Montgomery Parks' Progress Towards Eliminating Pollution and Treating Stormwater

Fiscal Year 2022 NPDES MS4 Annual Report Summary

Maryland-National Capital Park and Planning Commission (M-NCPPC) Montgomery County Department of Parks (Montgomery Parks) is regulated by the National Pollutant Discharge Elimination System (NPDES) general permit No. 13-SF-5501 for stormwater discharges from small municipal separate storm sewer systems (MS4) (herein, referred to as the "MS4 permit"). An MS4 is system of conveyances (*e.g.,* curbs, gutters, ditches, storm drains, etc.) that is owned or operated by a state, city, town, or other public entity that carries or collects stormwater and is not part of a sewage treatment plant.

Volunteers and campers help complete a storm drain mural at Meadowside Nature Center

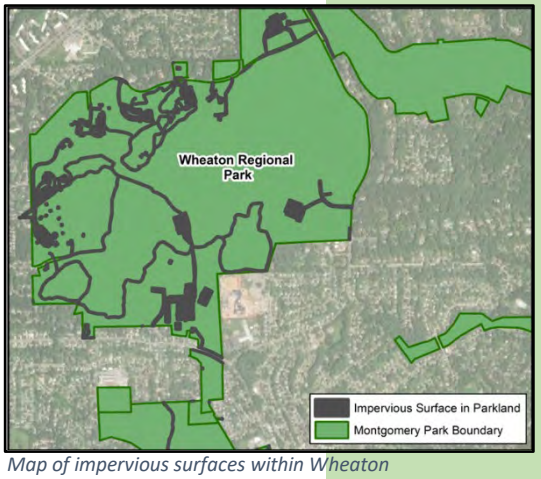
Montgomery Parks' MS4 permit is administered by the Maryland Department of the Environment (MDE) to carry out the NPDES program implemented by the Federal Clean Water Act. The purpose of the MS4 permit is to eliminate nutrient and sediment pollution from stormwater within the Chesapeake Bay watershed through Best Management Practices (BMPs), or techniques that manage the quantity and quality of stormwater runoff. Examples of BMPs include treating stormwater runoff from impervious surface areas, public education, outreach, and involvement.

As stewards of Montgomery County's most significant tributaries to the Chesapeake Bay, Montgomery Parks' mission and operational responsibilities support the goals of the MS4 permit to reduce stormwater pollution, educate, and involve the public, and coordinate with other MS4 permittees along the way.

A report is submitted to MDE annually that covers progress towards meeting the goals of the NPDES program within the five-year permit term (from 2018 to 2023). This report covers progress towards meeting the twenty percent impervious area restoration requirement, as well as progress over the past two FYs (*i.e.,* July 1 to June 30) towards implementing the six minimum control measures (MCMs). The purpose of this document is to provide a summary of the year-four, FY 2022 progress report submitted to MDE.

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 by requiring MS4 permittees to treat 20% of untreated impervious area. In year one of the five-year permit term, the total amount of untreated impervious within parkland was quantified to determine the 20% impervious area restoration requirement. Although impervious surfaces make up a small percentage of parkland, Montgomery Parks is committed to treating stormwater runoff.



Map of impervious surfaces within Wheaton Regional Park in Wheaton, Maryland

BMPs that reduce pollution and treat stormwater may include stormwater retrofits, bioretentions, and sand filters, as well as alternative practices such as stream restoration, outfall stabilization, and impervious surface removal. Credits associated with these practices are determined using MDE's methodologies and then applied to the 20% treatment requirements. A summary of progress towards meeting the impervious area restoration requirement is included in the list below. Montgomery Parks is on track to meet and even exceed the requirement to treat 20% of untreated impervious on parkland by 2025.

