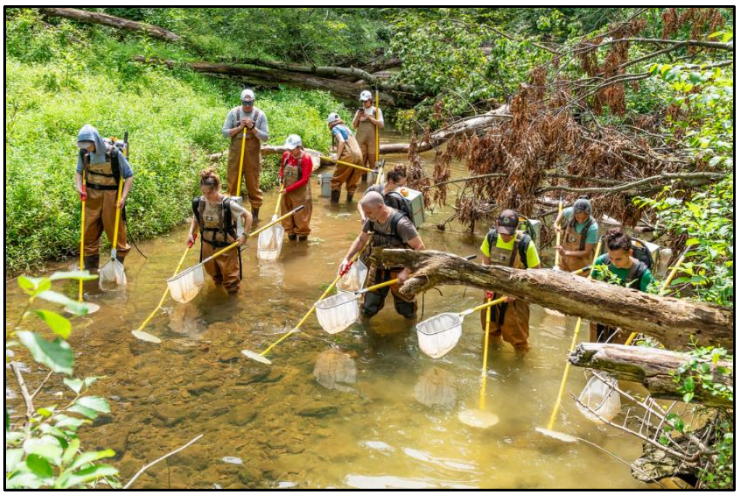
Montgomery Parks Progress Towards Eliminating Pollution and Improving Water Quality

The National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) FY24 Annual Progress Report



The Maryland-National Capital Park and Planning Commission (M-NCPPC), specifically the Montgomery County Department of Parks (Montgomery Parks), is governed by the National Pollutant Discharge Elimination System (NPDES) Phase II general permit No. 13-SF-5501, which regulates stormwater discharges from small municipal separate storm sewer systems (MS4s) (hereafter referred to as the "MS4 permit"). An MS4 refers to a system of conveyances, such as curbs, gutters, ditches, and storm drains, that is owned or operated by a public entity (e.g., state, city, or town) to collect or transport stormwater, but is not part of a sewage treatment plant.

Montgomery Parks' MS4 permit is authorized by the Maryland Department of the Environment (MDE) as part of the NPDES program, which operates under the Federal Clean Water Act. The goal of the MS4 permit is to reduce nutrient and sediment pollution in stormwater within the Chesapeake Bay watershed by implementing Best Management Practices (BMPs). BMPs are strategies or structures that reduce or prevent the discharge of pollutants through stormwater. Examples of BMPs include stormwater treatment facilities that address runoff from impervious surfaces, reforestation efforts, outfall stabilization projects, and public education, outreach, and involvement initiatives.

As stewards of Montgomery County's key tributaries to the Chesapeake Bay, Montgomery Parks' mission and operations align with the goals of the MS4 permit. These include reducing stormwater pollution, educating, and engaging the public, and collaborating with other MS4 permittees to achieve shared objectives.

Each year, a report is submitted to MDE that outlines progress towards meeting the 20% impervious area restoration target and other water quality improvement efforts by 2025. This year's annual report details the work completed from July 1, 2023, to June 30, 2024, in support of the MS4 permit requirements. The current permit term has been administratively extended, and MDE has requested that Montgomery Parks plan for additional restoration efforts to be completed by 2030.

Section I: Impervious Area Restoration

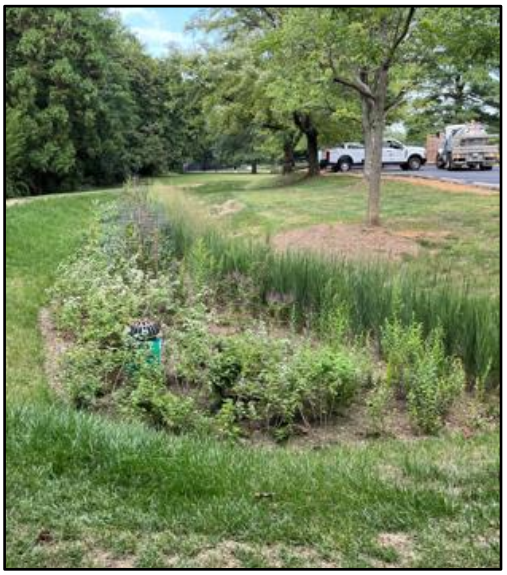
The impervious area restoration requirement included in the MS4 permit makes progress towards addressing the 2025 goals set by the Chesapeake Bay Total Maximum Daily Load (TMDL) standards. It mandates that MS4 permittees treat 20% of

previously untreated impervious area. During the first year of the permit term, the total amount of untreated impervious within parkland was assessed to determine the 20% restoration target. While impervious surfaces represent a small portion of parkland, Montgomery Parks remains dedicated to addressing stormwater runoff through effective treatment strategies.

BMPs that reduce pollution and treat stormwater may include stormwater retrofits, micro-bioretentions, and infiltration trenches, and alternative approaches such as stream restoration, outfall stabilization, and removal of impervious surfaces. The credits earned from these practices are calculated using MDE's established methodologies and are applied towards meeting the 20% treatment requirement. A summary of the impervious area restoration requirement is provided in the bulleted list below:

- Acres of untreated impervious area on parkland = 332.4 acres
- 20% of untreated impervious area restoration requirement = 66.5 acres

Stormwater Retrofits, Outfall Stabilization, and Stream Restoration



This year, a new micro-bioretention facility was installed at Nolte Local Park in Montgomery County that treats stormwater from a parking lot that was previously untreated. Bioretentions are a stormwater management technique that can help reduce the amount of pollution that enters waterways.

Montgomery Parks has a stormwater outfall infrastructure rehabilitation program that restores outdated and failing stormwater outfall infrastructure on parkland. Outfall stabilization projects may involve converting concrete-lined channels to naturalized channels and applying natural channel stabilization techniques to repair eroded channels downstream of the outfall pipe. These new channels are designed to replicate natural stream characteristics, incorporating natural habitat features and native vegetation to slow water flow, enhance infiltration, and improve water quality. Currently, Parks is constructing an outfall stabilization project at Flower Avenue, which, upon completion, will feature extensive plantings of native plugs, shrubs, and trees to enhance the local vegetative community.

Montgomery Parks also has a stream restoration program, which includes assisting other MS4 permittees in meeting their impervious area reduction goals on parkland. Stream restoration helps reduce erosion while enhancing both in-stream and floodplain habitats, providing valuable ecological improvements. Currently, Montgomery Parks has several stream restoration projects in the design phase, including the Parker Avenue stream restoration project at Wheaton Regional Park.

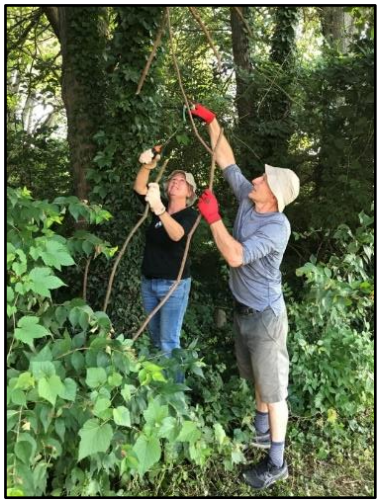
Section II: Minimum Control Measures (MCM)

MCM 1: Public and Personnel Education and Outreach

As part of the MS4 permit, Montgomery Parks is required to implement and maintain a personnel education and outreach program, distributing educational materials to both staff and the community to help reduce pollutant discharges caused by stormwater runoff. Education and outreach materials are tailored to specific audiences and are shared through various channels, including emails, presentations, hands-on trainings, and pamphlets.

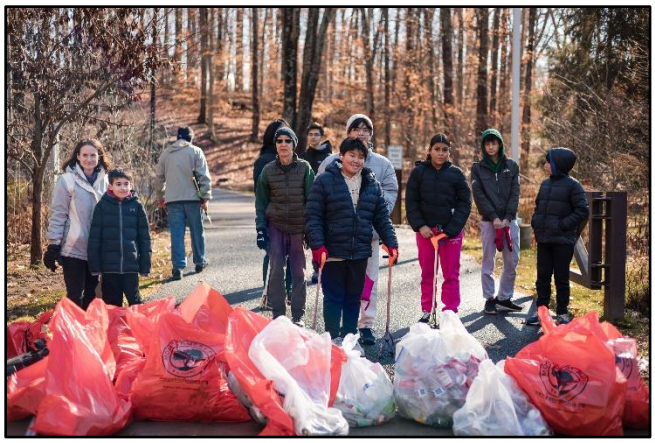
This fiscal year, the annual pollution prevention training was pre-recorded and completed by nearly 400 staff members. In addition to the training, a guidance document was developed for reporting water quality concerns to the hotline in both English and Spanish. This document was distributed to staff and park patrons at various outreach events and training sessions. The goal of this document is to streamline the reporting and response process for pollution concerns, ensuring they are addressed efficiently.

MCM 2: Public and Personnel Involvement and Participation



The public and personnel involvement and participation program aims to engage the community in hands-on environmental stewardship and learning experiences. This program includes initiatives such as park and stream clean-ups, non-native invasive plant removal projects, nature center programs, storm drain murals, and engagement events for all ages. Additionally, adult volunteers can be trained into leadership roles such as Cleanup Leaders, Weed Warrior Supervisors, Master Naturalists, and Volunteer Community Scientists. By training volunteers to become educators themselves, we can broaden the impact of educational programs focused on improving water quality. Montgomery Parks staff also collaborate closely with community members and local watershed groups, engaging them in efforts that support the objectives of the MS4 permit.

Throughout FY24, Montgomery Parks cleanup volunteers removed and properly disposed of over 132,000 pounds of trash from parks and streams. Additionally, the Weed Warriors Volunteer Program removed invasive vines from over 18,000 trees! The survival of trees is important as they help to capture and store rainfall and promote infiltration of rainwater into the soil. Tree root systems also help to stabilize stream banks and floodplains, reducing erosion and minimizing sedimentation downstream.



Montgomery Parks continued to lead the Montgomery FrogWatch community science program in FY24, which empowers volunteers to collect data on amphibians as indicators of water quality and environmental health. Volunteers are trained to identify frog and toad calls at a wetland site and report their observations online. The data is compiled and analyzed to guide conservation efforts for frogs and toads. In FY24, 35 volunteers contributed over 200 hours to this important work.

