekeeping plans (see above). Once the plans are developed, this position will track the training required by the plans, the implementation of the standard operating procedures, and overall pollutant reductions resulting from implementation of the good housekeeping plans. This position will also oversee the consultant’s work for the salt management plans (see above) and work with DOT, DGS, urban districts, and MCPS to coordinate the tracking and reporting required by the MS4 permit for winter weather operations. Also, this position will coordinate with DOT and DGS on the tracking and reporting on the County’s efforts to implement a program to reduce pollutants associated with the maintenance of county-owned properties, including roadways, as required by the MS4 permit. This position will be filled in FY24

**Add: New Position for Tree and Forest Programs (Program Manager I) \$84,206**

The Tree Canopy Law (Chapter 55) and the Forest Conservation Law (Chapter 22A) require the Department of Environmental Protection to implement programs related to trees and forests in Montgomery County. Currently, the existing staff does not meet all requirements, therefore additional subject-expert staff resources are needed within DEP. As defined by these two laws, DEP is required to:

- implement comprehensive shade tree planting and outreach programs, or the Tree Montgomery program, to use all fees collected through the Tree Canopy Law;
- analyze survival and mortality rates to provide guidance on these tree planting programs;
- inspect, replace, and complete reporting requirements for the MS4 Permit for all planted trees counted as credits towards the MS4 Permit;
- serve as a liaison between the residents, businesses, the County Executive and County Council, other departments and agencies and the residents to increase awareness of trees and forests; and
- develop comprehensive conservation and management strategies, such as participating in efforts towards enhancing climate change, carbon sequestration, and regional tree canopy goals.

While each of these duties requires staff time, implementing the Tree Montgomery program demands nearly all the staff resources currently allotted to the tree and forest programs. The goal of the Tree Montgomery program is to plant shade trees, such that they survive more than 50 years, on private property across the county. Each application requires a site visit and at least one conversation with each property owner by a tree expert to identify appropriate planting locations and species.

While the Tree Montgomery program has refined processes to maximize efficiency and an FTE was added in FY22, the number of applications received has increased and continues to exceed the rate they can be processed. In FY21, the program estimated that 750 applications were received annually. However, the actual number of applications received in FY22 was 928 and more than 460 were received in the first two quarters of FY23. To date, no advertising or targeted outreach has occurred to address equity or communities lacking canopy coverage. The Tree Canopy Law requires these efforts but staff is not able to implement this.

The shade tree plantings through Tree Montgomery are paid for by fees deposited into the Tree Canopy Account. This is a dedicated fund that can only be spent on planting and establishing shade trees and cannot be used to supplement staff (see Section 55-10(b)). The funds deposited into this account annually exceeds the funds spent for all prior years except for FY21 (FY22 data is not yet available). At the end of FY22, the unencumbered balance in the account was \$2.17 million (the Department of Finance year-end reconciliation has not yet been finalized).

Additionally, DEP requested a supplemental appropriation for \$750,000 for FY23 and an increase in the base appropriation for FY24 from \$750,000 to \$1.50 million. Further, DEP was awarded grant funds from the Environmental Protection Agency and the Chesapeake Bay Trust for more than \$889,000 in FY23, and future grants through the State's 5-million tree program are

anticipated. By all measures, the Tree Montgomery program continues to be more productive each year. None the less, it remains clear that in order to meet program goals of maintaining a low balance in the Tree Canopy Account and a short waiting list for applicants; targeting neighborhoods to address loss of canopy to development, a general lack of canopy and inequities; and meeting MS4 reporting requirements, then additional expert staff is needed. Due to the workload associated with the Tree Montgomery program, several other required duties have not been performed adequately or to any degree, including representing trees and forests in efforts to address climate change and carbon sequestration, comprehensive analysis of survival and mortality rates of planted trees and forests, and outreach programs to raise awareness as required by the Tree Canopy Law.

The new position would work closely with the existing staff on all programs and complete similar duties as the existing Program Managers I – Trees. These duties include:

- Implementing all tree planting activities under the Tree Montgomery program by working with applicants to identify planting locations and select shade tree species, and providing follow-up assistance to program participants to increase both long-time survival of trees and overall awareness of the benefits of trees and shade;
- Directing and monitoring activities of the contractors who plant and inspect newly installed shade trees under the Tree Montgomery program;
- Collecting and analyzing data related to Tree Montgomery and canopy other tree and forest programs, including information on shade tree plantings, mortality rates of newly planted trees, and canopy goals to evaluate the success of the County's tree and forest programs;
- Developing and implementing outreach and education strategies designed to inform the public about the County's tree planting and conservation programs (targeting communities with advertising), as well as the overall benefits of trees and shade; and
- Updating and revising program websites and outreach materials to enhance access to information about trees and these programs.

**Add: New Position for Water Quality and Monitoring (Water Quality Specialist I) \$72,929**

The County's MS4 permit has expanded requirements for Water Quality Monitoring for watershed assessment and trend monitoring related to stream biology and habitat, bacteria, chlorides, and PCB.

DEP Stream Monitoring team is comprised of 6 members: Senior Water Quality Specialist, WQS III, and 4 WQS II. These staff are dedicated to conducting the water quality monitoring requirements of the MS4 Permit, Special Protection Area requirements in the County Code, water quality monitoring for restoration projects, watershed assessment planning, data analysis and reporting.

The MS4 Permit requires that the County conduct biological and habitat assessment monitoring at randomly selected stream sites using state protocols, bacteria monitoring at 4 locations and chloride assessments monitoring at 2 locations. These new requirements have increased the

monitoring work by more than 50%. Increased work due to the MS4 permit has resulted in the need for more WQS staff to conduct the field work.

The monitoring work is currently performed by WQS II. These positions spend 85-90% of their time conducting the field work throughout the year. In addition to conducting the field work, the WQS must also identify the monitoring sites, request property permission, maintain equipment and gear, process all the biological, bacterial and chloride samples, enter the data, and analyze the results for reporting. The two new FTE WQS I will be dedicated to conducting field work, which will allow the WQS II staff more office time to improve communication, data analysis, reporting, and support DEP initiatives.

In addition, DEP is requesting the position to support DEP monitoring and investigation response to water quality concerns, include bacteria and other pollutants. These positions will help DEP be able to address the unscheduled monitoring of our streams to be responsive to residents' concerns, as well as emerging water quality concerns in the County's streams. For example, DEP has recently been involved in a bacteria issue in Willet Branch just downstream of Bethesda. DEP is hiring a consultant to conduct the investigation and monitoring because DEP does not have staff resources to conduct the monitoring needed to understand the bacteria problems. This position will be filled in FY24.

April 28, 2023

To: The Honorable Evan Glass  
President, Montgomery County Council  
and fellow Councilmembers  
100 Maryland Ave.  
Rockville, MD 20850

**Comments of the Montgomery County Advisory Committee on Climate, Energy, and Air Quality in support of an operating budget for Fiscal Year 2024 that is consistent with the County's climate commitments**

As an advisory committee to the County Executive and County Council, ***we are here as your appointees to offer you candid recommendations and guidance based on our expertise. In that capacity, we stress that the FY24 operating budget should build on the progress made in FY23 toward implementing the County's climate priorities.***

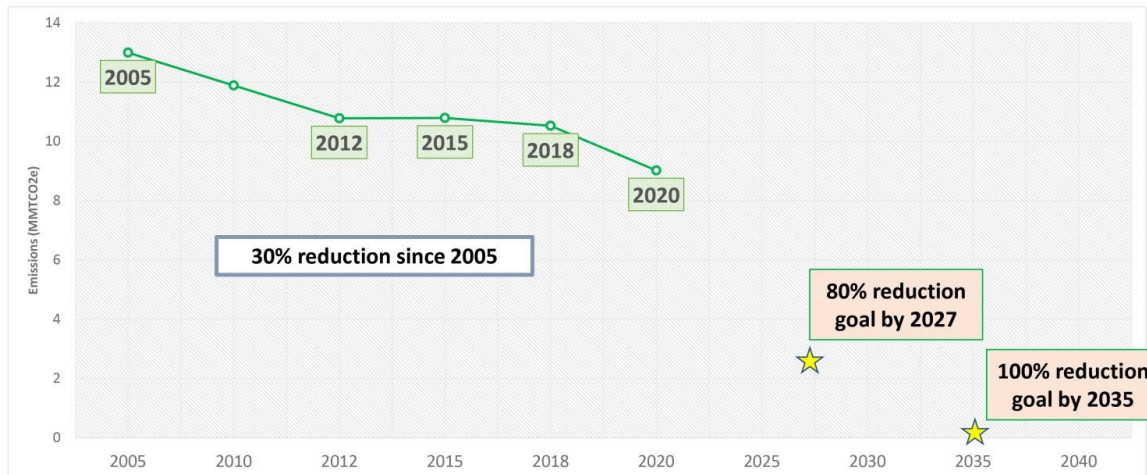
Earlier this year we sent a letter to County Executive Elrich (attached) setting out three priorities for FY24:

- 1. Funding for a comprehensive communications campaign and staff.**
- 2. Expanded grant and incentive programs for county residents and businesses.**
- 3. Resources to ensure that key sequestration and adaptation measures are implemented.**

We appreciate that the budget proposed by the County Executive addresses all of these areas to varying degrees, and urge the County Council to embrace the proposed budget. However, we feel strongly that it does not go far enough and urge expanded funding in the first area – communications. The many urgently needed initiatives emerging from the County and State governments to address the climate crisis are far-reaching and diverse. They cover energy efficiency in buildings, building decarbonization, on-site renewable energy, community energy choice, accelerating the transition to electric vehicles and necessary infrastructure, flood management, waste reduction, and many other initiatives. Unless the need for these changes and the benefits they offer are conveyed to the public as part of a coherent climate action strategy, they risk leaving residents and businesses surprised, confused, and even overwhelmed. For that reason, the Committee recommends that the Council allocate more funding in FY24 for climate-related communications.

As you know, the County's Climate Action Plan seeks to reduce greenhouse gas emissions 80 percent by 2027 and 100 percent by 2035. The commendable progress to date – cutting emissions by 30 percent between 2005 and 2020 – shows how far we have come and how far we have to go:

## Montgomery County's Measured GHG Emissions



Source: Metropolitan Washington Council of Governments (MWCOC) Montgomery County GHG Inventory

1

In FY23, the County allocated funds towards a new stakeholder engagement and outreach manager position to support the development of Building Energy Performance Standards (BEPS) and \$150,000 for a climate and Alert Montgomery communication campaign. The wide-ranging communication effort needed to mobilize residents to engage and take action will require a more substantial investment in FY24 and beyond. We support a unified communication strategy across all county departments and offices, including:

- Developing and implementing a highly visible multi-year public engagement outreach campaign.
- Funding a consultant to help target these communications and engage communities and individuals.
- Funding a senior climate communications leader.

The Committee urges funding for a consultant to develop and implement a comprehensive communication and advertising campaign through a multitude of channels to promote more widespread awareness of and engagement with the CAP. This campaign should educate county residents and businesses about county efforts to implement the CAP, resources available to support those efforts, and ongoing progress and plans.

We also urge the Council to include funding in the FY24 budget for a senior climate communications leader who will work with key county organizations to align and promote the county's efforts. A senior communications strategist is needed to coordinate messaging and strategies across multiple departments and divisions – and likely similar efforts by the State government – in support of the County's climate change objectives. A staff-level team has begun meeting to coordinate communication and engagement efforts across the county, broken out into various working groups – e.g., focusing on opportunities for individuals to take action



with regard to energy, transportation, flood resilience, trees, and food – but much more is needed. This effort is necessary to increase public awareness and acceptance of the CAP and ensure that we hear from the community about their interests and concerns, particularly with regard to economic impacts and justice.

A senior communications person can lead outreach and communications for the entire County, coordinating with various agencies on climate-related efforts, such as the Zero Waste campaign, Montgomery County Green Bank resources, and more. This effort must include funds for advertising and outside expertise (such as the consultant noted above) to carry out such a campaign, beyond what individual County staff can cover.

The [Montgomery County Climate Action Plan](#) has public engagement as one of the seven principal strategies for meeting the County’s Zero Greenhouse Gas Emissions Goal by 2035, saying, “Active engagement by residents and businesses is critical to the success of the CAP.” It explains:

The County must enhance climate communications to the general public and public support; standardize authentic and inclusive community engagement that creates new entry points for residents to be involved in climate action; strengthen state and regional coordination and collaboration; develop new strategic partnerships to galvanize support across key stakeholder organizations, communities, and jurisdictions; and develop increased opportunities for students to participate in climate change education and experiences, and empower them to take action at home and in their community.

Other forward-looking jurisdictions have recognized the importance of strong communications programs to successful climate plans. Climate Action Plans developed by such counties as [King County \(WA\)](#) and [Dane County \(WI\)](#) have outreach and public engagement built into their strategies. The Climate Action Plan of the State of Pennsylvania puts it this way:

Implementing climate change mitigation and adaptation strategies will create changes to the ways that Pennsylvanians live, work, and get around.... Efforts should aim to both explain climate change and outline the many co-benefits of taking action, including job creation, improved air and water quality, and the many health benefits that can be enjoyed with improved environmental quality.