- Acres of untreated impervious area on parkland = **315 acres**
- 20% of untreated impervious area restoration requirement = **63 acres**
- Progress towards meeting the 20% untreated impervious area restoration requirement through FY22 = **58.3 acres**
- Impervious area restoration requirement remaining = **4.7 acres**

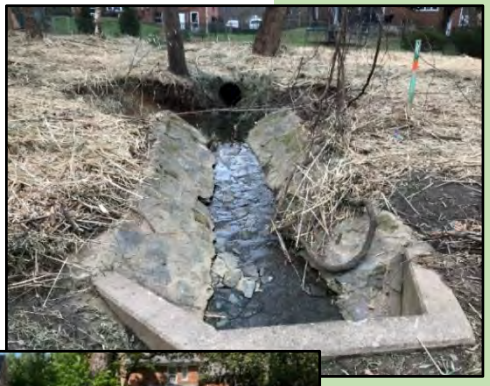
Stream Restoration and Outfall Stabilization

Stream restoration reduces erosion while increasing the quality and quantity of both instream and floodplain habitat features to provide functional uplift. Stream restoration is considered by MDE an alternative practice that may be applied to the 20% impervious area restoration requirement. Montgomery Parks has a robust stream restoration program that also supports helping other MS4 permittees meet their impervious area reduction requirements on parkland. This year, Montgomery Parks made substantial progress on four stream restorations that will support Montgomery County Department of Environmental Protection's (MC DEP's) restoration requirements. Those projects constructed in support of other MS4 permittees are not counted towards Montgomery Parks' restoration requirement.

Stoneybrook stream restoration pre-construction

Stoneybrook stream restoration post-construction

The Clearspring Manor Stream Restoration, a tributary to Magruder Branch, began construction in summer 2022. The project consists of approximately 550 linear feet of stream stabilization and floodplain reconnection of a channel that is severely incised. It is anticipated that this project will provide Montgomery County with 18.16 impervious acre treatment credits toward their MS4 permit. The Grosvenor Tributary to Rock Creek and the Stoneybrook Tributary to Rock Creek stream restoration projects are both complete and will be monitored for success.



Byeforde Road outfall before construction

Outfall stabilization and redevelopment initiatives on parkland transform existing stormwater outfalls that may have been designed as concrete-lined channels or are experiencing severe erosion due to inadequate stabilization downstream of the pipe. These new channels are designed to mimic natural channel characteristics and incorporate natural features and vegetation to slow down the flow, increase opportunities for infiltration, and improve water quality. Some current outfall stabilization projects underway to support Montgomery Parks' impervious area restoration requirement include Byeforde Road outfall (under construction), with Wildwood Road Outfall Stabilization and Yates Outfall Stabilization scheduled to be constructed in FY 2023.

Byeforde Road outfall during construction

Section II: Minimum Control Measures

1. Public or Personnel Education and Outreach

Permittees are required to implement and maintain a public and/or personnel education and outreach program and distribute education materials to the community and/or employees to help reduce the discharge of pollutants caused by stormwater runoff. To accommodate the range of responsibilities within Montgomery Parks, personnel educational and outreach material is tailored specifically to each Division within the Department and is disseminated through presentations, hands-on training, e-mails, and daily conversations.

Water Quality Concerns informational cards

The previously in-person annual pollution prevention training for all operational staff at Montgomery Parks was pre-recorded and distributed to nearly 300 staff members each in FY 2021 and FY 2022. This improved accessibility to the training and the number of participants increased from previous years.

In addition to the annual training, wallet-sized water quality informational cards were developed to provide a quick reference to the Montgomery Parks pollution prevention hotline, the Washington Suburban Sanitary Commission (WSSC) Water and Sewer Emergency phone number, and the Montgomery Parks water quality information webpage. These cards were provided to operational and volunteer-facing staff to use and distribute to park users. These cards help to ensure that pollution concerns are reported and responded to in a timely and efficient manner.

2. Public or Personnel Involvement and Participation

The public or personnel involvement and participation program is designed for the target audience of park users. 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. Adult stewards can be trained as Cleanup Leaders, Weed Warrior Supervisors, Master Naturalists, and Volunteer Community Scientists. These programs empower leaders to educate others on the impacts of uncontrolled stormwater pollution to waterways, as well as to collect data to help evaluate aquatic habitat conditions. Montgomery Parks staff members also work closely with community members and local watershed groups, involving them in efforts that help meet the goals of the MS4 permit.