Montgomery Parks hosted a variety of activities that engaged both staff and park patrons in stormwater management and water quality improvement:

- The inaugural **Sligo Creek Fest** on May 5, 2024, featuring the "Meet Your Aquatic Neighbors: Stream Surveys with Montgomery Parks" table and an electrofishing demonstration, which attracted over 320 attendees.
- Assisting in organizing the annual **Montgomery County GreenFest**, which drew more than 800 visitors in 2024.
- Providing professional development training for park naturalists in collaboration with the **National Association for Interpretation (NAI), Region 3**.
- Hosting outreach events, including the **Paddle and Scoop Kayak Cleanup, Tardes Ecológicas,** and **Latino Conservation Week**.
- Offering aquatic ecology-focused **master naturalist classes**.
- Running **student enrichment programs**.
- Delivering presentations and workshops at professional conferences, including the **2024 Choose Clean Water Conference**.
- Partnering with **Nature Forward** on the "Don't Pollute" Youth Leadership Program in the Long Branch community.

Montgomery Parks has a **Zero Waste Kit** that may be used by staff during gatherings, trainings, and activities. This kit diverted 861 items from the landfall in FY24.

MCM 3: Illicit Discharge Detection and Elimination

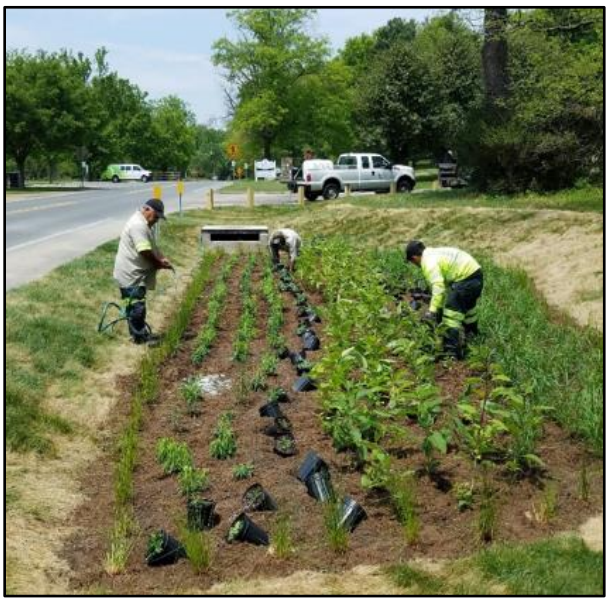
As part of the Illicit Discharge, Detection, and Elimination (IDDE) Program, Montgomery Parks identifies and eliminates illicit discharges by regularly inspecting outfalls on parkland. There are over 2,900 outfalls on park property, and outfalls with a higher risk for illicit discharge—such as those in urbanized areas and at park maintenance yards—are prioritized for screening. Montgomery Parks also responds to reports of suspected pollution, including incidents of water or sewer line breaks and illegal dumping. Over the past fiscal year, Montgomery Parks exceeded the required number of 100 screenings.

Chapter IV, Section 8 (Prohibited Activities and Conduct; Littering, Dumping and Storage) of the M-NCPPC Rules and Regulations states that the discharge of illicit materials is strictly prohibited. Enforcement of these regulations is carried out by M-NCPPC Park Police. Maintaining clean parks that are free from trash, hazardous materials, and pollutants is essential in the ongoing effort to reduce stormwater pollution.

MCM 4: Construction Site Stormwater Runoff Control

Stormwater runoff from construction sites is regulated by the Montgomery County Department of Permitting Services (MC DPS). Construction projects on parkland are required to implement and maintain appropriate erosion and sediment (E&S) control measures as required by the E&S Control Permit. These controls are regularly inspected and monitored to ensure they remain effective throughout the duration of the project.

Currently, 53 Montgomery Parks employees hold the Maryland Department of the Environment's (MDE) Responsible Personnel Certification for Erosion and Sediment Control. This certification ensures that staff are properly trained to install and maintain effective erosion and sediment controls on-site.



MCM 5: Post-Construction Stormwater Management

Stormwater management facilities are designed to treat runoff, remove pollutants, reduce the velocity of flow, and increase groundwater recharge. Examples of stormwater facilities include micro-bioretentions, rain gardens, sand filters, and grass swales, among others. After construction, stormwater facilities require regular maintenance through tasks such as mowing, trash removal, erosion repair, weeding, mulching, and more. Proper maintenance is crucial to ensure these facilities continue to function to reduce pollution and treat stormwater runoff. There are over 900 stormwater facilities on parkland. Of these, Montgomery Parks staff conduct year-round maintenance on approximately 730 facilities, while the remainder are maintained through partnerships with Montgomery County and other organizations.

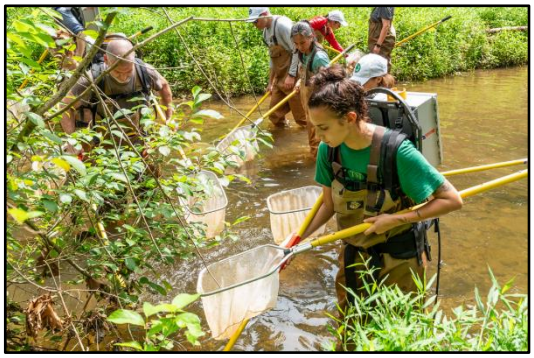
In addition to routine maintenance, stormwater facilities are inspected every three years to ensure they are functioning properly. Montgomery Parks conducts inspections on a portion of the stormwater facilities on Parkland, while others are inspected through partnerships with Montgomery County. A formal inspection program for facilities inspected by Montgomery Parks was established in FY21, which includes a standardized inspection form, a set inspection schedule, and photo documentation. The program was further improved in FY23 by incorporating Survey123 for conducting inspections and generating reports. In FY24, inspections were conducted on bioswales, micro-bios, and bioretention systems, with outfall stabilization projects scheduled for inspection in FY25.

MCM 6: Pollution Prevention and Good Housekeeping

Montgomery Parks has developed and implemented a program focused on pollution prevention and good housekeeping to reduce and prevent pollutant runoff. This program includes annual staff training, recycling and waste management initiatives, integrated pest management, nuisance wildlife control, non-native invasive vegetation management, and other practices.

Good housekeeping plans are created for park facilities with a higher potential for pollution. These plans outline best practices for the proper storage, use, and cleanup of potentially harmful materials—such as pesticides, fertilizers, cleaning products, and automotive chemicals. The plans also emphasize the importance of storing materials undercover, recycling or properly disposing of fluids, and promptly removing debris to minimize environmental impact.

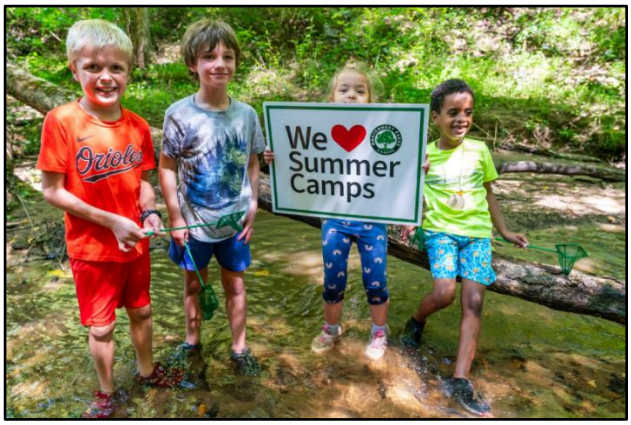
Montgomery Parks also monitors fish and benthic macroinvertebrate (bottom-dwelling insect) communities through stream biological assessments. The data collected from these efforts provide valuable insights into stream health and conditions. This information helps guide decisions on the installation and implementation of stormwater mitigation measures, stream restorations, and other BMPs, and aids to quantify any biological response that results from the implementation of these management practices.

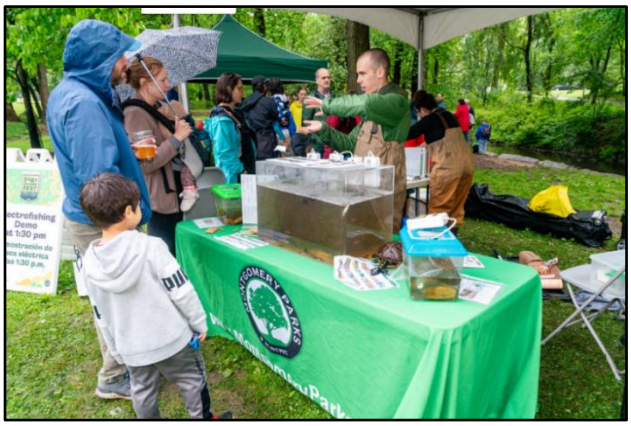


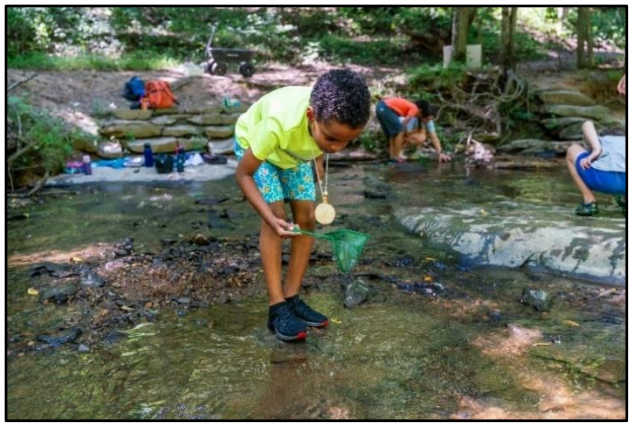
Conclusion

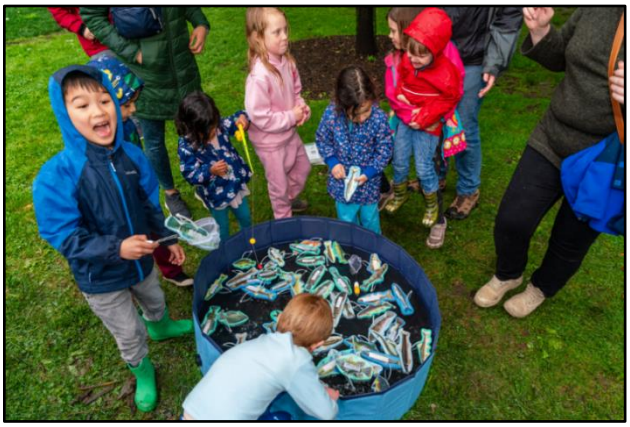
As stewards of Montgomery County's most significant stream valleys, Montgomery Parks' mission to protect natural resources through stewardship, education, and collaboration—while balancing the needs for recreation and conservation—aligns directly with the goals of the MS4 permit. These goals include reducing pollution, treating stormwater runoff, and meeting the Chesapeake Bay TMDL standards by 2025.

