National Pollutant Discharge Elimination System

MUNICIPAL SEPARATE STORM SEWER SYSTEM
DISCHARGE PERMIT NUMBER: MD0068365
STATE DISCHARGE NUMBER: 22-DP-3322

CHARLES COUNTY, MD
ANNUAL REPORT
JULY 2022 - JUNE 2023

Prepared for:
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Water and Science Administration
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Submitted by:
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Streams_HydroJunctions

	swFlow
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	swStructures

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Feature Classes			
	BMP	AlternateBMPPolygon	MonitoringSite
	BMPDrainageArea	Outfall	MonitoringDrainageArea
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Executive Summary

Charles County was issued a new National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit on December 30, 2022. This is Charles County's fourth generation MS4 permit and it covers the period from December 30, 2022 through December 29, 2027. Under Part V of the MS4 permit Charles County is required to submit annual progress reports.

This MS4 Annual Report covers a 12-month period from July 1, 2022 through June 30, 2023, which is Fiscal Year (FY) 2023. Highlights from the permit year include:

Capital Programs

- Construction of 3 stream restoration projects, totaling 197.36 acres of impervious surface restoration credit.

Financial Programs

- Stormwater Remediation Fee increase from $127 to $146 per improved parcel, increasing the Watershed and Protection Fund FY 2024 budget to $7.79 million.

Operational Programs

- Street sweeping of 1,358 lane miles and removing 115 tons of debris from the storm drainage system. Repairing County owned inlets at a cost of $324,249.

- Septic pump-out reimbursements for 857 applications as part of bringing public attention to the importance of routine septic maintenance.

- Watershed Restoration and Outreach grant awards to four organizations:
    - University of Maryland Environmental Finance Center for "Advancing the Care and Maintenance of County Rain Gardens on Private Property;"
    - University of Maryland Extension for "Fostering Deicing Salt Stewardship in Charles County through Education;"
    - Through Piscataway Eyes, Inc. for "Aquatic Invasive Species Program;" and
    - NOAA Office of National Marine Sanctuaries for "Mallows Bay Bioblitz 2023."

Planning Programs

- Charles County joined the Chesapeake Bay Trust Pooled Monitoring Program and is now a participant on the Pooled Monitoring Advisory Committee for the purposes of meeting the BMP Effectiveness Monitoring permit condition under *Part IV.G. Assessment of Controls*.

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I. Identification

Permit Number: 22-DP-3322 MD0068365

Permit Area: The permit covers all stormwater discharges from the municipal separate storm sewer system (MS4) owned or operated by Charles County, Maryland.

Effective Dates: December 30, 2022, through December 29, 2027.

FY 2023 Status

Charles County, Maryland has been operating its MS4 under a National Pollutant Discharge Elimination System (NPDES) MS4 permit since 1997, when the first five-year permit was issued by the Maryland Department of Environment, Water Management Administration (MDE/WMA). On July 31, 2002, the County was issued a second, five-year permit. Each permit issuance or renewal is referred to as a generation, for example, first generation, second generation, and so on. The County's first and second generation permits covered stormwater discharges from the MS4 within the Development District, designated as the County's northern urban area.

The third generation, five-year MS4 permit was issued on December 26, 2014, which expanded permit coverage to the entire county and added significant permit conditions. New conditions included expanding the Geographical Information System (GIS) data countywide, restoring 20 percent of the County's untreated impervious surface area countywide, and preparing watershed restoration plans to address total maximum daily loads (TMDLs) for both local waterways and the Chesapeake Bay. This permit was modified on November 8, 2019, to add Part IV.E.3 titled, "Nutrient Trading," which allows the County to acquire total nitrogen, total phosphorus, and total suspended solids credits in accordance with the requirements of the Maryland Water Quality Trading and Offset Program for purposes of meeting the 20 percent impervious surface area restoration requirement of the permit.

The County's fourth generation MS4 permit was issued on December 30, 2022, including new initiatives such as Good Housekeeping Plans for applicable County properties, developing a Salt Management Plan, and restoring 13 percent of the County's untreated impervious surface.

As part of this comprehensive water quality control permit, the County is required to provide annual progress reports to MDE/WMA. The annual reports are based on State/County fiscal year and are due on the anniversary date of the permit.

This report summarizes the actions taken by the County to fulfill the requirements of the NPDES permit. Following each permit condition is a description of the work completed.

II. Definitions

Terms used in this permit are defined in relevant chapter of the Code of federal Regulations (CFR) or the Code of Maryland Regulations (COMAR). Terms not defined in CFR or COMAR shall have the meanings attributed by common use unless the context in which they are used clearly requires a different meaning.

III. Water Quality

The permittee must manage, implement, and enforce a stormwater management program in accordance with the Clean Water Act (CWA) and corresponding National Pollutant Discharge Elimination System (NPDES) regulations, 40 CFR Parts 122-124.

Compliance with conditions in Parts IV through VII of the permit shall constitute compliance with Subsection 402(p)(3)(B)(iii) of the CWA and adequate progress toward compliance with Maryland's receiving water quality standards and U.S. Environmental Protection Agency (EPA) established or approved stormwater waste load allocations (WLAs) for this permit term.

IV.A. Permit Administration

Overview of Permit Conditions

1. *Charles County shall designate an individual to act as liaison with MDE for implementation of this permit. The County shall provide the coordinator's name, title, address, phone number, and email address. Additionally, the County shall submit in its annual reports to MDE, including an organizational chart detailing personnel and groups responsible for major NPDES program tasks in this permit. MDE shall be notified of any changes in personnel or organization relative to NPDES program tasks.*

FY 2023 Status

Listed below are the County's liaisons to MDE for permit implementation. The contact information for the FY 2023 liaisons is listed below.

Liaisons' address:

Charles County Planning Division
200 Baltimore Street,
La Plata, MD 20646

Liaisons' Phone and E-mail Contact Information:

Charles Rice, Planning Director
301-645-0651 (P), RiceC@CharlesCountyMD.gov

Lynn Knaggs, Environmental Programs Supervisor
301-638-0810 (P), KnaggsL@CharlesCountyMD.gov

Karen Wiggen, Planner III
301-645-0683 (P), WiggenK@CharlesCountyMD.gov

Organizational Chart:

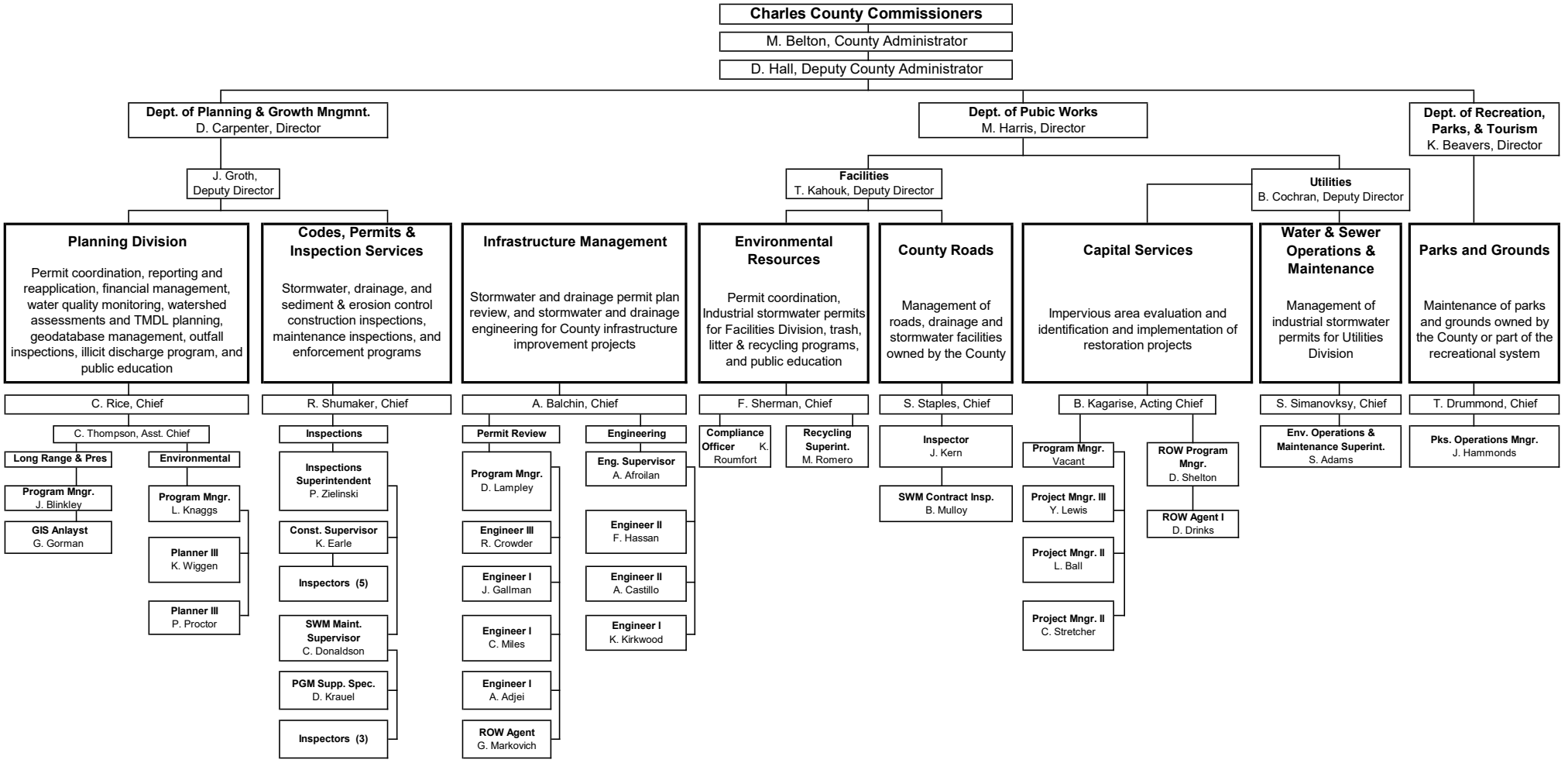
The NPDES program tasks in this permit are divided between three departments in Charles County: Planning and Growth Management (PGM), Department of Public Works (DPW) and Recreation, Parks, and Tourism (RPT). These departments coordinate with other departments, such as the County's Attorney's Office and the Department of Fiscal and Administrative Services, as necessary to implement the permit.

PGM's responsibilities primarily include the stormwater and erosion and sediment control permitting programs, development of stormwater infrastructure geographic information system (GIS), managing the County's data in the MDE geodatabase, monitoring water quality, performing watershed assessments, watershed restoration planning, managing the illicit discharge elimination and detection program, managing the septic pump-out program, and public outreach. DPW's responsibilities primarily include implementing capital restoration projects, maintenance of County-owned roads, maintenance of the public drainage system, implementation of stormwater pollution prevention plans for County owned industrial properties, the litter and floatables program, and public outreach. RPT's responsibilities include maintenance of County owned parks and grounds.

In FY 2021 the Charles County Commissioners introduced and adopted Bill No. 2020-07 adding Chapter 299 and Resilience Authority Sections 299.01 through 299.15 to the *Code of Charles County, Maryland*. The purpose stated in Section 299.01 is, "The Resilience Authority of Charles County will undertake and support resilience infrastructure projects, that mitigate the effects of climate change by offering a range of financing structures, forms, and techniques that leverages public and private investment and stimulates demand for resilience infrastructure projects throughout Charles County." The Board was appointed in February 2021 and a Climate Resilience and Sustainability Officer was hired by the Department of Planning and Growth Management to begin in FY 2022.

The following organizational chart details personnel and divisions responsible for major NPDES program tasks in this permit.

NPDES MS4 Permit Responsibilities Organizational Chart



IV.B. Legal Authority

Overview of Permit Conditions

Charles County shall maintain adequate legal authority, in accordance with NPDES regulations 40 CFR 122.26(d)(2)(I), throughout the term of this permit. In the event that any provision of its legal authority is found to be invalid, the County shall make the necessary changes to maintain adequate legal authority.

FY 2023 Status

The County will maintain adequate legal authority throughout the term of this permit, and in the event that any provision of its legal authority is found to be invalid, the County will make the necessary changes to maintain adequate legal authority.

IV.C. Source Identification

Overview of Permit Conditions

Sources of pollutants in stormwater runoff jurisdiction-wide shall be identified and linked to specific water quality impacts on a watershed basis. A georeferenced database shall be submitted annually in accordance with MDE NPDES MS4 Geodatabase Design and User's Guide (Version 1.2, May 2017), (hereafter MS4 Geodatabase) or as noted below that includes information on the following:

1. *Storm drain system: infrastructure, major outfalls, inlets, and associated drainage areas;*
2. *Industrial and commercial sources: industrial and commercial land uses and sites that the County has determined have the potential to contribute significant pollutants;*
3. *Urban best management practices (BMPs): stormwater management facility data including outfall locations and delineated drainage areas;*
4. *Impervious surfaces: public and private land use delineated, controlled and uncontrolled impervious areas based on, at minimum, Maryland's hierarchical eight-digit sub-basins;*
5. *Monitoring locations: locations established for chemical, biological, and physical monitoring of watershed restoration efforts and the 2000 Maryland Stormwater Design Manual, unless participating in the pooled monitoring program as described in Part IV.G; and*
6. *Water quality improvement projects: restoration projects implemented in accordance with Part IV.E.3 including stormwater BMPs, programmatic initiatives, and alternative control practices in accordance with the Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated Guidance for NPDES Permits (2021) (hereafter 2021 Accounting Guidance) including projects proposed, under construction, and completed with associated drainage areas delineated.*

FY 2023 Status

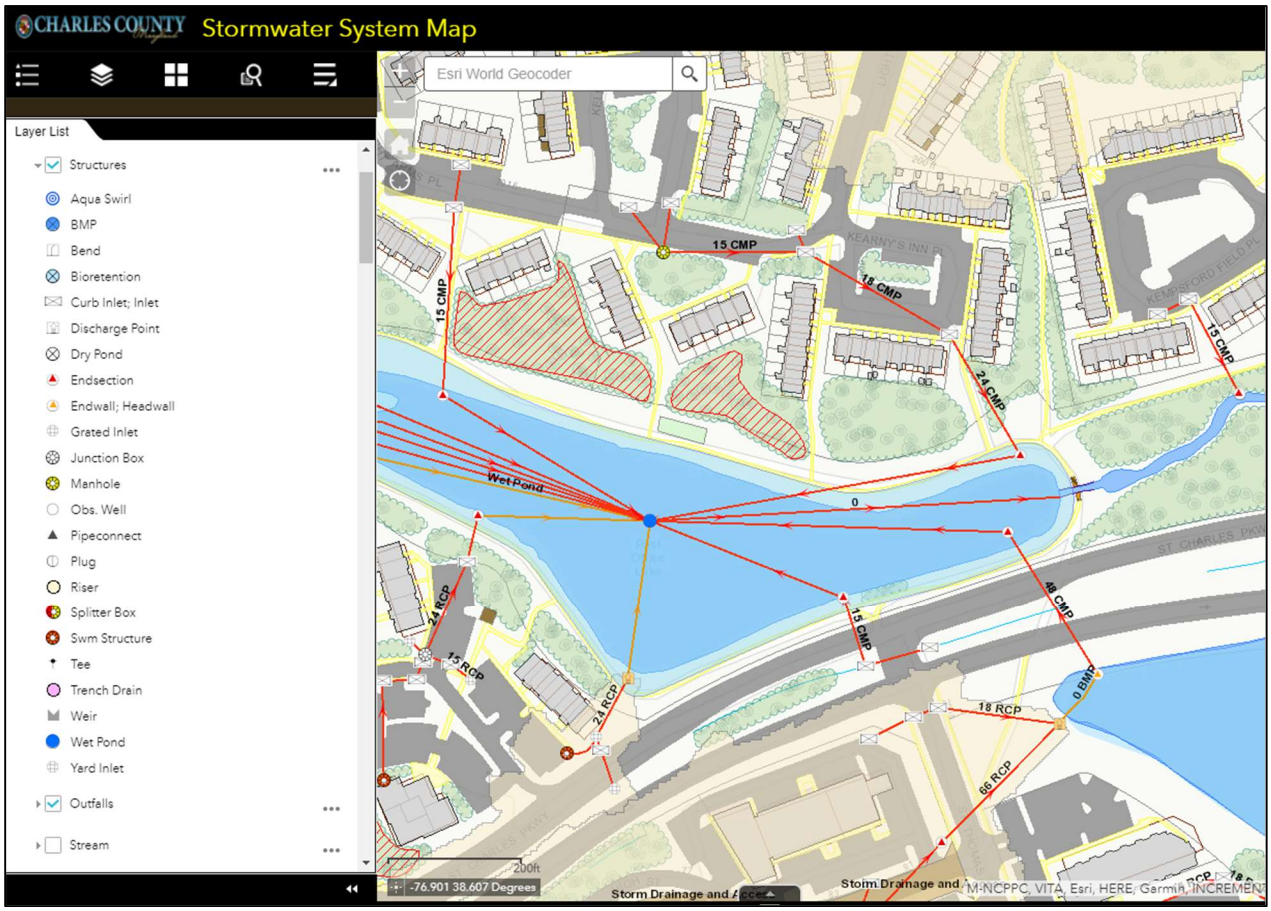
Charles County began compiling the above listed GIS data on a countywide basis in FY 2012. The GIS data coverage is a useful resource to County staff for public storm drain and stormwater best management practice (bmp) maintenance, stormwater permitting reviews, environmental permitting reviews, stormwater facility maintenance inspections, and watershed restoration planning.

In an effort to provide the stormwater data on a platform that would be easily accessible by County maintenance providers, permit reviewers and inspectors in the office or in the field, a Stormwater System Map internet application was established in 2013, with staff trainings occurring annually.