Volunteers and campers helped complete a storm drain mural at Meadowside Nature Center

A park naturalist instructs campers how to collect benthic macroinvertebrates in Rock Creek Regional Park

Across fiscal years 2021 and 2022, Montgomery Parks cleanup volunteers removed and properly disposed of over 150,000 pounds of trash from parks and streams. Additionally, the Weed Warriors Volunteer Program removed invasive vines from nearly 16,000 trees. The survival of trees is important as they help to capture and store rainfall and promote infiltration of rainwater into the soil. Public involvement and volunteering hours also increased substantially in the past fiscal year (see Table 1).

Table 1. Montgomery Parks Public Involvement and Participation

Volunteer Program Data	FY21 Park Cleanups	FY22 Park Cleanups	FY21 Weed Warriors	FY22 Weed Warriors	FY21 Other Volunteer Programs	FY22 Other Volunteer Programs	FY21 & FY22 TOTAL
Volunteer Hours	5,519	9,866	5,115	9,333	8,746	32,367	**70,946**
Number of Volunteers	2,498	4,841	249	1,685	3,632	3,685	**16,590**
Trash Removed in Pounds	58,536	92,172	--	--	--	--	**150,708**
Number of Trees Saved from Vines	--	--	3,899	11,974	--	--	**15,873**

Montgomery Parks collaborates with MC DEP to cohost the Montgomery FrogWatch community science program. This program invites individuals and families to participate in citizen science and learn more about amphibians and the wetlands they live in. Volunteers are trained to identify frog and toad calls at a wetland site and report their observations online. Data is compiled and analyzed to develop conservation strategies for frog and toad species, and their habitats. This program involved approximately 115 community members over the past two fiscal years. While 2022 results are still being processed, results of the 2021 FrogWatch monitoring program are available online as an interactive report.

Montgomery Parks also offered several other events that promoted public involvement and participation including:

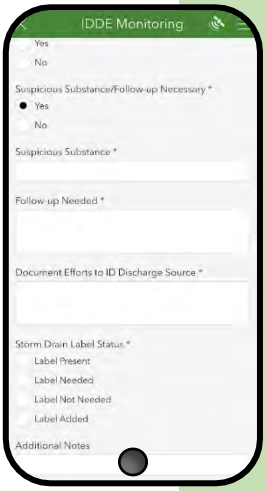
- Partnering with Nature Forward (formerly known as the Audubon Naturalist Society) on the "Si Se Puede" program
- Helping to organize the annual Montgomery County GreenFest
- Supporting the MC DEP Plogging Challenge (a combination of jogging and picking up litter)
- Collaborating with local watershed groups on cleanup events (e.g., Sweep the Creek with the Friends of Sligo Creek and the Extreme Cleanup with the Rock Creek Conservancy)
- Hosting a week-long series of events during Latino Conservation Week in 2021 and 2022, where 570 members of the Latino community participated or volunteered

Montgomery County GreenFest outreach event

Si Se Puede event

3. Illicit Discharge Detection and Elimination

As part of the Illicit Discharge, Detection, and Elimination (IDDE) MCM, Montgomery Parks implements a program to detect and eliminate illicit discharges by inspecting outfalls on parkland to screen for and eliminate potential illicit discharges to streams. Outfalls with higher potential for illicit discharge, such as those located in urbanized areas and at park maintenance yards, are prioritized for screening. Montgomery Parks also responds to reports of suspected pollution, including water and sewer line breaks and illegal dumping. In the past two fiscal years, Montgomery Parks exceeded the number of screenings required by the MS4 permit.



IDDE monitoring Survey 123 application

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. M-NCPPC Park Police conduct enforcement for all M-NCPPC Rules and Regulations on parkland. It is imperative that Montgomery Parks are kept clean as part of the effort to reduce stormwater pollution.