Montgomery Parks is on track to meet the requirement to treat 20% of previously untreated impervious surfaces through the installation of structural BMPs (such as bioretentions) and alternative practices like stream restoration and outfall stabilization. Additionally, Montgomery Parks is well-positioned to fulfill any further requirements set by the Maryland Department of the Environment (MDE) and will continue to collaborate with other MS4 permittees to implement BMPs and coordinate outreach initiatives.









MARYLAND DEPARTMENT OF THE ENVIRONMENT
WATER AND SCIENCE ADMINISTRATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
GENERAL PERMIT FOR DISCHARGES FROM
STATE AND FEDERAL SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS

GENERAL DISCHARGE PERMIT NO. 13-SF-5501
GENERAL NPDES NO. MDR055501

Final Determination:	April 27, 2018
Effective Date:	October 31, 2018
Expiration Date:	October 30, 2023

This National Pollutant Discharge Elimination System (NPDES) general permit covers State and federal small municipal separate storm sewer systems (MS4s) in certain portions of the State of Maryland. MS4 owners and operators to be regulated under this general permit must submit a Notice of Intent (NOI) to MDE by October 31, 2018. An NOI serves as notification that the MS4 owner or operator intends to comply with the terms and conditions of this general permit.

APPENDIX D

State and Federal Small MS4 Progress Report

Maryland Department of the Environment (MDE)

National Pollutant Discharge Elimination System (NPDES)
Small Municipal Separate Storm Sewer Systems (MS4) General Permit

This Progress Report is required for those State and federal agencies covered under General Discharge Permit No. 13-SF-5501. Progress Reports must be submitted to:

Maryland Department of the Environment, Water and Science Administration
Sediment, Stormwater, and Dam Safety Program
1800 Washington Boulevard, Suite 440, Baltimore, MD 21230-1708
Phone: 410-537-3543 FAX: 410-537-3553
Web Site: www.mde.maryland.gov

Contact Information

Permittee Name:	M-NCPPC Department of Parks, Montgomery County
Responsible Personnel:	Miti Figueredo, Director
Mailing Address:	2425 Reedie Drive, 12th Floor
	Wheaton, MD 20902
Phone Number(s):	(301) 495-2554
Email address:	miti.figueredo@montgomeryparks.org
Additional Contact(s):	Kyndal Gehlbach, NPDES Program Coordinator
Mailing Address:	2425 Reedie Drive, 11th Floor
Phone Number(s):	(301) 495-2538
Email address:	kyndal.gehlbach@montgomeryparks.org

Signature of Responsible Personnel

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Miti Figueredo		10/17/2024
Printed Name	Signature	Date

Reporting Period (State Fiscal Year): 2024

Due Date: 10-31-2024 **Date of Submission:** 10-21-2024

Type of Report Submitted:

Impervious Area Restoration Progress Report (Annual): ☐

Six Minimum Control Measures Progress (Years 2 and 4): ☐

Both: ☑

Permittee Information:

Renewal Permittee: ☑

New Permittee: ☐

Compliance with Reporting Requirements

Part VI of the Small MS4 General Discharge Permit (No. 13-SF-5501) specifies the reporting information that must be submitted to MDE to demonstrate compliance with permit conditions. The specific information required in this MS4 Progress Report includes:

1. Annual: Progress toward compliance with impervious area restoration requirements in accordance with Part V of the general permit. All requested information and supporting documentation must be submitted as specified in Section I of the Progress Report.
2. Years 2 and 4: Progress toward compliance with the six minimum control measures in accordance with Part IV of the general permit. All requested information and supporting documentation shall be reported as specified in Section II of the Progress Report. MDE may request more frequent reporting and/or a final report in year 5 if additional information is needed to demonstrate compliance with the permit.

Instructions for Completing Appendix D Reporting Forms

The reporting forms provided in Appendix D allow the user to electronically fill in answers to questions. Users may enter quantifiable information (e.g., number of outfalls inspected) in text boxes. When a more descriptive explanation is requested, the reporting forms will expand as the user types to allow as much information needed to fully answer the question. The permittee must indicate in the forms when attachments are included to provide sufficient information required in the MS4 Progress Report.

Section I: Impervious Area Restoration Reporting Form

Section I: Impervious Area Restoration Reporting

1. a. Was the impervious area baseline assessment submitted in year 1?
   ☑ Yes ☐ No

   b. If No, describe the status of completing the required information and provide a date at which all information required by MDE will be submitted:

   c. Has the baseline been adjusted since the previous reporting year?
   ☐ Yes ☑ No
2. Complete the information below based on the most recent data:

   Total impervious acres of area covered under this permit: 412.6

   Total impervious acres treated by stormwater water quality best management practices (BMPs): 80.17

   Total impervious acres treated by BMPs providing partial water quality treatment (multiply acres treated by percent of water quality provided):
   0

   Total impervious acres treated by nonstructural practices (i.e., rooftop disconnections, non-rooftop disconnections, or vegetated swales):
   0

   Total impervious acres untreated: 332.43

   Twenty percent of this total area (this is the restoration requirement):
   66.49

   Verify that all impervious area draining to BMPs with missing inspection records is not considered treated. Describe how this information was incorporated into the overall analysis:

   Per the NPDES General Permit (13-SF-5501) Part V. Section D., only functioning BMPs that are inspected triennially are included in the impervious acre credits calculation and in the Restoration Activity Schedule (see Appendix C: Restoration Activity Schedule). Parks has improved upon the triennial inspection process by going paperless and now utilizes Survey123 to capture inspection results.

   A select number of MC DEP BMPs receive and treat drainage from impervious area on both MC DEP and M-NCPPC Department of Parks (Parks) properties. Maintenance responsibilities for those BMPs on parkland are shared between Parks and MC DEP. MC DEP is responsible for triennial inspections of these facilities;

Section I: Impervious Area Restoration Reporting

inspection dates for these facilities are included from MC DEP's data in the Urban BMP database.

To ensure that impervious acre credits are not double counted between Parks and MC DEP, the impervious area treated is clipped to Parks' property boundaries using ArcGIS. Only treatment of impervious area within Parks property is included in the Parks' baseline total. Montgomery Parks works directly with MC DEP to ensure that there is no double counting of credits. The impervious area calculation methodology is provided as Appendix A: Baseline Impervious Area Assessment Methodology.

3. Has an Impervious Area Restoration Work Plan been developed and submitted to MDE in accordance with Part V.B, Table 1 of the permit or other format?
   ☑ Yes ☐ No
   Note: *Included herein as Table 1. Impervious Area Restoration Work Plan.*

   Has MDE approved the work plan?
   ☑ Yes ☐ No

   If the answer to either question is No, describe the status of submitting (or resubmitting) the work plan to MDE and provide a date at which all outstanding information will be available:
   Not applicable.

   Describe progress made toward restoration planning, design, and construction efforts and describe adaptive management strategies necessary to meet restoration requirements by the end of the permit term:
   Parks is on track to meet the 20% retrofit requirement by 2025. Additionally, Parks has a plan in place for restoration implementation beyond 2025. An estimate of impervious area restoration implementation to achieve an additional restoration equivalent to 10% of the current baseline by 2030 is included in the Restoration Activity Schedule. Parks is positioned to implement additional restoration projects and will continue to plan, design, construct, and implement BMPs.

4. Has a Restoration Schedule been completed and submitted to MDE in accordance with Part V.B, Table 2 of the permit?
   ☑ Yes ☐ No

   In year 5, has a complete restoration schedule been submitted including a complete list of projects and implementation dates for all BMPs needed to meet the twenty percent restoration requirement?
   ☑ Yes ☐ No

Section I: Impervious Area Restoration Reporting

The complete restoration schedule was submitted in year 5. Parks continues to update the restoration activity schedule to track progress towards meeting the twenty percent restoration requirement by 2025. An updated restoration schedule is also included in this year's submittal.

Are the projected implementation years for completion of all BMPs no later than 2025?
☑ Yes ☐ No

Per MDE's comment on our FY23 Annual Progress Report, projects planned through 2030 are also included in the Restoration Activity Schedule in Appendix C, which shows capacity for achieving additional restoration equivalent to 10% of the current baseline by 2030.

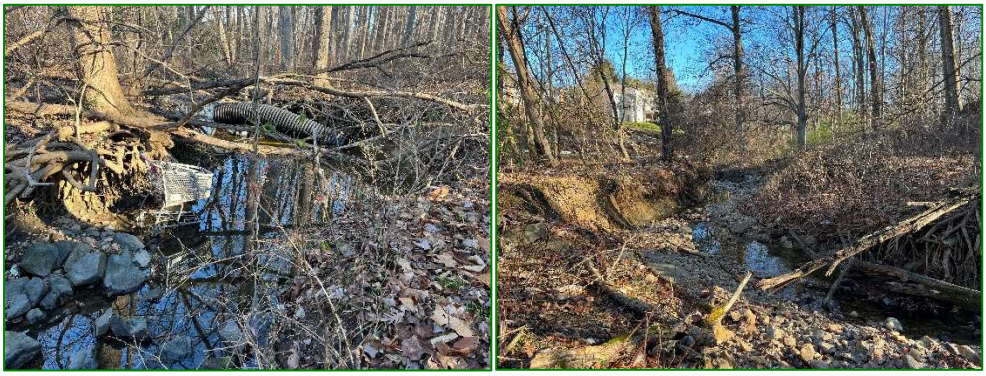
Describe actions planned to provide a complete list of projects in order to achieve compliance by the end of the permit term:

A complete list of constructed and planned projects is included in Appendix C: Restoration Activity Schedule. Parks is on track to meet the 20% retrofit requirement by 2025. As recommended by MDE, the Restoration Activity Schedule also includes an estimate of impervious area restoration implementation to achieve an additional restoration equivalent to 10% of the current baseline by 2030.