We hope that these recommendations will be considered in developing a FY24 operating budget that embodies the County’s climate commitment. The Committee would welcome the opportunity to discuss them in more detail at your convenience.

Signed,  
The Members of the Climate, Energy, and Air Quality Advisory Committee

Attachment: CEAQAC letter to County Executive Elrich about FY24 budget

## **Herb Simmens testimony on FY24 Budget**

My name is Herb Simmens and live in Silver Spring. I ask that you support sufficient resources be placed in the budget to enable the county to meet its unanimously declared 2017 goal to decarbonize 80% of 2005 emissions by 2027. I testify as one of those who worked to get the council in the same resolution to declare the first climate emergency of any large government in the world.

I am alarmed at the county's grossly inadequate and anything but emergency climate action. The three major pieces of mitigation legislation passed - BEPS, Green bank energy tax funding and building electrification - were carefully designed to ensure that they would only have a minimal impact on emissions before 2027.

The climate assessment bill I first proposed four years ago and agreed to then by most council members was only adopted three long years later. Council also refused to even include mention of the 2027 goal in the Thrive 2050 plan - only the 2035 goal - a level of blatant censorship I have never seen before.

The consensus amongst climate scientists is that what the world does in the next three or four years to reduce emissions will determine the future of life on earth for the next 10,000 years.

Let me repeat that. What is done in the next three or four years will determine the future of life on earth for the next 10,000 years.

Yet I have written to each of you at least twice asking that you undertake a comprehensive review of progress being made - as it is five years into the 10 year period - to reach the 2027 goal. Most of you never even responded.

if you are not willing to fund and legislate what is necessary to meet the 2027 goal then you be honest with the public and modify or eliminate the 80% goal.

Thank you.



## Water Quality Advisory Group

Dear County Executive Elrich, Council President Alborno, and Councilmembers Friedson, Glass, Hucker, Jawando, Katz, Navarro, Rice, and Riemer:

The Montgomery County Water Quality Advisory Group (WQAG) would like to thank the County Executive and the County Council for your service to the environment and to the citizens of Montgomery County, and thank you for considering our comments and recommendations on stream restorations in Montgomery County.

### **The Montgomery County Water Quality Advisory Group (WQAG)**

The WQAG was established under County Section 19-49(b) of the Montgomery County Code and was established to advise the County Executive and County Council on matters of water quality in the County and State, including streams, rivers, and other natural bodies of water. The group includes up to 15 resident members, and 3 non-voting agency members. Our members include the academic and scientific community, agricultural community, business community, environmental community, public members, and public agency representatives.

### **Stream Restoration**

The WQAG has been closely following Montgomery County's stream restoration efforts. Stream restoration is reshaping a stream channel to reduce the volume, speed, and pollution level of the water flowing through it. The goals of Montgomery County's stream restoration program are to control stormwater pollution, improve water quality, and work toward meeting water quality standards specified in the Municipal Separate Storm Sewer System (MS4) permit issued by the state. Accomplishing these goals benefits the county and downstream water bodies such as the Potomac River and Chesapeake Bay. Stream restoration can be controversial and this letter focuses on the pros and cons of that approach.



## Water Quality Advisory Group

### Background and Context

In the last few centuries, land use in the county has changed drastically. Montgomery County crossed a demographic milestone of over 1 million residents in 2012, and its population continues to grow, though the growth rate is slowing from peaks in the 1960's and 1980's.<sup>1</sup>

Population density increased in the county as well, in alignment with the County General Plans' growth concept of higher-density development along the I-270 corridor.

*"Most U.S. Census tracts outside of the Agricultural Reserve increased in population density [between 1990 and 2016], with the larger increases occurring along the main transportation corridors I-270, MD-97, and US-29. In addition, most tracts around Metro stations had increases of 2,500 or more people per square mile."*<sup>2</sup>

This intense and rapid urbanization has direct impacts on stormwater flow and water quality in local streams by creating additional impervious surfaces such as roads, rooftops, and parking lots. One of the defining characteristics of urban streams is the increased amount and speed of stormwater and surface runoff. After a rainfall, less water is absorbed into the soil and more runs off into streams, eroding banks, deepening channels, and destroying habitats. When the stream channel can't contain the increased storm runoff, flooding occurs. When water can't seep into the groundwater system, the pollutants it carries, such as oil and chemicals from streets, and lawn fertilizers from commercial and residential lawns, are no longer absorbed and flow quickly and directly into the streams.

Stream restoration brings the channel back towards its original shape, slows the water's speed to reduce erosion, and spreads it over a wider area to allow more water to seep into the soil where pollutants are retained. During a stream restoration project, stream banks are made much less steep and construction areas are re-planted with trees, shrubs, and grasses that slow runoff and trap sediments, while rocks and logs are added to the stream bed to slow flow and provide habitats for aquatic plants and animals.

---

<sup>1</sup> The Maryland National Capitol Park and Planning Commission. 2019. Montgomery County Trends: A look at People, Housing, and Jobs since 1990. [https://montgomeryplanning.org/wp-content/uploads/2019/01/MP\\_TrendsReport\\_final.pdf](https://montgomeryplanning.org/wp-content/uploads/2019/01/MP_TrendsReport_final.pdf)

<sup>2</sup> Ibid. p.14.

This type of stream restoration may also have negative impacts. It is often more expensive than upland best management practices; takes several years to plan, implement, and provide all the expected benefits; can disrupt the activities of nearby residents and businesses, and changes how the affected land can be used. Construction activities interfere with established traffic flows, may create risks for area children, increase air pollution, and may adversely affect property and business values.

While stream restorations may well reduce a major source of sediment and bonded nutrients due to bank erosion, they can be disruptive to the ecology of a stream valley and divert resources from upland retrofits and impervious surface removal, both of which address the root cause of stream bank erosion and could eliminate the need for stream restoration projects.

The WQAG has been closely following and discussing the debate over stream restoration in Montgomery County. We have had presentations from a wide variety of stream restoration experts over the past year including:

- Frank Dawson, Montgomery County Department of Environmental Protection (DEP), *Introduction to Stream Restoration and Department of Environmental Protection's Stream Restoration Program*, and the *Watershed Restoration Division's Climate Action Plan Activities*;
- Ken Mack, DEP, *Water Quality Monitoring in Montgomery County*;
- Robert Hildebrand, University of Maryland Center for Environmental Studies, *Ecological Impacts of Stream Restoration*;
- Kate Bennet, DEP, *Montgomery County's New MS4 Permit*
- Walking tour of Falls Reach Stream Restoration Project by DEP's Watershed Restoration Division's Design and Construction Section and Tree Montgomery Program.

As a result, we have drafted a set of recommendations for your consideration, presented in detail on the following pages. These recommendations are grouped into four categories as follows:

- Stream Restoration and Alternative Upland Best Management Practices
- Communications and Engagement
- Performance/Evaluation of completed stream restorations
- Engaging the Private Sector

*We note that we have achieved consensus on the recommendations below, but not on the overriding question of whether stream restorations are ever or at all appropriate. But we do all*

believe that if they are done, they should be done with extraordinary care, caution, and forethought to ensure that they result in benefits to the ecology of the local stream valley and riparian system, as well as downstream beneficiaries of reduced sediment and reduced pollution, such as the Potomac River and Chesapeake Bay. And, they should be tightly coupled with extensive upland retrofits, ideally before restoring the stream valley.

We are pleased with the potential benefits of DEP's new targeting/prioritization maps for stream restoration and upland retrofits and look forward to assessing their practical results during this next permit term.

Montgomery County  
Water Quality Advisory Group  
Stream Restoration Recommendations

## Contents

Stream Restoration and Alternative Upland Best Management Practices .....	3
How Areas are Chosen for Remediation Projects .....	3
Stormwater Management Tools .....	4
Upland Best Management Practices .....	4
Stream Restoration .....	4
Table 1. Select Upland Best Management Practices and Stream Restoration Techniques .....	5
RECOMMENDATIONS.....	6
Communications and Engagement.....	7
RECOMMENDATIONS.....	8
Keep People Informed.....	8
Provide More Detailed Site Information.....	8
Provide Best Management Practices Information .....	8
Communicate with Other Organizations .....	9
Performance/Evaluation of Stream Restoration .....	9
RECOMMENDATIONS.....	10
Engaging the Private Sector .....	11
RECOMMENDATIONS.....	11
APPENDIX A: Benefits or Effectiveness of Stream Restoration .....	13
Table 2. Benefits or Effectiveness of Stream Restoration.....	13



## Stream Restoration and Alternative Upland Best Management Practices

Stream restoration is currently one element of the County's stormwater management activities, which are governed in large part by the state-issued Municipal Separate Storm Sewer System (MS4) Permit. In addition to improving environmental conditions, changes made to meet MS4 requirements should also make Montgomery County a more attractive place to live and do business by increasing property values and protecting the environment.

### How Areas are Chosen for Remediation Projects

The conditions that require improvement to meet the MS4 Permit goals of controlling stormwater pollution to meet water quality standards can occur throughout any of the county's nine watersheds. The Montgomery County Department of Environmental Protection's (DEP's) current process for deciding what steps to take to improve stormwater management starts at the watershed level and works down to specific sites. At the watershed level, the entire watershed is assessed and highly critical sites where improvement is needed and suitable are identified. Conditions in these areas are carefully analyzed and potential repairs are prioritized based on water quality, aquatic habitat quality, and site condition. The draft watershed assessment is presented to the public for comment and the comments are used to finalize and publish the assessment. A county-level Implementation Plan is developed incorporating the individual watershed studies and discussing strategies to reduce stormwater pollution, bacteria, trash, and litter.

Each watershed is then further analyzed to identify critical issues and determine feasibility of remediation projects. Residents may be contacted to authorize property access to conduct feasibility surveys. Multiple public meetings are held to discuss the plan and gather public input. The finally approved projects range in size from small watershed improvements to more complex stream restoration. Once the project plan is completed, construction takes place. Communication with stakeholders continues throughout construction and may result in plan modification.

Decisions about what techniques will achieve the best outcomes for a specific site are both technical and financial, and there are likely to be more than one suitable solution or combinations of solutions for each site. Total environmental benefits and impact of a project's construction footprint versus alternatives, community input, financial aspects, scheduling, off-site impacts, etc., should also be considered and weighed appropriately.

## Stormwater Management Tools

Montgomery County has many stormwater management tools available to improve the health of watersheds and meet the requirements of the MS4 permit. This document divides those tools into two categories, out-of-stream tools (upland best management practices), and in-stream tools (stream restoration techniques). We further divide the in-stream techniques, generally, into two categories, “softer” stream restoration techniques, and “harder” stream restoration techniques. These distinctions are described in more detail below.

### Upland Best Management Practices

Often, the easiest approach to making the inflow and stream valley efficient is to reduce the amount of stormwater that reaches the stream by allowing it to soak into the groundwater. In general, these upland best management practices either create areas where impermeable surfaces such as pavement are removed or replaced with permeable surfaces; where stormwater is diverted into more permeable areas such as rain gardens, and tree box filters; or where the water is diverted into roadside areas such as bioretentions and grass swales. Table 1 shows upland best management practices.

The benefits of upland stormwater control are twofold. First, by controlling stormwater at its source the volume of stormwater that is fire hosed into streams through stormwater pipes is reduced. Thus, there is less erosion of streams and stream banks. Second, upland stormwater practices allow stormwater to infiltrate into the soil and recharge groundwater. Sufficient groundwater is critical to maintaining normal streamflow, i.e., the volume of a stream that is not generated due to stormwater runoff from storm events.

### Stream Restoration

Various stream restoration techniques comprise the in-stream tools that Montgomery County uses in its watershed restoration efforts to fight against floods and stream erosion. One goal of stream restoration is to slow down stormwater flow and adjust the shape of the stream valley so that the stream can efficiently allow the water to flow through with minimal erosion, pollution, and property damage. Some of the in-stream techniques the DEP uses for stream restoration are listed in Table 1 below and described at the DEP websites.

The Department of Environmental Protection defines stream restoration broadly as “a set of techniques or methods the County uses to protect adjacent properties and public infrastructure by reducing stream bank erosion, minimizing the down-cutting of stream bed, and restoring aquatic ecosystems (natural stream system).” Stream restoration may mean an engineered realignment or reshaping of a section of a stream ranging from a few tens of feet to

several miles. It may be as simple as installing a Cross Vane in which stones are placed in streams in the shape of a “C” or a “V” to direct water towards the center of the stream and away from the stream bank to reduce erosion or, for larger areas, it may be as complex as redirecting the stream by changing the shape of the valley to create a wider floodplain and shallower channel. In general, these in- and near-stream changes increase the time and area over which water infiltrates to the groundwater environment. Another technique may be to armor sections (e.g., with boulders or stone walls) to physically prevent stream bank erosion.

When a large section of a stream is being severely degraded, and upland best management practices are unavailable or have been exhausted, some form of stream restoration may be the only way to obtain MS4 permit credits in that particular sub-watershed. Alternatively, MS4 permit credits could be obtained by identifying upland practices in different sub-watersheds. “Soft” approaches to stream restoration can feature the use of logs and root wads instead of imported boulders, and enhancing a riparian buffer by widening it and planting more trees.