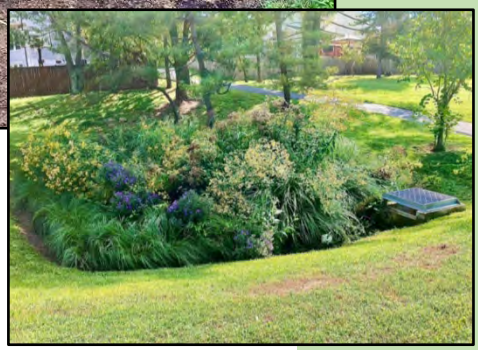
4. Construction Site Stormwater Runoff Control

Construction site stormwater runoff control measures are regulated and enforced by Montgomery County Department of Permitting Services. Construction projects that take place on parkland install and maintain proper erosion and sediment (E&S) control measures and occur under an E&S Control Permit, when applicable. E&S controls are inspected and monitored to ensure continued functionality.

5. Post-Construction Stormwater Management

After construction, stormwater facilities are routinely maintained through activities such as grass cutting, trash debris and removal, erosion repair, weeding, mulching, and more. In May 2022, Montgomery Parks staff attended a one-day training on landscape maintenance for stormwater BMPs. It is important that these facilities are maintained and remain in working order so that they function as intended to reduce pollution and treat stormwater runoff. Montgomery Parks Water Quality staff perform routine on approximately 760 stormwater facilities and have completed more than 3,880 work orders in FY 2022 alone.

Montgomery Parks staff plant native species in a stormwater bioretention facility



In addition to routine maintenance, stormwater facilities also require inspections on a triennial basis to ensure proper functioning. An inspection program was formalized in FY 2021 involving the use of a standardized inspection form, establishment of an inspection schedule, and photo documentation. Bioswales and bioretentions were inspected in FY 2021 and outfall stabilization projects were inspected in FY 2022. In FY 2023, the final year of the triennial inspection cycle, all remaining facilities will be inspected.

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. Pollution prevention is addressed through annual trainings to staff, recycling and waste management programs, nuisance wildlife management, non-native invasive vegetation management, and more. Good housekeeping plans were developed for park facilities that have greater pollution potential. These plans discuss good housekeeping practices, such as the correct storage, use, and cleanup measures when handling potentially harmful materials (*e.g.,* pesticides, fertilizers, cleaning solutions, automotive products, etc.). Good housekeeping plans also include keeping worksites clean and orderly, recycling/disposing of fluids properly, and removing debris in a timely fashion.

Montgomery Parks staff use cat litter to clean up a spill as a good housekeeping measure

Montgomery Parks also evaluates fish and benthic macroinvertebrate (bottom-dwelling insects) communities through stream biological monitoring that provides information relating to stream health and conditions. These data help to inform decisions about installation and implementation of stormwater mitigation efforts and other BMPs to ensure there is a measurable effect on restoring and protecting waterways.

Conclusion

As stewards of some of Montgomery County's most significant stream valleys, Montgomery Parks' mission to protect natural resources through stewardship, education, and collaboration while balancing the need for recreation and conservation inherently aligns well with the goals of the MS4 permit to reduce pollution, treat stormwater runoff, and address the Chesapeake Bay TMDL standards by the year 2025.

Montgomery Parks is on track to exceed the requirement to treat 20% of previously untreated impervious area through the installation of structural BMPs (e.g., bioretentions) and through alternative practices such as stream restoration and outfall stabilization. Montgomery Parks will also continue to work with and support other MS4 permittees to implement BMPs and coordinate outreach events.

Montgomery Parks staff and volunteers conduct fish and benthic macroinvertebrate biological monitoring in streams

The requirements of the MS4 permit are multifaceted and require input and collaboration across multiple Divisions within Montgomery Parks. Montgomery Parks has made notable progress towards reducing pollution through the requirements of the MCMs and will continue to expand and enhance efforts that support the goals of the NPDES program.