The County's Stormwater System Map internet application capabilities include:

- trace tool used to trace flow in a drainage system upstream for identifying potential sources of illicit discharges;
- bmp locator tool using local bmp identification numbers;
- street locator tool using bmp addresses;
- links to stormwater management, drainage and forest conservation easement documents, used to view easements of record;
- micro-bmp tool used to view approved permit plans for micro-bmps;
- inspection tool used to identify status of stormwater bmp inspections;
- 2014, 2017 and 2020 aerial imagery for comparison, 2020 imagery added in FY 2022;
- link from the project site to the construction/as-built drawings for the project (added in FY 2017); and
- major outfall search tool and photos (added in FY 2017).

In FY 2024 the County will begin new stream monitoring stations and is considering adding a monitoring data component to the Stormwater System Map.



MDE's NPDES MS4 Geodatabase Design and User's Guide

Early in 2015, MDE released the *NPDES MS4 Geodatabase Design and User's Guide Versions 1.0* and *1.1*. Revisions were subsequently reflected in Version 1.2, released in May 2017.

In November 2021, MDE released a *Draft Supplement to the Geodatabase Design and User's Guide (Version 1.2 Draft Updates)*. The corresponding geodatabase updates were included in *Version 2*, released in March 2022. Additional geodatabase updates occurred in September 2023. County staff converted existing data into the September 2023 version of the geodatabase for this submittal. See Appendix A for County feedback on the geodatabase updates.

MDE's 2023 MS4 Geodatabase format includes the following 11 feature classes (FC) and 16 required tables and 2 optional tables. Changes include: the BMP table has been changed to a FC; Restoration BMPs have been added to the BMP FC and Restoration BMP inspections have been added to BMP inspections table; Line, Polygon and Point Alternate BMP inspections have been combined into one Alternate BMP inspection table; and the BMP Point of Investigation FC has been removed. Charles County does not currently use the two optional tables.

- **Permit Administration:** *Permit Information table.*
- **Source Identification:** *Outfall FC; Outfall Drainage Area FC; BMP FC; BMP Drainage Area FC; Impervious Surface table; Monitoring Site FC; Monitoring Drainage Area FC; Alternate BMP Line FC; Alternate BMP Point FC; Alternate BMP Polygon FC; Discharges from Grey Infrastructure table (optional); Stream Restoration Protocols table; and Shoreline Management Practices table.*
- **Management Programs:** *Stormwater Management Program table; BMP Inspections table; Alternate BMP Inspections table; Erosion and Sediment Control Program table; Quarterly Grading Permits FC; Illicit Discharge Detection and Elimination Program table; Municipal Facilities FC; and Chemical Application table.*
- **Restoration Plans and Total Maximum Daily Loads:** *Chesapeake Bay TMDL Progress table; and Local TMDL Progress table.*
- **Assessment of Controls:** *Chemical Monitoring table; Local Concern Monitoring table (optional); and Biological Monitoring table.*
- **Program Funding:** *Fiscal Analysis table.*
- **Narrative Files:** *Documents, Charts and Reports table.*

Following is an overview of updates made this year in the MDE MS4 geodatabase and the County's storm drain system data. Both geodatabases are submitted with this annual report.

- **Storm Drain System:** The FY 2020 data was revised to separate pipes and culverts from open channel and flow features. In FY 2023 the dataset includes 29,843 enabled pipes and culverts and 53,314 enabled drainage related structures. Of the enabled structures 11,367 are 'SWM Junctions' which allow the GIS network trace tool to work but are not physical structures. The storm drain system is provided separate from the MS4 Geodatabase except for the outfalls and outfall drainage areas, which are included in the MS4 Geodatabase.

- **Industrial and Commercial Sources:** MDE noted on the question and answer spreadsheet, referenced above that this information is to be captured in the Municipal Facilities feature class of the geodatabase. Charles County has three municipal facilities with industrial stormwater permits, which have been added to the MS4 Geodatabase. A narrative summary of the data is included in Part IV.D.4. of this report.

- **Urban Best Management Practices (BMPs):** The County continued to work through its digital and paper files to expand and improve the County's stormwater GIS coverage countywide. The FY 2023 total is 8,131 active stormwater BMPs (3,146 Macro and 4,985 Micro BMPs). A narrative summary of the BMP data is included in Part IV.D.1. of this report.

- **Impervious Surfaces:** In 2013, the County first delineated impervious surface polygons based on 2011 aerial photographs. In FY 2015, 11,586 gravel parking areas and dirt roads were added to the polygon data. In 2017, the County's final impervious surface analysis of controlled acres based on era of stormwater management was provided to MDE.

- **Monitoring Locations:** A total of 25 stations are included in the MS4 Geodatabase, some of which are no longer being used, but are maintained for historical purposes. A narrative summary of monitoring data is included in Part IV.G. of this report.

- **Water Quality Improvement Projects:** Stormwater management best management practices that are completed, under construction and proposed, have been added to the BMP feature class and shown as points according to the *User's Guide*. Additional water quality improvement projects have been included under Alternate BMP lines (streams, shoreline and outfall stabilizations), Alternate BMP points (septic upgrades), and Alternate BMP polygons (inlet cleaning and tree planting) according to the *User's Guide*. A narrative summary of the water quality improvement projects is included in Part IV.E. of this report.

IV.D. Management Programs

Overview of Permit Conditions

The following management programs shall be implemented jurisdiction-wide by Charles County. These management programs are designed to control stormwater discharges and reduce associated pollutant loadings to the maximum extent practicable (MEP) and are to be maintained for the term of the permit. Additionally, these programs are to be integrated with other permit requirements to promote a comprehensive adaptive approach toward solving stormwater discharge water quality problems. Annual reports for the management programs shall be in accordance with Part V.A. of the County's MS4 permit and the MS4 Geodatabase.

1. Stormwater Management

An acceptable stormwater program shall continue to be maintained in accordance with the Environment Article, Title 4, Subtitle 2, Annotated Code of Maryland. County activities shall include following items a-d.

a. Implementing stormwater management design policies, principles, methods, and practices found in the latest version of the 2000 Maryland Stormwater Design Manual. This includes:

i. Complying with the Stormwater Management Act of 2007 (Act) by implementing Environmental Site Design (ESD) to the MEP for new and redevelopment projects;
ii. Tracking the progress toward satisfying the requirements of the Act and identifying and reporting annually the problems and modifications necessary to implement ESD to the MEP; and
iii. Reporting annually the modifications that have been or need to be made to all ordinances, regulations, and new development plan review and approval processes to comply with the requirements of the Act.

FY 2023 Status

The County continues to implement the stormwater management design policies, principles, methods, and practices found in the 2000 Maryland Stormwater Design Manual and COMAR 26.17.02. As required by the Maryland Stormwater Management Act of 2007, the County adopted new stormwater regulations on July 13, 2010, which went into effect on August 1, 2010. Since that time, no modifications have been made to the County's Stormwater Management and Drainage Ordinances.

To better comply with the Act and related stormwater management codes, the following procedural modifications were made in FY 2023:

- An additional requirement for projects with small pond approval was implemented to better track and ensure submittal of as-built drawings within 90 days of completion to the State for review. To ensure this step is complied with, no County permitted project can progress to completion until the County receives a confirmation of compliance letter. An example of a compliance letter is found in Appendix A.

  This step was implemented because too many projects were not complying with the requirement to submit as-built drawings within 90 days of completion to the State for review and the Charles County Soil Conservation District could not ensure compliance if the County continued to permit completion.

- The County issued PGM Notice 23-02 "Onsite Dedication Document Approval Requirements for Development Services Permit Issuance" on March 7, 2023. This requires the County Attorney's Office to approve all easement, right-of-way, and covenant documents prior to issuance of the development services permit (DSP). A copy of this notice is found in Appendix A.

- The County issued PGM Notice 23-03 "Clarification of Submerged Gravel Wetland Requirements" on March 30, 2023. This notice is to ensure the Environmental Site Design (ESD) to the Maximum Extent Practicable (MEP) is not compromised, and is found in Appendix A.

b. Maintaining programmatic and implementation information related to the stormwater management program including, but not limited to:

i. Number of Concept, Site Development, and Final Plans received and number of those approved. Plans that are re-submitted as a result of revision or in response to comments should not be considered as a separate project;
ii. Number of redevelopment projects received and the number of those approved;
iii. Number of stormwater exemptions issued; and
iv. Number and type of waivers received and issued, including those for quantity control, quality control, or both. Multiple requests for waivers may be received for a single project and each should be counted separately whether part of the same project or plan.

FY 2023 Status

Since the County's adoption of the stormwater management regulations (August 1, 2010) requiring environmental site design (ESD) to the maximum extent practicable (MEP), through FY 2023, a total of 453 projects have submitted Concept SWM Plans, which is Step 1 of the regulation. During that

same time period, 403 projects have also submitted Site SWM Plans, which is Step 2 of the regulation.

Table 1: Stormwater Management Concept and Site Plans Per Fiscal Year

	2020 Received	*202 Approved*	*2021 Received*	*2021 Approved*	*2022 Received*	*2022 Approved*	*2023 Received*	*2023 Approved*
CSWM (Step 1)	*29*	*9*	*25*	*21*	*38*	*28*	*24*	*13*
SSWM (Step 2)	*23*	*3*	*25*	*15*	*27*	*20*	*38*	*16*
Total	*52*	*12*	*50*	*36*	*65*	*48*	*62*	*29*

For the FY 2023 time period, the County received 25 new Development Services Permit submissions (these permit submissions may also include the Final Stormwater Management Plans, which is the Step 3 of the regulation).

For FY 2023 time period, 2 redevelopment projects were received under a Concept SWM Plan application; 3 redevelopment projects were received under a Site SWM Plan application, and 4 redevelopment projects received final permit approval. These projects are listed in the following tables.

Table 2: Redevelopment Concept (CSWM) and Site SWM (SSWM) Plans Received for Review

Plan Number	Name
CSWM-230010	Pinefield ESM Station
CSWM-230011	Mt. Carmel Woods WWTP
SSWM-220021	Mattawoman WWTP
SSWM-220027	Bryan's Road Dash-In
SSWM-230003	Bryan's Road Auto Zone

Table 3: Redevelopment Final Stormwater Management Plans Approved

Plan Number	Name
DSP-220021	Tommy Box Carwash
DSP-220035	Mattawoman WWTP Lime & Truck Bay Improvements
DSP-220038	Dash-In 1064 (Glymont)
DSP-220040	Chick-fil-A 3365 Crain Highway

In addition to the four stormwater redevelopment plan permits receiving final approval on the above table, there were 21 stormwater management plan permits for new development that received final approval and the associated development services permits were subsequently issued in FY 2023 (some of these issued permits were plan revisions). A table of FY 2023 issued SWM permits follows.

Table 4: Final Approved Stormwater Management Plan Permits in Fiscal Year 2023

DSP 190034	DSP 210042	DSP 220024	DSP 220039
DSP 200045	DSP 220001	DSP 220025	DSP 220044
DSP 200056	DSP 220004	DSP 220026	DSP 230003
DSP 200058	DSP 220008	DSP 220031	
DSP 210012	DSP 220017	DSP 220032	
DSP 210031	DSP 220018	DSP 220033	

* This table does not include Redevelopment Plan Permits, which are shown on table above.

For the FY 2023 time period, the County did not receive or grant any requests for Exemptions or Administrative Waivers for quality and/or quantity.

Once stormwater BMPs have been constructed, As-built drawings of the BMPs are verified and approved by the County, then a final acceptance inspection is completed by the County, and finally a warranty period begins prior to bond release.

Table 5: As-Builts Approved In Fiscal Year 2023

Permit Number	Name	Approval Date
VR_160028	Timber Ridge, Phase 1	7/19/2022
DSP-180006	St. Charles Mini Storage, Lot 8	7/22/2022
VR_130078	Town Center South, Lot 5R	8/3/2022
VR_170093	Christopher Pointe, Section 2	8/9/2022
VR_120071	Hamilton Park	8/15/2022
DSP-190022	Hunt Club Estates Bridle Path Stream Rest.	9/1/2022
VR_60069	Kingsview Subdivision, Section 6B	10/26/2022
DSP-200023	7-Eleven Crain Highway	10/24/2022
VR_180006	Brentwood 7	10/24/2022
VR_150014	Central Park at Colonial Charles	10/28/2022
VR_150016	Gleneagles P	11/14/2022
VR_130103	Town Center South Lot 5R Phase 2	11/28/2022
VR_70027	Mimosa Mt Carmel Woods Addition	12/21/2022
VR_90009	Sodus Manor	12/21/2022
DSP-190066	Tower Self Storage II	12/28/2022
DSP-190030	College of Southern Maryland Stream Restoration	02/10/2023
VR_50014	Cliffton on the Potomac Roadway Improvements	03/16/2023
VR_170085	Timber Ridge Phase 2	03/20/2023
DSP-200008	Dollar General - Marbury	04/04/2023
DSP-200009	SMECO - Mt. Victoria Substation	05/19/2023
DSP-210034	Raising Cane's	05/26/2023
DSP-190051	NPDES: Ruth B. Swann Park Tributary Channel Stream Restoration	06/15/2023
VR_160033	Highgrove 7	06/20/2023
DSP-190030	CSM Stream Restoration	06/26/2023

c. *Maintaining construction inspection information is to be maintained according to COMAR 26.17.02 for all ESD treatment practices, structural stormwater management facilities, and stable conveyance and capacity to receiving waters, including the number of inspections conducted and violation notices issued by Charles County.*

FY 2023 Status

In accordance with COMAR 26.17.02.10 Construction Inspection and Enforcement, County personnel perform the various inspections, as outlined for the ESD treatment practices and structural stormwater management facilities. The County also reviews the as-built plans and certifications, including the submission of the Notice of Construction Completion Forms, which were previously updated to collect the technical data associated with each device/facility that are provided to the Charles County Soil Conservation District.

In January 2019, Charles County Department of Planning and Growth Management fully transitioned to a permit management software system called EnerGov. This system schedules and tracks review and inspection activities associated with all types of construction permits. The EnerGov module provides a location in each permit file to store photos, permit drawings, reports, data forms, and documents such as inspection reports, violation notices, and letters.

The number of stormwater management facility construction inspections is shown on the following table. The inspections of residential micro-stormwater practice inspections count as one per permit, even if there are multiple stormwater practices per permit. There were no stormwater construction violations or stop work orders.

Table 6: Stormwater Best Management Practice (BMP) Construction Inspections

	FY 2020	FY 2021	FY 2022	FY 2023
Development Services Permits (DSP) (BMPs not on Residential Lots)	571	363	286	232
Residential Permits (RESD) (BMPs on Private Residential Lots)	1,182	1,080	1,361	1,154
Construction Violations (Stop Work Orders)	0	0	0	0

d. *Conducting preventative maintenance inspections according to COMAR 26.17.02, of all ESD treatment systems, structural stormwater management facilities, and stable structural conveyance and capacity to receiving waters, at least on a triennial basis. Documentation identifying the ESD systems and structural stormwater management facilities inspected, the number of maintenance inspections, follow-up inspections, the enforcement actions used to ensure compliance, the maintenance inspection schedules, and any other relevant information shall be submitted in the County's annual reports.*

FY 2023 Status

The County continues conducting preventative maintenance inspections of all stormwater management (SWM) devices on a triennial basis. In FY 2021 inspections were expanded to include Charles County Government and Public School owned BMPs located in the Towns of La Plata and Indian Head.

In February 2020, the SWM Maintenance Inspections fully transitioned to the new EnerGov software. Since then, each existing and new major stormwater BMP is assigned a Stormwater Management Maintenance (SWMM) permit number in EnerGov. Residential micro-stormwater practices are inspected under the original construction permit number and not assigned a separate SWMM permit. This is because the multiple micro-BMPs are inspected together under a single inspection entry whereas the major stormwater BMPs are inspected and tracked individually. In FY 2023 there are 2,990 active SWMM permits.

Table 7: SWM Maintenance Permits for Macro-BMPs Entered in EnerGov for Inspection

	Jan 1, 2020 – June 30, 2021	FY 2022	FY 2023
# SWMM Permits Entered	1,484	1,322	200

Maintenance inspection photos and reports are recorded directly into the EnerGov software module on electronic field tablets during the inspection of each BMP. If necessary, certified letters are sent to initiate compliance and these are also saved within the individual permit file within EnerGov.

The EnerGov software provides the following options for each inspection result: “Pass” or “Re-inspection Required”. Inspections with “Pass” results are recorded as “Pass” and the inspections with “Re-inspection Required” results are recorded as “Fail” in the MS4 Geodatabase. It should be noted that the reasons for “Re-inspection Required” vary widely and include not being able to access the site, needing minor maintenance, and structural failure. Therefore, a “Fail” in the MS4 geodatabase does not indicate severity of the situation. Owners are notified that maintenance is required and re-inspections are scheduled on the timeframe determined suitable by the inspector. If the owners do not rectify the situation, the cases are referred to the County Attorney’s Office for enforcement.

Table 8: SWM Maintenance Inspections for BMPS not on Residential Lots

	FY 2021	FY 2022	FY 2023
Total Inspections	1,378	1,547	1,112
Failed Inspections	242	345	667
Total BMPs Inspected	1,163	1,371	692
Noncompliant BMPs	154 (13%)	203 (15%)	273 (39%)

Table 9: SWM Maintenance Inspections for BMPs on Private Residential Lots

	FY 2021	FY 2022	FY 2023
Total Inspections	3,009	219	2,099
Failed Inspections	463	101	929
Total Private Residential Lots Inspected	2,590	178	1,373
Lots w/Noncompliant BMPs	326 (13%)	44 (25%)	213 (16%)

*Table 10: SWM Maintenance Inspections for Restoration BMPs**

	FY 2021	FY 2022	FY 2023
Total Inspections	32	1	9
Failed Inspections	0	1	7
Total Restoration BMPs Inspected	32	1	4
Noncompliant BMPs	0	1	2

*These inspections are included in the totals found in Table 6.