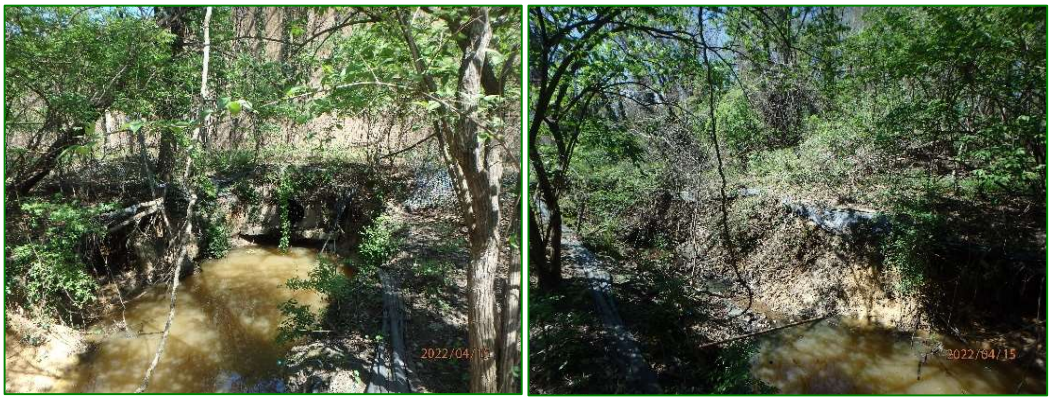
Describe the progress of restoration efforts (attach examples and photos of proposed or completed projects when available):

Parks is currently restoring the Glenallan Tributary stream and has several other restoration projects moving into the construction phase, including the Flower Avenue outfall project and Parker Avenue stream restoration. When finalized, these efforts will reduce erosion and increase the quality and quantity of both instream and riparian habitat. Each of the projects will be accompanied by robust plantings of native plugs, shrubs, and trees to improve the local vegetative community. The restoration of Glenallan Tributary will be credited to Montgomery County's Phase I MS4 Permit goals, while the Flower Avenue outfall project and Parker Avenue stream restoration will be credited towards Montgomery Parks Phase II MS4 Permit goals.

Section I: Impervious Area Restoration Reporting

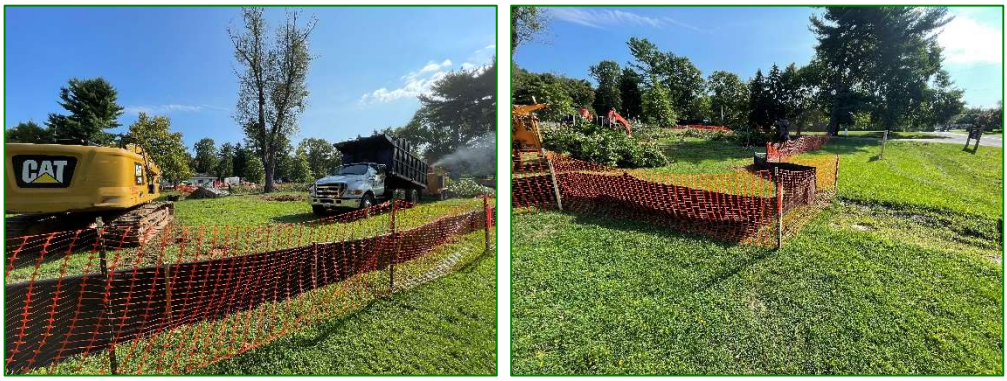


Above: *Glenallan Tributary stream restoration site (prior to restoration)*



Above: *Flower Avenue outfall stabilization (prior to restoration)*

In October 2023, Nolte Local Park was retrofit to include a micro-bioretention to provide treatment for an existing parking lot that previously had no stormwater treatment. Colesville Local Park is also currently being retrofit to add stormwater management to treat previously untreated impervious. Additionally, several stormwater improvement projects are in the design and permitting phases and are included in the Restoration Activity Schedule.



Above: *Colesville Local Park stormwater management retrofit (during construction)*

Section I: Impervious Area Restoration Reporting

Above: *Nolte Local Park micro-bioretention installation (during construction)*

Above: *Nolte Local Park micro-bioretention installation (before, during, and after construction)*

Parks is on track to meet the 20% retrofit requirement by 2025 and will continue to advance meaningful water quality projects and initiatives.

5. Has the BMP database been submitted to MDE in Microsoft Excel format in accordance with Appendix B, Tables B.1.a, b, and c?
   ☑ Yes ☐ No

   Is the database complete?
   ☑ Yes ☐ No

   If either answer is No, describe efforts underway to complete all data fields, and a date that MDE will receive the required information:
   Not applicable

6. Provide a summary of impervious area restoration activities planned for the next reporting cycle (attach additional information if necessary):
   Parks will continue to progress impervious area restoration through activities that include, but are not limited to, impervious surface removal, retrofits that incorporate ESD, and alternative BMPs (e.g., stream restoration and outfall stabilization). Planned projects are included in the Restoration Activity

Section I: Impervious Area Restoration Reporting

Schedule. As recommended by MDE, the Restoration Activity Schedule also includes an estimate of impervious area restoration implementation that could achieve an additional restoration equivalent to 10% of the current baseline by 2030.

7. Describe coordination efforts with other agencies regarding the implementation of impervious area restoration activities:

As a steward of over 37,000 acres of land that span Montgomery County, Parks' MS4 jurisdiction abuts other small and large MS4's including Montgomery County, Maryland Department of Transportation State Highway Administration (MDOT SHA), the City of Gaithersburg, the City of Takoma Park, the City of Rockville, and the U.S. General Services Administration properties. Communication and coordination on implementation strategies and activities occur with these jurisdictions whenever projects have the potential or opportunity to impact multiple jurisdictions. Parks collaborates most frequently with Montgomery County, installing stream restoration and stormwater retrofits on parkland for the County's Phase I MS4 Permit. Parks and Montgomery County also collaborate on the maintenance of stormwater facilities on parkland.

Additionally, in 2024 Montgomery Parks joined the Maryland Municipal Stormwater Association (MAMSA), which is a statewide association that brings together over 20 local governments and consulting organizations and provides a means for collaboration, discussion, and knowledge sharing among members.

8. List the total cost of developing and implementing impervious area restoration program during the permit term:

A portion of funding for the Parks MS4 Program is provided by the Montgomery County Water Quality Protection Fund (WQPF), which is raised, in part, by a fee on impervious acreage in the county aimed at improving the water quality of county streams and reducing the impacts of stormwater runoff.

Current projections for implementing the impervious area restoration program for the 5-year permit term plus the 1-year administrative permit extension (6 years total):

- *Capital Improvement Program (CIP) $8,356,000 over the 6-year permit term via two funding projects:*
  - *Pollution Prevention and Repairs to Ponds and Lakes: $3,168,000*
  - *Stream Protection: $5,188,000*
- *Operating Budget: $4,869,228 ($811,538 annually)*

As stewards of Montgomery County's most significant stream valleys, Parks' mission to protect natural resources through stewardship, education, and

Section I: Impervious Area Restoration Reporting

collaboration while balancing the need for recreation and conservation inherently aligns with the goals of the NPDES General Permit. Parks' general funds also contribute to impervious area restoration and minimum control measure efforts, as the work is complementary to Parks' mission.

Table 1. Impervious Area Restoration Work Plan

	Management Strategies and Goals
Year 1 | FY19	1. Develop an impervious area baseline assessment and begin to develop the Urban BMP Database. 2. Develop an impervious area restoration work plan for Maryland Department of Environment (MDE) review and approval (this Table). 3. Initiate development of a list of specific projects to be implemented for restoration and identify these on the Restoration Activity Schedule (Appendix C). 4. Assess opportunities and timelines for implementing water quality Best Management Practices (BMPs). 5. Assess opportunities to develop partnerships with other National Pollutant Discharge Elimination System (NPDES) permittees.
Year 2 | FY20	1. Analyze and update the database to capture all BMPs, including maintenance and inspection schedules to verify impervious baseline area and restoration data. 2. Submit Urban BMP Database with maintenance and inspection status of past and newly implemented BMPs. 3. Analyze existing data (e.g., biological, watershed assessments, etc.) to identify water quality priorities and opportunities for restoration. 4. Develop Stream Restoration Inspection program. 5. Update and submit a Restoration Activity Schedule (Appendix C). 6. Report on minimum control measures (MCMs) utilizing Section II Reporting Forms.
Year 3 | FY21	1. Refine strategies for watershed assessments and identifying potential restoration projects. 2. Update Urban BMP Database with maintenance and inspection status of past and newly implemented BMPs. 3. Begin more robust inspection paradigm for Environmental Site Design (ESD) and Structural BMPs. 4. Continue to identify opportunities for water quality improvement projects and collaborative partnerships to meet restoration requirements. 5. Update the Restoration Activity Schedule (Appendix C).
Year 4 | FY22	1. Update the Urban BMP Database with maintenance and inspection status of past and newly implemented BMPs. 2. Update the Restoration Activity Schedule (Appendix C). 3. Report on minimum control measures (MCMs) utilizing Section II Reporting Forms. 4. Complete a preliminary gap analysis, establish monitoring priorities and frequencies, and develop strategies for implementing watershed assessments and identifying potential restoration projects. 5. Understand and coordinate biological monitoring implementation with local and state efforts at randomly selected locations to avoid duplicative efforts and maintain data comparability and consistency for larger scale assessments. 6. Check existing database to confirm that all assets include proper close-out documentation and improve the process for collecting construction completion data and as-built plans.

