



Montgomery Parks' Progress Towards Eliminating Pollution and Treating Stormwater

Fiscal Year 2023 NPDES MS4 Annual Report Summary

The 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 a 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.

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 the implementation of Best Management Practices (BMPs), or techniques that manage the quantity and quality of stormwater runoff. Examples of BMPs include stormwater facilities that treat stormwater runoff from impervious surface areas; stream restoration projects; and 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 each year that covers progress towards identifying water quality improvement opportunities and securing appropriate funding to meet the twenty percent impervious area restoration requirement by 2025. This year's annual report highlights the work accomplished between July 1, 2022, and June 30, 2023, to meet the requirements of the MS4 permit. Although this is technically the last year of the five-year permit term, MDE has administratively extended the permit term and requested that Montgomery Parks plan for additional restoration to be achieved by 2030.



Volunteers and families study benthic macroinvertebrates at the Community Science Festival at Rock Creek Regional Park.

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 then determine the 20% impervious area restoration requirement. Although impervious surfaces make up a relatively small percentage of parkland, Montgomery Parks is committed to treating stormwater runoff.

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 the impervious area restoration requirement is included in the bulleted list below.

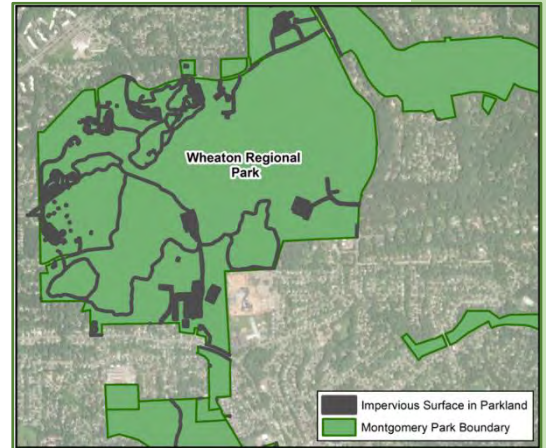
- Acres of untreated impervious area on parkland = **332.4 acres**
- 20% of untreated impervious area restoration requirement = **66.5 acres**

Thus far, Montgomery Parks has achieved more than 80% of the restoration requirement and is well poised to meet the restoration requirements outlined in the permit by 2025.

This year, MDE administratively extended the permit term and requested that Montgomery Parks plan for additional restoration by 2030. Specifically, MDE requested that permittees provide a plan to treat an additional 10% of untreated impervious by 2030; this would equate to 33.2 acres of additional treatment for Montgomery Parks.

Outfall Stabilization and Stream Restoration

Montgomery Parks has a [Stormwater Outfall Infrastructure Rehabilitation Program](#) intended to rehabilitate outdated and failing stormwater outfall infrastructure on parkland. Outfall stabilization projects may involve converting concrete-lined channels to naturalized channels and/or using natural channel stabilization techniques to repair eroded channels downstream of the pipe. These new channels are designed to mimic natural stream characteristics and incorporate habitat features and native vegetation to slow down the flow, increase opportunities for infiltration, and improve water quality. This past fiscal year (FY), Parks completed the construction of three sustainable outfall restoration projects. All projects were accompanied by robust plantings of native plugs, shrubs, and trees to improve the local vegetative community.



Map of impervious surfaces within Wheaton Regional Park.



Wildwood Road Outfall pre-construction (left) and post-construction (right).

Montgomery Parks also has a robust stream restoration program that also includes supporting other MS4 permittees in meeting their impervious area reduction requirements on parkland. Stream restoration reduces erosion while increasing the quality and quantity of both instream and floodplain habitat features to provide functional uplift. Montgomery Parks has several stream restoration projects currently in the design phase, including the Parker Avenue stream restoration project.

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 to each Division within the Department and is disseminated through emails, presentations, hands-on training, and daily conversations.

The annual pollution prevention training for all operational staff at Montgomery Parks was pre-recorded and distributed to over 300 staff members in FY 2023.

In addition to the annual training, a water quality concerns hotline guidance document was developed to provide an overview of the types of water quality concerns that should be reported to the Montgomery Parks pollution prevention hotline. This document was distributed in-person to park users and volunteers at outreach events, as well as digitally to Parks staff. This document aims to help ensure that pollution concerns are reported and responded to in an efficient manner.

2. Public or Personnel Involvement and Participation

The public or personnel involvement and participation program is designed for park users as the target audience. 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



Weed Warriors removing an invasive plant.



Volunteers participating in a clean-up event.

local watershed groups, and involve them in efforts that help meet the goals of the MS4 permit.