In the most severely degraded areas, which are often in urban areas where development is closer to the stream, “harder” engineered solutions, such as natural channel design and reconnecting the incised channel to its natural floodplain, if one can be shown to have existed in the past, may be required. This typically involves using heavy equipment to relocate the stream channel and broaden its valley for a length of hundreds of feet to a few miles. Planning, permitting, contracting, construction, and inspecting may take several years from the time a site is proposed for restoration. Construction, itself, may disrupt traffic flows and access to nearby residences and businesses and may create hazards for residents and their children.

In many cases the DEP uses a combination of upland best management practices and in-stream restoration techniques to address stormwater problems at the watershed level. A more comprehensive list for both stream restoration techniques and upland best management practices is presented in MDE’s *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated*.<sup>3</sup>

*Table 1. Select Upland Best Management Practices and Stream Restoration Techniques*

Upland Best Management Practices	Stream Restoration Techniques	
Rain Gardens	Rock Pack and Flush Cut	J Hook
Bioretentions	Cross Vanes	Mulch Planting
Tree Box Filters	Imbricated Rip Rap	Shallow Wetlands

<sup>3</sup> Maryland Department of the Environment. 2021. Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated. <https://mde.maryland.gov/programs/Water/StormwaterManagementProgram/Documents/Final%20Determination%20Dox%20N5%202021/MS4%20Accounting%20Guidance%20FINAL%2011%2005%202021.pdf>

Pervious Sidewalk	Log Vanes	Stone Toe Protection
Permeable Pavers	Step Pools	Woody Debris
Pavement Removal	Root Wads	Brush Layering
Curb Extensions	Grading and Planting	Coir Logs
Grass Swales		
<b>Descriptions of how these techniques work are at:</b>		
<a href="https://www.montgomerycountymd.gov/water/restoration/green-streets.html">https://www.montgomerycountymd.gov/water/restoration/green-streets.html</a> for upland techniques and <a href="https://www.montgomerycountymd.gov/water/restoration/streams.html">https://www.montgomerycountymd.gov/water/restoration/streams.html</a> for soft techniques.		

Generally, the position of the WQAG is that upland best management practices are the preferred method over any in-stream approaches for addressing stormwater management issues and fulfilling the requirements of the MS4 permit because they address the problem of uncontrolled stormwater at the source. Of the instream techniques, “soft” techniques are preferable to “hard” alternatives if upland best management practices have been exhausted or are not feasible. “Hard” stream restoration approaches are the least preferred and should only be undertaken when all other potential methods have been exhausted in the same or other sub-watersheds because, as noted above, they do not address the problem of uncontrolled stormwater at the source.

**RECOMMENDATIONS**

- DEP should strongly prioritize the use of upland BMPs over in-stream restorations for future projects intended to meet the new MS4 permit targets.
- DEP should minimize the credit achieved through in-stream restoration as much as possible, and DEP should cap the number of acres of impervious restoration credit that can be achieved through in-stream restoration at 50 percent.
- DEP should ensure the current impacts and future potential impacts of climate change are addressed in stormwater management plans. More frequent, more intense precipitation will increase the capacity demanded of the county’s storm water system.
- DEP should include information in project planning documents pertaining to alternatives considered, how they were evaluated, and why they were accepted or rejected. DEP should also include favorable and unfavorable public comments and DEP’s responses.
- The County Council and the County Executive should consider increasing funding to programs such as Green Streets and RainScapes.
- Montgomery County should consider joining with other jurisdictions in the Chesapeake watershed *to establish* an independent panel to examine the pros and cons of stream restorations. Such a panel could consider, for example, the total environmental and economic consequences and feasibility of engineered stream

restoration techniques versus out-of-stream stormwater control practices (upland BMPs). The results of such a study could be used to make a more informed recommendation on the continued use of stream restorations.<sup>4</sup>

## Communications and Engagement

Public participation in stream restoration activities is required by the MS4 permit, which says:

*“[The] County shall provide continual outreach to the public regarding the development of its watershed assessments and restoration plans. Additionally, the County shall allow for public participation in the TMDL<sup>5</sup> process, solicit input, and incorporate any relevant ideas and program improvements that can aid in achieving TMDLs and water quality standards.”*

It is important that community members who want to be involved are welcomed and feel that they have a voice in any stream restoration projects. The county should provide resources so that these people have accurate, timely and reliable information about the current condition of watersheds; understand why stream restoration projects are being considered; know about project goals and status; and trust that the county will understand, balance, and address the community’s needs. Suggestions from the public on how to best meet both the water quality and community goals should be actively encouraged at all stages of the project.

Messaging should explain each goal of a restoration project. The goal of stream restoration for the MS4 permit is to reduce the amount of nitrogen, phosphorus, and suspended sediment in the stream. Other goals, may be to slow down stormwater flow and adjust the shape of the stream valley so that the stream can efficiently allow stormwater to flow through with minimal erosion, pollution, and property damage, or improve aquatic communities (e.g., macroinvertebrates and fish) both in terms of diversity and quantity. DEP should explain how each restoration project contributes to this goal and describe both the positive and negative impacts achieving this goal will have on the stream and the community. Positive and negative community feedback relating to any aspect of the project should be welcomed. All comments should receive a response that describes what, if anything, will be done to change project plans

---

<sup>4</sup> The County and other jurisdictions could suggest that a study be done by a Chesapeake Bay Program (CBP) expert panel since CBP has convened other such expert panels in the past. For example, the CBP’s Urban Stormwater Workgroup convened an Expert Panel to Define Removal Rates for Individual Stream Restoration Projects; CBP’s Agriculture Workgroup has been charged with convening an expert panel to evaluate stream restoration practices that do not adhere to the stream restoration protocols developed by the Urban Stormwater Workgroup.

<sup>5</sup> Total Maximum Daily Load, the maximum amount of a pollutant allowed in a waterbody; it serves as a starting point or planning tool for restoring water quality.

or project selection. Thoughtful responses help demonstrate that DEP is engaged with the community and will do what it can to address concerns.

## RECOMMENDATIONS

### Keep People Informed

- DEP should use available internal and external media to communicate about stream restoration projects, e.g., County Executive and Councilmember newsletters, community newspapers, neighborhood and Home Owner Association list-serves, environmental and recreational organizations, etc.
- DEP should set up a Frequently Asked Questions (FAQ) page to address common issues, e.g., how stream restoration activities make an area less flood prone and, less polluted; impact on natural areas (such as loss of riparian tree cover, changes in wildlife habitat, and changes in plant or animal communities); construction noise and equipment related hazards; landscape changes; traffic re-routing; child safety; property value; access to businesses and facilities; and utility service interruptions.
- DEP should, to the extent practical, increase outreach about steps through the RainScapes program, such as installation of rain gardens and impervious pavement removal, that private property owners can take to manage pollution and runoff. Outreach should be increased either from within existing DEP budget, or additional funding should be allocated by the County Council if current funding is inadequate to do so.

### Provide More Detailed Site Information

- For each potential stream restoration site, the DEP should maintain an up-to-date summary Fact Sheet and a more detailed Project Log of relevant information with links to sources of additional information.
- DEP should put directories at the Watershed Restoration Home page for easy access to specific topics such as: Rain Gardens and Pavement Removal under RainScapes.
- DEP should explain, on the Department of Environmental Protection water page, how Federal and state regulations guide county decisions on how to meet the MS4 requirements for, e.g., impervious acre removal, waste-load allocation reductions, structural and non-structural projects, etc., and should add links to external resources such as: Federal and state agencies that deal with water quality and stream restoration issues; and relevant enacted and proposed laws and regulations.

### Provide Best Management Practices Information

- DEP should group Best Management Practices (BMP) into in-stream, stream-adjacent, and upland sections and note that they are often used together. BMP descriptions should provide an overview of the potential benefits and drawbacks on water quality, the environment, the community, and other related concerns.

## Communicate with Other Organizations

- DEP should continue to build relationships with other county, regional, and national agencies, such as: the Environmental Protection Agency (EPA); Maryland Department of the Environment (MDE); Montgomery County Public Schools (MCPS); Montgomery Parks; Maryland National Capital Park and Planning Commission (MNCPPC); State Highway Administration (SHA); Washington Sanitary Sewer Commission (WSSC); Montgomery County Department of Transportation; and private property owners, to work together to address the stormwater problem on a whole watershed basis.
- DEP staff should routinely keep abreast of what other local and national jurisdictions are doing, looking for ways to improve Montgomery County practices. This should include both what other jurisdictions recommend or implement for watershed restoration and how they communicate with the public

## Performance/Evaluation of Stream Restoration

With increasing popularity of stream restoration in the US, a number of publications in the early 1990s argued for more monitoring and evaluation of projects, so that the experience gained from current projects could be used to improve future endeavors.

Evaluation has become increasingly common, though many evaluations do not definitively answer if restoration has succeeded. Many metrics have been used, but they are not always tied to project objectives, nor necessarily appropriate for measuring the changes effected by the restoration interventions. Perhaps the most universal insight from multiple evaluations of stream restoration is the importance of understanding the complexity of stream systems and their potential responses to restoration.”<sup>6</sup>

However, in the context of restoration, many projects intended to improve water quality provide ancillary benefits that improve instream habitat through additions of rocks and logs, or even through complete channel reconstruction. It is not immediately clear that indices based on pollution sensitivity of macroinvertebrate taxa (“water bugs”) are appropriate to measure effectiveness of restoration projects for the MS4 permit, though they are commonly used.<sup>7</sup> Stream restoration projects may also be seeking to reduce streambank erosion since fine sediment is a common water-quality impairment. In such cases, use of a biological index may be warranted.

---

<sup>6</sup> Rubin, Z.; Kondolf, G.M.; Rios-Touma, B. Evaluating Stream Restoration Projects: What Do We Learn from Monitoring? *Water* **2017**, *9*, 174. <https://doi.org/10.3390/w9030174>

<sup>7</sup> Ibid.

The investment needed for meaningful assessment implies that restoration evaluation may be possible only in some cases, and effective evaluation strategies may require pooling resources across multiple projects. The MS4 permit requires that regular maintenance shall occur for all restoration measures once every 3 years and each jurisdiction shall implement appropriate actions and document that any deficiencies are rectified. Therefore, proper reporting and ongoing and maintenance are essential for compliance with permit requirements.

It is also important to keep records of which changes are most effective in various environments. Knowing the best approach for a site helps ensure successful outcomes.

Table 2 (See Appendix 1) was designed to give an initial overview of some of the potential benefits (termed as effectiveness) of stream restorations, based only on the Breewood Restoration project. Effectiveness is rated as positive, negative, or neutral. The use of color in conjunction with symbols hopefully gives an overall sense of the benefit or effectiveness of various factors. The element of time is examined for some factors since the benefits or effectiveness may not necessarily be static over time. A description of each factor and rating is given after the table.

## RECOMMENDATIONS

- The WQAG requests that County Council provide funding for additional monitoring for appropriate parameters for future stream restoration projects beyond the MS4 permit requirements.
- DEP should tie performance measures and evaluation of stream restoration projects directly to project objectives or desired outcomes, and communicate those according to the recommendations in the previous section. DEP should also recognize that the scale of the outcome is a key factor in understanding objectives or outcomes (i.e., the desired outcomes of restoring a watershed may differ markedly from those of restoring the hydrology of a streambed that is causing localized flooding or other potential damages).
- Given the particular interest and concerns surrounding engineered stream restorations, projects of this type should be monitored separately in the future, rather than as part of an overall watershed monitoring strategy, ensuring that metrics match the intent of the restoration.
- Ensure site plans discuss the Stream Restoration features that will be installed, why they were selected, how they will be monitored, the expected changes in performance, and how the combination of approaches work together to achieve the best results. Update the site plans as needed when the combination of approaches changes.



- Include maintenance and monitoring schedules, with monitoring timeframes that are commensurate with the desired outcomes, in site plans that show the outcomes expected at each monitoring event. Include performance monitoring results in the site status reports.
- The MS4 permit allows pooling of monitoring across multiple project and multiple jurisdictions. If pooled monitoring is adopted, include discussion of how the selected monitoring sites inform any restoration project in the project site plan, as appropriate.
- DEP should consider engaging local watershed and environmental groups in stream restoration monitoring efforts through citizen science efforts.

## Engaging the Private Sector

One of the major causes of stream degradation is runoff in urban and suburban areas from impervious surfaces such as rooftops, parking lots, and playgrounds. Most of these are privately owned by households and businesses, which limits the ability of DEP to reduce or mitigate their impervious surfaces. Even current stormwater management requirements are inadequate for effective stormwater control. While incentives to mitigate for impervious surfaces exist (e.g., RainScapes program), given the proportionately large acreage of privately owned impervious surface in Montgomery County, increased efforts to build and scale partnerships and collaborative efforts with the private sector could substantially decrease the volume of runoff entering our streams and watersheds.