The data in this section is captured is included in the enclosed MS4 Geodatabase as follows:

- Number of various types of stormwater plan reviews, and construction inspections are in the *SWM Table*,
- New development and restoration BMPs are in the *BMP Table,* and
- BMP Maintenance inspections are in the *BMP Inspections Table.*

Stormwater Maintenance Inspection Process Updates

EnerGov Software

The EnerGov software began use for scheduling and tracking stormwater maintenance inspections in February 2020. Processes for adding BMP inspections into the EnerGov queue:

1) Active historic BMPs and new BMPs must be manually entered into EnerGov. As of FY 2023 this is mostly complete with This continues to be the process.
2) As new BMPs are constructed, staff has been scheduling the future 1-year inspections once the final construction inspections pass. Notification of final construction inspection pass is via e-mail from the construction inspection staff.
3) Next inspections must be requested in EnerGov prior to completing a current inspection, otherwise the BMP will not be in the queue for another inspection.
4) Private Residential BMPs are often built under multiple permits, such as house, garage, pool, deck, etc. A maintenance inspection is tracked for each permit in EnerGov.

Several improvements to entering data from the EnerGov into the MS4 geodatabase have also occurred.

1) EnerGov quarterly reports of fully constructed BMP permits passing final construction inspection (aka 'finaled') are used to add new BMPs to the geodatabase records.
2) EnerGov quarterly reports of BMP maintenance inspections are used to distribute the large workload of data entry and cleanup over the reporting year.
3) New EnerGov Inspection Numbers are matched with existing inspection numbers to ensure no duplicate inspections are entered into the MS4 geodatabase. This is to resolve issues of EnerGov creating duplicate inspection records in the quarterly reports, which may be due to the BMP crossing property boundaries or other reasons.
4) The SWMM Permit numbers have been added to the County's MS4 geodatabase schema.
5) Inspection records within the geodatabase are matched by BMP_ID and re-inspections are manually collapsed into the line item of the original "Fail" inspection. If a BMP has "Fail" on re-inspection, the third inspection is entered on a new line item, and the process is repeated. The collapsing process ceased midway in FY 2022 due to MDE's new schema released in March 2022, that collects each inspection as a separate line item.

EnerGov processes that staff continues to work through in FY 2022 and into FY 2023:

1) More than one maintenance inspection may be 'accidently' scheduled back-to-back for the same BMP. In this case, the inspector notes the prior inspector and date of the recently passed inspection and marks as 'passed' again. These 'extra' passed inspections have been teased out of the MS4 geodatabase *BMP Inspections Table* prior to submittal.
2) When a BMP is revised under a subsequent project permit, often the BMP will be in the inspection queue under both project permits and thus have repeated inspections. When these are found one of the duplicate BMP records is 'completed' (aka closed) in EnerGov and removed from the MS4 geodatabase *BMP Inspections Table*.
3) The EnerGov provides a data line for entering the entity maintaining each BMP. For example, private entity, Department of Public Works, Volunteer Fire Department, or Board of Education. However, this data has not yet been entered, but would be helpful if completed so lists of BMPs can be run and provided to the responsible entity for their awareness of new BMPs to be included under their maintenance programs.
4) BMP inspections that have been associated with multiple or incorrect property ID's in EnerGov need to be corrected. This likely needs to be done by a software manager.
5) EnerGov software may create multiple SWMM permit numbers for the same BMP, likely due to an internal saving process occurring during data entry and can only be corrected by a software manager. Several have been identified for correction.
6) An EnerGov report has been created that will pull the next inspection date for all BMPs to verify that all 'submitted' (aka active) BMPs are in the queue for a future inspection.
7) EnerGov process for violations and enforcement need to be clarified and reports developed for BMPs that have failed multiple times in a row.

Inspection Notification for Private Residential Lot Owners

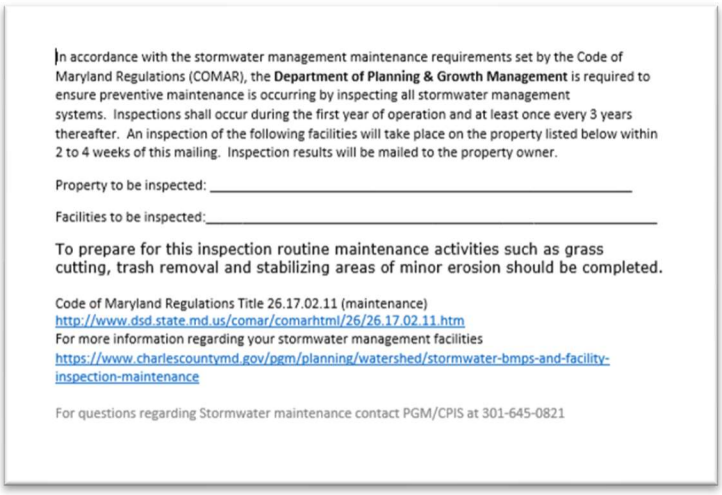
The Stormwater Maintenance Inspections postcard mailer started being used in May 2019 for pre-notification to homeowners that a County inspection would be held within 2-4 weeks and that access to their property is needed. A door hanger was also developed to let the homeowners know if a BMP issue was found during the inspection and to expect a follow-up letter from the County. The feedback on the pre-notification and the door hanger has been positive. Images of the postcard are provided.


Charles County Government
Planning & Growth Management
200 Baltimore street
La Plata, MD 20646

Watershed Protection & Restoration

PROPERTY OWNER
STREET ADDRESS
CITY, STATE & ZIP

For questions regarding Stormwater maintenance contact PGM/CPIS at 301-645-0821


In accordance with the stormwater management maintenance requirements set by the Code of Maryland Regulations (COMAR), the **Department of Planning & Growth Management** is required to ensure preventive maintenance is occurring by inspecting all stormwater management systems. Inspections shall occur during the first year of operation and at least once every 3 years thereafter. An inspection of the following facilities will take place on the property listed below within 2 to 4 weeks of this mailing. Inspection results will be mailed to the property owner.

Property to be inspected: _____

Facilities to be inspected:_____

To prepare for this inspection routine maintenance activities such as grass cutting, trash removal and stabilizing areas of minor erosion should be completed.

Code of Maryland Regulations Title 26.17.02.11 (maintenance)
http://www.dsd.state.md.us/comar/comarhtml/26/26.17.02.11.htm
For more information regarding your stormwater management facilities
https://www.charlescountymd.gov/pgm/planning/watershed/stormwater-bmps-and-facility-inspection-maintenance

For questions regarding Stormwater maintenance contact PGM/CPIS at 301-645-0821

Private On-Site SWM Facilities Declaration of Covenants Disclosure Form

In FY 2021 the Charles County Department of Planning and Growth Management instituted a process of disclosing to future homeowners their maintenance responsibilities regarding on-site micro scale stormwater management practices. This is done by executing and recording an agreement in County Land Records which outlines responsibilities of homeowner maintenance and County inspections. This agreement runs with the land, thus binding future owners.

1. Erosion and Sediment Control

An acceptable erosion and sediment control program shall be maintained and implemented in accordance with Environmental Article, Title 4, Subtitle 1, Annotated Code of Maryland. County activities shall include, but not be limited to items a-c.

a. Implementing program improvements identified in any MDE evaluation of the County's erosion and sediment control enforcement authority.

FY 2023 Status

Every two years, MDE performs field reviews of active construction sites to review the County's implementation of the erosion and sediment control program. The County's current delegated program authority was renewed on March 14, 2022 to extend through June 30, 2024.

b. Ensuring that construction site operators have received training regarding erosion and sediment control compliance and hold a valid Responsible Personnel Certification as required by MDE.

FY 2023 Status

County sediment and erosion control inspection staff continues to verify that site operators hold valid Responsible Certification as required by MDE.

c. Reporting quarterly to MDE, information regarding earth disturbances exceeding one acre or more.

FY 2023 Status

The required data has been provided to MDE on a quarterly basis in FY 2023. The following information summarizes the number of entries in the enclosed MS4 Geodatabase *Quarterly Grading Permit Feature Class* and *Quarterly Grading Permit Information Table*.

Table 11: Construction Permits Issued for Earth Disturbances > 1 Acre, Fiscal Years 2020-2023

Permit Type	2020	2021	2022	2023
Development Services Permits	27	33	35	27
Residential Permits	6	2	7	6

Erosion and Sediment Control Program activity shall be recorded in the MS4 Geodatabase and submitted to MDE as required in Part V.A of the permit.

FY 2023 Status

The following information is included in the enclosed MS4 Geodatabase *Erosion Sediment Control Table.*

Table 12: Erosion and Sediment Control Table for Fiscal Years 2020 - 2023

Fiscal Year	2020	2021	2022	2023
Number of Grading Permits Issued	701	1,099	1,238	1,211
Number Grading Permits Active (overall)	1,295	1,417	1,307	1,339
Disturbed Area for Active Grading Permits	4,498	3,845	4,125	4,418
Number of Other Permits Issued	22	28	24	24
Number of Other Active Permits (overall)	46	31	50	51
Disturbed Area for Other Active Permits	2,845	1,767	1,732	1,762
Number of Sediment Control Inspectors	4	4	5.25	5.5
Number of Supervisors	1	1	1	1
Number of Sediment Control Inspections	8,053	5,624	6,372	5,230
Number of Stop Work Orders Issued	23	15	16	15
Number of Fines Collected	23	15	16	15
Amount of Fines Collected	$11,109	$7,530	$8,302	$7,875
Number of Violations	23	24	16	15
Number of Court Cases	0	0	0	0
Number of Sediment Control Complaints Received	12	40	32	30

3. Illicit Discharge Detection and Elimination

The County shall implement an inspection and enforcement program to ensure that all discharges into, through, or from the MS4 that are not composed entirely of stormwater are either issued a permit by MDE or eliminated. Activities shall include, but not be limited to:

a. Reviewing all County outfalls to prioritize field screening efforts in areas with the greatest potential for polluted discharges. The County must submit the process developed to prioritize outfall screenings to MDE for approval with the first year annual report;

b. Submitting a plan and schedule for field screening the prioritized outfalls for MDE's approval with the first year annual report. The plan and schedule shall include the annual screening of at least 100 outfalls. Each outfall having a dry weather discharge shall be sampled using a chemical test kit. An alternative program may be submitted by the County for the Department's approval that methodically identifies, investigates, and eliminates illegal discharges into, through, or from the County's MS4;

c. Conducting annual visual surveys of commercial and industrial areas as identified in Part IV.C.2 for discovering, documenting, and eliminating pollutant sources. Areas surveyed and the results of the surveys shall be reported annually;

d. Maintaining written standard operating procedures for outfall screenings, illicit discharge investigations, annual visual surveys of commercial and industrial areas, responding to illicit discharge complaints, and enforcement implementation;

e. Maintaining an ordinance, or other regulatory means, that prohibits illicit discharges into the storm sewer system;

f. Maintaining a program to address and respond to illegal discharges, dumping, and spills; and

g. Using appropriate enforcement procedures for investigating and eliminating illicit discharges, illegal dumping, and spills. When a suspected illicit discharge discovered within the County's jurisdiction is either originating from or discharging to an adjacent MS4, the County must coordinate with that MS4 to resolve the investigation. Significant discharges shall be reported to MDE for enforcement and/or permitting.

FY 2023 Status

Prioritization of Field Screening Efforts

Previous Prioritization Process

For previous permit cycles, Charles County has worked to update its Geodatabase to include all storm drain inventory; typically completed as new developments are constructed, or existing systems are modified. On an annual basis, the County's IDDE program staff and consultants query the database for existing outfalls, and determine which outfalls constitute major outfalls. Major outfalls have been historically defined as follows:

- Storm drain pipes or other infrastructure with an equivalent inside diameter of 36 inches or greater, draining residential or commercial land uses, or
- Storm drain pipes or other infrastructure with an equivalent inside diameter of 12 inches or greater, draining industrial land uses.

Charles County is required to field screen 100 outfalls under its IDDE program. For past permit terms, the number of outfalls that meet these requirements as major outfalls has been such that all major outfalls can be inspected at least once within the permit term. Therefore, prioritization for screening was as follows:

- First Priority: Revisit major outfalls with past findings of an illicit discharge or other significant concern, to verify that issues have been corrected.
- Second Priority: Sort the remaining major outfalls by previous screening date. Select the remaining major outfalls needed to complete the 100 required based on those major outfalls that have not been screened for the longest period of time.

Updated Prioritization Process for Current Permit Term

Based on the results of previous screening efforts, it was determined that outfalls draining residential communities rarely show signs of any illicit connections. Further, it was identified that large commercial and/or industrial areas were not being screened due to the associated outfalls not being classified as major. To maximize the pollutant-removal benefits of the program, it was decided to no longer field screen residential outfalls, and instead increase focus on the commercial and industrial areas. The updated prioritization methodology is therefore as follows:

- Query the geodatabase to identify all storm drain outfalls.
- Identify all commercial and industrial outfalls, with 12 inches or greater equivalent inside diameter.
- First Priority: Revisit major outfalls with past findings of an illicit discharge or other significant concern, to verify that issues have been corrected.
- Second Priority: Sort the remaining commercial / industrial outfalls, greater than 12 inches equivalent inside diameter, by previous screening date. Select the remaining outfalls

needed to complete the 100 required based on those outfalls that have not been screened for the longest period of time.
    - Since this permit term is seeing the addition of commercial outfalls less than 36 inches in equivalent inside diameter, many outfalls have never been screened. Priority should be adjusted to ensure that major outfalls are also being screened, and effort is not spent solely on new, smaller, outfalls.
    - Age of the outfall is also part of the prioritization due to reaching life expectancy and need for replacement or repair causing sediment and debris discharges and also the potential for inadequate plumbing codes at time of construction which could lead to cross connections and illicit discharges.
- Annually, this prioritization will be applied, and outfalls selected for inspection.

Conclusion

Results from past screening efforts implemented in Charles County's IDDE program have indicated that adjustments to the outfall selection and prioritization process may produce improved results. A more targeted approach on commercial and industrial areas by selecting smaller equivalent pipe sizes will expand the associated contributing drainage areas that are subject to screening, since many of these sites do not drain to major outfalls. This prioritization was applied in the FY 2023 reporting year and will be updated in the County's Standard Operating Procedures in FY 2024.

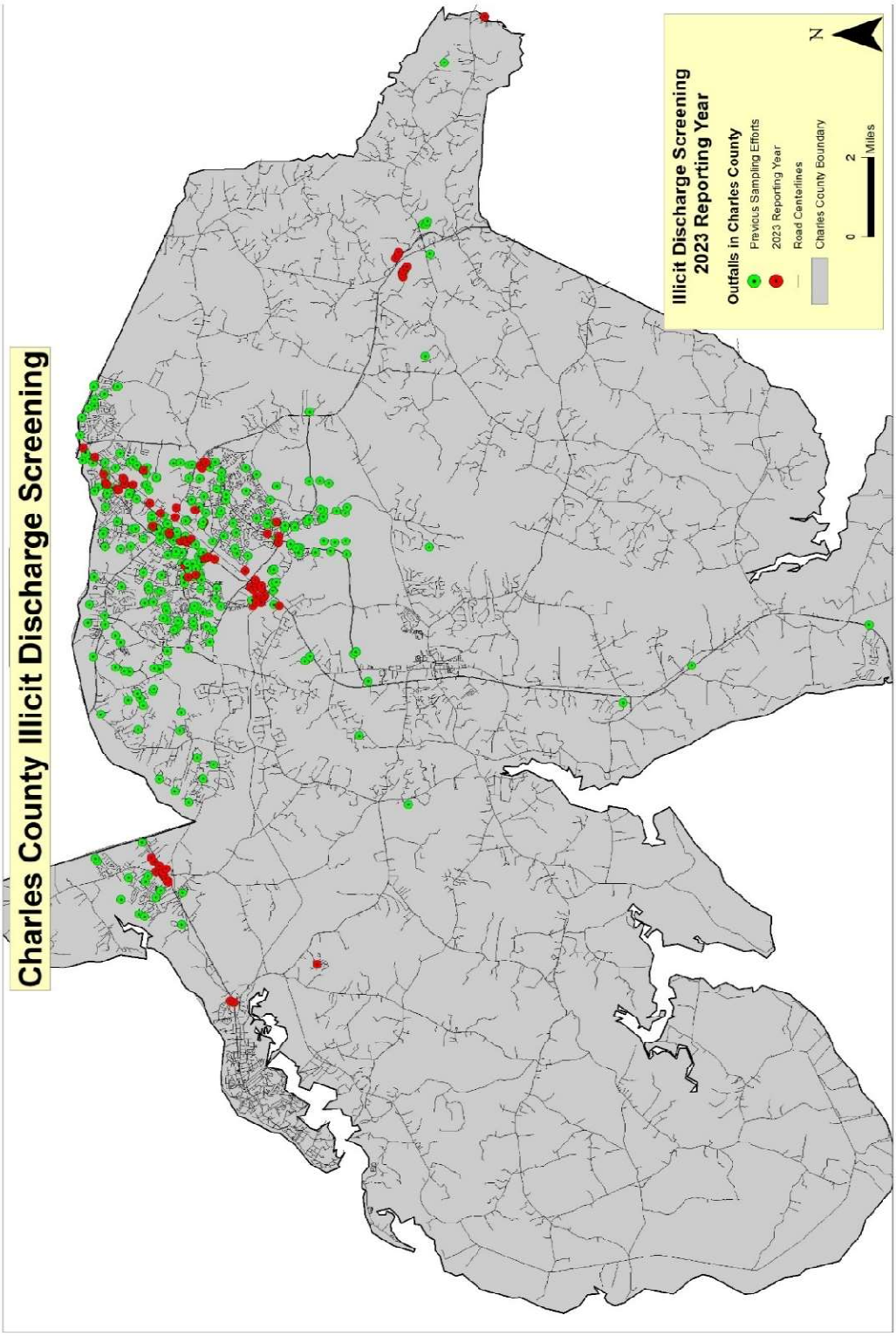
Illicit Connection Detection Field Screening

During the FY 2023 screening, 100 sites were inspected. This includes 12 draining industrial areas and 88 draining commercial areas. A map of the outfalls sampled follows on page 22.