Suspect Water Pollution in One of Our Parks?

- 1.) Document the date, time, and location
- 2.) If it is safe, take some pictures
- 3.) Call the Water Quality Pollution Hotline:

(301) 495-3582

What Types of Concerns Should I Report?

Call the Water Quality Concerns Hotline if you see the following on Parkland:

Discolored Water

- Colorful substances in water can indicate the presence of pollution. Report these:
 - Brown water is an indicator of excess sediment and could mean there is a watermain break nearby.
 - White water is an indicator of concrete wash, paint, or other construction material illegally washed down the storm drain.
 - Bright green or blue-green water can be an indicator of a harmful algal bloom.

Aquatic Organism Mortality

- Fish and amphibians (e.g., frogs and salamanders) are good indicators of water quality. If you see multiple dead aquatic organisms in a concentrated area and suspect the cause may be from pollution, report this.

Illicit Discharges

- Report suspected discharges of sewage, detergents, oil or auto fluids, concrete or paint, pesticides and fertilizers, hazardous waste, pool water or chlorine, cooking grease, household waste, and gray water.
- Use your sense of smell to help detect illicit discharges. If you smell gas, leave the area immediately and call 911 and Washington Gas at (703) 750-1400.

Spills and Leaks

- Report any accidental spills or leaks that have potential to enter a nearby storm drain or stream.
- For sewage leaks and water main break concerns, contact WSSC Emergency Services directly at (301) 206-4002.

Everyone has a role in preventing pollution and protecting our waterways!

Water Quality Concerns Hotline Guidance Document.

Throughout FY 2023, Montgomery Parks cleanup volunteers removed and properly disposed of over 108,000 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. Tree root systems also help to stabilize stream banks and floodplains, reducing erosion and additional sedimentation downstream. See Table 1 for a summary of volunteer programmatic data collected in FY 2023.

Table 1. Montgomery Parks Public Involvement and Participation in FY 2023

Volunteer Program Data	FY 2023 Park Cleanups	FY 2023 Weed Warriors	FY 2023 Other Volunteer Programs	FY 2023 TOTAL
Volunteer Hours	11,232	11,857	40,494	63,583
Number of Volunteers	5,693	2,180	2,286	10,159
Trash Removed in Pounds	108,751	--	--	108,751
Number of Trees Saved from Vines	--	15,841	--	15,841

Montgomery Parks also 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. While 2023 results are still being processed, results of the 2022 FrogWatch monitoring program are available online as an [interactive report](#).

Montgomery Parks also offered several other events that promoted public involvement and participation in FY 2023, including:

- Partnering with [Nature Forward](#) on the “Don’t Pollute” Youth Leadership Program in Long Branch
- Helping to organize the annual [Montgomery County GreenFest](#), which had 800+ visitors in 2023
- Coordinating service events for MLK Day of Service, Earth Month, Natural Public Lands Day, and Community Service Month
- 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](#), which engages about 500 participants annually

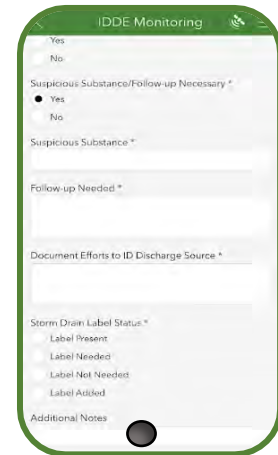


An outreach table set up at one of the Latino Conservation Week events.

3. Illicit Discharge Detection and Elimination

As part of the Illicit Discharge, Detection, and Elimination (IDDE) Program, Montgomery Parks detects and eliminates illicit discharges by inspecting outfalls on parkland. 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. Over the past fiscal year, Montgomery Parks exceeded the number of required screenings.

[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 all parks are kept clean and free of trash, hazardous materials, and pollutants as part of the effort to reduce stormwater pollution.



IDDE monitoring Survey123 application.

4. Construction Site Stormwater Runoff Control



Proper erosion and sediment control practices installed on a construction site.

Construction site stormwater runoff control measures are regulated and enforced by the Montgomery County Department of Permitting Services (MC DPS). 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.

There are currently 47 Montgomery Parks employees that possess MDEs Responsible Personnel Certification for Erosion and Sediment Control. This helps ensure that staff are properly trained and that all erosion and sediment controls on-site are correctly installed and maintained.

5. Post-Construction Stormwater Management

After construction, stormwater facilities are routinely maintained through activities such as mowing, trash debris and removal, erosion repair, weeding, mulching, and more. 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 maintenance on more than 770 stormwater facilities.