### RECOMMENDATIONS

- DEP should pilot a program to engage with private companies that own or manage large areal extents of impervious surfaces to install and showcase upland BMPs or green roofs and provide information on the economic and environmental benefits of these BMPs.
- An aspect of a stream restoration project that the DEP has the limited control over is the contract. The county procurement department makes a vigorous effort to make sure social justice and small business participation are included in solicitation and contracting documents. DEP can continue to make sure that minority-owned and small businesses are aware of and are properly considered in the procurement. They should also continue to ensure that contractors enforce fair hiring practices.
- New construction and remodeling offer opportunities beyond current regulations for reducing runoff from roofs, parking lots, etc. DEP should work with other county agencies (e.g., DPS, DOT, MCPS) to require better management of runoff from impervious surfaces on all new construction and redevelopment.

- DEP should also work with enforcement agencies (e.g., MCPD, Animal Control) to make sure laws controlling use of lawn and garden chemicals, disposal of pet waste, and other pollution sources are strictly enforced.

## APPENDIX A: Benefits or Effectiveness of Stream Restoration

The following table was designed to give a high-level overview of some of the positive, negative, or neutral aspects of stream restorations. The use of color in conjunction with symbols hopefully gives an overall sense of the benefit or effectiveness of various factors. The element of time is examined for some factors since the benefits or effectiveness may not necessarily be static over time. A description of each factor and rating is given after the table.

*Table 2. Benefits or Effectiveness of Stream Restoration*

Factor	Benefit or Effectiveness
From FY20 MS4 Permit Report for Breewood site*	
Nutrients: Nitrogen (plus zinc) removed or avoided	-
Nutrients: Phosphorous (plus copper & lead) removed or avoided	+
Suspended sediment removed or avoided	+
In-stream biological health	0
Physical habitat	0
Physical Geomorphic Assessment	+
Other considerations (not Breewood specific)	
Control of stormwater before entering stream valley	0
Control stormwater within project (floodplain reconnect)	+
Control stormwater within project (new floodplain)	0
Impervious surface reduction	0
Potential structural failure consequences	-
Potential introduction of pollutants & imported material	-
Control of pollutants from upland	+

Non-stream ecosystem services (including potential climate change impacts): immediate   early   long term	-	0	+
Non-native invasive plants: short   long term	+	-	
Hydrology change (soil compaction, seeps, etc.)	unknown		
Geological preservation in natural areas	-		
Increased stream temperature from tree cover removal: short   long term	-	0	

Key: + = positive benefit, effectiveness, or impact  
 0 = neutral (no impact/change)  
 - = negative benefit, effectiveness, or impact  
 Unknown (not enough information to evaluate)

\* The stream restoration at Breewood was completed in 2015. Other stormwater control projects in the watershed were completed in 2018 (2020 MS4 Annual report, p. 116).

A detailed explanation of the table section follows.

From FY20 MS4 Permit Report for Breewood site

Reference: 2020 MS4 Annual Report, Section H Assessment of Controls, p. 109): [https://www.montgomerycountymd.gov/water/Resources/Files/stormwater/ms4/MontgomeryCo\\_FY20\\_MS4AnnualReport\\_Complete.pdf](https://www.montgomerycountymd.gov/water/Resources/Files/stormwater/ms4/MontgomeryCo_FY20_MS4AnnualReport_Complete.pdf)

It is difficult, or impossible, to separate the results due to the Breewood stream restoration itself since the instream monitoring station is downstream from not just the stream restoration but also other stormwater control practices including Green Streets projects such as bioretentions and pervious pavement. Furthermore, the 2020 MS4 Annual Report says that “While some limited statements can be inferred about conditions, evaluating the overall project from these data is impossible” since they only have data from the first year after project completion and that “DEP will continue collecting data for multiple years to create a robust data set that that facilitates conclusively evaluating project impacts.” (Ibid, p. 131)

While there are reports from several stream restorations posted online (<https://www.montgomerycountymd.gov/water/restoration/monitoring.html>), the Breewood site was used as the one monitored site for the entire County as was required by the last MS4 Permit.

- Nutrients: Nitrogen (plus zinc) removed or avoided
  - Benefit or Effectiveness over time: - = negative
  - Explanation: Prevented Sediment (Natural Channel Design) stream restorations are credited with avoiding the introduction of Nitrogen (N) or Phosphorus (P) into stream water. This type of stream restoration does not actually remove N or P from stormwater. Rather, it avoids the introduction of N and P into stream water by preventing stream bank erosion (e.g., by armoring the stream bank) and the avoidance of any N and P that may be present in that soil. Floodplain reconnection projects are of two types: legacy sediment removal and raising the stream bed. They reduce sediment and nutrients by allowing suspended sediments and pollutants to settle out onto the floodplain during overbank flow conditions.

The County's FY20 Annual MS4 Report says that "Preliminary analysis of the project is as follows: Loads of soluble Total Kjeldahl Nitrogen and Nitrate+Nitrite are up along with biological oxygen demand and zinc."

And that "Additional analysis is underway and more definitive results will be available after additional data has been collected in FY21."

([https://www.montgomerycountymd.gov/water/Resources/Files/stormwater/ms4/MontgomeryCo\\_FY20\\_MS4AnnualReport\\_Complete.pdf](https://www.montgomerycountymd.gov/water/Resources/Files/stormwater/ms4/MontgomeryCo_FY20_MS4AnnualReport_Complete.pdf), p. ES-15.)

- Nutrients: Phosphorous (plus copper & lead) removed or avoided
  - Benefit or Effectiveness over time: + = positive
  - Explanation: "Loads of total suspended solids (TSS) and pollutants that bind to TSS (phosphorus, copper, lead) were reduced." (Ibid, p. p. ES-15). See explanation in Nitrogen section above.
- Suspended sediment removed or avoided
  - Benefit or Effectiveness over time: + = positive

- Explanation: “Loads of total suspended solids (TSS) and pollutants that bind to TSS (phosphorus, copper, lead) were reduced.” (Ibid, p. p. ES-15). See explanation in Nitrogen section above.
- In-stream biological health (biological uplift)
  - Benefit or Effectiveness over time: 0 = neutral  
 Explanation: The County’s FY20 Annual MS4 Report says that “The benthic community structure has shifted since channel restoration was completed, but that shift has not demonstrated an obvious improvement that can be attributed to channel restoration. ... DEP will continue to monitor annually...”  
 ([https://www.montgomerycountymd.gov/water/Resources/Files/stormwater/ms4/MontgomeryCo\\_FY20\\_MS4AnnualReport\\_Complete.pdf](https://www.montgomerycountymd.gov/water/Resources/Files/stormwater/ms4/MontgomeryCo_FY20_MS4AnnualReport_Complete.pdf) , p.131)

It is noted that some scientific papers show that the results of stream restorations rarely, if ever, show evidence for biological improvement for aquatic organisms. Per Hilderbrand, Robert H., et. al., “Quantifying the ecological uplift and effectiveness of differing stream restoration approaches in Maryland,” Final Report Submitted to the Chesapeake Bay Trust for Grant #13141, 2020 ([https://cbtrust.org/wp-content/uploads/Hilderbrand-et-al\\_Quantifying-the-Ecological-Uplift.pdf](https://cbtrust.org/wp-content/uploads/Hilderbrand-et-al_Quantifying-the-Ecological-Uplift.pdf) ), “We sampled 40 urban stream restorations across the Piedmont and Coastal Plain physiographic regions in the greater Baltimore/Washington DC Metropolitan area of Maryland. ...Despite the promise and allure of repairing damaged streams, there is little evidence for ecological uplift after a stream’s geomorphic attributes have been repaired.”.

See Appendix 1 for references to papers by Hilderbrand (2020), Palmer (2014), and Pederson (2014).

It should be noted that some highly urbanized streams may not have had healthy biota before a restoration and that the purpose of most stream restorations is not to provide biological uplift. DEP has noted that "While we recognize the importance of ecological uplift, it is not the only or even the primary reason for stream restoration. Urban streams often need restoration of their hydrology, hydraulics, and physical structure to reduce the damage done by uncontrolled stormwater flow “firehosing” into them from impervious surfaces resulting from increased urbanization of the

County." On the other hand, there are upland stormwater control practices (e.g., bioretentions) that can reduce the volume of water from impervious surfaces.

- Other stormwater management practices: It is unknown if studies have been done to examine the ecological impact of out-of-stream stormwater control practices on in-stream biological health.
  
- Physical habitat
  - Benefit or Effectiveness over time: 0 = neutral
  - Explanation: The County's FY20 Annual MS4 Report says that "In 2019, the Breewood habitat score was 56 percent and consistent with preconstruction results. While restoration substantially changed the stream channel, improving instream fish cover, embeddedness, and bank stability, the epifaunal [stream surface] substrate was negatively impacted." (Ibid, p. 125)
  
- Physical geomorphic assessment
  - Benefit or Effectiveness over time: + = positive
  - Explanation: The County's FY20 Annual MS4 Report says that "Restoration has resulted in a more stable channel, with lower erosion potential. Erosive stormflows that were once confined and concentrated in an entrenched channel with erodible soils now have space in the floodplain to spread out and slow down. The design intends for water to filter through the hyporheic zone to reduce surface-flow volumes and improve water quality." (Ibid, p. 127)

**Other factors to consider (these are related to stream restorations broadly and are not Breewood specific)**

- Control of stormwater volume (from upland) before entering stream valley
  - Benefit or Effectiveness over time: 0 = neutral
  - Explanation: By their very nature, stream restorations do not reduce the volume of stormwater from upland sources (primarily impervious surfaces in developed areas) before it enters a stream valley. Hence the neutral rating.

If stormwater is not controlled upland before entering stream, the frequency of flooding will not decrease, and therefore, before rising floodwater can reach the floodplain there may be continued scouring of stream banks and possible blowouts of armored sections.

Other stormwater management practices: both upland and out-of-stream riparian stormwater control practices do reduce stormwater volume before it can enter streams. These practices address the root cause of stream bank erosion and therefore can be expected to reduce stream bank erosion by future storm events.

- Control of stormwater volume within project (floodplain reconnection)
  - Benefit or Effectiveness over time: + = positive
  - Explanation: The benefit of reconnecting to a floodplain is to control flooding downstream – as stormwater overflows a stream bank and into the floodplain, the stormwater can slow down, deposit sediment, and infiltrate into the floodplain soils. The U.S. EPA cites one of the key benefits of floodplains is their ability to “filter pollutants from point and non-point sources” (<https://www.epa.gov/hwp/benefits-healthy-watersheds>)

Control of stormwater within project (new floodplain creation, where no floodplain existed before)

- Benefit or Effectiveness over time: 0 = neutral
- Explanation: While most streams have floodplains, in some cases in the Piedmont natural streams may not have expansive natural floodplains, so it may not be advisable to create a floodplain where none existed before. This could lead to the destruction of existing non-floodplain ecosystems and their ecosystem services. For example, per Rod Simmons, City of Alexandria Natural Resources Manager, regarding a globally and state rare Acidic Seepage Swamp along the south bank of Taylor Run at Chinquapin Park in the City of Alexandria, “Despite some protection from encroachment, natural channel design will destroy this ground-water controlled, non-alluvial wetland by creating an artificial floodplain where none naturally exists and using the non-alluvial wetland as an alluvial habitat to be washed out by overland flooding regimes.” (“Native Biodiversity Conservation and Restoration Challenges in Urbanized Areas,” presentation to Pocahontas Chapter of the Virginia Native Plant Society, February 4, 2021)



- Impervious surface reduction

- Benefit or Effectiveness over time: 0 = neutral
- Explanation: Stream restorations have no impact, either positive or negative, on upland impervious surfaces. These impervious surfaces are the root source of stormwater which firehoses into streams from outside stream valleys.

Other stormwater management practices: Some do reduce impervious surfaces (e.g., pervious pavement and green roofs) and or near-impervious surfaces (e.g., bioretentions done in grassy street easements).

- Potential structural failure consequences (including Total Cost of Ownership)

- Benefit or Effectiveness over time: - = negative
- Explanation: When a stream restoration fails, for example when armoring is undercut or dislodged by large rain events, the consequence can be a large increase in the amount of sediment washed downstream. The failures could be gradual or relatively quick.

As noted above, stream restorations (especially those using Natural Channel Design, the most common stream restoration practice) avoid erosion by armoring stream banks using rocks, geotextile fabric, and/or bio-stabilization. While initially effective at stopping erosion, there are documented examples of failures of stream restoration structures (i.e., armoring that is disrupted/displaced by uncontrolled stormwater from upland) rendering them less or no longer effective. See the photo below from Cabin Branch Stream in Cabin John Regional Park (3/19/2021 by K. Bawer).



Another example is the Lower Booze Creek stream restoration project in Montgomery County was originally completed in May 2013 for \$700,000. “Storm damage occurred very soon after construction, initiating structural failures” (<https://www.montgomerycountymd.gov/water/restoration/booze-creek.html>). Restoration Repair was scheduled to begin in Jan., 2020 and cost \$4.9 million dollars.