For the 2023 reporting year, 19 outfalls previously mapped outfalls that were not sampled during the 2021 and 2022 reporting years were selected for sampling and accounted for 19 outfalls. The other 81 outfalls were newly added to the major outfall inventory in the 2023 reporting year to meet changed criteria for selection. Of the 81 new outfalls screened, 79 of these drain commercial areas, and two drain industrial areas. A map of the outfalls sampled follows on page 20.

The screening was conducted in June of 2023. A two-person field crew visited each site following 72-hours of dry weather. The physical condition of each site was recorded on field sheets. If a dry-weather flow was present, a sample was taken and tested with a Hach chemical test kit. Tests were conducted for pH, detergents, chlorine, copper, phenols, temperature, and ammonia nitrogen. When a chemical test was conducted, and the results showed a high concentration for any contaminant, the site was retested after 4 hours but within 24 hours to verify the results.

Figure 4: Charles County Illicit Discharge Screening Map



The results of the chemical test performed were compared with the accepted statewide averages described in *Dry Weather Flow and Illicit Discharges in Maryland Storm Drain Systems* (MDE, 1997). Using the statewide averages, the 1997 study provides a threshold for each constituent, based on watershed land use. The results from the chemical tests performed during the 2023 reporting year were compared with this threshold to determine which results are considered abnormal for each constituent, and to make recommendations as to which storm drain systems should be investigated further as having possible illicit connections. The thresholds listed were 0.4 ppm for chlorine, 0.17 for phenols, 0.21 for copper, and 0.5 ppm for detergents. No state-approved threshold limit exists for ammonia. Based on EPA and USGS documentation, a value of 2.0 ppm appears reasonable. This is consistent with the high outlying values found in previous screening efforts. Review of past data shows that typical pH values in Charles County fall outside the standard threshold range of 6.5 to 8.5. Therefore, for the 2022 reporting year, the following thresholds were used to determine if an upstream investigation was necessary:

- pH outside the range 5.5-8.5
- >0.5 ppm Detergents
- >0.4 ppm Chlorine
- >0.17 ppm Phenols
- >0.21 ppm Copper
- >2.0 ppm Ammonia

When a confirmed high concentration of a contaminant was found, field crews followed the storm drain system upstream attempting to locate the source of the contamination. Additional tests at upstream structures were conducted as needed to track the contamination upstream to the source, especially where two systems converged. For any outfall with flow, a brief inspection of the storm drain system is performed to indicate the source of the discharge.

All data collected during the illicit discharge screening is recorded in the enclosed MS4 geodatabase in the *IDDE Table*.

The results show that, of the 100 sites, 4 had observed flow. Of these, 2 had observed flow that was too small for a sample to be collected. For these outfalls, observed flow is set to 'no' and water temperature and CFS flow are not filled out in the geodatabase since a sample is not collected. Of the remaining 2 sites where flow was able to be collected, one had detectable chlorine below the threshold limit.

No concentrations of detergent, phenol, or copper were detected at the sites where flow was able to be collected. PH levels were within historical ranges for all outfalls sampled.

Metal corrosion was present at 8 outfalls and 12 outfalls were found to either be backwatered or submerged. 8 outfalls were experiencing pipe separation/damage. Other issues encountered

at 12 outfalls included accessibility, pipe compression, moderate erosion, and overgrown vegetation.

Algae was found at 21 outfalls, which may indicate excessive nutrients in the water. Outfall #414 had an oil/grease odor. Sediment and iron flocculent deposits were found at many sites.

The screening results are listed in the following table.

Table 13: Field Screening Results for Priority Outfalls

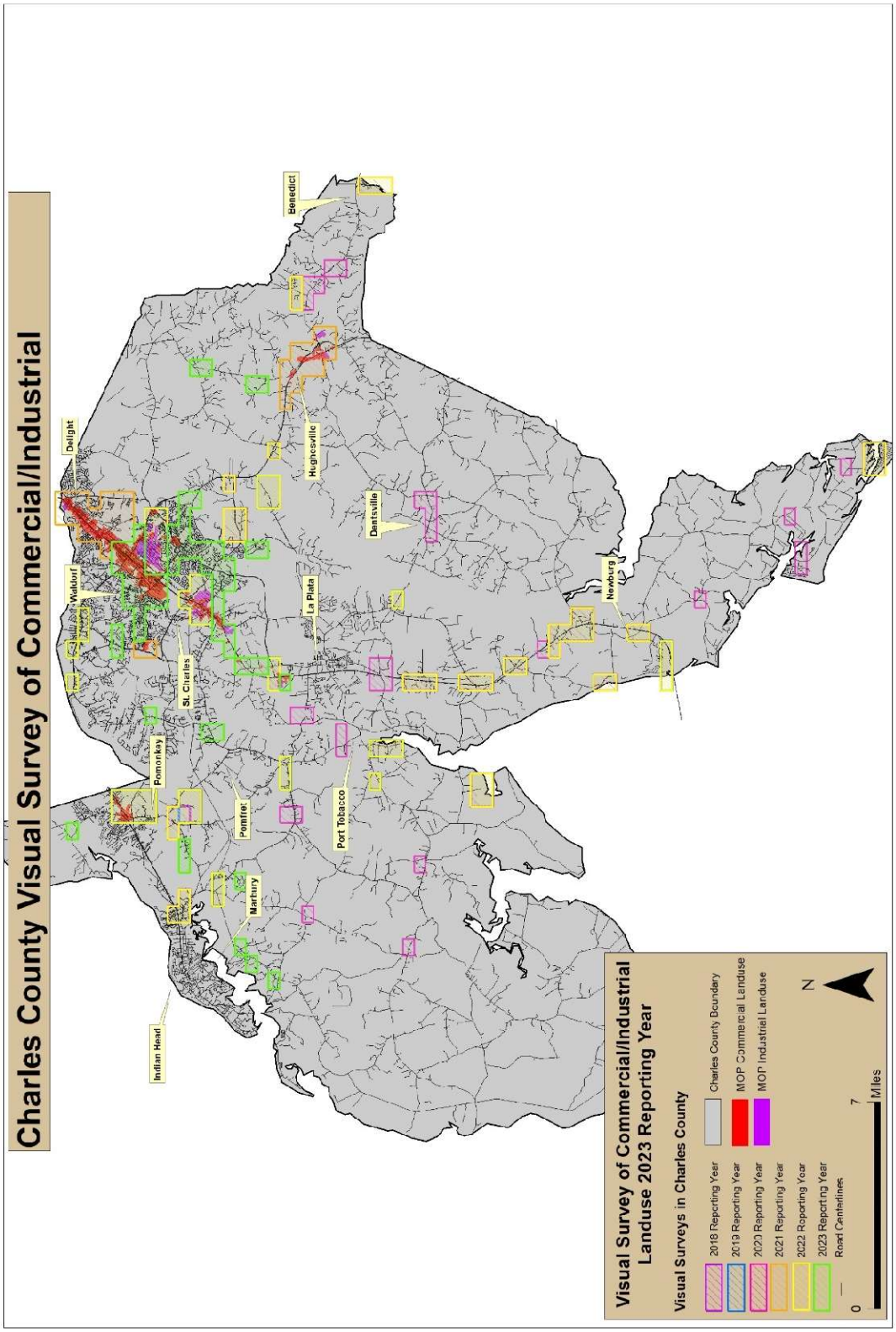
Outfall #	Problem
#381	Invert corroded through
#386	Completely plugged up disallowing flow
#388	Pipe and endsection corroded through
#389	Pipe and endsection corroded through
#394	Outfall no longer visible due to tree overgrowth
#395	Unmaintained vegetation made inspecting the outfall impossible
#414	Outfall had potential grease dumping and oil stains as well as a fryer stench.
#416	Cracking to the wall of the first upstream inlet
#418	Endsection corroded out, barrel separating, and woody debris in barrel
#419	Endsection corroded through
#420	Endsection crumpled and detached from main pipe
#427	Tree growing on outfall, including root growth on endsection
#428	Upstream inlet slab damaged and beginning to fall into system
#437	Pipe corroded through and endsection beginning to detach
#439	Tree growing on outfall

Commercial and Industrial Visual Surveys

During the FY 2023 screening, several portions of the County including Marbury, Bennsville, Pomfret, St. Charles, and US 301 in St. Charles and north of La Plata were targeted for visual surveys. The visual surveys were conducted in early June 2023 and 450 tax parcels were visually assessed in the field. The map on the following page shows the survey locations.

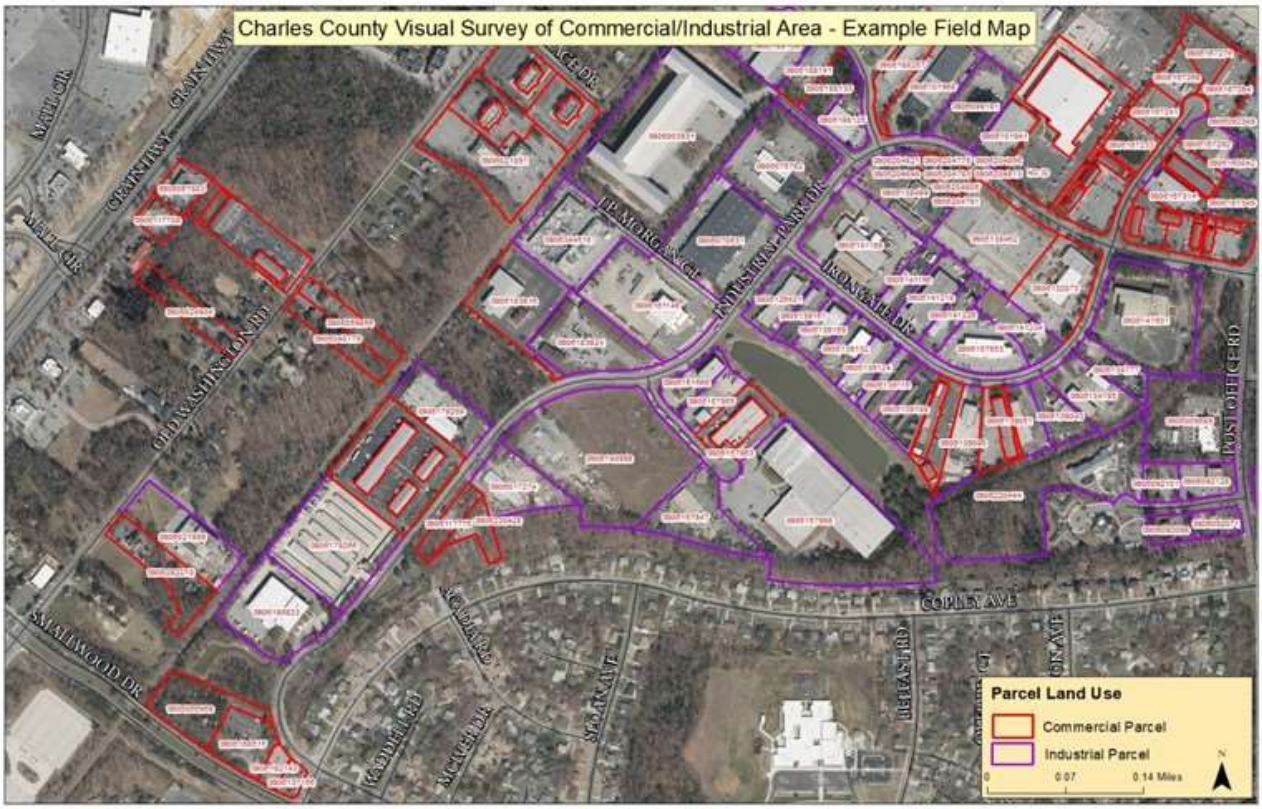
For the FY 2023 screenings, the approach to selecting, tracking, and inspecting commercial and industrial surveys was continued from FY 2022. The ISA_PARCEL shapefile was utilized to determine tax parcels within the County that had commercial or industrial land uses.

Figure 5: Visual Survey of Commercial/Industrial Landuse Map



Commercial and industrial tax parcels were selected from this shapefile and field maps with parcel account numbers were generated for the targeted areas as shown on Figure 6.

Figure 6: Commercial/Industrial Areas – Example Field Map



Tracking of inspected tax parcels will be completed using the ISA_PARCEL shapefile to ensure all commercial and industrial properties are inspected over the permit term.

The survey uses a modified Center for Watershed Protection (CWP) Hotspot Site Investigation Sheet (HSI), which can be found as an attachment to the County's Standard Operating Procedure in Appendix C of the FY 2021 MS4 Annual Report. The modified HSI form contains the most common items that inspectors find in the field, including vehicle operations, storage of outdoor materials, waste operations, and facility management. Each tax parcel identified on the field maps was visually assessed from a vehicle or on foot depending on access and safety. If no visible practices or conditions that would produce pollution to nearby storm drain inlets or watersheds are observed, then a Charles County Hotspot Site Investigation Sheet is not filled out, but the field map is marked to show the tax parcel was surveyed. If visible practices or conditions that would produce pollution to nearby storm drain inlets or watersheds are observed, then field crews document the conditions by recording tax parcel number,

address/location, business name, property owner (if available), notes, and pictures on a Charles County Hotspot Site Investigation Sheet and mark the field map to show the tax parcel was surveyed.

Within the targeted areas, 42 businesses and one private home were documented as having practices or conditions that would produce pollution to nearby storm drain inlets or watersheds in 2023. The practices or conditions found at the businesses included poor trash and grease dumpster management, storing drums and other containers of fluids and chemicals outside without secondary containment and not containing vehicle wash water. Detailed reports for each can be found in Appendix D and enforcement activity is described in the following section.

Standard Operating Procedure

The Illicit Discharge and Detection Elimination Standard Operating Procedure (SOP) was most recently updated in 2021. The County plans on updating in 2024 for the following purposes:

- Clarify what an illicit discharge is with a reference to the Center for Watershed Protection's *IDDE Guidance Manual;*
- Incorporate any changes necessary to reflect upgrades to the County's case management software system (EnerGov); and
- Incorporate the new outfall prioritization methods that began being applied in FY 2023.

Enforcement Activities

Per the Illicit Discharge and Detection Elimination Standard Operation Procedures, the County tracks the investigations using an assigned case number. Case numbers use 'ILLD' to indicate a suspected illicit discharge and 'VIOL' to indicate a violation had been issued.

Seventy-four cases were reported and investigated between July 2022 and November 2023. Of these cases, five went to enforcement action. See Appendix D for a summary of the investigations.

4. Property Management and Maintenance

a. Coverage under Maryland's NPDES General Permit for Discharges of Stormwater Associated with Industrial Activity (SW Industrial GP) is typically required at facilities where the following activities are performed: maintenance or storage of vehicles or equipment; storage of vehicles or equipment; storage of fertilizers, pesticides, landscaping materials, hazardous materials, or other materials that could pollute stormwater runoff. The County shall:

i. Ensure that a Notice of Intent (NOI) has been submitted to MDE for each County-owned industrial facility requiring coverage under the SW Industrial GP; and

ii. Submit with the annual report a list of County properties currently covered under the industrial stormwater permit.

FY 2023 Status

County-Owned Facilities with Industrial Stormwater Permits

As of FY 2023, three County-owned municipal facilities require the NPDES industrial stormwater permit coverage. These facilities are the Charles County Wastewater Treatment Plant (WWTP), the Sanitary Landfill #2, and the Department of Public Works (DPW) campus. All three facilities have active SWPPPs (Stormwater Pollution Prevention Plans). The old 12SW industrial stormwater permits were voided and replaced with the new 20-SW industrial stormwater permits effective February 1, 2023. Maryland Department of the Environment required 20-SW permittees to submit new application materials by July 31, 2023. The facilities received 20-SW permits and comply with the new requirements.

At all three facilities, routine inspections are conducted. At a minimum, on a quarterly basis, quarterly visual assessments and routine facility inspections are completed. Monthly, non-stormwater discharge assessments and routine monthly inspections (focused on spill prevention) are conducted. The facilities complete annual staff training and comprehensive site evaluations. More information is in the Staff Training section below.

The Municipal Facilities Narratives are in Appendix E, and the *Municipal Facilities Table* is included in the enclosed MS4 Geodatabase.

b. The County shall develop, implement, and maintain a good housekeeping plan (GHP) for County-owned properties not required to be covered under Maryland's SW Industrial GP where the activities listed in PART IV.D.4.a. are performed. The GHP shall be submitted to MDE by the County in its third year annual report and

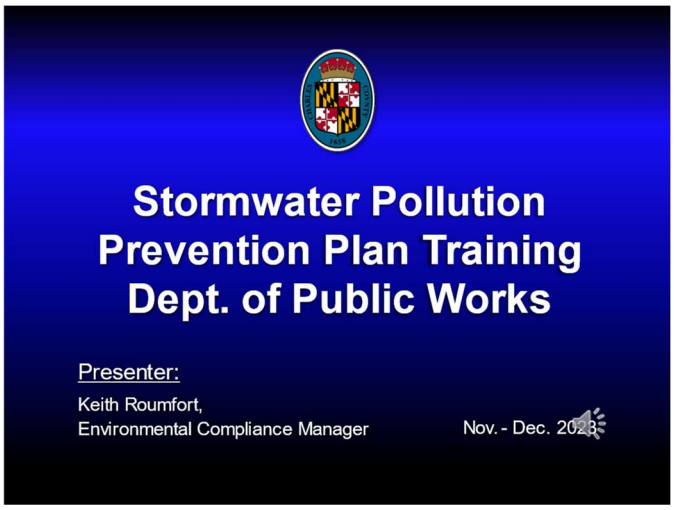
implemented thereafter. A standard GHP may be developed for properties with similar use (e.g., recreation and parks properties, school properties). The GHP shall include, but not be limited to:

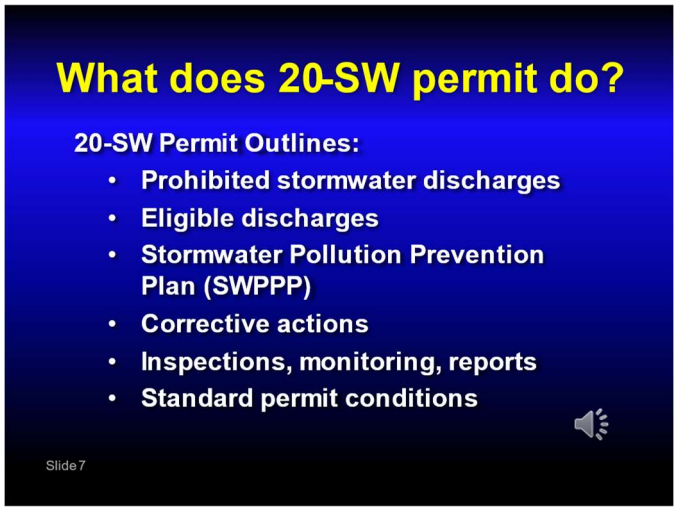
i. A description of property management activities;
ii. A map of the locations of properties covered by the GHP;
iii. A list of potential pollutants and their sources that result from facility activities;
iv. Written procedures designed to reduce the potential for stormwater pollution form property activities, including illicit discharges, dumping, and spills;
v. Written procedures for annually assessing County properties in order to prevent the discharge of pollutants, spills, and leaks into its municipal separate storm sewer system; and
vi. Written procedures for performing stormwater conveyance system inspections for removing debris that may cause clogging, backups, and flooding; and
vii. Annual training for all appropriate County staff and contractors regarding best practices for preventing, reducing, and eliminating the discharge of pollutants during property activities.