Year 5| FY23	1. Update Urban BMP Database with maintenance and inspection status of past and newly implemented BMPs. 2. Update the Restoration Activity Schedule (Appendix C). 3. Work towards developing and piloting a provisional parkland screening process to be used in conjunction with countywide watershed and suitability assessments to identify impaired or recovering stream reaches for water quality improvement project prioritization. 4. Identify and recommend opportunities for water quality improvement projects while working towards collaborative partnerships to meet and monitor restoration requirements with neighboring permit holders. 5. Continue long-term efforts towards collecting and documenting construction completion data and as-built plans to verify water quality treatment. 6. Plan for restoration implementation beyond 2025 equivalent to 10% of the current baseline by 2030 to inform future permit requirements.
Year 6+| FY24 - 2030	1. Update Urban BMP Database with maintenance and inspection status of past and newly implemented BMPs. 2. Update the Restoration Activity Schedule (Appendix C). 3. Develop a georeferenced relational database to validate a 30-year dataset to map stream conditions across the county and interjurisdictional permit areas. 4. Partner and exchange data with Montgomery County Department of Environmental Protection for countywide watershed assessments and trend analyses. 5. Begin a provisional parkland screening process to be used in conjunction with countywide watershed and suitability assessments to identify impaired or recovering stream reaches for water quality improvement project prioritization. 6. Continue long-term efforts towards collecting and documenting construction completion data and as-built plans to verify water quality treatment. 7. Continue to work with the Department on recommendations for continued restoration through 2030.

Section II: Minimum Control Measures Reporting Forms

MCM #1: Personnel Education and Outreach

1. Does the permittee maintain a process and phone number for the public and/or staff to report water quality complaints?
   ☑ Yes ☐ No

   Number of complaints received: 46

   Describe the actions taken to address the complaints:

   Actions to address complaints are outlined in the Water Quality Concerns Log included as Appendix D.

   Concerns are routed to the Resource Analysis section of the Park Planning and Stewardship Division. They are received through a variety of methods, including a Water Quality Concerns Hotline, the Parks' Information & Customer Service team, the Park Police, park patrons, and parks staff members.

2. Describe training to employees to reduce pollutants to the MS4:

   Annual Pollution Prevention Training is required for all Parks' operation staff and is also made available to all staff each year. The training includes material on stormwater pollution prevention practices at industrial facilities (i.e., park maintenance yards) and throughout the parks. The annual training also includes information on spill prevention and response and best management practices for conducting work around stormwater BMPs and storm drain inlets.

3. Describe the target audience(s):

   The target audience is Parks operations staff, including individuals in the following divisions: Facilities Management Division; Northern Parks Division; Southern Parks Division; and the Horticulture, Forestry, and Environmental Education Division.

4. Are examples of educational/training materials attached with this report?
   ☑ Yes ☐ No

   See Appendix G: Examples of Educational and Training Materials.

   Provide the number and type of educational materials distributed:

   The Annual Pollution Prevention Training was distributed in FY23 and FY24 as a pre-recorded PowerPoint.

   A guidance document was developed in both English and Spanish titled, "Suspect Water Pollution in One of Our Parks?" to educate the public on the types of water quality concerns that should be reported to the Water Quality Concerns Hotline. This guidance document has helpful photographs of potential pollutants (e.g., sediment, paint, and algal blooms) and includes common

pollution look-a-likes (e.g., filamentous algae and iron-oxidizing bacteria). The document includes the Water Quality Concerns Hotline phone number to report pollution concerns on parkland and includes guidance on who to call if there is a concern that is discovered or that originates off parkland. A QR code was developed and is included on the guidance document that links the reader to the Montgomery Parks stormwater management webpage for more information.

Describe how the personnel education program is appropriate for the target audience(s):

The training was developed by Parks staff who are knowledgeable of the most effective ways to eliminate the discharge of pollutants caused by stormwater runoff. The training covers stormwater management topics that are most relevant to the maintenance yards and other parts of the Parks where potential pollutants are stored and where best management practices should be employed. The training is updated each year to stay relevant and to ensure it is appropriately tailored to the operational staff. The training was pre-recorded in fiscal year 2023 and fiscal year 2024 and distributed to staff members virtually to increase accessibility and flexibility of viewing.

The guidance document titled "Suspect Water Pollution in One of Our Parks?" is written in layman's terms and includes pictures and detailed descriptions so that someone with no prior education on water pollution can feel confident identifying and reporting water quality concerns.

5. Describe how stormwater education materials were distributed to the public and/or staff (e.g., newsletters, website):

Parks' operation staff are required to take the annual pollution prevention training. The pollution prevention training is also made available to all staff through Parks' Learning Central portal. Park staff and the public can find additional stormwater education materials on the following websites:

- https://montgomeryparks.org/caring-for-our-parks/natural-spaces/stormwater-management/
- https://montgomeryparks.org/caring-for-our-parks/natural-spaces/water-quality-information/

Pocket-sized water quality informational cards were also provided to operations and volunteer-facing staff that contain Parks' Water Quality Concerns Hotline number, Parks' water quality information webpage (above), as well as other useful contacts, such as WSSC Water and Sewer Emergency.

The guidance document titled "Suspect Water Pollution in One of Our Parks?" was distributed during external education and outreach events, as well as internal education and outreach events and presentations. This document was also distributed via email in a monthly report from the Director of Parks to all staff employed with Montgomery Parks. An accessible version of this document

that meets ADA standards is also on the Montgomery Parks Water Quality Information webpage.

6. Describe how educational programs facilitated efforts to reduce pollutants in stormwater runoff:

   Educational programs emphasize the importance of reducing pollutants in stormwater runoff and inform participants of the tools, measures, and processes in place to achieve pollution reduction. Staff are also trained annually on pollution prevention measures, which better equips them to recognize potential stormwater-related issues and how to properly respond.

   The water quality informational cards also provide a practical and useful way to quickly report a variety of water quality concerns. The guidance document titled "Suspect Water Pollution in One of Our Parks?" educates staff and the public on how to effectively report pollution and raises awareness of the Water Quality Concerns Hotline.

7. Provide a summary of activities planned for the next reporting cycle:

   The Stormwater Pollution Prevention Training will continue to be conducted annually to ensure that Parks staff understand stormwater pollution, how to prevent it, and who to contact when water quality concerns are observed. Beginning in 2025, the training will also be conducted in-person and will feature a mock spill and response demonstration to educate staff on proper spill response procedures and how to use the materials contained in the spill kits. The training will also be distributed online to increase engagement.

   Parks recently issued a Request for Proposal (RFP) and selected five contractors that are on call to assist with the emergency response of: hazardous material, petroleum product, and/or chemical release/spill clean-up; soil testing and amendment; and proper material disposal. Parks is also in the process of updating the department-wide Spill Response Procedures. Education and outreach materials are also in draft form and will emphasize spill prevention, preparedness, and response, ensuring park staff understand the procedures to follow in the event of an inadvertent spill.

   Parks is also working to expand our reach and improve education and outreach related to smart salting and best management practices. Prior to the FY25 winter season, staff that apply salt will be required to take the Montgomery County Smart Salt Applicator Training hosted by the Izaak Walton League of America. Additionally, the Izaak Walton League of America will be partnering with Meadowside Nature Center to offer a free program to the public about smart salting practices. They will also give participants a free salt kit to train them as "salt watchers".

MCM #1: Personnel Education and Outreach

Each winter Parks posts social media content on Instagram and Facebook providing information about techniques homeowners can use to minimize salt application on their sidewalks and driveways and how to report piles of road salt for clean-up. Parks is working with the marketing team to create additional social media content to be shared prior to the winter season.

Parks staff will continue to investigate, mediate, and track water quality complaints as they are received.

8. List the total cost of implementing this MCM over the permit term:
   $2,517,984 over the 6-year permit term.

MCM #2: Public or Personnel Involvement and Participation

1. Describe how the public or personnel involvement and participation program is appropriate for the target audience(s):

   The public or personnel involvement and participation program is designed for the target audience of park users. The programs' primary initiatives are park and stream clean-ups, non-native invasive plant removal projects, nature center programs, and other events for all ages. Adult stewards can also be trained as Cleanup Leaders, Weed Warrior Supervisors, Master Naturalists, Nature Center Volunteers, FrogWatch participants, and Volunteer Community Scientists. This empowers them to educate others on the impacts of uncontrolled stormwater pollution to waterways, as well as to collect data to help evaluate aquatic habitat conditions. Parks' staff work closely with community members and local watershed groups to involve them in efforts that help to meet the goals of the NPDES MS4 general permit.

   The Volunteer Services Office engages volunteers from local churches, businesses, non-profit organizations, schools, and community groups to restore their parks while learning about stormwater management and how they can contribute to initiatives aimed at improving water quality. In Fiscal Years 2023 and 2024, there were a total of 1,072 cleanups and 954 Weed Warrior events.

   The Nature Centers, Nature Classroom, and SEED Classroom are all located adjacent to a body of water such as Rock Creek or Little Seneca Lake. Each location offers specific programming focused on water, incorporates water quality and conservation topics, and provides recreational activities for the public. Examples include WaterFest, Creek Week, kayaking, storm drain mural paintings, and more. Additionally, the Nature Centers work to educate staff on the various stormwater features located on their work property. Examples include the spillway in Little Seneca Lake, the Study Pond at Meadowside Nature Center, and the earthen dam at Lake Frank.

2. Quantify and report public and/or staff involvement and participation efforts as shown below where applicable.

Number of participants at public and/or staff events:	28k
Quantity of trash and debris removed at clean up events:	240.2k lb
Number of employee volunteers participating in sponsored events:	32
Number of trees planted:	1,463
Length of stream cleaned (feet):	264,000

MCM #2: Public or Personnel Involvement and Participation

Number of storm drains stenciled: 16

Number of public notices published to facilitate public and/or staff participation:
~360

Number of public and/or staff meetings organized:
N/A

Total number of attendees at all public and/or staff meetings:
N/A

Describe the agenda, items discussed, and collaboration efforts with interested parties for public and/or staff meetings:

Not applicable. Coordination of volunteer projects occurred mostly via email.

Describe how public and/or staff comments have been incorporated into the permittee's MS4 program, including water quality improvement projects to address impervious area restoration requirements:

Permit documents are available on the Parks' website for the public to review as interested. Input is collected on potential and active water quality improvement projects throughout the year and meetings are held on a regular basis to discuss opportunities to further advance the goals and management strategies of Parks' permit.

Describe any additional events and activities if applicable:

Nature Center Programs

Over the past two fiscal years, five nature centers offered a combined total of 428 water-related educational programming events or activities to the public and enrolled over 9,000 participants. These participants were educated on the importance of healthy waterways, sources of pollution, and local aquatic wildlife. Examples of these programs included week-long summer camps called "Creek Week" and "Grossology", guided kayaking tours, fishing programs, boat trips, and festivals.