Other examples of failures can be seen at Josephs Branch in Kensington, Long Branch in Takoma Park, Little Pimmit Run in Fairfax, Little Bennett Regional Park, Snakeden Branch in Potomac, Lower Booze Creek in Potomac, as well as examples from the Chesapeake Bay Program “Expert Panel” report entitled “Recommended Methods to Verify Stream Restoration Practices Built for Pollutant Crediting in the Chesapeake Bay Watershed,” Approved by the Urban Stormwater Work Group of the Chesapeake Bay Program Date: June 18, 2019

[https://chesapeakestormwater.net/wp-content/uploads/dlm\\_uploads/2019/07/Approved-Verification-Memo-061819.pdf](https://chesapeakestormwater.net/wp-content/uploads/dlm_uploads/2019/07/Approved-Verification-Memo-061819.pdf)

- Other stormwater management practices: Due to the typically much smaller scale of these projects, the failure of one would probably not be as impactful as a stream restoration failure. For example, if a road had five bioretentions along it and one

failed, the volume of stormwater not captured would only be reduced by twenty percent. In addition, the types of failure that a structure such as a bioretention might experience would probably be much quicker and cheaper to remedy. The simplest type of failure might be clogging of the inlet with leaves. A more serious failure might be the clogging of the bioretention material over time rendering the fill material unable to absorb water. Presumably that material would have to be removed and replaced, but probably at much less expense than a stream restoration failure.

Due to the less energetic (slower velocity) environment of out-of-stream structures (bioretentions, for example) compared to that faced by stream restorations, these practices will probably not fail structurally. Since each facility is meant to control a much smaller volume of water than a stream restoration project, it is less likely that an out-of-stream practice would fail structurally.

- Potential introduction of pollutants & imported material from project (e.g., plastic geotextile, rock rubble) into natural areas
  - Benefit or Effectiveness over time: - = negative
  - Explanation: Some stream restorations in Montgomery County have had failures. This has resulted in exposed plastic geotextile and dislocation of imported rock barriers and structures. The photo below shows exposed plastic geotextile fabric at the Snakeden Branch site in Potomac (Photo by K. Bawer, 11/23/2021):



Once plastic geotextile is exposed to sunlight, it is susceptible to UV degradation and subsequent generation of microplastics and larger plastic fragments that could be ingested by wildlife. “Ultraviolet radiation and elevated temperatures are very harmful to all geosynthetics. Geotextiles show limited resistance to Ultraviolet (UV) light.” (REF: Degradation of Geotextiles after Weathering Exposure, by P.C. Lodi et al., The First Pan American Geosynthetics Conference & Exhibition, 2-5 March 2008, Cancun, Mexico). “Polymeric geomembranes can be affected by the UV radiation in uncovered applications. They can degrade and present loss of physical and mechanical properties. ...The consequences of long-term exposure include discoloration, surface cracks, brittleness, and deterioration in mechanical properties” (REF: “CONSIDERATIONS ABOUT WEATHERING EXPOSURE AND UV DEGRADATION OF POLYMERIC GEOMEMBRANES,” by P. C. Lodi, et al, Minerva, 4(2): 201-205

- Control of pollutants from upland (kept out of stream valley)
  - Benefit or Effectiveness over time: 0 = neutral
  - Explanation: Stream restorations do not affect the amount of upland pollutants entering stream valleys (i.e., streams and floodplains). They can reduce concentrations of some pollutants such as nitrogen, phosphorus, sediment, and heavy metals once they have entered the system. However, pollutants such as lawn of fertilizer, pesticides, pet waste,

oil products, trash, and others are carried into streams by stormwater runoff from upland impervious surfaces. If streams are reconnected to floodplains, these upland pollutants will be partially deposited in these floodplains which are effective in preventing pollutants from continuing downstream.

Other stormwater management practices: Upland practices such as bioretentions, bioswales, etc. perform water purification (e.g., capture of fertilizer, pet waste, oil products, trash) to some extent before water enters a stream valley.

- Non-stream ecosystem services

- Benefit or Effectiveness, *immediate*: - = negative
- Explanation: When forested areas are removed in the foot-print of stream restoration projects, biological ecosystem services are initially decreased. For example, removing trees and other plants results in the immediate loss of their carbon sequestration and oxygen production. Other lost biological ecosystem services of a forest might include an initial decrease in biodiversity, the plants that insects eat, and the insects that birds depend on, for example.

Stream restorations may also result in the removal of animal communities in their footprint including small animals that can't easily or quickly leave the site such as frogs, toads, turtles, snakes, and other reptiles, amphibians, and invertebrates, etc. There may be a disruption of mycorrhizal fungal interconnections between plants where the soil is removed as well as the loss of the native seed bank.

- Benefit or Effectiveness, *early succession, short-term (approximately 3-5 years)*: 0 = neutral
- Explanation: After most stream restoration projects are completed, a certain number of trees and shrubs are usually replanted. Other plants will naturally return as seeds are introduced from adjacent and/or nearby areas by wind and animal dispersal.

“Early successional communities are characterized by high productivity and provide habitat for many disturbance-adapted wildlife species.” (Early Successional Habitat; U.S. Department of Agriculture, Natural Resources Conservation Service. January 2007, Fish and Wildlife Habitat Management Leaflet, Number 41; [https://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs143\\_022190.pdf](https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs143_022190.pdf). There

is likely to be a shift in floral and faunal species from those that depend on more mature forest habitat to species that depend on early succession habitat.

However, there will be some net loss of carbon sequestration benefits from the removal of mature trees during the restoration process.

The neutral rating reflects that there may be both positive and negative impacts during this time period.

- Benefit or Effectiveness, *long term (5+ years)*: + = positive
- Explanation: “Early successional habitats are highly ephemeral. In the absence of further disturbance, the attractiveness and productivity of many wildlife habitats declines.” (Early Successional Habitat; U.S. Department of Agriculture, Natural Resources Conservation Service. January 2007, Fish and Wildlife Habitat Management Leaflet, Number 41; [https://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs143\\_022190.pdf](https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs143_022190.pdf).)

New types of ecosystem services will be created by stream reconstruction. Some of these projects may include ecosystem services such as carbon sequestration benefits from mature wetlands, which contain some of the highest stores of soil carbon in the biosphere (Nahlik, A., Fennessy, M. Carbon storage in US wetlands. *Nat Commun* 7, 13835 (2016). <https://doi.org/10.1038/ncomms13835>) (see figure below), as well as flood control benefits. Resulting in positive impacts as the wetlands created by the stream restoration mature.

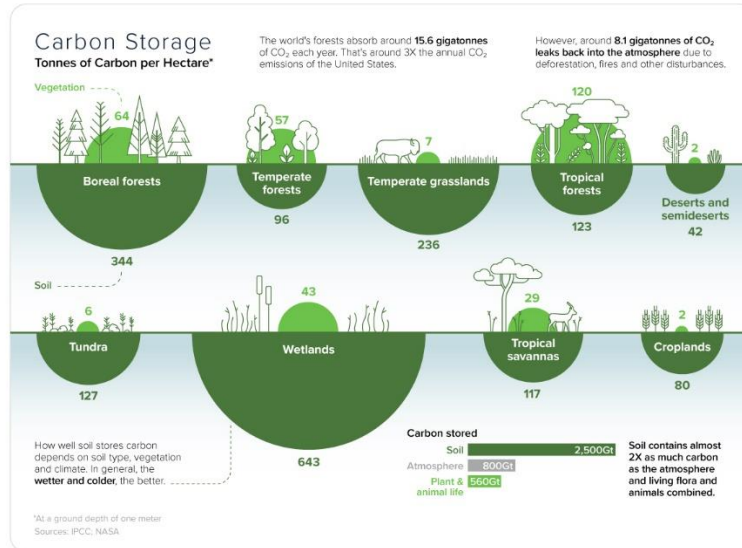
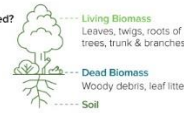
# Carbon Storage in Earth's Ecosystems

Achieving net-zero by 2050 depends on the Earth's natural carbon sinks.

Forests play a critical role in regulating the global climate. They absorb carbon from the atmosphere and then store it, acting as natural carbon sinks.

### Where is Carbon Stored?

There are various carbon pools in a forest ecosystem.



Carbon Streaming is protecting the Earth's natural carbon sinks with carbon credit streams across the following REDD+ projects:



**Rimba Raya**  
Borneo, Indonesia  
~64,000 hectares



**Cerrado Biome**  
Brazil  
~11,000 hectares



**MarVivo Blue Carbon**  
Baja California Sur, Mexico  
~22,000 hectares

**CARBON STREAMING** | Learn more at [CARBONSTREAMING.COM](http://CARBONSTREAMING.COM)

NEO: **NETZ**  
OTCQB: **OFSTF**  
FSE: **M2Q**

**VISUAL CAPITALIST** | [/visualcapitalist](https://www.facebook.com/visualcapitalist) | [@visualcap](https://www.instagram.com/visualcap) | [visualcapitalist.com](http://visualcapitalist.com)

- Other stormwater management practices: Other practices such as bioretentions are typically done in non-natural areas such as road easements with turf which have little to no native plant and animal communities.
- Non-native invasive plants
  - Benefit or Effectiveness, short term: + = positive
  - Explanation: Stream restoration construction may include the removal of non-native invasive plant infestations in those areas where the understory and/or the surface soil layer is removed.
  - Benefit or Effectiveness, long term: - = negative

- Explanation: Stream restorations may result in large areas of disturbed soils which is the preferred environment for many non-native invasive plants. Having virtually no control mechanisms (few animals eat them and few diseases attack them, for example), these non-native invasive plants can out-compete native plants and deprive the native plants of moisture, nutrients, and sunlight which will inhibit or stunt the growth of native plants. “Invasive plants can disrupt ecosystems by reducing biodiversity at multiple trophic levels.” (Masters, J.A., et. al, “Does Removal of the Invasive Shrub *Lonicera maackii* Alter Arthropod Abundance and Diversity?” 2017, Natural Areas Journal 37: 228-232. (<https://bioone.org/journals/natural-areas-journal/volume-37/issue-2/043.037.0211/Does-Removal-of-the-Invasive-Shrub-Lonicera-maackii-Alter-Arthropod/10.3375/043.037.0211.short> )
- Other stormwater management practices: Other practices such as bioretentions are typically planted with native plants and are maintained by the County on a regular basis.
- Hydrology change (soil compaction, seeps, etc.)
  - Benefit or Effectiveness over time: unknown
  - Explanation: Although sometimes care is taken to cushion the impact of heavy construction equipment using wood chip paths and wooden pallet “roads”, there are some projects where equipment was used directly on the forest floor or stream bed (Audubon Naturalist Society, Montgomery Parks, Solitaire Court in Gaithersburg). We would like to see studies that examine whether there is a change in soil hydrology after the construction process.
  - Other stormwater management practices: Non-stream restoration practices probably do not involve changes to hydrology in natural areas.
- Geological preservation in natural areas
  - Benefit or Effectiveness over time: - = negative
  - Explanation: The addition of imported rock material to a site, which may or may not be chemically and biologically benign, may contribute to a change of the original geologic makeup of the site. Some stream restorations result in the re-sculpting of stream banks, the filling in and moving of stream channel locations (e.g., at



Glenstone Museum), the addition or removal of meanders, etc. These types of activities alter the existing geology.

As examples, see the photo below of the Lower Booze Creek project in Potomac (12/4/2021 by K. Bawer) and the stream restoration in Asbury Methodist Village, Gaithersburg (from <https://www.youtube.com/watch?v=hGZN-L0Qrj0>)



- Other stormwater management practices: Non-stream restoration stormwater control practices are typically done in already disturbed areas such as road easements, not in natural areas.
- Increased stream temperature from tree cover removal
  - Benefit or Effectiveness, short term: - = negative
  - Explanation: Stream restorations may remove stream-side trees that provided shading of stream water and protection from solar heating. “When the plants are removed from the banks, and shade is decreased, water temperatures often become too high for trout and many benthic macro invertebrates, such as stoneflies, to survive”. (“Pond and Brook, A Guide to Nature in Fresh Water Environments,” Michael J. Caduto, University Press of New England, 1990, p. 43). Plus, “...colder water can hold more dissolved oxygen for aquatic life.” (Ibid, p. 145). Some fish and amphibian species require lower water temperatures for spawning and hatching.
  - Benefit or Effectiveness, long term: 0 = neutral
    - Explanation: Once overstory trees regrow, the shade provided may approximate the pre-restoration shade regimen.

#### References and extracts regarding biological uplift

- Hilderbrand, Robert H., et. al., “Quantifying the ecological uplift and effectiveness of differing stream restoration approaches in Maryland,” Final Report Submitted to the Chesapeake Bay Trust for Grant #13141, 2020 ([https://cbtrust.org/wp-content/uploads/Hilderbrand-et-al\\_Quantifying-the-Ecological-Uplift.pdf](https://cbtrust.org/wp-content/uploads/Hilderbrand-et-al_Quantifying-the-Ecological-Uplift.pdf) )
  - “The over-arching goal of this research was to determine whether stream restoration activities produce ecological uplift compared to sections on the same stream that have not been restored.” P. 7/70.
  - “We sampled 40 urban stream restorations across the Piedmont and Coastal Plain physiographic regions in the greater Baltimore/Washington DC Metropolitan area of Maryland.
  - Despite the promise and allure of repairing damaged streams, there is little evidence for ecological uplift after a stream’s geomorphic attributes have been repaired.
  - Unfortunately, the ecological aspects rarely improved despite the improved physical measures.