FY 2023 Status

Staff Training in Pollution Prevention and Good Housekeeping Practices

Per the Charles County Department of Public Work's (DPW) Stormwater Pollution Prevention Plans (SWPPP), all applicable staff is trained annually on, but not limited to: spill prevention and control, proper fueling procedures, general good housekeeping practices, waste recycling, and used oil management. A PowerPoint presentation is developed and presented by the Environmental Compliance Manager to discuss the topics, as well as any specific examples of how to improve DPW's housekeeping practices. A recorded PowerPoint presentation is played at the employee's convenience by the completion due date. County facilities with an industrial stormwater permit had to update and apply for the new 20-SW permit by July 31, 2023. It wasn't until after this transitional period that employees received their training on the new permit, SWPPP, and good housekeeping practices. A record of all employees who completed these training courses is kept with the SWPPP. Divisions of the Department of Public Works received their annual SWPPP training in December 2023. Example training slides are shown below.





The Mattawoman Wastewater Treatment Plant (WWTP) conducted their annual SWPPP training in December 2023. Hazen and Sawyer has been working with the county in preparation of the New SWPPP and conducted training with staff about all areas of the SWPPP and conducting Inspections.

The Mattawoman Wastewater Treatment Plant SWPPP team takes applicable staff on their routine facility inspection and discusses good housekeeping practices. The SWPPP team also discusses spill response, which covers the gates to lock in an emergency and the locations of all spill kits. Staff has also taken extra steps in cleaning around site to maintain spill prevention and placing spill kits in key areas. Equipment maintenance staff have been included to ensure day to day operations and activities maintain compliance with spill prevention.

Mattawoman is undergoing major upgrades and with the construction activities at the facility and the greater possibilities of fuel/oil contamination from equipment leaks. Observation of any

incidents of this nature was stressed so remediation can take place if necessary. Erosion control that has been put in place for these construction activities is inspected regularly by the County Inspectors. In addition to this service, the SWPPP team members at the facility also inspect these sediment controls as part of their inspections.

c. *The County shall continue to implement a program to reduce pollutants associated with the maintenance of County-owned properties including, but not limited to, local roads and parks. The maintenance program shall include the following activities where applicable:*

i. *Street sweeping in the amount identified in Appendix B and annually updated thereafter in accordance with PART IV.E.8.a;*
ii. *Inlet inspection and cleaning in the amount identified in Appendix B and annually updated thereafter in accordance with PART IV.E.8; and*
iii. *Reducing the use of pesticides, herbicides, fertilizers, and other pollutants associated with vegetation management. This can include, but is not limited to:*
- *Developing and implementing an Integrated Pest Management Plan according to EPA guidelines;*
- *Custom fertilizer property management plans based on soil testing;*
- *Targeted application or "spot application" of pesticides;*
- *Alternative and organic fertilizers;*
- *Manual weed removal, mowing, and trimming;*
- *Annual training and applicator certification and licensing as required by Maryland Department of Agriculture to ensure accurate application of chemicals according to manufacturer's recommendations;*
- *Subcontracting to a certified pest control applicator licensed business for some or all of the properties;*
- *Piloting biological pest control programs; and*
- *Establishing "no mow" areas.*

FY 2023 Status

Street Sweeping

In FY 2023, the Roads Division (Roads) swept 1,358 miles of Charles County roadways, mostly within high traffic and residential areas. The hired contractor typically uses one to three trucks when they mobilize and typically use a 2006 or 2016 Freightliner Broom Bear sweeper. Tonnage collected from sweeping was 89 tons and the FY 2023 budget for street sweeping remains at

$100,000.00. Roads requests a 10% increase for all line items every budget year regarding the Watershed Protection and Restoration Fund.

Table 14: Street Sweeping

	FY 2020	FY 2021	FY 2022	FY 2023
Miles Swept	430.7	522.47	1,156	1,358
Debris Removed (tons)	94.6	46.5	157	89
Contractual Expenses	$101,250	$99,000	$98,500	$92,700

Inlet Inspection, Repair, Cleaning, and Marking

The weight of material removed from storm drain inlets cleanings was 115.13 tons. FY 2023 budget for inlet cleaning was $120,000 with an additional $370,490 for inlet and catch basin inspections. Inlet repairs totaled over $444,213. Actual expenditures vary from budgeted amounts. Budgets for FY 2023 are indicated in the following tables.

Table 15: Stormwater Pipe and Inlet Cleaning

	FY 2020	FY 2021	FY 2022	FY 2023
Pipes/Inlets Vacuumed	81/69	77/46	59/31	28
Debris Removed (tons)	155.4	319.2	55.19	115.13
Contractual Expenses	$119,922	$119,491	$119,754	$119,964

Table 16: Stormwater Inlet Inspections and Repairs

	FY 2020	FY 2021	FY 2022	FY 2023
Inlets Repaired	53	9	36	35
Contractual Inlet Inspection Expenses	$270,580	$274,349	$316,777	$370,000
Outfall Repairs (in sq. ft.)	--	2,345	1,375	1,131
Contractual Inlet Repair Expenses	--	$557,410	$396,373	324,249

See Part IV.D.5 Public Education for information on the Storm Inlet Marking program.

The *Alternate BMP Polygons* feature class containing inlet cleaning information, is in the enclosed MS4 Geodatabase.

County Owned Stormwater Management Facility Inspection and Maintenance

The County owns and maintains approximately 500 stormwater management facilities for the purposes of managing stormwater runoff from County roads, parking areas and buildings. These facilities must be inspected and maintained on a regular basis to ensure proper functioning.

The intent of providing annual maintenance for these facilities is for consistent performance and to reduce costly repairs. Facility repairs are typically per Planning and Growth Management's stormwater maintenance triennial inspection findings.

Table 17: County Owned Stormwater Management Facility Inspection and Maintenance

	FY 2020	FY 2021	FY 2022	FY 2023
# Facilities	360	341	393	455
Expenses (Contractual)	$342,321	$347,209	$342,845	$398,681.78

Mosquito Control expenses associated with County owned property are funded by the Watershed Protection and Restoration Fund since FY 2018 as they are part of maintaining the stormwater management systems. FY 2018 expenses were $4,000, and for FY 2019 and FY 2020 expenses were $6,000 for each year. In FY 2021 and FY 2022 expenses were $16,000 annually. In FY 2023 expenses were $25,000 and the proposed FY 2024 budget is $32,000.

County Owned Stream Restoration and Shoreline Stabilization Projects

In FY 2020 the Department of Public Works (DPW) began conducting year-two and beyond inspections for all completed shoreline stabilization and stream restoration projects that are constructed by the Capital Services Division. As part of each project's completion, Capital Services conducts necessary inspections and monitoring for the year following the project's completion. The Environmental Resources Division conducts any maintenance and inspections thereafter.

In FY 2023, the cost for Environmental Resources Division to monitor and inspect shoreline stabilization projects and stream restoration projects totaled $101,910. This cost is expected to incrementally increase in future fiscal years as more projects are added. The cost of each project varies depending upon the level of stabilization or restoration work needed. FY 2024's budget for this task is currently $225,000.

Table 18: County Owned Shoreline Stabilization and Stream Restoration Monitoring by Environmental Resources

	FY 2021	**FY 2022**	**FY 2023**	**FY 2024**
# Shoreline Stabilizations	2	5	5	5
# Stream Restorations	2	2	5	6
Contractual Expense	$31,676	$54,648	$101,910	$225,000 (budgeted)

Vegetation Management

In FY 2023, Roads used a contractor to apply approximately 392 gallons of herbicide to four County-maintained highways. The contractor used the 1.5% ratio at 2 oz of Round-Up® per gallon. Roads does not apply any other chemicals or pollutants for roadway vegetative management.

The Parks and Grounds Division (Parks) is responsible for maintaining all parks, sport facilities, and lawn care surrounding government buildings within the County. In FY 2015, Parks converted from a quick release to slow-release fertilizer for all applications. Coated/slow-release carrier minimized risk of fertilizer moving into ground and surface water through and less likelihood of runoff. Also, the use of slow-release fertilizer has reduced the frequency of grass mowing. Parks has also stopped the usage of fertilizer that contains phosphorus entirely. The latest saturated soil analysis was conducted on May 7, 2019. In FY 2023, Parks used 68.45 gallons of Buccaneer (EPA #: 55467-9) (Glyphosate, 41%), an herbicide, on County property.

The White Plains Golf Course is managed independently of the other County parks. In FY 2022, 193 gallons of herbicide/pesticide was applied, as well as 2.5 tons of fertilizer over the 30 acres of turfgrass.

d. *The County shall reduce the use of winter weather deicing and anti-icing materials, without compromising public safety, by developing a County Salt Management Plan (SMP) to be submitted to the Department in its third year annual report and implemented thereafter. The SMP shall be based on the guidance provided on best road salt management practices described in the Maryland Department of Transportation, State Highway Administration's Maryland Statewide Salt Management Plan, developed and updated annually as required by the Maryland Code, Transportation §8-602.1. The County's SMP shall include, but not be limited to:*

i. *A plan for evaluation of new equipment and methods, and other strategies for continual program improvement;*

ii. *Training and outreach:*

- *Creating a local "Salt Academy" that annually provides County winter weather operator personnel and contractors with the latest training in deicer and anti-icer management, or the participation of County personnel and contractors in a "Salt Academy" administered by another MS4 permittee or State agency.*
- *Developing and distributing best salt management practices outreach for educating residents within the County.*

iii. *Tracking and reporting:*

- *Starting with the fourth year annual report, during storm events where deicing or anti-icing materials are applied to County roads, track and record the amount of materials used and snowfall in inches per event, if applicable, and;*
- *Report the deicing or anti-icing application by event or date, and the monthly and annual pounds used per lane mile per inch of snow.*

FY 2023 Status

Winter Weather Deicing

Rather than spreading salt throughout the storm event, Roads Division waits until the storm has nearly passed to plow and spread salt to increase its effectiveness and decrease runoff. In FY 2023, Roads staff were not mobilized for any storm events and did not apply any salt to roadways. No pretreatment compounds are used on County roads, such as magnesium chloride and potassium chloride. Roads strictly uses sodium chloride salt when necessary.

Salt spreaders are calibrated before and after their use to ensure they work effectively. Staff is also trained on proper salt-spreading techniques and usage before the beginning of each winter season. If needed, the staff and/or individual contractors are trained throughout the season, depending on the severity of winter weather and their adherence to County policies. Snow supervisors and their contractors know they must remove any excess salt from County roadways after a winter weather event. If any policy is violated, the contractor will not be allowed to continue their snow contract with the County.

Roads is exploring a salt-tracking barcode scanner cell phone application where any person using salt from one of the County's domes will have to scan the amount of salt taken and returned. This way, if salt is improperly applied, the specific contractor can be re-trained or removed from the program.

Parks uses a de-icing compound called "Quad-Release", which is a blend of magnesium chloride, calcium chloride, sodium chloride, and potassium chloride on pedestrian walkways and parking lots. While Parks cannot eliminate the use of this product due to public safety concerns, staff has been trained to reduce the amount used whenever possible. This included the following direction: shovel first prior to applying material, apply the recommended amount or less during large winter events, and close lesser-used walkways. Parks will also sweep sidewalks after the storm is over. Parks did not apply any Quad-Release snow melt on sidewalks and parking lots throughout the winter season in FY 2023. No salt was applied to the White Plains Golf Course.

Four Parks staff are attending the Winter 2023-2024 Smart Salting certification course that is being piloted by the University of Maryland Extension and MDE.

e. *The County shall evaluate current litter control problems associated with discharges into, through, or from portions of its MS4. Additionally, the County shall continue to remove from or prevent from entering its MS4 273.5 tons of litter and debris as identified in the first year of permit issuance or as updated annually thereafter in accordance with PART IV.E.8.*

FY 2023 Status

Litter Control Programs

The Charles County Department of Public Works, Environmental Resources Division, (DPW) has multiple litter control programs that have proven to be effective in combating litter.

The litter control crews routinely patrol the litter hot spots in the County, as well as respond to citizen complaints. In addition to the County-staffed litter crews, a contractor conducts daily cleanings for priority roads. The FY 2023 budget for the litter contractor crew was $110,000. In FY 2023, both contracted and County-staffed crews removed nearly 160 tons of litter from the roads. Due to the closure of the Southern Maryland Pre-Release Unit in April of 2021, Litter Control crews are comprised of part time Charles County employees in FY22. In FY 2023, full-time Litter Control Technician positions were added.

The Adopt-A-Road program allows residents to volunteer to clean up their County roads. A sign is placed on the adopted road in recognition of the group/individual that adopted it. The program had 72 roads adopted and 140 cleanings had been reported in FY 2023. Some inactive groups were removed from the program in order to attract more participatory groups.

The Potomac River Watershed Cleanup is scheduled in April every year. This popular event saw 10 volunteer groups conducting cleanups throughout the County. More than 11 tons of litter and debris were removed from waterways. The County and local watershed organizations continue to supply bags, vests, and litter grabbers, and provided trash removal for the cleanup groups.

In May of 2023, Charles County hosted its third annual Charles County Community Cleanup. Residents and businesses were encouraged to select a community or public space to clean and beautify. Twelve volunteer groups participated in the event, removing nearly 4 tons of debris and litter from area public space.

Litter Control Public Education

DPW has increased their efforts to educate the public on the importance of reducing, reusing, and recycling in numerous ways. DPW has adapted their outreach approach. A brochure was mailed to 60,000 residents in their tax bill regarding household hazardous waste (HHW) recycling and the benefits of grasscycling. Rather than newspaper advertisements or press releases, DPW boosted more social media advertisements, and aired a commercial at the local movie theatre. There were nearly 40 social media posts and videos in FY 2023. Recycling and Litter Control staff were interviewed for five segments of the Charles County YouTube Channel show titled "Your Charles County".

DPW continued offering monthly onsite, secure paper shredding. Residents are required to register for the events in advance. These events shredded and recycled 32.3 tons of personal documents. The budget for all public outreach and education was $89,100 including printing, marketing, community promotions, Geo-bin (composting bin) costs, and rain barrel subsidy. Rain barrels are provided to registered residents at workshops at a reduced cost to capture rainwater for recommended usage.

In FY 2023, the County budgeted approximately $115,000 for household hazardous waste collection days. This contracted service provides residents a drop-off location on the first Saturday of each month.

Effectiveness of Litter Control Efforts

The latest finalized waste diversion rate is for Calendar Year 2021, which was 39.77%. The County has surpassed the State mandated 35% recycling rate for numerous years.

f. *The County shall report annually on the changes in its Property Management and Maintenance programs and the overall pollutant reductions resulting from implementation of the components of the programs listed in this section.*

FY 2023 Status

Changes in Property Management and Maintenance programs are noted above under each applicable permit condition and in the following tables within the enclosed MS4 Geodatabase:

The *Alternate BMP Polygon* Table reports pollutant reduction resulting from implementation of the storm drain vacuuming program.

The *Chemical Application* Table contains information about the types and quantities of chemicals the County uses in maintaining public right-or-way and property.

5. Public Education

The County shall continue to implement a public education and outreach program to reduce stormwater pollution and flooding. Education and outreach efforts may be integrated with other aspects of the County's activities. These efforts are to be documented and summarized in each annual report, with details on resources (e.g., personnel and financial) expended and method of delivery for education and outreach. The County shall implement a public outreach and education campaign that includes, but is not limited to:

a. Maintaining a website with locally relevant stormwater management information and promoting its existence and use;

b. Maintaining a compliance hotline or similar mechanism for public reporting of water quality complaints, including suspected illicit discharges, illegal dumping, spills, and flooding problems;

c. Provide information to inform the general public about the benefits of:

- *i. Increasing water conservation;*
- *ii. Residential and community stormwater management implementation and facility maintenance;*
- *iii. Proper erosion and sediment control practices;*
- *iv. Increasing proper disposal of household hazardous waste;*
- *v. Improving lawn care and landscape management (e.g., the proper use of herbicides, pesticides, and fertilizers, ice control and snow removal, cash for clippers, etc.)*
- *vi. Proper residential car care and washing;*
- *vii. Litter reduction;*
- *viii. Reducing, reusing, and recycling solid waste; and*
- *ix. Proper pet waste management.*

The County shall conduct a minimum of 15 outreach efforts per year. These efforts may include distributing printed materials such as brochures or newsletters; electronic materials such as website pages; mass media such as newspaper articles or public service announcements (radio or television); and conducting targeted workshops on stormwater management for the public.