Volunteers participate in a park clean up

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:	Michael F. Riley, Director
Mailing Address:	2425 Reedie Drive, 12th Floor
	Wheaton, MD 20902
Phone Number(s):	301-495-2500
Email address:	mike.riley@montgomeryparks.org
Additional Contact(s):	Matt Harper, Resource Analysis Supervisor
Mailing Address:	2425 Reedie Drive, 11th Floor
	Wheaton, MD 20902
Phone Number(s):	301-650-4383
Email address:	matthew.harper@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.

Michael F. Riley		1/17/2022
Printed Name	Signature	Date

Reporting Period (State Fiscal Year): 2022

Due Date: 10-31-22 **Date of Submission:** 10-18-22

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.

List of Appendices

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): 97.8

   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: 314.8

   Twenty percent of this total area (this is the restoration requirement):
   63.0

   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).

   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 are shared between Parks and MC DEP. Note that MC DEP is responsible for triennial inspections of these facilities (per guidance received from Deborah Cappuccitti at MDE on January 18, 2019, additional inspections are not required for these BMPs).

Section I: Impervious Area Restoration Reporting

To ensure that impervious area 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. To provide more information in response to MDE's request to confirm no double-counting, 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
   Note: *The work plan (included herein as Table 1) was updated per MDE feedback received on March 1, 2022.*

   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 will continue to plan, design, construct, and implement BMPs and will adjust and refine the Impervious Area Restoration Work Plan to remain on track with restoration requirements.

4. Has a Restoration Schedule been completed and submitted to MDE in accordance with Part V.B, Table 2 of the permit?
   ☑ Yes ☐ No
   Note: *A Restoration Activity Schedule was completed and is submitted to MDE annually in accordance with the NPDES General Permit (13-SF-5501) Part V. Section C. Develop a Restoration Activity Schedule (see Appendix C: Restoration Activity Schedule).*

   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
   Note: *A completed Restoration Activity Schedule will be submitted in the year 5 submittal.*

Section I: Impervious Area Restoration Reporting

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

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

In addition to the Impervious Area Restoration Work Plan and the Restoration Activity Schedule, which document the actions planned to achieve compliance by the end of the permit term, Parks will continue to report on and implement eligible projects to meet the impervious area restoration requirements.

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

Note that Parks assists MC DEP with stream restoration projects on parkland to help MC DEP meet their impervious acre credit goals through Memorandums of Understanding (MOUs). Although Parks does not take impervious acre credits for the projects constructed for MC DEP credits, Parks will continue to support these types of alternative BMPs on parkland. Those projects credited by MC DEP are not included in Parks' Restoration Activity Schedule; however, some of these efforts are still discussed below.

Parks is leading the implementation of the Clearspring Manor Tributary to Magruder Branch (currently in the construction phase) and the Glenallan Tributary to Northwest Branch (currently in the design phase) stream restoration projects, but MC DEP will take impervious acre credit for these projects. The restoration of Grosvenor Tributary to Rock Creek, and Stoneybrook Tributary to Rock Creek (see photos below) were also designed, permitted and constructed by Parks and are now complete and will be monitored for success and credited by MC DEP. All these projects will reduce erosion while increasing the quality and quantity of both instream and floodplain habitat features to provide functional uplift.

Above pictures: *Stoneybrook Stream Restoration pre-construction (left) and post-construction (right)*

Section I: Impervious Area Restoration Reporting

The sustainable outfall stabilization program showed notable progress in fiscal years 2021 and 2022. Byeforde Road outfall is currently under construction (see photos below), with Wildwood outfall and Yates outfall breaking ground in the fall of 2022. These outfall redevelopment initiatives transform existing outfalls that were designed as concrete-lined channels into channels that mimic natural hydrologic characteristics and incorporate natural features and vegetation to reduce runoff speeds, increase opportunities for infiltration, and improve water quality. Cumulatively, it is expected that these projects will provide the equivalent of 4.4 acres of impervious treatment and are included in the Restoration Activity Schedule.