- There simply were few ecological differences between restored and unrestored sites. In fact, the unrestored sections upstream were often ecologically better than the restored sections or those downstream of restorations.
  - Our results suggest that restoration activities do not mitigate the reasons causing the ecological declines. Higher levels of Impervious Surface Cover (ISC) in the watershed have an overarching influence on Piedmont streams (but not in the Coastal Plain). Restorations decreased in ecological health measures to a greater extent as ISC increased than their unrestored counterparts upstream
  - The time since restoration completion partially mitigated these effects when focusing only on responses in restored sections, but it did not produce significant trends when compared against unrestored sections.
  - We conclude there is little evidence that urban stream restorations can produce meaningful improvements in traditional measures of stream condition as measured with benthic macroinvertebrates. Unfortunately, the possibility of restoring the ecology of urban streams to resemble conditions of streams in lesser disturbed watersheds is limited.”
  - “Justifying degrading activities by claiming that restoration will solve the problems the activities caused is untrue and will lead to misdirected human and financial resources. The steep declines in IBI and richness in restored sections as ISC increases are particularly troubling and suggest that restorations in high ISC watersheds may do more ecological harm than good.”
  - “In relative terms, RSC [Regenerative Stormwater Conveyance]-dominant restorations performed similarly to NCD [Natural Channel Design]-dominated; both showed limited to no ecological uplift due to restoration activities.”
- Palmer, M. A., K. L. Hondula, and B. J. Koch, 2014, “Ecological Restoration of Streams and Rivers: Shifting Strategies and Shifting Goals,” *Annu. Rev. Ecol. Evol. Syst.* 2014. 45:247-269.  
(<https://palmerlab.umd.edu/publications/Palmerpublications/Palmer2014a.pdf>)
    - “Improvements in the five metrics within the water quality category (Table 2) were found for only 7% of the channel reconfiguration projects and for none of the in-stream channel projects (Table 2).” P. 259
    - “Unfortunately, recovery of biodiversity was rare for the vast majority of stream restoration projects.” P. 259
    - “Unlike diversity, taxa richness is not a particularly informative indicator of project outcome because it does not distinguish between tolerant and intolerant taxa. One of the most comprehensive studies of restoration outcomes (24 channel reconfiguration projects assessed) reported no significant change in

diversity for two-thirds of the projects and only a slight increase in taxa richness in the other third that was associated with the addition of a few tolerant taxa characteristic of urban streams (Tullos et al. 2009).” P. 262

- “A recent study has shown that watershed-scale, out-of-channel management practices to restore urban streams can be quite successful... (Smucker & Detenbeck 2014).” P. 262
  - “We found that the highest success rates biologically were for those projects that involved a primary focus on enhancing the riparian zone as the restoration action. Typically, these involved either planting native vegetation or removing nonnative vegetation.” P. 262.
  - “...the problematic ecological outcomes of many or most structurally based restoration projects are only now becoming more widely acknowledged. ... We show that a major emphasis remains on the use of dramatic structural interventions, such as completely reshaping a channel, despite growing scientific evidence that such approaches do not enhance ecological recovery, and the data we assembled (Table 2) suggest they are often ineffective in stabilizing channels when stability is the primary goal. Efforts at the watershed and riparian scales that target restoration of hydrological processes and prevention of pollutants from entering the stream appear to offer the most promise.” P. 262
  - “Restoration is hard, and forestalling the socio-economic incentives to invent new ecosystems rather than restore existing ones or to manipulate channels rather than rehabilitate watersheds will require great revolutions indeed.” P. 263
- Pedersen ML, Kristensen KK, Friberg N (2014), “Re-Meandering of Lowland Streams: Will Disobeying the Laws of Geomorphology Have Ecological Consequences?” PLoS ONE 9(9): e108558. doi:10.1371/journal.pone.0108558. (brackets added to extract below)
    - “Despite significant differences in physical habitat conditions, macroinvertebrate taxonomic richness, abundance and diversity showed a similar lack of response in channelized and restored reaches. A similar absence of response was reported from a meta-analysis study of 24 projects by Miller et al. Ernst et al. found that only one macroinvertebrate metric responded to restoration in small forested headwater streams in the Catskill Mountains in New York State.”
    - “Such a lack of response is consistent with the results of numerous other studies recording little or no response of macroinvertebrates to restoration. Lepori et al. concluded that local scale restoration had little effect on macroinvertebrate communities compared to watershed scale factors. In a meta-analysis of stream restoration projects from 1975 to 2008, Palmer et al. found that only 2 of 78 restoration projects generated increases in macroinvertebrate diversity.”

- “More investigations should be carried out with focus on developing biological indicators of habitat improvements. Macroinvertebrates are an important organism/functional group in streams, but their mixed response to restoration and habitat improvement suggests that other organism groups should be included [such as native plant diversity, habitat quality, soil microorganisms, etc.]”

April 11, 2023

**Written testimony for Fiscal Year 2024 Montgomery County Operating Budget - in support of increases in funding for Climate Change, Racial Equity & Social Justice, Clean water & Stormwater, Recycling, Transit, and Parks.**

Submitted by: Denisse Guitarra, MD Conservation Advocate, Nature Forward



Dear Montgomery County Council,

Nature Forward (formerly Audubon Naturalist Society) is the oldest independent environmental organization protecting nature in the DC metro region. Our mission is to inspire residents of the greater Washington, DC, region to appreciate, understand, and protect their natural environment through outdoor experiences, education, and advocacy. We thank the Council for the opportunity to provide testimony for Montgomery County's FY24 Operating Budget.

Nature Forward would like to highlight that currently the Environment section only gets 2.7%<sup>1</sup> of the total operating budget. This is relatively a small slice of the pie when knowing that climate change has a direct impact on all of us, all our infrastructure, and is a threat multiplier across all the other ongoing crises.

We have divided our testimony into two categories which are: 1) **We Support**, these are areas we support the allocated funds in the proposed budget and, 2) **We Recommend**, these are areas where we recommend more funds to be added or modified. We also provide additional comments in both the areas we support and recommend funding. We ask the Council to consider and carefully review our budget requests as presented in our testimony.

---

<sup>1</sup> Montgomery County Operating Budget FY24. Available at: <https://apps.montgomerycountymd.gov/BASISOPERATING/Common/Index.aspx>



## **WE SUPPORT:**

We support and ask Council to approve funding of the following categories.

- Nature Forward supports the County Executive’s recommendation of **allocating \$271.6 million toward climate change in the operating and capital budgets.**<sup>2</sup> These funds will help the County continue with the implementation phases of the County Climate Action Plan.<sup>3</sup>
- **Department of Environmental Protection (DEP):** We support the following DEP programs to be funded at the proposed amounts as listed below and provide additional comments.
  - \$750,000 increase for the Tree Canopy Fund to plant more shade trees. Trees provide multiple benefits such as urban heat reduction, stormwater reduction, and mental well-being. We applaud the County for expanding DEP’s Tree Montgomery program to plant more shade trees in urban areas.
  - \$370,000 increase funding for illicit discharge detection and elimination to reduce pollution. This measure will help the county meet its MS4 permit requirements and also maintain our waterways cleaner and pollution free.
  - \$200,000 increase for Rainscapes grant program to fund additional rebates for residential stormwater management projects. We support the County for allocating DEP enough funds to cover its RainScapes program which is always in high demand among county residents, and which has had to stop continuously during the past years due to lack of funding and personnel. Council should consider improving the access of the Rainscapes program to a broader range of diverse communities.
  - We support the addition of funding for new positions in waterway pollutant reduction, improvement of water quality, water monitoring, forests, clean energy, electrification, and grants management. By adding new capacity, DEP will be able to expand its current programs and also explore new areas which were pending funding.

---

<sup>2</sup> County Executive Elrich Releases Recommended \$6.8 Billion Fiscal Year 2024 Operating Budget That Includes 10-Cent Increase in Property Tax Rate Exclusively to Fully Fund MCPS Request. March 15, 20223. Available at: <https://montgomerycmd.blogspot.com/2023/03/county-executive-elrich-releases.html>

<sup>3</sup> Montgomery County Climate Action Plan (2021) Available from: <https://www.montgomerycountymd.gov/green/climate/index.html>



- We are pleased that this year's budget continues to include \$300,000 to continue the Community Justice Academy and recommend the program expands into more and new communities across the county.
- **Racial equity and social justice:** We ask the County Council to approve and fully fund the Office of Racial Equity & Social Justice Program (ORESJ) at 1.4M.<sup>4</sup> We look forward to seeing the ORESJ work become embedded into every department over time and funded accordingly. We support the continued funds to expand the Asian American Health Initiative, Latino Health Initiative, and African American Health Programs that were crucial during the pandemic and helped to connect and create more networks across the county. We support funds going into the county's farm to food bank program and to continue the work of the county's Food Resilience efforts.
- **Electrification and clean energy:** We support the County's commitment to reaching our greenhouse gas reduction goals by investing on electrifying and reducing emissions from buildings and cars.
  - \$250,000 increase in climate grants. This will increase community-based climate residence across communities in the county.
  - \$250,000 increase energy audits for buildings subject to Building Energy Performance Standards (BEPS) and a \$250,000 increase for Community Choice Energy consultant. With residential and commercial buildings being the largest emitters of GHG in the county<sup>5</sup>, it is essential the county invest in this sector to reach the county's climate goals.
  - \$100,000 for Electric Vehicle Co-op Management Program. However, we recommend that along with more EV improvements, the goal of the county should be to reduce the reliance of cars in general as EV cars still do take up space on roads, still are a source of air pollution via tire particulates, and still cause congestion.
  - We support the increase of almost \$700,000 to continue and expand funding of the Montgomery Green Bank to ensure a continuation on the electrification and switching to cleaner, renewable energy for residents and businesses in the county.

---

<sup>4</sup> Racial Equity & Social Justice. Montgomery County Operating Budget FY24. Available from: <https://apps.montgomerycountymd.gov/BASISOPERATING/Common/BudgetSnapshot.aspx?ID=25P01&TYPE=E>

<sup>5</sup> Montgomery County Climate Action Plan. Montgomery County Greenhouse Gas Emissions. Figure 25. Page 74. Available at: <https://www.montgomerycountymd.gov/climate/Resources/Files/climate/climate-action-plan.pdf>





## **WE RECOMMEND**

The following are areas where we recommend the County Council to consider adding the more funds in the following categories or modify these.

- **Stormwater:** Montgomery County has done great work meeting regulatory requirements for stormwater, but these requirements are not enough to protect our streams and watersheds. While some watersheds' health has been improving, many are still declining. What streams need is getting more complicated, too: in the summer, climate change drives more explosive storms that overwhelm the kinds of projects installed to date; and in the winter, more and more salting ahead of unpredictable snowstorms leads to toxic salinity conditions in streams. Please see the Stormwater Partners Network written testimony for more detail on our stormwater-related recommendations.
- **Water Quality Protection Charge (WQPC):** Nature Forward believes that the Water Quality Protection Charge (WQPC) needs to begin rising at more than the cost of baseline program delivery and keep pace with inflation, in order to increase our ambition as a county to truly return our watersheds to health. The FY24 recommended rate of \$128.00/Equivalent Residential Unit, spread across 368,000 ERUs, is designed to fund the County's current rate of ambition in meeting its relatively modest MS4 permit. This rate does not account for additional stormwater work beyond the permit, nor does it fund the ever-growing costs of flood management. Please see the Stormwater Partners Network written testimony for more detail on our WQPC recommendations.
- **Flooding:** County council should begin considering and preparing ahead the upcoming billions which will take to repair and improve our existing stormwater infrastructure and landscape to adapt to the more frequent and larger climate change driven storms. DEP's upcoming Comprehensive Flood Management Plan<sup>6</sup> will give the Council the list of urgent projects that need to be completed and also a price range for these. It is critical that the County Council begins planning now before more lives continue to be impacted like those tragically lost during the 2021 Rock Creek Woods apartments flooding.
- **Recycling:** DEP's Recycling and Resource Management Division<sup>7</sup> helps county residents put in place better recycling practices but needs more resources. In particular, the Waste Reduction and Recycling Section has fewer multi-family inspectors compared to the single-family households' inspectors. Council could allocate more funds and resources to recycling inspections and outreach as the county continues to grow, especially in multi-family properties.
- **Parks:** The Parks Department maintains 421 parks across 37,000 acres of parkland, including community gardens, museums and historic buildings, hundreds of miles of

---

<sup>6</sup> Montgomery County Comprehensive Flood Management Plan. 2023. Available at: <https://www.montgomerycountymd.gov/flooding/county/plan.html>

<sup>7</sup> MoCo DEP - Recycling and Resource Management Division Available from: <https://www.montgomerycountymd.gov/sws/>



natural and hard surface trails, nature centers, much more that provides programs and services that appeal to every interest and ability across county residents.<sup>8</sup> Montgomery Parks is currently receiving a budget cut relative to inflation. Nature Forward asks the County Council to fully fund the Parks Department FY24 Operating Budget request and add \$4.3M back to their budget. If Parks are not funded at this rate, then there will be a hiring freeze, community-based events will be on a hold along with park maintenance for new and newly acquired parks.