FY 2023 Status

The Public Education program continued to develop and grow in FY 2023. Outreach efforts included:

1. Phone, email, and online reporting by the public for suspected illicit discharges and drainage concerns
2. County-wide website, social media, email, newspaper, tax bill inserts, smart apps, County government television (live stream and video on demand)
3. Cable TV, streaming, and digital media Public Service Announcements (PSAs)
4. Radio PSAs
5. Public meetings, public hearings, County Fair
6. Citizens' Academy
7. Rain barrel and composting workshops
8. Septic system maintenance webinars
9. Household hazardous waste collection days, shredding events, community cleanup events
10. Chesapeake Bay Trust Outreach and Restoration Grant Program awards
11. Student and youth outreach
12. Storm Drain Stenciling/Marking Program
13. Homeowners Association (HOA) and new homebuyers' outreach
14. Septic Pump-Out and Riser Reimbursement Program
15. Pollution prevention guidance for businesses

Charles County Watershed Protection and Restoration Program - Logo

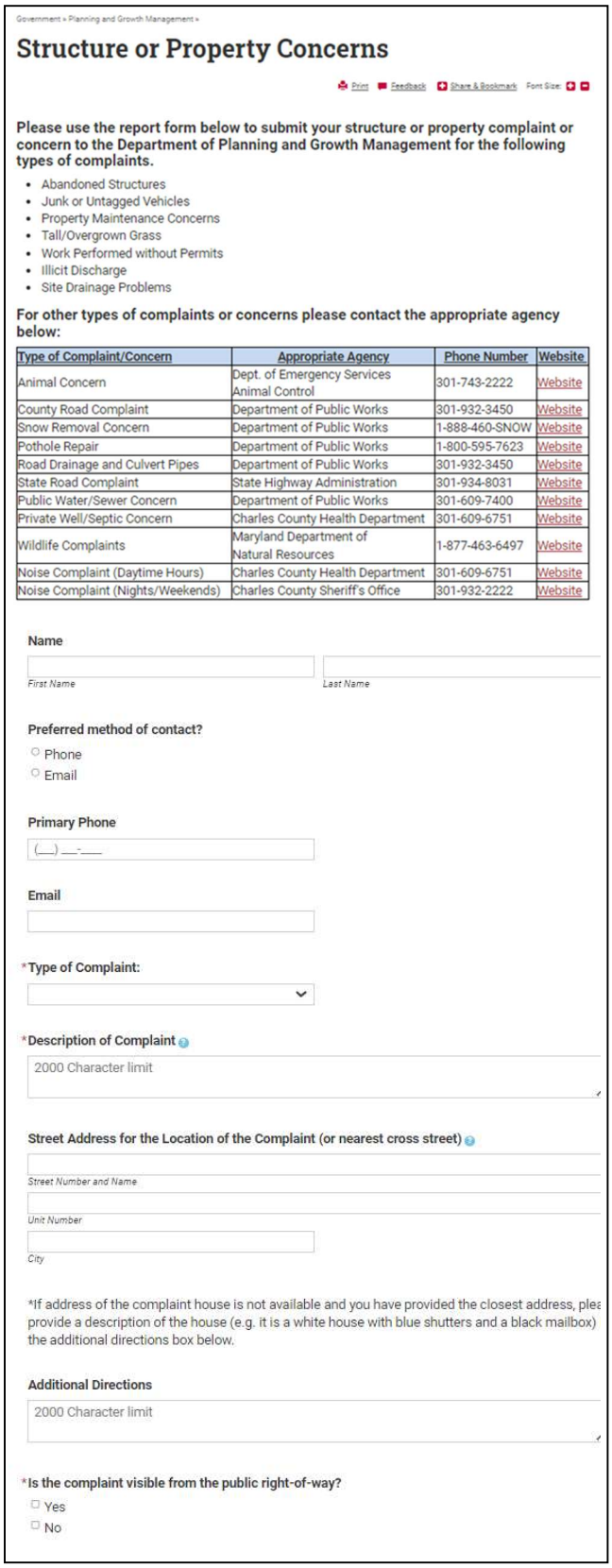
Charles County's Watershed Protection and Restoration Program (WPRP) logo continues to serve as a branding mechanism for the program. The logo was developed in FY 2015 to project a united program whose staff is spread amongst two departments and several divisions. The logo can be seen on the program's web pages, outreach guidance documents, engineered drawings for restoration projects, brochures, and outreach presentations. The logo served as the program's brand on PSAs during FY 2023 shown on cable television, digital streaming and on County social media. The logo is also featured on promotional merchandise handed out at community and outreach events used to promote the program and increase interest in stormwater management and watershed stewardship.

The following matrix illustrates Charles County's MS4 permit public education coverage.

Charles County Phase 1 MS4

Public Education Coverage

PUBLIC EDUCATION TOOL / PERMIT CONDITION	Telephone & Hotline	Online Form	Mobile App	Website	MDE Website	Mailed Letters	Inspection	Brochure	Workshop & Training	HOA Meetings	Schools	County Fair	Citizens Academy	Radio PSA	Video PSA	Rebate	CBT Grant	Adopt-A-Road	Storm Drain Marking	River Cleanup	Household Haz Waste Day	Shred-It Event	Comm Cleanup
Public Reporting Of Water Quality Complaints	✓	✓		✓		✓	✓	✓	✓	✓		✓	✓		✓		✓		✓	✓	✓		
Water Conservation				✓				✓	✓	✓	✓	✓	✓										
Stormwater Management	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓			✓
Erosion and Sediment Control	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓					
Household Hazardous Waste	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	✓		✓
Septic Systems	✓	✓		✓		✓		✓	✓	✓	✓	✓	✓			✓							
Lawn Care & Landscape Management			✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Rain Barrels & Rain Gardens		✓		✓			✓	✓	✓	✓	✓	✓	✓			✓	✓					✓	
Herbicides & Pesticides & Fertilizer				✓		✓		✓	✓	✓	✓	✓	✓	✓	✓		✓		✓		✓		
Ice Control & Salt Use				✓	✓	✓			✓	✓	✓	✓	✓	✓				✓					
Yard Waste & Composting			✓	✓		✓		✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓			✓
Litter Reduction	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓
Reduce, Reuse & Recycle			✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓			✓		✓	✓	✓	✓
Vehicle Care & Washing	✓	✓		✓	✓	✓	✓			✓	✓		✓		✓				✓		✓		✓
Pet Waste	✓	✓		✓			✓	✓		✓	✓	✓	✓	✓	✓				✓				✓
NPDES Requirements				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	BUSINESS PERMITS			
Pollution Prevention Plans					✓	✓	✓	✓	✓						✓								
Proper Housekeeping					✓	✓	✓	✓	✓		✓	✓	✓		✓								
Spill Prevention & Response	✓	✓			✓	✓	✓	✓	✓						✓								



Government » Planning and Growth Management »

Structure or Property Concerns

Print Feedback Share & Bookmark Font Size:

Please use the report form below to submit your structure or property complaint or concern to the Department of Planning and Growth Management for the following types of complaints.

- Abandoned Structures
- Junk or Untagged Vehicles
- Property Maintenance Concerns
- Tall/Overgrown Grass
- Work Performed without Permits
- Illicit Discharge
- Site Drainage Problems

For other types of complaints or concerns please contact the appropriate agency below:

Type of Complaint/Concern	Appropriate Agency	Phone Number	Website
Animal Concern	Dept. of Emergency Services Animal Control	301-743-2222	Website
County Road Complaint	Department of Public Works	301-932-3450	Website
Snow Removal Concern	Department of Public Works	1-888-460-SNOW	Website
Pothole Repair	Department of Public Works	1-800-595-7623	Website
Road Drainage and Culvert Pipes	Department of Public Works	301-932-3450	Website
State Road Complaint	State Highway Administration	301-934-8031	Website
Public Water/Sewer Concern	Department of Public Works	301-609-7400	Website
Private Well/Septic Concern	Charles County Health Department	301-609-6751	Website
Wildlife Complaints	Maryland Department of Natural Resources	1-877-463-6497	Website
Noise Complaint (Daytime Hours)	Charles County Health Department	301-609-6751	Website
Noise Complaint (Nights/Weekends)	Charles County Sheriff's Office	301-932-2222	Website

Name

First Name Last Name

Preferred method of contact?

○ Phone
○ Email

Primary Phone

(___) ___-____

Email

***Type of Complaint:**

***Description of Complaint**

2000 Character limit

Street Address for the Location of the Complaint (or nearest cross street)

Street Number and Name

Unit Number

City

*If address of the complaint house is not available and you have provided the closest address, plea provide a description of the house (e.g. it is a white house with blue shutters and a black mailbox) the additional directions box below.

Additional Directions

2000 Character limit

***Is the complaint visible from the public right-of-way?**

☐ Yes
☐ No

Illicit Discharge Detection and Elimination Program (IDDE)

Public Education and Reporting

The WPRP webpage features information on the IDDE Program. The webpage explains what IDDE is, describes Charles County's program, and explains how to report an illicit discharge either by telephone or online. The website also displays links to the following: 1) business and homeowner's guidance to Charles County's IDDE program; and 2) pollution prevention guidance brochures for specific business types. The brochures were also distributed to citizens and businesses via mail and handed out during inspections and outreach events. Citizens used the IDDE online reporting webform (*Structure or Property Concern*) for reporting suspected illicit discharges and/or activities with the potential to pollute listed as dumping, junk/untagged vehicles, property maintenance concerns, construction work without permits, or site drainage problems—many of which could have detrimental effects to surface water if left unchecked. The County's webform remains available for anyone to report suspected illicit discharges and allows for uploading up to five photographs per complaint. Citizens also reported suspected illicit discharges either by telephone/hotline or online.

When an illicit discharge (or potential for a discharge) to the storm drain system is found during an inspection, the County inspector speaks with the property owner or an on-site representative; however, if they are not present, the inspector writes a detailed note and their contact information on a door hangar to be placed on the front entrance. Educational material was attached to inspection reports and violation notices

mailed to business/property owners and managers. The material includes the County's 1) multi-fold brochure, *Illicit Discharges Affect Everyone . . . Even You! A Business and Homeowners Guide to Charles County's IDDE Program*, 2) rack cards (see below), and if applicable, 3) State or EPA guidance, and information on Maryland NPDES individual permits.

In FY 2023, Charles County distributed two-sided 4 x 9 in. rack cards for the purpose of educating local businesses on how to prevent stormwater pollution and illicit discharges into the County's storm drain system/surface waters from various activities related to: 1) Automotive Businesses; 2) Dumpsters; 3) Restaurants; and 4) Outdoor Storage. The cards list recommendations of good housekeeping practices and pollution prevention methods by business-type with photographs showing correct and incorrect examples.

During FY 2023, the video titled *IDDE: A Grate Concern* (Excal Visual, Inc.) ran 360 times on the Charles County Government TV station (CCGTV) and had several views on Charles County Government YouTube channel. The video can be viewed here https://youtu.be/gX5j6wlHZb8 .

For more information on the County's IDDE Program, see Section IV.D.3.

ILLICIT DISCHARGES AFFECT EVERYONE... EVEN YOU!

A BUSINESS AND HOMEOWNERS GUIDE TO CHARLES COUNTY'S IDDE PROGRAM

Charles County Government
Dept. of Planning & Growth Management
www.CharlesCountyMD.gov/Watershed

ILLICIT DISCHARGES AFFECT EVERYONE... EVEN YOU!

A BUSINESS AND HOMEOWNERS GUIDE TO CHARLES COUNTY'S IDDE PROGRAM

What is the Charles County Illicit Discharge Detection and Elimination (IDDE) Program

Under its National Pollutant Discharge Elimination System (NPDES) municipal stormwater permit, Charles County Government is required to implement an inspection and enforcement program to ensure all discharges to and from the municipal separate storm sewer system (MS4) that are not composed entirely of stormwater are either permitted by the Maryland Department of the Environment (MDE) or eliminated.

Charles County Government conducts an annual random screening of storm drain outfalls as well as a routine survey of commercial and industrial watersheds. The overall goal of the IDDE program is to identify illegal dumping activities, unauthorized storage of materials and illicit discharges. By identifying such activities and having specific reports of a violation, the county proceeds with efforts to remove such unpermitted discharges.

CHARLES COUNTY Watershed Protection & Restoration

Learn more:

www.CharlesCountyMD.gov/Watershed (Click on Pollution)

What is an Illicit Discharge?

Illicit discharges are generally any discharge into a storm drain system that is not entirely composed of rain water. Unlike wastewater which flows to a wastewater treatment plant, stormwater generally flows to waterways without any additional treatment. Illicit discharges often include pathogens, oil, grease, litter, surfactants, and various toxic chemicals that pollute our waterways that are used for recreation and drinking water.

Penalties for Illicit Discharges

Illicit discharges are a serious offense that can result in criminal prosecution. Every case of illicit discharge is investigated. Persons responsible for illicit discharges are subject to civil fines and possible criminal prosecution.

What is Illegal Dumping?

Illegal dumping is anyone depositing solid waste at a location other than a legally accepted facility. Illegal dumping is a serious problem that requires the county to relinquish funds for investigation, clean-up and enforcement.

Penalties for Illegal Dumping

Illegal dumping is a serious offense that can result in criminal prosecution. Every case of illicit discharge is investigated. Illegal dumpers are subject to civil fines and possible criminal prosecution.

Examples of Illicit Discharges

- Any induction of non-stormwater to the ground or into the storm drain.
- Sanitary waste water.
- Septic tank effluent.
- Car wash waste waters.
- Motor oil disposal.
- Radiator flushing disposal.
- Laundry waste waters.
- Auto or household toxic chemical disposal.
- Restaurant grease or cooking oil.
- Leaves or yard waste.

Examples of Illegal Dumping

- Disposing of your trash in dumpsters or containers you do not own.
- Disposing of trash along public roadways, vacant lots, fields, woods, stream valleys, parks or any other unacceptable location.
- Dumping chemicals, pesticide's, used automotive fluids or other chemical liquids into storm drains, water ways, or on the ground.
- Burning solid waste.
- Improperly disposing of yard waste over your property line or nearby woods.
- Burying solid waste.
- Dropping off solid waste at any location other than a regulated, legally accepted facility, dump, transfer station, or convenience center.

Reporting of Illegal Dumping or Illicit Discharges

- If you suspect an illicit discharge is being released into the storm sewer system, contact the Charles County Government at 301-645-0692 (Monday through Friday 8 a.m. to 4:30 p.m.).
- If you suspect an illicit discharge is going into the storm sewer system during non-business hours, please call the Maryland Department of the Environment's toll-free 24-Hour emergency number for pollution problems in Maryland at 866-633-4686 (or 866-MDE-GOTO).
- Submit complaint online: **www.CharlesCountyMD.gov/Watershed** (click on Pollution, and then Report a Suspected Illicit Discharge)
- When reporting, try to include the following:
- Date and time of incident.
- Location of dumping or discharge.
- Digital photos and/or description of incident observed.
- Vehicle and license plate information if involved.

How **Businesses** Can Help Keep Illicit Discharges Out of Our Waterways:

Keep water from contacting work areas – work areas can be contaminated by raw materials, liquids, grease, waste oil, heavy metals, or other fluids. Stormwater runoff flows across work areas and picks up these contaminants.

To keep from discharging contaminated stormwater:

- Keep stormwater runoff from contacting any industrial areas, either indoors or out.
- Install roofs or move industrial operations indoors.
- Avoid hosing down outdoor work areas or washing commercial vehicles where the wastewater will enter the storm sewer system.

Keep contaminants off surfaces that will come into contact with stormwater:

- Control leaks and spills – Clean them up, even if only minor.
- Review operating routines to ensure adequate requirements are met to eliminate potential for contamination on surfaces.
- Regularly check equipment for exposed or leaking parts.
- Minimize the use of chemicals. When needed, make sure you are using the right product in the right amount by following all label instructions. Dispose of any waste and empty containers properly.

Educate employees about how to prevent stormwater pollution:

- Develop required standard operating procedures such as proper equipment washing.
- Provide training to employees on the importance of following the procedures so they understand why they are being asked to change their methods.
- Post signs as reminders to close covers and protect storage containers, including dumpsters.
- Let your customers know the efforts you are making to minimize waste and eliminate potential pollution sources.

How **Homeowners** Can Help Keep Illicit Discharges Out of Our Waterways:

- Used oil, antifreeze, or batteries should be recycled. Be sure to check your vehicle on a regular basis for leaks, and clean up any spills with an absorbent that can be swept up and disposed of properly.
- Either wash your car on the grass, so the waste water filters through the soil, or take your car to a commercial wash that sends their water to a wastewater treatment plant.
- Grass clippings and yard waste should be swept away from storm drains after mowing and cutting to either be composted or taken to a proper disposal location.
- Bag or scoop your pet's waste and dispose of it properly.
- Many household products are considered hazardous waste and should be disposed of properly. Charles County Government offers regularly scheduled Household Hazardous Waste Collection days. Details: **www.CharlesCountyMD.gov/HHW** or call 301-932-3599.

Charles County Government
Department of Planning & Growth Management
200 Baltimore Street • La Plata, Maryland 20646
301-645-0692 • MD Relay: 711 (TDD: 1-800-735-2258)
Equal Opportunity County

Learn more at...

www.CharlesCountyMD.gov/Watershed

About Charles County Government

The mission of Charles County Government is to provide our citizens the highest quality service possible in a timely, efficient and courteous manner. To achieve this goal, our government must be operated in an open and accessible atmosphere, be based on comprehensive long- and short-term planning and have an appropriate managerial organization tempered by fiscal responsibility. We support and encourage efforts to grow a diverse workplace. Charles County is a place where all people thrive and businesses grow and prosper; where the preservation of our heritage and environment is paramount; where government services to its citizens are provided at the highest level of excellence; and where the quality of life is the best in the nation.

It is the policy of Charles County to provide equal employment opportunity to all persons regardless of race, color, sex, age, national origin, religious or political affiliation or opinion, disability, marital status, sexual orientation, genetic information, gender identity or expression, or any other status protected by law.