Above pictures: *Byeforde Road Outfall pre-construction (left) and during construction (right).*

Additional stormwater retrofit projects that incorporate ESD and treat previously untreated impervious areas are planned and underway at Stewartown Local Park, Maplewood-Alta Vista Local Park, Nolte Local Park, and Colesville Local Park. These facilities will be added to the Urban BMP Database after construction is completed and the required close-out documentation is obtained. Montgomery County Parks is well-positioned to meet the 20% retrofit requirement within the first 5-year permit cycle and continues 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:
   The Urban BMP Database is included electronically as Appendix B: Urban BMP Database.

Section I: Impervious Area Restoration Reporting

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 Schedule.

7. Describe coordination efforts with other agencies regarding the implementation of impervious area restoration activities:
   Parks meets regularly with Montgomery County agencies and other local and federal jurisdictions to discuss implementation strategies and coordinate impervious area restoration activities. As a steward of more than 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.

8. List the total cost of developing and implementing impervious area restoration program during the permit term:
   A portion of funding for the Parks NPDES 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:
   - *Capital Improvement Program (CIP) $6,810,000 over the 5-year permit term via two funding projects:*
     - *Pollution Prevention and Repairs to Ponds and Lakes: $2,460,000*
     - *Stream Protection: $4,350,000*
   - *Operating Budget: $3,080,755 ($616,151 annually)*

   As stewards of Montgomery County's most significant stream valleys, Parks' mission to protect natural resources through stewardship, education, and 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 Restoration Activity Schedule (Appendix C). 3. Report on minimum control measures (MCMs) utilizing Section II Reporting Forms. 4. Develop and pilot 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. 5. Identify and recommend opportunities for water quality improvement projects while working towards collaborative partnerships to meet and monitor restoration requirements with neighboring permit holders. 6. Continue long-term efforts towards collecting and documenting construction completion data and as-built plans to verify water quality treatment.

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: 114

   Describe the actions taken to address the complaints:
   Actions to address complaints are outlined in the 2022 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 pollution 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 conducted for Parks' operation staff each year. Training includes material on stormwater pollution prevention practices at industrial facilities (i.e., park maintenance yards). The annual training includes information on spill prevention and response and best management practices for conducting work around stormwater BMPs.

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 Horticulture, Forestry, and Environmental Education Division.

4. Are examples of educational/training materials attached with this report?
   ☑ Yes ☐ No
   See Appendix E: Stormwater Pollution Prevention Trainings for the 2021 and 2022 Stormwater Pollution Prevention Trainings.

   Provide the number and type of educational materials distributed:
   The Annual Pollution Prevention Training was distributed as a pre-recorded PowerPoint along with a condensed Parks Pollution Prevention Resources reference to keep on hand for tips and answers to common issues that would be encountered in daily operational activities.

   Describe how the personnel education program is appropriate for the target audience(s):
   The training was developed by Park staff who are knowledgeable of the most effective ways to reduce 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 there are potential pollutants or best management practices that could be employed. The training is updated each year to stay relevant and to ensure it is tailored to the operational staff. The training was pre-recorded in fiscal year 2021 and fiscal year 2022 and distributed to staff members virtually to meet the challenges presented by the Covid-19 pandemic.

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

   Certain staff members receive annual pollution prevention and general stormwater training, and they (like the public) can find additional stormwater education 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/*

   Water quality informational cards were also provided in fiscal year 2022 to operations and volunteer-facing staff that contain Parks' pollution hotline phone number, Parks' water quality information webpage (above), as well as other useful contacts, such as WSSC Water and Sewer Emergency.

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. After staff members complete the training, they are equipped to recognize potential stormwater-related issues and how to report these. Staff are also trained annually on good housekeeping measures.

   The water quality informational cards distributed also provide a practical and useful way to quickly report a variety of water quality concerns.

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

   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 they observe water quality issues. 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:

   $1,208,880 over the 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, identified as 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, 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.