- **Transit:** In Montgomery County, the transportation sector is the largest contributor<sup>9</sup> to greenhouse gas emissions. The County must reduce its emissions by investing in transit to move people, instead of cars, around safely and efficiently. We support the County's commitment to transition to zero-emissions by investing into the Bethesda Circulator buses, and hope this is replicated across other parts of the county too.<sup>10</sup> Would like to see more funds into pedestrian safety and preservation of roadside trees. Safety and healthy environments should not need to compete with one another in location nor funds.

On behalf of Nature Forward and our 28,000 members and supporters, we recommend that the County Council supports and takes into consideration our FY24 Operating Budget comments and recommendations. We believe allocating funds these programs it is important for the wellbeing of county residents, wildlife, and our waterways.

Sincerely,

Denisse Guitarra

MD Conservation Advocate

Nature Forward

---

<sup>8</sup> Montgomery Parks. Available at: <https://montgomeryparks.org/about/parks/>

<sup>9</sup> Montgomery County Climate Action Plan. Montgomery County Greenhouse Gas Emissions. Figure 25. Page 74. Available at: <https://www.montgomerycountymd.gov/climate/Resources/Files/climate/climate-action-plan.pdf>

<sup>10</sup> Climate Change. Montgomery County Operating Budget FY23. DOT section. Available from: <https://apps.montgomerycountymd.gov/BASISOPERATING/Common/Chapter.aspx?ID=CC>



April 11, 2023

Testimony to Montgomery County Council

Regarding: the FY 2024 Operating Budget

From: Kit Gage, Advocacy Director

Friends of Sligo Creek, or FOSC, is a nonprofit community organization dedicated to protecting, improving, and appreciating the ecological health of Sligo Creek Park and its surrounding watershed.

We will limit our comments on the Montgomery County budget to issues directly related to the Departments of Environmental Protection and Parks. We associate ourselves with both the Stormwater Partners Network and the MoCo Climate Coalition, more detailed testimony from both which we have signed.

### **Department of Environmental Protection**

We are in general very supportive of the priorities of DEP and in its budget proposal, as reflected in its increased budgets for staff and/or program for:

- 1) Tree planting, which is critical for climate change mitigation
- 2) The RainScapes rebate program, a vastly popular and important way both to help mitigate stormwater issues and increase native plantings which have critical wildlife/pollinator support impacts.
- 3) Illicit discharge detection and elimination, which through our Water WatchDog program, we both help DEP and also educate ourselves and people throughout the watershed to understand the significant and deleterious impact of such discharges and the important work of DEP.

4) In general to improve efforts to - reduce pollutants in waterways, improve water quality, salt management, invasive species, water monitoring effects, forests, clean energy, electrification, sustainable buildings, organic lawn care, and grants management.

#### MS4 Permit

We strongly agree with the Stormwater Partners Network that DEP can and should in this time of Climate Emergency, exceed its MS4 permit requirements for handling stormwater in an environmentally sensitive fashion.

#### Water Quality Protection Charge

We agree with the Stormwater Partners Network that to accomplish this in part, the Water Quality Protection Charge should be increased at a somewhat faster rate than proposed. Both the predicted costs of flood management and accelerated rain events we're seeing with Climate Change require more robust funding in the more predictable fashion reflected with budgeting rather than emergency outlays.

#### Stormwater Waiver Fees

We remain concerned that when entities obtain waivers from handling stormwater on a site, they are not actually paying for the environment and other costs to the community of such waivers. So the fees should be increased to accomplish this and incentivize reduced use of waivers.

#### Montgomery Parks

As a watershed organization, we work closely on a volunteer basis with Montgomery Parks, largely in Sligo Creek Park. We recognize the extraordinary work Parks does to seek to improve the Park and help mitigate damage to the environment from human and other sources. Parks and specifically forests, are increasingly recognized for their critical function not just for wildlife and current human health but also for the continued functioning of the planet.

Parks proposed budget is just a 4% increase over last year, not the 7% average of the total budget. Parks is not the agency from which just cuts should be taken. At the very least, the budget should be raised to that 7% average of other agencies. At a minimum, Council should fully fund Parks at the rate of inflation, to avoid hiring freezes, limits on critical programs and activities.

In particular, we work with Parks through our Weed Warrior program to address invasive species, and we recommend areas for reforestation, and places where stormwater damage requires mitigation. Tree health requires a robust invasive plant removal effort. Parks, and

even our very diligent and massive volunteer Weed Warrior effort, are not sufficient. Additional funding to add to the Weed Warriors, target particular problem areas, and where possible, replant with native species. Parks' Vegetation Ecology and Management Unit is sorely underfunded – for decades – and should finally receive the 3 FTEs we and Parks recommend to more effectively implement this program.

Parks' stormwater management team does remarkable work to help address the problems it sees, but more funding is needed to do more – and more collaborative work with DEP and DOT will more effectively address the problems by facilitating upstream restoration.

In sum, we very strongly urge the Council to fully fund and even exceed the budget requests of the Department of Environmental Protection and Parks.

Thank you for your consideration.

**From:** Climate Action Plan Coalition

**To:** Montgomery County Council President Evan Glass

**Cc:** Montgomery County Council Members:

Gabe Albornoz, Marilyn Balcombe, Natali Fani-Gonzalez, Andrew Friedson, Will Jawando, Sydney Katz, Dawn Luedtke, Kristin Mink, Laurie-Anne Sayles, Kate Stewart

**Re:** FY24 Proposed Budget

**Date:** April 12, 2023

Dear President Glass,

We have reviewed the County Executive's proposed FY24 operating budget and are writing to support the many robust actions he proposes to address the current and future effects of climate change in Montgomery County. That said, we were hopeful that the FY24 budget would have added additional funding for a few other items, given the climate emergency that our region faces. Attached to this letter is our original request to Executive Elrich. We are writing this letter to identify areas that we are asking you to improve.

We support as a baseline the Executive's proposed operating budget including \$10.3M for DEP and 5 additional FTEs<sup>1</sup> plus 4 FTEs<sup>2</sup> transferred from the Non-Departmental Account and the CEX account; we support the \$3M in CIP for trees and \$17M CIP for electric buses. We almost missed the fact that his budget includes \$1.1M for the Office of Food System Resilience which, technically, should have been in the cross-departmental climate budget - and which we heartily support. In addition, we are pleased to see increased investments in trees, RainScapes, solar, electrification, equity, and attention to resilience. In sum, this is a robust budget.

We also note that the Executive added funding for the Office of People's Counsel for the first time in more than 10 years. The CAP Coalition knows that land use is key to controlling climate change and, after working with the Planning Board staff on the climate assessment template, we have begun following their zoning and master planning efforts. We have come to appreciate the complexity of land use planning and would find a People's Counsel invaluable. We support this budget line item.

However, the County is NOT on track to reach its climate emergency goal. While this budget reflects great work, this level of funding will still not be enough.

We understand that the County will have \$86M more than what is required for the reserve fund. Given that we are in a climate emergency of momentous proportions, we ask that that County Council significantly increase the climate-targeted budget to accelerate the transition to a county

---

<sup>1</sup> (1) Solar Technical Program Manager; (1) Residential Electrification Program Manager; (2) new Grants & Incentives Program Managers; (1) Program Manager position for Tree and Forest programs;

<sup>2</sup> Transfer from NDA: (2) new Zero Waste Planner positions; (1) Residential Electrification Program Manager; Transfer from CEX to DEP: (1) Data Analyst

that reduces overall energy consumption, maximizes development and use of renewable energy sources, aggressively expands forest and tree cover, invests in its farming community especially for food crops, and inspires the public to make climate-smart choices every day.

Here are our specific requests:

- 1) The County government cannot achieve our greenhouse gas reduction goals without more involvement of the public. It is essential that we convey the importance of choices that only individuals can make, including lifestyle changes that can significantly reduce greenhouse gas emissions – i.e., alternative transportation modes and fuels, reducing dependence on fossil fuels for residential energy, reducing consumption, achieving zero waste, etc. Accordingly, public outreach is a huge part of what we think is needed. We have advocated for more outreach since 2020. We believe that we need a massive public outreach campaign to meet our goals. Unfortunately this is the area with the lowest allocation in the proposed budget. **Therefore, we urge you to add \$2M for a massive public outreach campaign to promote behaviors that reduce greenhouse gas emissions and improve resilience.**
- 2) Zero Waste: The County Executive has ambitious plans to significantly reduce the amount of waste produced across all sectors centered around ending the climate-damaging incineration of easily recoverable materials, particularly food scraps, plastics, and other recyclables. However, the number of staff needed to implement these plans is inadequate. We see that the Executive proposes to add two new positions for waste reduction efforts and one for a multi-family recycling specialist. **We request adding a total of five new positions (rather than only 3) to develop and implement new waste reduction, reuse and recycling programs, and to enforce recycling laws.**
- 3) In 2023 the County authorized \$1M for a residential electrification retrofit pilot. We strongly urge the Council to heavily invest in energy efficiency and electrification retrofits for low- to middle-income households and multi-unit residential complexes that serve primarily low- to middle-income tenants and condo owners. This will ensure that lower income buildings gain the benefit of upgraded service without raising the cost of housing. **Therefore, we strongly urge the Council to add at least an additional \$1M for a total of \$2M or more per year.**
- 4) We have also recently learned that the Parks Department budget is receiving \$4 million short of what is needed, reflecting only a 4% increase as compared to the rest of the county budget which is receiving an average 7% increase. Maintaining parks and natural areas is an important part of sequestration, stormwater management, resilience especially to heat, public outreach opportunities, and more. Accordingly, to ensure that the contribution of sequestration and adaptation services provided by the Parks Department does not decline, and since the County surplus exceeds what is needed for its reserve balance by \$86M, **we request that \$4M be added to the Parks Department budget.**
- 5) We are happy that the Green Bank is now able to help fund resilience. Our concern is that, without adding more funds, there is a risk that the Bank may start using some of the existing \$19M from the county's energy utility tax to support resiliency rather than its

intended use for building energy efficiency and electrification efforts. While our request to double its portion of the energy tax was not accepted, ***we look forward to working with you to identify ways to create more leverage and infusion of funds for Green Bank resilience efforts.***

**Council members, let us reiterate - the fact that we are in a climate emergency is not just a slogan. We know you read the news everyday of accelerating ice sheet loss, historic droughts and massive rainfalls, forest fires, coastal inundation...and the heart breaking disasters befalling the most vulnerable. It is time to step up our game, and get serious about addressing the climate emergency. Please add the resources needed to accelerate our progress on this vital issue.**

We would be happy to meet with you and other Council members to discuss our request, including how we can finance what is needed to truly meet our climate emergency goals.

**On behalf of the MoCo Climate Coalition (formerly, the Climate Action Plan Coalition),**

**The Coordinating Committee:**

Nancy Beller-Simms, Sebastian Gordon, Karl Held, Karen Metchis, Doris Nguyen, Kevin Walton

**MoCo Climate Coalition member organizations and individuals**

350 Montgomery County;	One Montgomery Green (OMG);
Ask the Climate Question (ACQ);	Poolesville Green;
Bethesda Green;	Safe Healthy Playing Fields;
Biodiversity for a Livable Climate;	Sugarloaf Citizens' Association;
Chesapeake Climate Action Network (CCAN);	Takoma Park Mobilization Environment Committee (TPMEC);
Elders Climate Action;	The Climate Mobilization Montgomery County (TCM);
Environmental Justice Ministry Cedar Lane Unitarian Universalist Church;	Transit Alternatives to Mid-County Highway Extended/M-83 (TAME);
Environmental Study Group;	Zero Waste Montgomery County;
Friends of Sligo Creek;	
Glen Echo Heights Mobilization;	
Green Sanctuary Committee of the Unitarian-Universalist Church of Silver Spring;	Carol Jones
Montgomery County-Faith Alliance for Climate Solutions (MCFACS);	Deborah Cohn
	Stuart Simon
	Hokuma Karimova
	Jim Driscoll

**attachment:** Budget request addressed to Executive Marc Elrich, January 18, 2023.



April 13, 2023

# Written Testimony for Montgomery County's Fiscal Year 2024 Operating Budget

**Submitted by:** Eliza Cava, Co-Chair, Stormwater Partners Network of Montgomery County (SWPN) and Director of Conservation, Nature Forward

Dear Montgomery County Council,

We, the undersigned Stormwater Partners Network of Montgomery County (SWPN),<sup>1</sup> provide the following feedback and recommendations to Montgomery County's FY24 Operating Budget. As a Network, our mission is to advocate for clean water, protecting, improving, and restoring our watersheds in ways that are equitable and ecologically sensitive, improving community resilience to stormwater impacts such as storm-driven flooding, and connecting communities to their backyard waterways. Our vision is that Montgomery County's waterways are clean, pollution-free, and resilient to the climate crisis, providing healthy, equitable, safe, and thriving green spaces for communities, families, and wildlife.