Charles County Pollution Prevention Practices

AUTOMOTIVE BUSINESSES

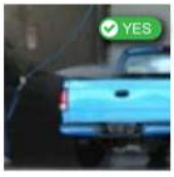
In order to manage stormwater runoff pollution, Charles County implemented the **Illicit Discharge Detection and Elimination Program** in 2001. Stormwater runoff is a result of a rain or snow event flowing over impervious surfaces like streets, sidewalks, and parking lots. This **stormwater runoff** conveys pollutants associated with vehicle maintenance, pet waste, lawn care, and litter into the storm drain system leading directly to our local waterways. When materials like used oil, trash juice from dumpsters, chemicals, or other hazardous materials are discharged, intentionally or unintentionally, into the storm water sewer system, this is considered an **illicit discharge**. Charles County is charged with the responsibility to discover, document, and eliminate these sources of stormwater pollution.

Help Charles County Prevent Stormwater Pollution

Keep garbage can and dumpster lids **closed**, and the area free of debris. Ensure that the dumpster is in proper working condition (i.e., no leaks, or seal damage).

Immediately clean up any oil, chemical, or non-stormwater spill using **dry methods** like kitty litter. Properly dispose of the cleanup material after absorbance.

Label liquid storage containers and place on spill pallets to catch any leaks or spills. Store containers **inside** or under cover to prevent exposure to stormwater.



Ensure vehicles are cleaned in a **wash bay** that either recycles used water or drains to a sanitary sewage system. Do not allow wash water to enter a storm drain or the environment.

To report a concern about pollutants or possible illegal dumping into the storm drain system, contact the Department of Planning & Growth Management: 301-646-0692

Charles County Pollution Prevention Practices

OUTDOOR STORAGE

Properly label and cover potentially hazardous materials, such as used oil, paints, detergents, or antifreeze in appropriate containers with secondary containment.

Ensure all outdoor containers have lids and are kept closed when not in use.

Cover outdoor work areas and piles of loose materials (i.e., sand, salt) to prevent contaminated runoff from reaching storm drains.

Move any activities which have the potential for pollution indoors.

Help Charles County Prevent Stormwater Pollution

Pollution Prevention Practices is a publication of the Charles County Watershed Protection & Restoration Program. For additional information, visit online or contact us by phone or email.

301-645-0692 • PGM@CharlesCountyMD.gov

www.CharlesCountyMD.gov/Watershed

Charles County Government
Department of Planning & Growth Management
200 Baltimore Street • La Plata, Maryland 20646
MD Relay: 711 (TDD: 1-800-735-2258) • Equal Opportunity County

Charles County Pollution Prevention Practices

DUMPSTERS

In order to manage stormwater runoff pollution, Charles County implemented the **Illicit Discharge Detection and Elimination Program** in 2001. Stormwater runoff is a result of a rain or snow event flowing over impervious surfaces like streets, sidewalks, and parking lots. This **stormwater runoff** conveys pollutants associated with vehicle maintenance, pet waste, lawn care, and litter into the storm drain system leading directly to our local waterways. When materials like used oil, trash juice from dumpsters, chemicals, or other hazardous materials are discharged, intentionally or unintentionally, into the storm water sewer system, this is considered an **illicit discharge**. Charles County is charged with the responsibility to discover, document, and eliminate these sources of stormwater pollution.

Help Charles County Prevent Stormwater Pollution

Why is dumpster maintenance important?

Unmaintained dumpsters can…

- **Contaminate** stormwater runoff
- **Pollute** our waterways
- **Hurt** our wildlife
- **Harm** our environment

What do I need to do?

- **Train** employees to close all dumpster lids after every use. Post dumpster maintenance tips.
- **Fix** damaged or broken lids, and replace dumpsters that leak.
- **Sweep** litter into a trash receptacle.
- **Inspect** the area around dumpsters regularly to ensure it is clean.
- **Dispose** of grease and hazardous waste (i.e., oil, batteries, electronics) by using separate containers.

What should I NOT do?

- **Do not** overfill dumpsters.
- **Do not** dispose of liquids or allow leakage.
- **Do not** pressure wash, hose, or sweep debris or spills into the storm drain.
- **Do not** leave lids open so rainwater can get into the dumpster.
- **Do not** wash the dumpster area with detergents.

To report a concern about pollutants or possible illegal dumping into the storm drain system, contact the Department of Planning & Growth Management: 301-646-0692

Charles County Pollution Prevention Practices

RESTAURANTS

In order to manage stormwater runoff pollution, Charles County implemented the **Illicit Discharge Detection and Elimination Program** in 2001. Stormwater runoff is a result of a rain or snow event flowing over impervious surfaces like streets, sidewalks, and parking lots. This **stormwater runoff** conveys pollutants associated with vehicle maintenance, pet waste, lawn care, and litter into the storm drain system leading directly to our local waterways. When materials like used oil, trash juice from dumpsters, chemicals, or other hazardous materials are discharged, intentionally or unintentionally, into the storm water sewer system, this is considered an **illicit discharge**. Charles County is charged with the responsibility to discover, document, and eliminate these sources of stormwater pollution.

Help Charles County Prevent Stormwater Pollution

Keep garbage can and dumpster **lids closed**, and the area free of debris. Ensure that the dumpster is in proper working condition (i.e., no leaks, or seal damage).

Immediately clean up any oil, chemical, or other liquid spill using **dry methods** like kitty litter. Properly dispose of the cleanup material after absorbance.

Use **indoor sinks** or floor drains to clean floor mats and empty dirty mop water. **Do not** dispose of any wash water outdoors or into the storm drains.

Keep grease dumpster and used oil container **lids closed** at all times when not in use. Using a closed container to prevent spills, **transport** used cooking oil to grease dumpster after it has cooled.

To report a concern about pollutants or possible illegal dumping into the storm drain system, contact the Department of Planning & Growth Management: 301-646-0692

CCGTV, Website, Social Media, Email, Newspaper, Podcast & Mail

CCGTV: Charles County Government Television (CCGTV) is the government local access channel for Charles County, Maryland. CCGTV is available on Comcast and Verizon FIOS as well as streaming via AppleTV, Roku and the internet. The channel broadcasted live meetings of the Board of County Commissioners, as well as Public Hearings. CCGTV also produces original programming to highlight county programs and events. A schedule and video on demand library remain available through https://www.charlescountymd.gov/services/media-services/charles-county-government-television.

Website: www.CharlesCountyMD.gov/watershed

In FY 2023, Charles County's WPRP continued to:

1. Update webpages.
2. Encourage interest in the WPRP.
3. Increase public awareness of the County's efforts on watershed protection, stormwater management and MS4 permit compliance.
4. Educate citizens and business owners on the basics of watershed, stormwater, and stormwater management concepts.
5. Convey the role of citizens in achieving improved water quality.
6. Increase transparency of the program.

The WPRP webpages remained featured under the Department of Planning and Growth Management (PGM) and the Department of Public Works (DPW) websites. Information is organized and presented under four major categories on the PGM homesite: 1) Education & Programs; 2) News and Videos; 3) Planning & Monitoring; and 4) Pollution. In addition, interactive online tools and webforms continue to be available on the website. Examples are shown on the following pages.

Government » Planning and Growth Management » Stormwater Management » Pollution »

Help Stop Water Pollution!

Font Size: Share & Bookmark Feedback Print

Water pollution is defined as the contamination of water bodies, including lakes, rivers, oceans, aquifers and groundwater. Humans and wildlife depend on clean water to survive, it is essential to sustain life. Access to clean water is one of the largest global health risks. When water becomes unfit for drinking and recreation, human and wildlife populations suffer. Water pollution does not only affect people around the world, it affects our local communities. Sources of water pollution in Charles County include:

- Automotive Fluids, Oils, Grease, Industrial Waste, and Paint
- Yard Waste and Litter
- Pesticides, Fertilizers, and Road Salt
- Pet Waste
- Leaking or Overflowing Sewage Pipes

Protecting water quality can be accomplished by everyone. Click on the areas below to find out how you can help.

Lawn Care and Landscape Management >

Proper Car Care and Washing >

Proper Disposal of Household Hazardous Waste >

Proper Pet Waste Management >

Rain Barrels and Workshops >

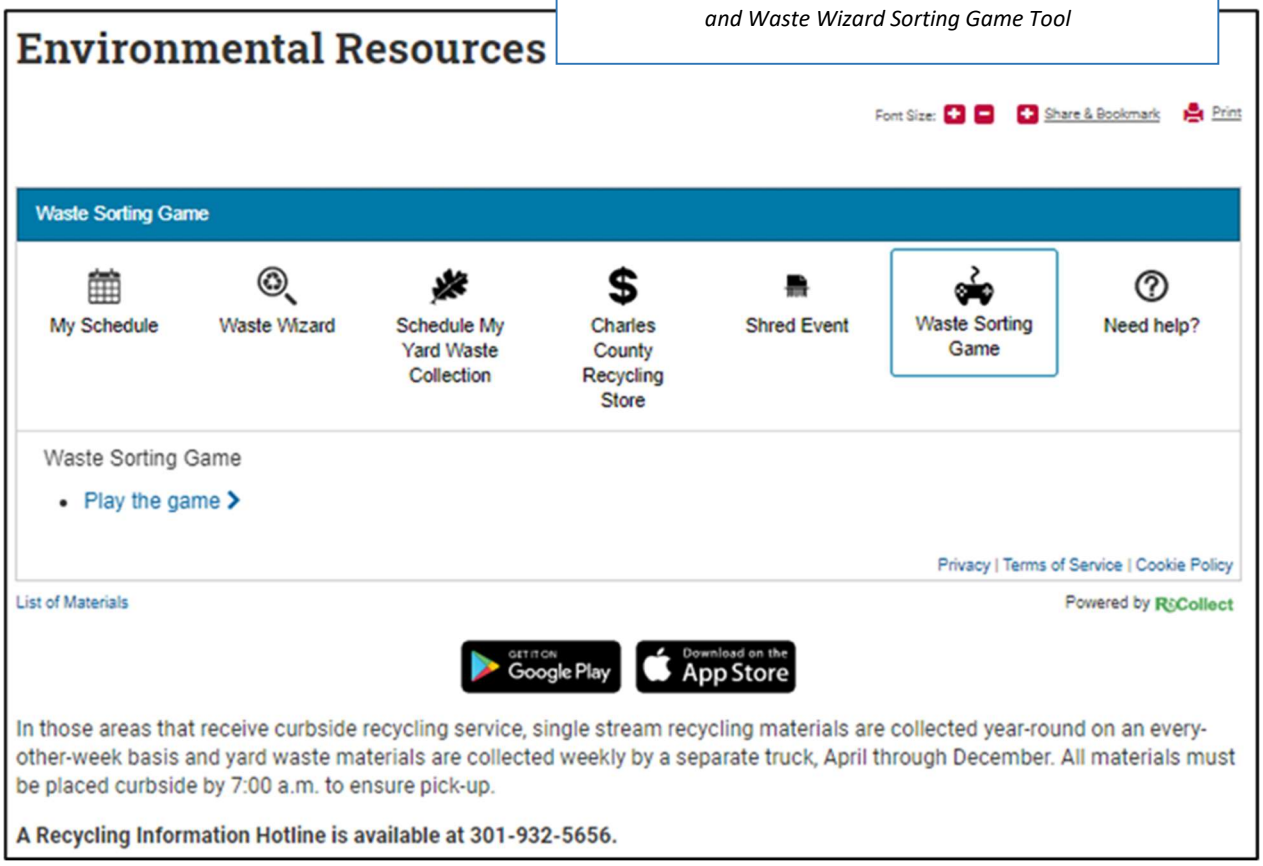
Rain Garden >

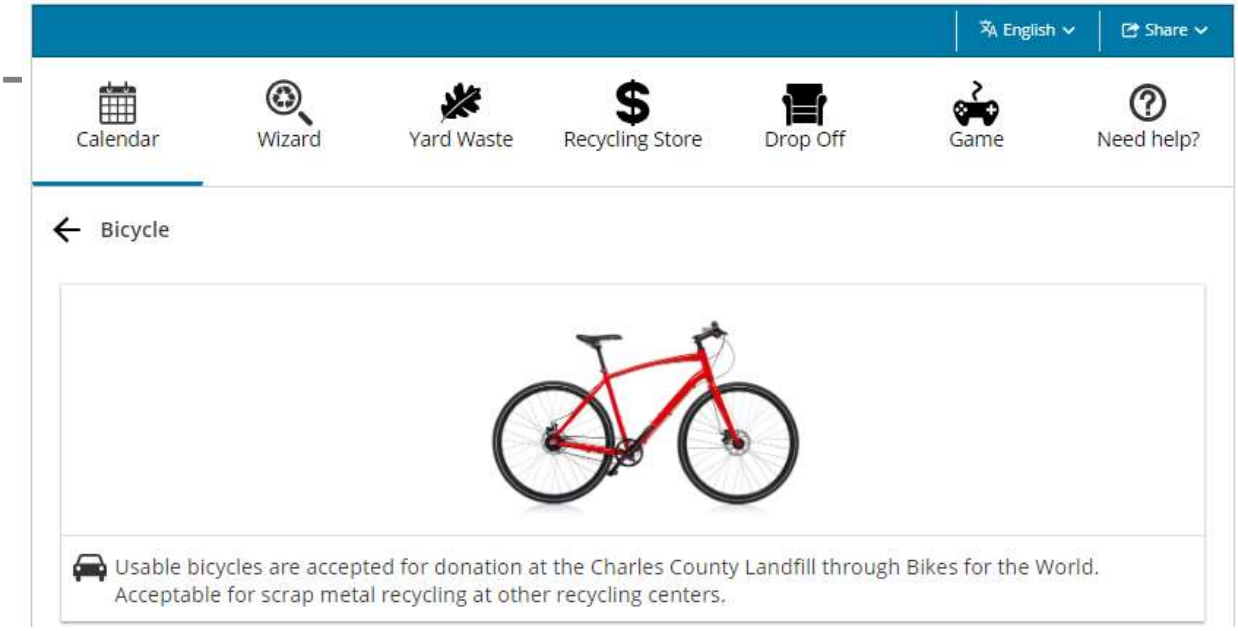
Restaurants Pollution Prevention >

Dumpster Maintenance >

Storm Drain Stenciling/Marking Program >

DPW's Environmental Resource's Downloadable Mobile Apps and Waste Wizard Sorting Game Tool

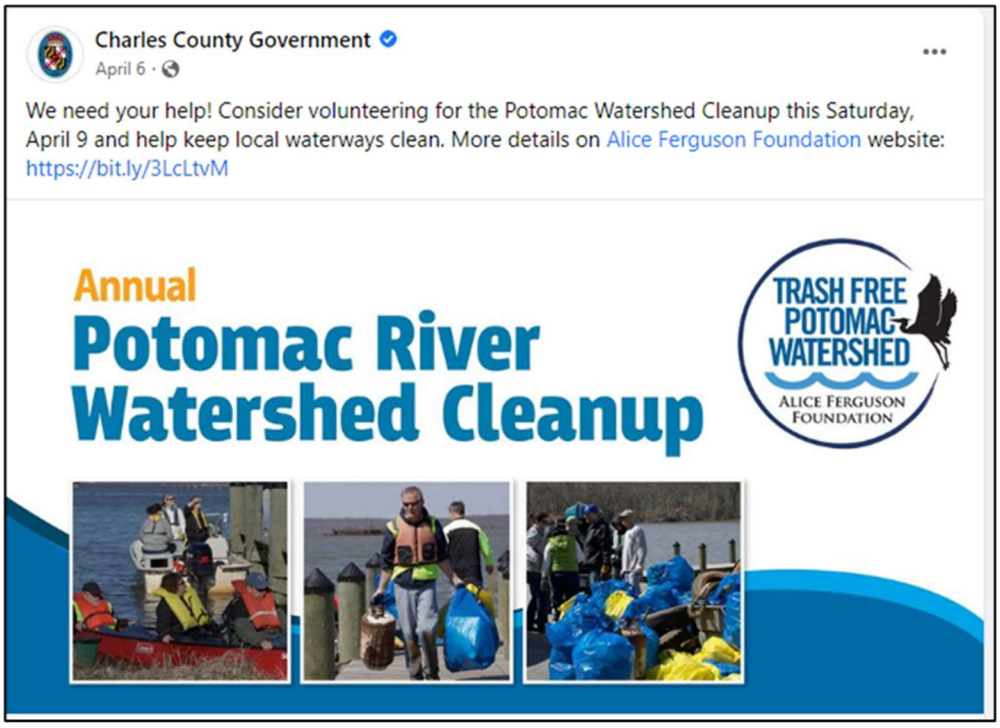




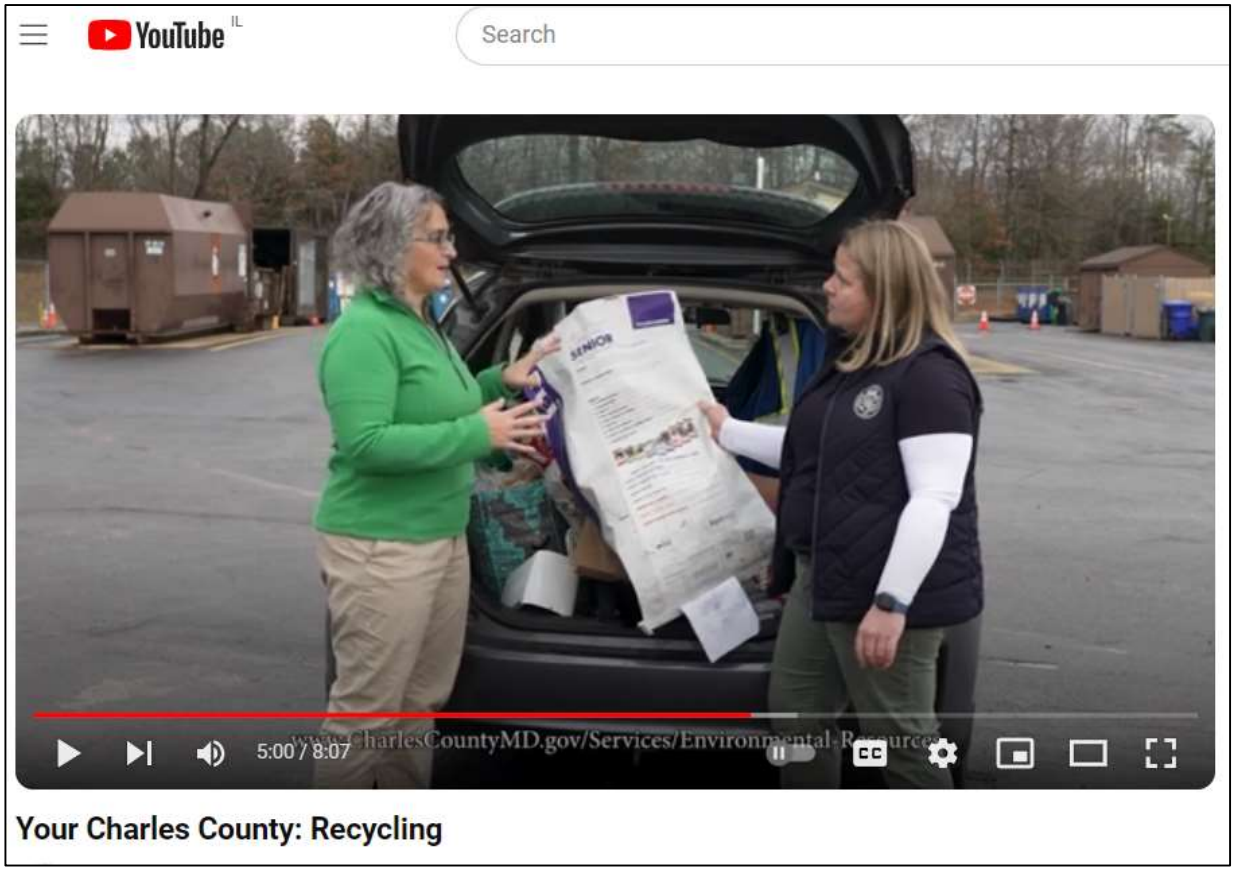
Charles County began accepting donations of usable bicycles through the Bikes for the World, a network of individuals and organizations committed to preserving our environment and empowering the less fortunate through the collection of usable used bicycles for donation to qualified community service programs overseas.