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: 26,287

   Quantity of trash and debris removed at clean up events: ~151k lbs

   Number of employee volunteers participating in sponsored events: N/A

   Number of trees planted: N/A

   Length of stream cleaned (feet): ~264,000'

   Number of storm drains stenciled: 13 labeled

   Number of public notices published to facilitate public and/or staff participation: 24

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

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

MCM #2: Public or Personnel Involvement and Participation

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 Park's 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:

Over the past two fiscal years, five nature centers offered a combined total of 759 water-related educational programming events or activities to the public. On average, each program reached a total of 12 participants, which equates up to 9,108 participants educated on the importance of waterways, bodies of water, and local aquatic wildlife. Examples of these programs include a week-long summer camp called "Creek Week" and guided kayaking tours on lakes.

Montgomery Parks' cleanup volunteers removed 150,708 pounds of trash from streams and parks and the Weed Warrior Program volunteers removed invasive vines from approximately 15,873 trees.

Montgomery Parks maintained an ongoing collaboration with Montgomery County Department of Environmental Protection (MC DEP) to cohost the Montgomery FrogWatch community science program. This not only includes joint outreach and training opportunities that reached 118 residents within and surrounding Montgomery County, but also involves careful coordination and support of a corps of volunteers monitoring on parkland by providing supplemental field trainings, identifying monitoring locations and authorizing permissions, and sustaining communication and engagement. Volunteers monitoring on parkland are registered Montgomery Parks volunteers, with a total of 22 individuals contributing approximately 64 hours to the program in 2021 and 2022, equating to a service value of approximately $2,000. Data collection results for 2022 are pending, but a season summary for 2021 was presented as an interactive report via ArcGIS StoryMaps (https://storymaps.arcgis.com/stories/4c177349b5844a198c2015125d29dec3), available at https://montgomeryparks.org/caring-for-our-parks/natural-spaces/water-quality-information/.

Parks also collaborates with MC DEP and other County agencies and local governments to organize the annual Montgomery County GreenFest hosted in the spring, which is focused on general environmental and sustainability issues. Due to the Covid-19 pandemic, the event was held virtually in 2021 with workshops and

weekly challenges such a plogging (a combination of jogging and picking up litter). In 2022 GreenFest was held in-person at Brookside Gardens with ~5,000 attendees. Please see https://montgomerycountygreenfest.org/ for more information.

Montgomery Parks was also a key partner for the Si Se Puede project in the Long Branch community by Audubon Naturalist Society (ANS) and local partners. Through this project, we engaged ten families - up to 30 participants - in watershed education and restoration. Montgomery Parks hosted a week-long series of events in 2021 and 2022 to recognize Latino Conservation Week where 570 members of the Latino community participated or volunteered.

Additionally, Parks is involved in the annual H2O Summit put on by MC DEP, which brings together representatives of local watershed groups and members of the public interested in water quality issues. Please see https://www.montgomerycountymd.gov/water/education/events.html for more information.

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 10th year of the Montgomery County FrogWatch community science program kicking off in February 2023. Parks' staff will continue to host events for GreenFest, Latino Conservation Week, and the H20 Summit as well as a new youth stewardship program in the Long Branch community with ANS and local partners. We will 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:
$589,395 over the 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 G: 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) were submitted in the fiscal year 2020 NPDES MS4 annual progress report and are resubmitted in this fiscal year 2022 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, impervious acreage, 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 industrial 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? 2,193

   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? 303

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?

How many dry weather flows were observed? 0

If dry weather flows were observed, how many were determined to be illicit discharges? N/A

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

See Appendix H: 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**: Park's Water Quality Teams has minor involvement in addressing this and MC DEP performs minor sediment removal and major dredging, where necessary.*

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.

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

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

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 E: Stormwater Pollution Prevention Trainings, Appendix H: Montgomery Parks IDDE Program SOP, and Appendix I: Montgomery Parks Spill Response Procedures.

10. Specify the number of employees trained in illicit discharge detection and spill prevention: See belo

    Fiscal year 2021: *381 individuals*
    Fiscal year 2022: *293 individuals*

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 training materials are included in Appendix E. Also see Minimum Control Measure 1. Personnel Education and Outreach.