In addition to routine maintenance, stormwater facilities also require inspections on a triennial basis to ensure proper function. An inspection program was formalized in FY 2021 involving the use of a standardized inspection form, establishment of an inspection schedule, and photo documentation. This program was further enhanced in FY 2023 to utilize Survey123 to conduct the inspections and generate reports. Stream restorations and infiltration facilities were inspected in FY 2023, and bioswales, micro-bios, and bioretentions will be inspected in FY 2024.



Water Quality Staff perform maintenance on pervious pavement.

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 and good housekeeping practices are addressed through annual trainings to staff, recycling and waste management programs, integrated pest management, nuisance wildlife management, non-native invasive vegetation management, and more.



Montgomery Parks staff store vehicles under cover to reduce pollutant potential resulting from leaks.

Good housekeeping plans are developed for park facilities that have greater pollution potential. These plans cover 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.). The good housekeeping plans also discuss storing materials under cover, recycling/disposing of fluids properly, and removing debris in a timely fashion.

Montgomery Parks also evaluates fish and benthic macroinvertebrate (i.e., bottom-dwelling insect) communities through stream biological monitoring; these data collection efforts provide useful information related to stream conditions.

These data also help to inform decisions about the installation and implementation of stormwater mitigation efforts, stream restorations, and other BMPs to ensure there is a measurable effect on restoring and protecting waterways.

Conclusion

As stewards of Montgomery County's most notable stream valleys, Montgomery 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 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 meet 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 is also well poised to meet any additional requirements outlined by MDE, and will continue to work with other MS4 permittees to implement BMPs and coordinate outreach events.

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 minimum control measures and will continue to expand and enhance efforts that support the goals of the NPDES program.



Volunteers participate in a park clean-up at Matthew Henson State Park Unit #4.



**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 Reddie Drive, 12th Floor Wheaton, MD 20902
Phone Number(s):	(301) 495-2500
Email address:	mike.riley@montgomeryparks.org
Additional Contact(s):	Kyndal Gehlbach, NPDES Program Coordinator
Mailing Address:	2425 Reddie Drive, 11th Floor Wheaton, MD 20902
Phone Number(s):	(301) 650-4383
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.

Michael F. Riley	<i>Michael F. Riley</i>	10/19/2023
Printed Name	Signature	Date

Reporting Period (State Fiscal Year):

2023

Due Date:

10-31-23

Date of Submission:

10-23-2023

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). This year, Parks 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; inspection dates for these facilities are included from MC DEP's data in the Urban BMP database.

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. 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.

Section I: Impervious Area Restoration Reporting

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

Are the projected implementation years for completion of all BMPs no later than 2025?

Yes No

Per MDE's comment on our 2022 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

Section I: Impervious Area Restoration Reporting

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 has several stream restoration projects currently in the design phase, including Flower Avenue Outfall and Parker Avenue stream restoration. When installed, these projects will reduce erosion while increasing the quality and quantity of both instream and riparian habitat features to provide functional uplift.



Above pictures: Parker Avenue stream restoration site (before construction; currently in design)

This past fiscal year, Parks completed construction of 3 sustainable outfall restoration projects. Two of these outfall initiatives transformed existing outfalls that were designed as concrete-lined ditches 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. The third project daylighted a portion of a piped channel and provided a stable natural channel to transition the outfall into the floodplain of Sligo Creek. Cumulatively, these 3 projects provide the equivalent of 4.4 acres of impervious acre treatment. All projects were accompanied by robust plantings of plugs, shrubs, and trees to improve the local vegetative community.

Section I: Impervious Area Restoration Reporting



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



Above pictures: Wildwood Road Outfall pre-construction (left) and post-construction (right).

Stormwater retrofit projects that incorporate Environmental Site Design (ESD) and treat previously untreated existing impervious areas were completed at Stewartown Local Park and Dale Drive Local Park. An additional micro-bioretenion facility is under construction at Nolte Local Park for completion in FY24, and others are currently in design and permitting.

Section I: Impervious Area Restoration Reporting



Above picture: Dale Drive Local Park Bioretention

Montgomery County 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:

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. 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.

Section I: Impervious Area Restoration Reporting

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:*
 - o *Pollution Prevention and Repairs to Ponds and Lakes: \$2,460,000*
 - o *Stream Protection: \$4,350,000*
- *Operating Budget: \$3,621,465 (\$724,293 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	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none">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 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.4. Continue long-term efforts towards collecting and documenting construction completion data and as-built plans to verify water quality treatment.5. Continue to work with the Department on recommendations for continued restoration through 2030.
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