Additionally, a Zero Waste kit (equipped with reusable plates, cups, cutlery, and a compost bin) is located at Meadowside Nature Center and was used at 19 events with 345 total people over these last two fiscal years. Collectively, the events composted 27 pounds of food and diverted 861 items from the landfill! When this kit was created, a flyer was disseminated across the organization to encourage it's use and outline its importance.

MCM #2: Public or Personnel Involvement and Participation

FrogWatch Program

Montgomery Parks continued leading the Montgomery FrogWatch community science program, which empowers volunteers to collect data on amphibians as indicators of water quality and environmental health while helping to inform conservation strategies for species and their habitats. 104 prospective community scientists attended training sessions from March 2022 – June 2024 to learn how to recognize frog and toad calls and submit data to a national database. Monthly monitoring meet-ups were also hosted at Meadowside Nature Center and Locust Grove Nature Center, as well as in collaboration with Nature Forward, promoting volunteer engagement and extending learning opportunities during 33 distinct events.

Program participation has grown each year, with 22 volunteers reporting 168 hours in FY23 and 35 volunteers contributing 208 hours in FY24. These hours equate to a service value of more than $13,125 during the reporting period, all while collecting data needed to protect existing aquatic habitats and help measure the success of habitat enhancement and restoration efforts. One such project implemented by Montgomery Parks outside of Locust Grove Nature Center involving reconveyance of stormwater and wetland habitat creation with hydrophytic vegetation plantings was documented by FrogWatch volunteers to support 6 frog and toad species since its completion in April 2023. Moreover, more than 51 participants have contributed 949 monitoring observations throughout the duration of this permit (2018 – 2024).

Outreach Events

Over the last two fiscal years, Montgomery Parks' cleanup volunteers removed 240,255 pounds of trash from streams and parks, and the Weed Warrior Program volunteers removed invasive vines from approximately 34,573 trees.

Parks also collaborates with MC DEP and other County agencies/local governments to organize the annual Montgomery County GreenFest hosted in the spring, which is focused on general environmental and sustainability issues. During fiscal years 2023 and 2024, the event reached approximately 1,600 participants. Please see https://montgomerycountygreenfest.org/ for more information.

Montgomery Parks was also a key partner for the Don't Pollute youth program in collaboration with Nature Forward, Community Health and Empowerment through Education and Research (CHEER), and Defensores de la Cuenca. Eighteen Black, Indigenous, and People of Color (BIPOC) high school students participated in the program to create and lead litter reduction projects in the Long Branch community in Silver Spring, MD and share these results with community members. Montgomery Parks provided support during training sessions and co-organized several volunteer events in Montgomery Parks.

MCM #2: Public or Personnel Involvement and Participation

Montgomery Parks also participated in outreach events such as Charlemos con Zumba (Let's Talk with Zumba), Tardes Ecologicas (Eco Evenings), Community Science Festival, Sligo Creek Fest, Latino Conservation Week, Paddle and Scoop Kayak Cleanup, and the Crossroads Farmers Market. We will continue to work with local partners to engage the public in projects that improve local watersheds and educate communities on stormwater pollution.

Additional events and activities that engaged more than 780 staff and members of the public in stormwater education and stream health during the reporting period included:

i. *Professional development trainings for park naturalists and cohorts with the National Association for Interpretation (NAI), Region 3*
ii. *Aquatic ecology-focused master naturalist classes*
iii. *Student enrichment programs*
iv. *Presentations and workshops at professional conferences including the 2022 Maryland Water Monitoring Council Annual Meeting and 2024 Choose Clean Water Conference.*
v. *The inaugural Sligo Creek Fest on May 5, 2024, with the "Meet Your Aquatic Neighbors: Stream Surveys with Montgomery Parks" table and electrofishing demo attracting at least 320 individual attendees.*

3. Provide a summary of activities planned for the next reporting cycle:

Park and stream cleanups, as well as nature center programming, continue to be the primary activities for public involvement and participation. Other opportunities will be undertaken, where possible. Parks will continue to support collaborative projects and events with neighboring jurisdictions and other partners, including cohosting the 12th year of the Montgomery County FrogWatch community science program kicking off in February 2025. Parks' staff will continue to host events for GreenFest, Latino Conservation Week, and Earth Month. The volunteer cleanups program is developing more long-term volunteer programs with the goal of maintaining a regular presence at parks-in-need. We will also continue to work closely with local watershed groups and other community partners to understand concerns and priorities related to stormwater.

4. List the total cost of implementing this MCM for the permit term:

$1,035,234 over the 6-year permit term.

MCM #3: Illicit Discharge Detection and Elimination (IDDE)

1. Does the permittee maintain a map of the MS4 owned or operated by the permittee, including stormwater conveyances, outfalls, stormwater best management practices (BMPs), and waters of the U.S. receiving stormwater discharges?
☑ Yes ☐ No

   If Yes, attach the map to this report and provide a progress update on any features that are still being mapped. (If submitting a map would compromise the operational security of an agency, indicate that the map is available for MDE review on site.) If No, detail the current status of map development and provide an estimated date of submission to MDE:

   A geodatabase of field verified stormwater conveyances, outfalls, BMPs, and waters of the U.S. receiving stormwater discharges was completed in March of 2020 for the approximately 37,000 acres of Montgomery Parks on a watershed-by-watershed basis (see Appendix E: Map of Conveyances, Outfalls, BMPs, and Waters of the U.S.). The quantity of data is substantial, as parks are designated primarily around stream valleys with over 490 miles of streams to steward.

   As additional assets are discovered, they are added to the map and dataset. More recent updates include revisiting previously mapped parks and project sites, particularly in those areas mapped originally from 2012 - 2014 and adding or modifying assets. The data will continue to be refined.

2. Does the permittee have a policy, or other agency directive, that prohibits illicit discharges?
☑ Yes ☐ No

   If Yes, describe the policy utilized for enforcement by the permittee (alternatively, a link may be provided to the permittee's webpage where this information is available). If No, describe the permittee's plan, including approximate time frame, to establish a policy that prohibits illicit discharges into the storm sewer system:

   Chapter IV, Section 8 (Prohibited Activities and Conduct; Littering, Dumping and Storage) of the M-NCPPC Rules and Regulations prohibits the discharge of illicit materials. The directive can be found here: https://www.montgomeryparks.org/about/rules-and-regulations/. M-NCPPC Park Police conduct enforcement for all M-NCPPC Rules and Regulations on parkland.

   When pollution originates on either private or County-owned land, M-NCPPC coordinates with MC DEP for investigation and enforcement. Their policy can be found here: https://codelibrary.amlegal.com/codes/montgomerycounty/latest/montgomeryco_md/0-0-0-127911#JD_19-50. MC DEP enforces all Montgomery County Code

violations, including illicit discharges found on parkland but originating on private or County-owned property. Similarly, other nearby MS4 jurisdictions (Gaithersburg, Rockville, and Takoma Park) have their own rules and regulations regarding infractions within their boundaries and coordination occurs when incidents cross these boundaries.

3. Did the permittee submit to MDE standard operating procedures (SOPs) in accordance with Part IV.C of the permit?
☑ Yes ☐ No

   If No, provide a proposed date that SOPs will be submitted to MDE. MDE may require more frequent reports for delays in program development:
   Standard Operation Procedures (SOPs) are resubmitted in this fiscal year 2024 NPDES MS4 annual progress report.

   Did MDE approve the submitted SOPs?
☑ Yes ☐ No

   If No, describe the status of requested SOP revisions and approximate date of resubmission for MDE approval:
   Not applicable

4. Describe how the permittee prioritized screening locations in areas of high pollutant potential and identify the areas within which screenings were conducted during this reporting period:
   To identify and prioritize screening locations in areas of high pollution potential, ArcGIS is used to compare spatial data including outfalls, land use, and storm drain networks. Outfalls (and inlets, as needed) within the Park's twelve maintenance yards are screened annually, as these locations store materials that have higher pollutant potential. Other outfalls within the parks, with priority given to those near more urbanized areas, are screened on a rotating basis. In total, at least one hundred structures are screened annually.

5. Answers to the following questions must reflect this two-year reporting period.

   How many outfalls were identified on the map? 2,903

   How many outfalls were required to be screened for dry weather flows to meet the minimum numeric requirement based on property size? 100/year

   How many outfalls were screened for dry weather flows? 208

MCM #3: Illicit Discharge Detection and Elimination (IDDE)

Per the permittee's SOP, how frequently were outfalls required to be screened?

A minimum of 100 dry weather screenings are required to be performed annually.

At what frequency were outfalls screened during the reporting period?

103 screened in FY23, and 105 screened in FY24

How many dry weather flows were observed? 20

If dry weather flows were observed, how many were determined to be illicit discharges? 0

Describe the investigation process to track and eliminate each suspected illicit discharge and report the status of resolution:

See Appendix F: Montgomery Parks IDDE Program SOP, specifically the section titled "Investigating the Source of Pollution" for a detailed description of the investigation process.

6. Describe maintenance or corrective actions undertaken during this reporting period to address erosion, debris buildup, sediment accumulation, or blockage problems:

***Erosion**: When erosion is observed, the appropriate staff members are contacted, and erosion and sediment control measures are implemented in accordance with COMAR 26.17.01 with support from Park Development Engineering and Facilities Maintenance Heavy Machinery Crew (when larger equipment is required) and Horticulture's Tree Crew (when downed trees are a factor).*

***Debris buildup and sediment accumulation within stormwater BMPs**: Parks' Water Quality Teams address minor sediment accumulations via removal and MC DEP also performs sediment removal and major dredging, where necessary.*

***Sewage blockage and overflows:** To prevent sewage blockage and overflow, grinder pumps are used where needed. From a Sanitary Sewer Overflow (SSO) perspective, technology installed on new and renovated grinder pumps will sound an alarm that there is an issue with the grinder pump BEFORE we reach the point of raw sewage overflow. Not all the grinder pumps have this technology, but we continue to upgrade this technology throughout our system as possible.*

Montgomery Parks maintains a database of underground utilities on parkland that includes sewage tanks, sewer lines, and sewer appurtenances (e.g., grinder pumps, sewer manholes, pumping stations, cleanouts, etc.). The data documents and tracks sewage tanks that are pumped bi-annually, annually, and biennially.