12. List the cost of implementing this MCM during this permit term:
    $641,075 over the 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: 3

   Describe the status of enforcement activities:
   Notice of Violations (NOVs) were issued by MDE at two Park construction sites (Parklawn and Stoneybrook) this past permit cycle. The two violations at Stoneybrook were quickly resolved and the violation at Parklawn is nearing resolution.

   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.

   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: 38

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:
   $742,620 over the 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 in fiscal year 2020, 2021, and 2022. 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 J: 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
   - ***Annual Stormwater Pollution Prevention Training:*** *381 staff members in fiscal year 2021 and 293 staff members in fiscal year 2022.*
   - ***Stormwater Facility Maintenance Contractor Training Program:*** *Two staff members in fiscal year 2020 (expires in February 2023).*
   - ***Chesapeake Bay Landscape Professional (CBLP) – Sustainable Stormwater Management for Crews Certificate:*** *20 staff members*

6. 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.*
   - *Parks will refine and utilize inspection programs for BMPs in the Urban BMP Database.*

7. List the total cost of implementing this MCM over the permit term:
   $11,722,185 over the 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.

   See Appendix E: Stormwater Pollution Prevention Trainings for a copy of the training presentations.

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

   Fiscal year 2021 training available online from 2/1/21 – 3/15/21
   Fiscal year 2022 training available online from 2/1/22 – 3/15/22

   Number of staff attended: See below

   Fiscal year 2021: *381 staff*
   Fiscal year 2022: *293 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 and are also uploaded to the Enterprise Asset Management (EAM) System. 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:

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. Through partnerships with Maryland Department of Agriculture and MC DEP, #2 HDPE pesticide and fertilizer containers are also able to be recycled, which is not an option through mainstream recycling. 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 67 certified pesticide applicators employed. See Appendix F: 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. Alternative practices, such as flame weeding, hot foam, mechanical weed removal using sod cutters and/or hand-held hoes, are used to remove weeds and reduce the need for pesticides.

Training on pesticide use, integrated pest management (IPM), and BMPs are attended by staff annually.

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 and comply with laws limiting use 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 for public safety. Reduction of salt application is the main objective, although other BMPs are applied to reduce environmental impacts when salt must be used to ensure public safety. Parks assists Montgomery County Department of Transportation (MC DOT) with treatment of a select number of park-owned roads in accordance with their protocols and BMPs.

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 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 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).

The results of Parks' stream monitoring efforts support a wide variety of resource management needs across both park and planning domains, allowing for informed and responsible planning decisions appropriate to development, watershed planning, restoration, and parkland acquisition. From July 1, 2020 –

June 30, 2022, data were collected at 61 biological monitoring sites, 30 (49%) of which were designated for prioritization and evaluation of 16 stream restoration and outfall stabilization projects (11 pre-restoration and 5 post-restoration). Data from three stations were collected to evaluate discrete pollution event impacts to biological communities, 11 were applied to informing park operation and use at newly acquired parkland, park master plan, and countywide master plan investigations, and 15 were reserved for monitoring at best natural/biodiversity areas and annual trend sites.

Countywide data collected since 1995 by Parks, and in cooperation with MC DEP, were synthesized and used to fulfill 35 data requests ranging in topics from stream condition and watershed assessment results to collaborative investigations of biological community structure at stream restoration sites to identification of angler access locations. Presentations were provided to a variety of audiences on topics in stream ecology and stormwater management mitigation reaching approximately 281 county residents and interested environmental stewards, despite the challenges posed by the Covid-19 pandemic during the reporting period and beyond what is reported in the Public Education and Outreach Minimum Control Measure (MCM #2) detailed earlier in this report.

Responsible Pesticide Use in Parks

Parks requires that all pesticides are stored in approved storage units, with secondary containment to avoid pesticide spills and surface water runoff. 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.

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.

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:

   $6,323,975 over the permit term.