The Network has historically worked towards implementing stronger regulatory measures to strengthen our stormwater management and infrastructure, increase infiltration of water on site instead and decrease stormwater runoff into our precious local waterways. We also support the work and needs of Montgomery Parks, particularly resource stewardship, and the work of the County to meet climate and equity goals. We note that currently the Environment section only gets 2.7% of the total operating budget. This is a small slice of the pie when knowing that climate change has a direct impact on all of us, all our infrastructure, and is a threat multiplier across all the other ongoing crises. We ask the Council to consider and carefully review our budget requests as presented in our testimony, and to go further and actively seek the funds needed to implement and continue to protect our natural resources into the long term. We also support increasing the budget to account for inflation and other rising costs, both for contracts/supplies and personnel.

We recognize that in an inflationary period, this is an expensive budget. Nonetheless, it makes historic and essential investments in climate change mitigation and preparation, environmental protection, stormwater management, and trees and forests that are critical to maintain Montgomery County's status as a wonderful, safe, and healthy place for people of all backgrounds to live, work, play, and raise a family.

---

<sup>1</sup> The Stormwater Partners Network is composed of 34 organizations and many individuals who support our mission and vision. A full list of our current membership can be found on our website, [www.stormwaterpartnersmoco.net](http://www.stormwaterpartnersmoco.net).



## **I. CLEAN WATER AND STORMWATER**

Montgomery County has done great work meeting regulatory requirements for stormwater, but these requirements are not enough to protect our streams and watersheds. While some watersheds' health has been improving, many are still declining. What streams need is getting more complicated, too: in the summer, climate change drives more explosive storms that overwhelm the kinds of projects installed to date; and in the winter, more and more salting ahead of unpredictable snowstorms leads to toxic salinity conditions in streams.

DEP, its staff, and its contractors have demonstrated that they are capable of doing more than the next draft MS4 permit requires, and the increases in the proposed FY24 budget demonstrate some of the ambition we would like to see even more of. SWPN and our member groups have strongly pressed the state to require more ambitious stormwater management, especially using green infrastructure throughout our watersheds and with less reliance on stream restorations. Council should direct the Department to go above and beyond the minimum MS4 permit requirements, even though the state requires only a minimum level of effort (half that of the prior MS4 permit). And Council and the Executive should work together to find a sustainable, long-term source of funds to meet a greater level of ambition and continue this critical work.

Despite the above caveat, we are overall pleased and supportive of the proposed DEP budget, and **support the entirety of the proposed Watershed Restoration budget. In particular, we support the following DEP programs to be funded at the proposed amounts as listed below:**

- **\$370,000 increase in funding for illicit discharge detection and elimination to reduce pollution.** This measure will help the county meet its MS4 permit requirements and also maintain our waterways cleaner and pollution free.
- **\$200,000 increase for Rainscapes grant program to fund additional rebates for residential stormwater management projects.** We support the County allocating enough funds to cover its RainScapes program which is always in high demand among county residents, and which has often had to suspend new applications during the past years due to lack of funding and personnel. Council should consider improving the access of the Rainscapes program to a broader range of diverse communities.
- **The addition of funding for new positions, contracts, or projects to reduce pollutants in waterways, improve water quality, salt management, invasive species, water monitoring effects, forests, clean energy, electrification, sustainable buildings, organic lawn care, and grants management.** By adding new capacity, DEP will be able to expand its current programs and also explore new areas which were pending funding.

# STORMWATER PARTNERS NETWORK OF MONTGOMERY COUNTY



## Water Quality Protection Charge (WQPC)

Stormwater Partners Network believes that the Water Quality Protection Charge (WQPC) needs to begin rising at more than the cost of baseline program delivery and keep pace with inflation, in order to increase our ambition as a county to truly return our watersheds to health. The FY24 recommended rate of \$128.00/Equivalent Residential Unit, spread across 368,000 ERUs, is designed to fund the County's current rate of ambition in meeting its relatively modest MS4 permit. This rate does not account for additional stormwater work beyond the permit, nor does it fund the ever-growing costs of flood management, nor does it fully fund major structural repairs as facilities age and deteriorate. There is a backlog of about 40 major repair projects, particularly stormwater pond repairs, currently unfunded and not included in the FY23-28 CIP budget. DEP will explore options to include more of this backlog in the FY25-29CIP budget, which could also prompt a need for WQPC increases. Without doing so, we are kicking the can down the road on these pond and other repairs. Existing ponds play a critical role in attenuating the worst impacts of storms on stream valleys. As storms get worse, it is critical to maintain our ponds. **Council should consider accelerating the pace of addressing this stormwater repair backlog.**

## Increase the Stormwater Waiver Fee

**One item that we would like to see changed in the budget and could be a potential long-term source of revenue would be increasing the cost of stormwater waivers (or, more accurately, increasing their precision so that waiver charges match the actual replacement cost of incomplete on-site stormwater management).**

According to our research, waivers ("fee in lieu to building permits") are currently granted very frequently but are difficult to track due to limitations in DPS' data systems. We need to know how much volume of water is being waived, and where, in order to accurately address the issues of both water quality in streams and nuisance lot-to-lot flooding.

Currently, the fees from stormwater waivers do not correspond appropriately to the volume of runoff generated from a developed property and are not overall equal to the management and environmental protection costs of the stormwater impacts originating from those properties. Calculating stormwater waiver fees more precisely could bring an added source of valuable stormwater revenue while acting as a disincentive for impervious cover without raising the annual WQPC rate. While this might raise rates on some property owners, it could lower them on others. Some nearby jurisdictions that do have higher stormwater waiver fees continue to see high economic growth and development, indicating that any additional fees would be easily borne by the market.

# STORMWATER PARTNERS NETWORK OF MONTGOMERY COUNTY



## Flooding

**County Council should begin considering and planning ahead for the upcoming billions of dollars which it will take to repair and improve our existing stormwater infrastructure and landscape to adapt to the more frequent and larger climate change driven storms.** DEP's upcoming Comprehensive Flood Management Plan<sup>2</sup> will give the Council the list of urgent projects that need to be completed and also a price range for these. While we hope that state and federal dollars will help ease the cost burden on the County, we need to be prepared to find revenue mechanisms to fund these urgent projects. It is critical that the County Council begins planning now before more residents are needlessly displaced and lives tragically lost as happened during the 2021 Rock Creek Woods apartments flooding.<sup>3</sup>

## II. PARKS

It is critical now more than ever to continue to fund the Department of Parks. During the pandemic and now, our parks are serving as natural refuges keeping people healthy both physically and mentally. The Parks Department maintains 421 parks across 37,000 acres of parkland, including community gardens and dog parks, museums and historic buildings, hundreds of miles of natural and hard surface trails, and provides programs and services that appeal to every interest and ability, like nature centers, concerts and exercise classes, and natural resources conservation.<sup>4</sup> The Parks Department must have adequate staff and resources to continue protection of these invaluable natural resources and to assure a healthier future for all. The County Executive's recommended FY24 budget provides only a 4% increase in funding which falls short of the 7% needed to account for inflation. This represents a \$4.3 million shortfall, which will result in a reduction of service, including a hiring freeze, putting community-based events on hold, and inadequate park maintenance for new and newly acquired parks.

**SWPN asks the County Council to fully fund the Parks Department FY24 Requested Operating Budget including closing the \$4.3 million gap between the requested and the County Executive's recommended budget.**

---

<sup>2</sup> Montgomery County Comprehensive Flood Management Plan. 2023. Available at: <https://www.montgomerycountymd.gov/flooding/county/plan.html>

<sup>3</sup> 1 Dead After Rockville Apartments Fill with Flood Water, Displacing 150. NBC Washington. 2021. Available at: <https://www.nbcwashington.com/weather/weather-stories/rockville-apartment-flood-unaccounted/2789314>

<sup>4</sup> Montgomery Parks. Available at: <https://montgomeryparks.org/about/parks/>



## Natural resource management & invasive plants on parklands

Invasive plants are a huge and ever-growing problem on all our forested and natural lands, most of which is owned by M-NCPPC. Montgomery Parks focuses its funded effort on natural areas in less degraded condition, while in parklands closer to where most people live, invasive plant removal is primarily managed through the volunteer Weed Warrior program. This program is a valiant effort (and many SWPN members are Weed Warriors), but **wholly** inadequate to the scale of the need. M-NCPPC needs to develop, and Council needs to fund, a comprehensive management plan for invasives, including dedicated staff positions. Further, as invasives spread throughout the park system, M-NCPPC should ensure that its focus and treatment prioritizes the most biodiverse/currently healthy areas. And once invasive plants are removed, especially by any large-scale manual removal that disrupts the soil, Parks should replant wherever appropriate with native plants.

Parks has the leadership, expertise, and Integrated Pest Management plans necessary to step up effort on invasive plant removal. They have lacked funding to do so for decades. With some ups and downs, the current staffing levels in the Natural Resources Stewardship Section's Vegetation Ecology & Management Unit are now the same as they were **35 years ago - in the 1980s and 1990s**. This low level of staffing is despite all that we have learned about invasive species management, habitat fragmentation, and forest ecology since that time; and as development and climate pressures have only increased stresses upon our natural resources. Last year, we asked Council to request a budget proposal from Parks to address this need. This year, Parks requested \$167,110 to support three FTEs including a natural resource specialist to support inventory & planning, and a crew of 2 natural areas maintenance workers. **If Council does not fill Parks' \$4.3M budget gap, these positions will again go unfilled - keeping our ability to manage our essential natural resources at a 1990-like level.**

### III. CLIMATE CHANGE

The recent Intergovernmental Panel on Climate Change report made crystal-clear that what we already knew: tackling the climate crisis is the challenge of this century, and will interact with all other challenges, from ecological to economic to social. Leaders who boldly act to reduce and prepare for climate impacts have the opportunity to truly preserve and create a better world for ourselves and our children. This starts with reducing our greenhouse gas emissions.

# STORMWATER PARTNERS NETWORK OF MONTGOMERY COUNTY



**SWPN asks the County Council to approve the proposed allocation of \$271.6 million towards fighting climate change in the operating and capital budgets.<sup>5</sup>**

These funds will help the County continue with the implementation phases of the County Climate Action Plan.<sup>6</sup>

- We are pleased that this year's budget continues to include **\$300,000 to continue the Community Justice Academy** and recommend the program continues to expand into more and new communities across the county.
- **We particularly support the increases in tree and forestry programming, with total tree funding at about \$11M:**
  - **\$750,000 increase for the Tree Canopy Fund (DEP) to plant more shade trees.** Trees provide multiple benefits such as urban heat reduction, stormwater reduction, and mental well-being. We applaud the County for expanding DEP's Tree Montgomery program to plant more shade trees in urban areas.
  - **Addition of new Program Manager position for Tree and Forest programs (DEP).**
  - **Urban Tree Canopy funds for DOT at \$5.7M (Operating) and \$3.1M (Capital).**

We appreciate the County Council considering our testimony. If you have any questions, please contact SWPN Co-Chairs Eliza Cava ([eliza.cava@natureforward.org](mailto:eliza.cava@natureforward.org)) or Jeanne Braha ([jbaha@rockcreekconservancy.org](mailto:jbaha@rockcreekconservancy.org)).

Sincerely,

Eliza Cava\*  
Director of Conservation, Nature Forward

Jeanne Braha\*  
Executive Director, Rock Creek Conservancy

*Additional signatories on following page*

---

<sup>5</sup> County Executive Elrich Releases Recommended \$6.8 Billion Fiscal Year 2024 Operating Budget That Includes 10-Cent Increase in Property Tax Rate Exclusively to Fully Fund MCPS Request. March 15, 20223. Available at: <https://montgomerycomd.blogspot.com/2023/03/county-executive-elrich-releases.html>

<sup>6</sup> Montgomery County Climate Action Plan (2021) Available at: <https://www.montgomerycountymd.gov/green/climate/index.html>

# STORMWATER PARTNERS NETWORK OF MONTGOMERY COUNTY



Emily Ransom  
Maryland Director, Clean Water Action

Diana Conway  
President, Safe Healthy Playing Fields,  
Inc.

Ginny Barnes  
Vice Chair, Conservation Montgomery  
Vice-President, West-Montgomery  
County Citizens Association

Paul Chrostowski  
Representative, Takoma Stormwater  
Solutions (part of Takoma Park  
Mobilization)

Kit Gage\*  
Advocacy Director, Friends of Sligo  
Creek

Tracy Rouleau\*  
President, TBD Economics, LLC

Sevim Kalyoncu  
Executive Director, Green Muslims

Margaret Schoap  
Organizer, Transit Alternatives to  
Midcounty Highway Extended (TAME)  
Coalition

Sarah Morse  
Executive Director, Little Falls  
Watershed Alliance

Pia Iolster

Nora Swisher  
President, Neighbors of the Northwest  
Branch

Edna Miller

Karen Metchis\*

Betsy Nicholas  
Vice President of Programs, Potomac  
Riverkeeper Network

Deborah Sarabia

\*SWPN Steering Committee Member