MCM #3: Illicit Discharge Detection and Elimination (IDDE)

7. Is the permittee maintaining all IDDE inspection records and are they available to MDE during site inspections?
   ☑ Yes ☐ No

8. If spills, illicit discharges, and illegal dumping occurred during this reporting period, describe the corrective actions taken, including enforcement activities, and indicate the status of resolution:
   See Appendix D: Water Quality Concerns Log

9. Attach to this report specific examples of educational materials distributed to the public and/or staff related to illicit discharge reporting, illegal dumping, and spill prevention. If these are not available, describe plans to develop public and/or staff education materials and submit examples with the next Progress Report:
   See Appendix G: Examples of Educational and Training Materials, Appendix F: Montgomery Parks IDDE Program SOP, and Appendix H: Montgomery Parks Spill Response Procedures.

10. Specify the number of employees trained in illicit discharge detection and spill prevention: See belo
    Fiscal year 2023: 329 staff
    Fiscal year 2024: 394 staff

11. Provide examples of training materials. If not available, describe plans to develop employee training and submit examples with the next Progress Report:
    Examples of educational and training materials are included in Appendix G. Also see Minimum Control Measure 1. Personnel Education and Outreach.

12. List the cost of implementing this MCM during this permit term:
    $715,200 over the 6-year permit term.

MCM #4: Construction Site Stormwater Runoff Control

1. Does the permittee have a process for receiving, investigating, and resolving complaints from interested parties related to construction activities and erosion and sediment control?
☑ Yes ☐ No

   Describe the process:
   Residents may call 311, which is directed to the Montgomery County Department of Permitting Services (MC DPS).

   Provide a list of all complaints and a summary of actions taken to resolve them:
   This information is tracked by MC DPS; please refer to MC DEP's NPDES MS4 annual progress report for this information.

2. Total number of active construction projects within the reporting period: See below

   Provide a list of all construction projects and tabulate the total disturbed area:
   This information is tracked by MC DPS; please refer to MC DEP's NPDES MS4 annual progress report for this data.

3. Total number of violation notices issued by MDE related to this MCM on the agency's property: 4

   Describe the status of enforcement activities:
   - *Mill Creek – Noncompliant; Parks preparing rectification plan.*
   - *Seneca Landing – Permit modified and the completed site is in compliance with the permit and conditions.*
   - *Parklawn – Noncompliant; Parks preparing rectification plan.*
   - *Long Branch at Clayborn – Construction activities modified in coordination with MDE inspector to comply.*

   Describe how the permittee communicates and collaborates with MDE to maintain compliance with this MCM for all active construction projects on the agency's property:
   For active construction projects on Montgomery County parkland, Montgomery County Department of Permitting Services (MC DPS) communicates and collaborates with MDE to maintain compliance with this MCM. For projects disturbing >1ac, Parks has a CP-20 permit with MDE.

   Are erosion and sediment control inspection records retained and available to MDE during field review of the agency MS4 program?
☐ Yes ☑ No

MCM #4: Construction Site Stormwater Runoff Control

If No, explain:
MC DEP includes inspection records in their NPDES MS4 annual progress report.

4. Number of staff trained in MDE's Responsible Personnel Certification: 53

5. Describe the coordination with other entities regarding implementation of this MCM:
Parks values the importance of proper installation and maintenance of erosion and sediment controls (E&S) on all construction sites. For projects that require a land disturbance permit, project designs are reviewed by MC DPS for approval and issuance of an Erosion and Sediment Control Permit. Each construction project on parkland is assigned an in-house Construction Inspector to monitor progress and to ensure appropriate E&S practices. MC DPS also inspects each site for compliance with permit terms and adequate maintenance of E&S controls.

6. List the total cost of implementing this MCM over the permit term:
$653,784 over the 6-year permit term.

MCM #5: Post Construction Stormwater Management

1. Has an Urban BMP database been submitted in accordance with the database structure in Appendix B, Tables B.1.a, b, and c as a Microsoft Excel file?
☑ Yes ☐ No

   Describe the status of the database, efforts to complete all data fields, and provide a date as to when the required information will be submitted to MDE:

   The Urban BMP Database was submitted with the NPDES MS4 annual progress Report beginning in fiscal year 2020, and has been submitted each year, including for this fiscal year 2024 report. Stormwater retrofit projects are added to the database once construction is completed and all necessary close-out documents are obtained.

2. Total number of plans submitted to MDE for review and approval: See below

   Projects that require stormwater management approval are reviewed by MC DPS for issuance of a permit.

   Total number of as-built plans submitted to MDE: See below

   This information is tracked by MC DPS; please refer to MC DEP's NPDES MS4 annual progress report for the total number of as-built plans submitted to MDE.

   Number of submitted as-built plans approved by MDE: See below

   This information is tracked by MC DPS; please refer to MC DEP's NPDES MS4 annual progress report for the total number of as-built plans approved by MDE.

3. Total number of BMPs located on each property covered under the general permit (list individual property, and total BMPs for that property – provide separate attachment if necessary):

   See Appendix I: List of BMPs per Park

   Does the permittee perform inspections for all structural BMPs in accordance with the Dam Inspection Checklist in Maryland Pond Code 378 at least once every three years?
☐ Yes ☑ No

   Structural BMPs on parkland that require dam inspections are performed by MC DEP.

   If No, describe efforts to train staff and develop a program to perform these required inspections on a triennial basis:

   Not applicable

   .

Are BMP inspection records retained and available to MDE during field review of local programs?

☑ Yes ☐ No

Note: *BMP inspection records are retained by both parks and MC DEP. Parks information is available to MDE during field review upon request.*

4. Provide a summary of routine maintenance activities for all BMPs:

   Routine maintenance activities for BMPs include grass cutting and mowing, woody vegetation cutting and removal, trash and debris removal, accumulated sediment removal, erosion repair, signage verification, weeding, mulching, and plant care.

   Are BMP maintenance procedures consistent with maintenance requirements on MDE approved plans?

   ☑ Yes ☐ No

   Are completed BMP maintenance checklists available to MDE during field review of local programs?

   ☑ Yes ☐ No

   If either answer is No, describe planned actions to implement maintenance checklists and procedures and provide formal documentation of these activities:

   Not applicable

   Describe all problems discovered during routine maintenance operations and repair work performed to restore the function of the BMP(s) (attach photos and additional documentation as needed):

   Repair work is performed for the following problems that arise:

   - *Clogged inlets, outlet channels, pipes, and trash racks due to debris and sediment build-up or beaver activity,*
   - *Non-native invasive plant colonization,*
   - *Dead vegetation,*
   - *Erosion,*
   - *Accumulation of sediment and debris,*
   - *Animal burrows,*
   - *Vandalism (damage to structures, graffiti), and*
   - *Missing, damaged, or jammed observation well caps.*

MCM #5: Post Construction Stormwater Management

5. Number of staff trained in proper BMP design, performance, inspection, and routine maintenance: See below
    - *MDE Smart Salting: Enhanced Winter Maintenance Training Series:*
        - *11 staff members*
    - *Montgomery Parks Annual Stormwater Pollution Prevention Training:*
        - *329 staff members in fiscal year 2023 and 394 staff members in fiscal year 2024*
    - *Stormwater Facility Maintenance Contractor Training Program:*
        - *9 staff members*
    - *Professional Engineers:*
        - *10 staff members*
    - *Chesapeake Urban Stormwater Professionals (CUSP) Certificate:*
        - *2 staff members*
    - *Chesapeake Bay Landscape Professionals (CBLP):*
        - *2 staff members*

Provide a summary of activities planned for the next reporting cycle:

• Continue to install BMPs for new construction, retrofit, and restoration projects to meet stormwater management requirements as approved by MC DPS.

• Continue to maintain BMPs and perform non-structural maintenance on shared MC DEP facilities as required.

• Continue to advance and refine inspection programs for BMPs in the Urban BMP Database, including integrating inspections into Survey123.

6. List the total cost of implementing this MCM over the permit term:
    $17,829,126 over the 6-year permit term.

MCM #6: Pollution Prevention and Good Housekeeping

1. Provide a list of topics covered during the last training session related to pollution prevention and good housekeeping, and attach to this report specific examples of training materials:

   The training sessions cover topics including stormwater pollution prevention at industrial facilities (i.e., park maintenance yards) and throughout our park system, good housekeeping practices, spill prevention and response, and best management practices for conducting work around stormwater BMPs and storm drain inlets.

   See Appendix G: Examples of Educational and Training Materials for a copy of the training presentations.

   List all training dates within this two-year reporting period:

   Fiscal year 2023 training available online from 1/31/2023-5/15/23
   Fiscal year 2024 training available online from 1/24/2024-5/15/24

   Number of staff attended: See below

   Fiscal year 2023: 329 staff
   Fiscal year 2024: 394 staff

2. Are the good housekeeping plan and inspection records at each property retained and available to MDE during field review of the local program? ☑ Yes ☐ No

   If No, explain:

   Good housekeeping plans are completed for a select number of facilities. Once plans are finalized, they are sent to each facility manager. Efforts continue to complete good housekeeping plans for other facilities.

   Provide details of all discharges, releases, leaks, or spills that occurred in the past reporting period using the following format (attach additional sheets if necessary).

   See Appendix D: Water Quality Concerns Log.

   Property Name: Date:

   Describe observations:

   Describe permittee's response:

3. Quantify and report property management efforts as shown below, where applicable (attach additional sheets if necessary).

MCM #6: Pollution Prevention and Good Housekeeping

Number of miles swept: 0

Amount of debris collected from sweeping (indicate units): N/A

If roads and streets are swept, describe the strategy the permittee has implemented to maximize efficiency and target high priority areas:

Not applicable

Number of inlets cleaned: 0

Amount of debris collected from inlet cleaning (indicate units): N/A

Describe how trash and hazardous waste materials are disposed of at permittee owned and operated property(ies), including debris collected from street sweeping and inlet cleaning:

The recycling and waste management program offers trash and recycling collection at various park sites and staffed facilities throughout the county. Trash is collected and hauled by a contractor and recyclables are collected and hauled by in-house staff to the Montgomery Transfer Station.

*Although waste collection services are offered as part of the program, waste **reduction** is ultimately the primary objective. Materials such as motor fuel, tires, electronic waste, light bulbs, batteries, construction debris, and concrete and asphalt are examples of materials commonly recycled as part of the waste reduction initiative. Montgomery Parks is working with Ag Plastic Solutions (APS) to recycle #2 HDPE pesticide and fertilizer containers. Diverting materials from the trash when they can be recycled, even though less convenient, is a priority.*

Hazardous waste is properly disposed of through Montgomery County's EcoWise Hazardous Waste program. Currently, no regular street sweeping or inlet cleaning is performed.

Does the permittee have a current State of Maryland public agency permit to apply pesticides?

☑ Yes ☐ No

If No, explain (e.g., contractor applies pesticides):

Not applicable.

Does the permittee employ at least one individual certified in pesticide application?

☑ Yes ☐ No

If Yes, list name(s):

We have 63 certified pesticide applicators employed. See Appendix J: Certified Pesticide Applicators List.

If the permittee applied pesticides during the reporting year, describe good housekeeping methods (e.g., integrated pest management, alternative materials/techniques):

*It is a priority to **reduce** the use of pesticide application on parkland; however, when necessary, the application is done so in accordance with the labeled directions and in compliance with local, state, and federal pesticide laws and regulations. "Pesticide Safety and Integrated Pest Management" procedures are also implemented to reduce pesticide applications on parkland.*

All pesticide applicators are licensed with the Maryland Department of Agriculture and participate in continuing education annually on integrated pest management (IPM) and best practices for pest management and pesticide use.

Alternative methods utilized by parks staff include biological control (using beneficial organisms to control a pest), cutting and/or digging weeds with equipment, additional field dragging, use of hot foam or hot water to kill weeds and other pests, playground surface grooming beyond the maintenance standards, hand tool weeding, propane flaming, string trimming, and weed suppression with mulch or landscape fabric.

Parks requires that all pesticides are stored in approved storage units, with secondary containment to avoid pesticide spills and surface water runoff. Pre-notification is provided both on the website and on the physical site 48 hours prior to a pesticide application, and post-application notification signage is provided for 48 hours following an application.

Common treated plant species are researched to identify the lowest effective concentration of chemical. Montgomery County Government enacted strict pesticide usage and Parks observes pesticide free parks, complying with some of the strictest components of the regulation. Parks implements alternative methods first, followed by direct application techniques (e.g., cut stump treatments). As a last resort, broadcast application methods are used, and blue marking dye is used to ensure no repeat applications across larger treatment areas.

When employing broadcast application methods, conditions are carefully monitored and wind speed must be at or below 7 miles per hour (mph), which is lower than label recommendations. Additionally, no pesticides are applied within 8 to 12 hours of a rain event to allow herbicide time to dry and adhere to plants, avoiding run-off. Parks uses pesticides that bind to soil organic matter and have low residual times, allowing chemicals time to break down and become inert before potentially reaching groundwater. When working in aquatic environments,

Parks uses only aquatic-rated herbicides and non-ionic surfactants; these chemicals will not bio-accumulate in aquatic wildlife that may come into contact with herbicide applications.

If the permittee applied fertilizer during the reporting year, describe good housekeeping methods (e.g., application methods, chemical storage, native or low maintenance species, training):

Fertilizer is purchased as needed and stored under cover. Staff applying fertilizer to turfgrass are trained and certified as Professional Fertilizer Applicators (PFA) with the Maryland Department of Agriculture (MDA) and comply with laws and regulations related to application of nitrogen and phosphorus. PFAs attend annual recertification training to learn about updates in nutrient management techniques, timing, and regulations. Detailed fertilizer use records are maintained at each site; total N-P-K use is reported each year by March 1st to the MDA.

If the permittee applied materials for snow and ice control during the reporting year, describe good housekeeping methods (e.g., pre-treatment, truck calibration and storage, salt domes):

Salt is applied in parks to sidewalks and walkways to ensure the safety of park patrons. Reduction of salt application is the main objective, although other BMPs are employed to reduce environmental impacts when salt must be used to ensure public safety including: equipment is calibrated to ensure only the proper amount of mixture is used; staff are trained to only apply salt when the vehicle is in motion to avoid piling of salt; air and road temperatures and type of precipitation and accumulation are all considered when determining salt mixture/quantity.

Montgomery Parks also recently purchased a brine mixing and application system and updated the Parks' Weather Emergency Operations Guide to include an appendix on Environmental Protection. Additionally, signs were made to hang on the Brookside Nature Center boardwalk during winter weather that state in both English and Spanish, "Walkway is closed to reduce salt application. Excess salt can damage entire aquatic ecosystems, including salamanders, frogs, fish, and aquatic plants". A copy of the sign is available upon request. Lastly, information related to the impacts of salt and best management practices was added to the annual Pollution Prevention Training.

Parks assists Montgomery County Department of Transportation (MC DOT) with treatment of a select number of park-owned roads in accordance with MC DOT protocols and BMPs.

Parks is also working to expand our reach and improve education and outreach related to smart salting and best management practices. Prior to the FY25 winter season, staff that apply salt will be required to take the Montgomery County Smart Salt Applicator Training hosted by the Izaak Walton League of America.

MCM #6: Pollution Prevention and Good Housekeeping

Describe good housekeeping BMP alternatives not listed above:

Nuisance Wildlife in Stormwater Facilities

Many of the stormwater facilities on parkland are designed with naturalized features that provide suitable and beneficial habitat for wildlife. Although most wildlife is welcome to inhabit the stormwater facilities, some species (e.g., beavers, groundhogs, and Canada geese) can cause negative impacts to the facility, creating maintenance, operational, structural, and safety issues.

If not maintained, these nuisance species can increase eroding, deposit excrement that may increase algae and introduce disease causing pathogens, damage vegetation through herbivory, and impair water quality. Routine inspections are conducted by both park staff and MC DEP at stormwater facilities to assess and manage wildlife presence.

Non-Native Invasive Plant Management

Non-native invasive plant management, as well as the planting of native trees and shrubs in forested areas and stream buffers, help to filter pollutants from stormwater runoff before it reaches streams. Staff and contractors are required to use alternatives to chemical control as a first option, including mechanical control options. If the use of pesticide is necessary, the minimum effective concentration is utilized in conjunction with the most direct application method. Montgomery Parks meets and exceeds regulatory requirements such as the Lawn Care Act and Waterbody Environments and maintains a comprehensive BMP for frequently controlled non-native invasive species which is available to staff and contractors

Stream Monitoring

Evaluating aquatic insect and fish communities through stream biological monitoring provides a standardized assessment of the general health and condition of a stream and its catchment area. Altered biological community structure and the loss of sensitive organisms can signal changes in the contributing watershed and may provide a means for determining whether the installation and implementation of BMPs and other stormwater mitigation efforts are having a measurable effect on restoring and protecting waterways. In addition to an overall watershed monitoring rotation, targeted monitoring allows for evaluation of stream restorations and other stormwater management projects, emergency infrastructure failures, significant development projects, resources being considered in both area and park master plans, and parks where sensitive or high-quality water resources have already been identified (i.e., Special Protection Areas, Best Natural Areas, and Biodiversity Areas).

From July 1, 2022 – June 30, 2024, data were collected at 68 biological monitoring stations in 14 county watersheds and 16 Maryland 12-digit watersheds, the breakdown for which is as follows:

- *29 (43%) were designated for prioritization and evaluation of stream restoration and outfall stabilization projects (5 pre-restoration and 9 post-restoration).*
- *Data from five stations were collected to evaluate discrete and chronic pollution event impacts to biological communities following a sanitary sewer overflow in Rock Run, suspected illicit discharges in the Flora Lane Tributary to Sligo Creek, and ongoing infrastructure changes along the Long Branch Tributary to Sligo Creek.*
- *20 stations generated data applied to informing park operation and use at newly acquired parkland and as part of park master plan and countywide master plan studies, including focal investigations in the Broad Run, Cabin John, Little Seneca, Paint Branch, and Sligo Creek watersheds.*
- *The remaining 14 were utilized for targeted monitoring at best natural/biodiversity areas and annual trend sites.*

The results of Parks' stream monitoring efforts support a wide variety of resource management needs allowing for informed and responsible planning decisions appropriate to watershed assessment, restoration, development, and parkland acquisition. Additionally, countywide data collected since 1995 by Parks, and in cooperation with MCDEP, were synthesized and used to fulfill 53 data requests during the reporting period.

Across the entirety of this permit's duration (2018-2024), more than 88 requests for biological monitoring data were fulfilled. Data collected at 23 stream restoration reaches are being synthesized to evaluate biological community structure and function, habitat, and physical chemistry prior to and following project implementation. In total, 333 biological samples were collected at 108 sites in 19 county watersheds and 23 12-digit watersheds from 2018-2024, allowing for detailed stream condition and more widespread trend analysis across 56 park units.

Project Reviews

All projects affecting parklands require a Park Construction Permit, which enforces the minimization of environmental impacts (e.g., tree impacts, imperviousness, etc.), as well as proper stormwater management and erosion & sediment controls. As part of the permit process, the proposed project is reviewed and overseen by park staff from the planning stages through to construction to ensure the work aligns with Montgomery County Parks' mission. Through this process, the scope of work is reviewed, and comments are provided advocating for avoidance and minimization of environmental impacts to parklands and requesting mitigation and/or compensation, where necessary.

Some projects on parkland are funded through the Capital Improvement Plan (CIP), whereas others are proposed by external government agencies, public utilities, non-profits, private developers, and others. Because parkland is

concentrated in stream valleys, the project review process is essential to protect the integrity of natural, recreational, and cultural resources, as well as to ensure proper stormwater management and erosion and sediment control measures.

4. If applicable, provide a status update for permittee owned or operated properties regarding coverage under the Maryland General Permit for Stormwater Discharges Associated with Industrial Activity or an individual industrial surface water discharge permit:

   Parks will continue to maintain coverage under General Discharge Permit No. 12-SW, the NPDES General Permit for discharges from stormwater associated with industrial activities for the 12 maintenance yards.

5. List the total cost of implementing this MCM over the permit term:

   $11,492,412 over the 6-year permit term.