Social Media: The WPRP uses social media to reach out to citizens and promote the WPRP. Workshops, community events, proposed regulations, public hearings, and Citizen's Academy were shared on Facebook, Twitter, and YouTube to build public awareness, increase participation, and make registration easy.

The Charles County Government Facebook page has 19,000-plus followers (an increase of approximately 1,000 from FY 2022), the @CharlesCoMD Twitter handle has 5,917 followers (approximately 200 more than last year), and the Charles County Government YouTube channel has 5,140 subscribers (310 more than the previous year). Charles County Government improves community



communication through their YouTube channel. This visual, social medium has become a successful outreach tool that informs and entertains. The YouTube channel introduces County leaders and provides information on local programs, events, proposals, services, and local



places of interest. Health, safety, education, history, tourism, parks and recreation, economic opportunities, utilities, waste management, infrastructure, and the environmental protection were some of the topics covered. Latest videos were consistently uploaded from various County government departments and local community groups. The channel has 5,150 subscribers and features over 700 videos organized in 26 playlists. All seven WPRP public service announcements (PSAs) are featured on the channel (with 797 views) in FY 2023.

E-News: In FY 2023, Charles County citizens stayed connected and engaged with County news, updates, and events through the weekly Charles County Government e-newsletter sent directly to their email. All citizens, especially new residents, are encouraged to register for the e-newsletter by WPRP staff and on CCGTV by visiting the County's Stay Connected webpage at https://www.charlescountymd.gov/services/media-services/get-connected or by calling the County's Public Information Office at (301) 645-0580.

News Releases/Newspapers: News releases from the Charles County Media Services Division alerted citizens about upcoming WPRP events, trainings, grants, and hearings. All News

Releases were published in local southern Maryland newspapers, posted on Charles County Government social media outlets, and emailed to individuals who registered to the County's e-news distribution. News Releases advertise rain barrel workshops, yard waste collection for composting, hazardous waste collection days, shred events, grant programs, public meetings, hearings, and other WPRP announcements.

On the following pages are two News Release examples announcing: 1) Adopt-A-Spot Program; and 2) a Free Scrap Tire Collection Event.

Charles County Government

NewsRelease

For Immediate Release
News Release # 2023-067

The Department of Public Works is partnering with the Nanjemoy Creek Environmental Education Center and the University of Maryland Extension to host a rain barrel and compost workshop event. This event will be held on Saturday, July 22, at the Waldorf Senior & Recreation Center (90 Post Office Rd, Waldorf).

Workshops are 9 a.m. and 10:30 a.m. Register at www.CharlesCountyMD.gov/Outreach. Advanced registration is required.

Rain Barrel Workshop

- Take home a rain barrel and learn proper in-home installation techniques, practical uses for rain barrels, and how to reduce the impact of runoff on local waterways.
- Become eligible for a stormwater remediation fee credit. Residents within the Town of La Plata and the Town of Indian Head are not eligible to receive the Stormwater Remediation Fee Credit.
- The deadline for online registration is Sunday, July 9.
- For more information, contact Keith Roumfort at roumfork@CharlesCountyMD.gov or 301-932-3599.

Composting Workshop

- In this hands-on workshop, participants will learn the basics of home composting and get instructions on making a wire bin at home. Charles County registrants can receive a free plastic GEOBIN®.
- The deadline for online registration is Friday, July 14.
- For more information, contact Meg Romero at RomeroM@CharlesCountyMD.gov or 301-932-3599.

Citizens with special needs may contact the Maryland Relay Service at 711, or Relay Service TDD: 800-735-2258.

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For media inquiries, contact PressRoom@CharlesCountyMD.gov.

Return to full list >>

Charles County Government

NewsRelease

FOR **IMMEDIATE** RELEASE
News Release #2023-079
Monday, July 31, 2023, 10:15 a.m.

FOR MEDIA INQUIRIES ONLY:
Donna Fuqua, Public Information Specialist
Phone: 301-885-2779 | PressRoom@CharlesCountyMD.gov

Residents Encouraged to Sign Up for the Adopt-A-Spot Program

"Keep Charles County Beautiful"

Charles County Environmental Resources Division encourages residents and businesses to help combat littering by "adopting" a County area or spot. The Adopt-A-Spot Program is a litter awareness campaign designed to aid in the removal of litter and debris from open public spaces around Charles County, such as parks, trails, and neighborhood playgrounds.

Residents, volunteer groups, and businesses can participate (supervision is required for ages 17 and younger). There is no cost to participate in this program. Volunteers will receive sign recognition in exchange for cleaning their spot at least three times in a calendar year. Gloves, bags, trash grabbers, and safety vests will be provided free of charge as well as trash disposal.

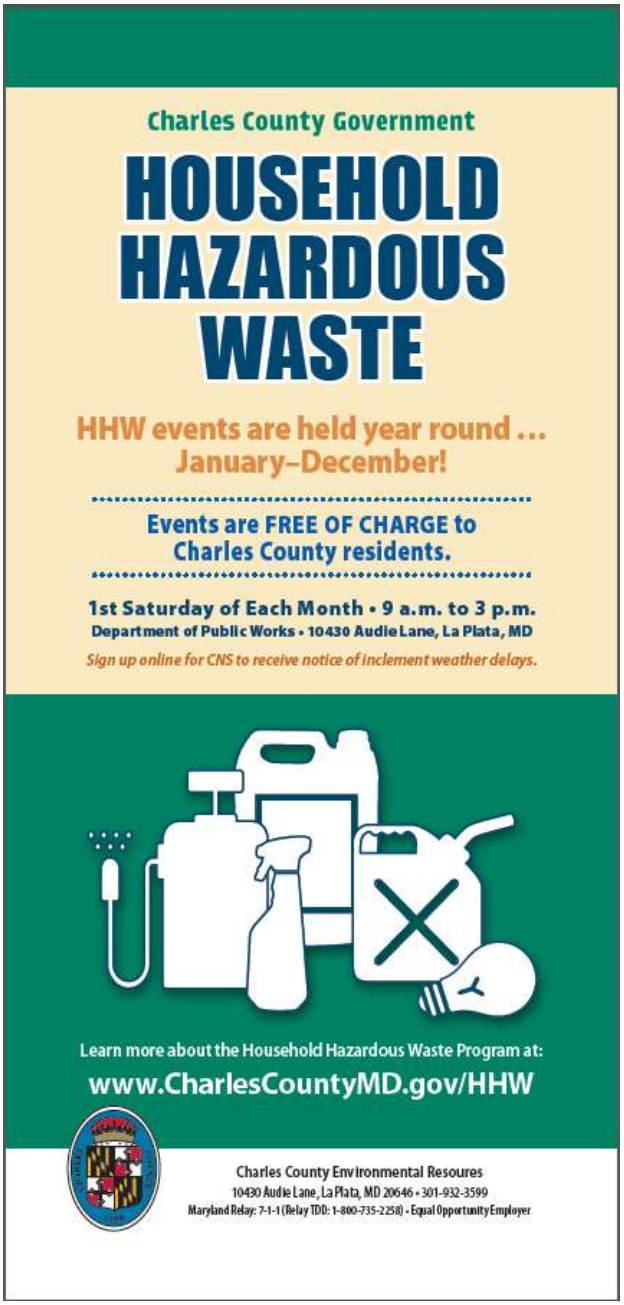
The Adopt-A-Road and Adopt-A-Spot programs are community initiatives through the Environmental Resources Division that aim to enhance the cleanliness and appearance of local roadways and public spaces. Become an environmental steward for Charles County. An official sign will be installed on your adopted area recognizing your efforts to "Keep Charles County Beautiful."

To participate in the Adopt-A-Road/Adopt-A-Spot program, visit www.CharlesCountyMD.gov/services/environmental-resources. For additional information, contact the Environmental Resources Division at 301-932-3599 or email AdoptARoad@CharlesCountyMD.gov. Residents with special needs may contact the Maryland Relay Service at 711, or Relay Service TDD: 800-735-2258.

###

Tax Bill Inserts

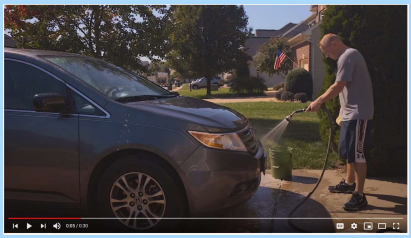
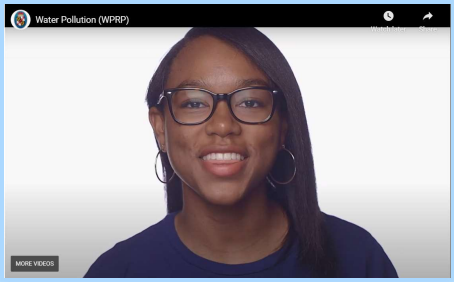
In the summer of 2023, the County's tax bill mail-out included a mailer with instructions to County residents on how to use the *Charles County Recycles* App. On the back of the mailer, information was provided about free, monthly Household Hazardous Waste collection events for County residents.

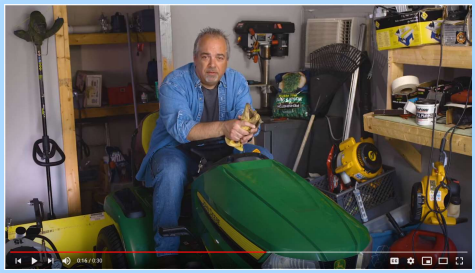
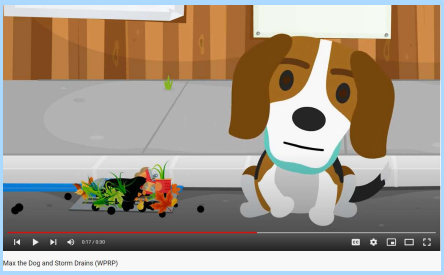


Public Service Announcements

The WPRP airs Public Service Announcement (PSA) commercials serve as an effective visual medium to educate citizens of all ages on the origins of nonpoint source water pollution and how to protect water quality while using the catchphrase "Be the Solution to Water Pollution." All seven PSAs continue to be an important part of the County's public outreach effort and were shown on cable television, Charles County Government television (CCGTV), Charles County YouTube channel, and digital streaming devices. They were also embedded on the Stormwater Management - News and Videos webpage https://www.charlescountymd.gov/government/planning-and-growth-management/stormwater-management/news-and-videos

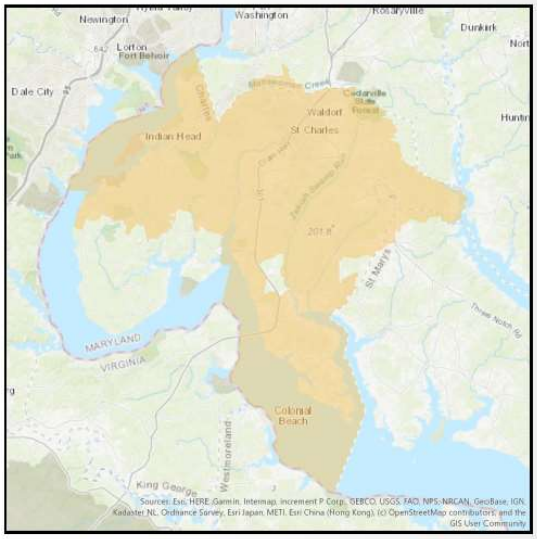
Public Service Announcements Statistics in FY 2023

#	PSA	Video	Link
1	Where our water pollution comes from		https://www.youtube.com/watch?v=9IE2TKv0PFg&list=PLYKfJ608FjL9iMMhiTn5kjvWv8sDNmoz2&index=6
2	Take Responsibility for Water Pollution		https://www.youtube.com/watch?v=RkP7vDv5xgU&list=PLYKfJ608FjL9iMMhiTn5kjvWv8sDNmoz2
3	Max the Dog and Pet Waste		https://www.youtube.com/watch?v=y-IjVAw_SaI&list=PLYKfJ608FjL9iMMhiTn5kjvWv8sDNmoz2&index=2

4	Lawn Care & Using Fertilizers		https://www.youtube.com/watch?v=islMrwMpnPU&list=PLYKfJ608FjL9iMMhiTn5kjvWv8sDNmoz2&index=3
5	How the Storm Drain Works		https://www.youtube.com/watch?v=4XfrHMxJZcM&list=PLYKfJ608FjL9iMMhiTn5kjvWv8sDNmoz2&index=4
6	Max the Dog & Lawn Waste		https://www.youtube.com/watch?v=5DDw0Bjoo4Y&list=PLYKfJ608FjL9iMMhiTn5kjvWv8sDNmoz2&index=5
7	Illicit Discharge Detection & Elimination		https://www.youtube.com/watch?v=gX5j6wlHZb8&list=PLYKfJ608FjL9iMMhiTn5kjvWv8sDNmoz2&index=7 CCGTV: https://www.charlescountymd.gov/services/media-services/charles-county-government-television/ccgtv-live-stream CCGTV Spots: 360

COMCAST Spotlight

The WPRP TV and Digital Media campaign continued in FY 2023 with Comcast Spotlight. PSAs were aired on Comcast cable, Spotlight Streaming Video, and Verizon Fios throughout FY 2023. The spots were aired on major networks including high profile programs such as: Monday Night Football, Disney-XD, History Channel, Nick TV, Tru TV, Paramount, The Weather Channel, and others. In total 5,779 cable spots (with 455,670 impressions) and 105,263 in-stream (video-on-demand) impressions were delivered to Charles County customers in FY 2023.



Demographic Profile

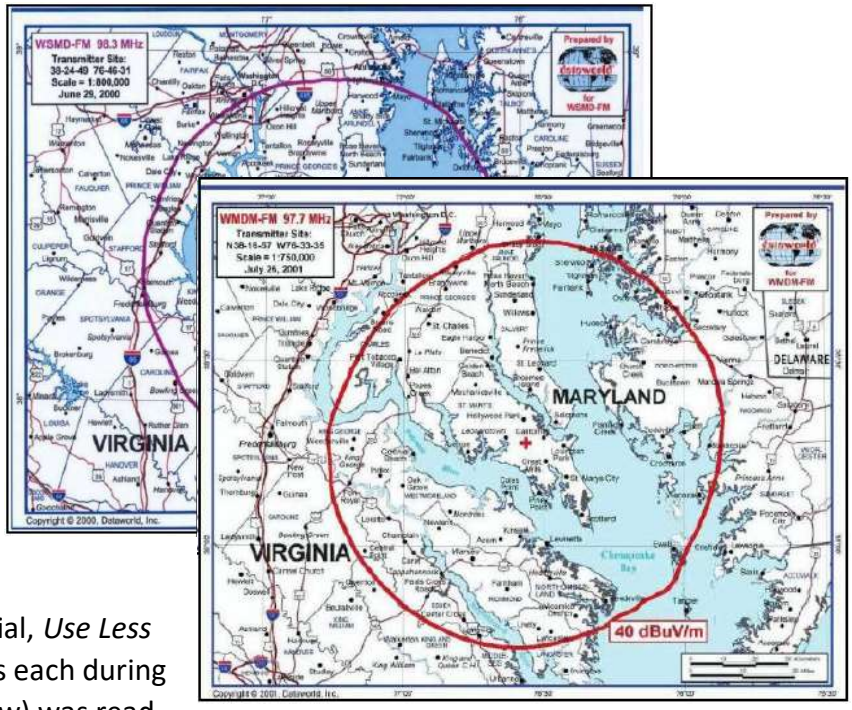
Age Groups	
Persons 17 and under	24.2%
Adults 18-34	21.2%
Adults 35-54	29.8%
Adults 55+	24.8%
Education	
Attended College+	60.5%
Marital Status	
Single (Never Married)	31.3%
Married	52.2%
Divorced/Separated/Widowed	16.6%
Household Income	
$30,000-$49,999	10.9%
$50,000-$74,999	14.3%
$75,000-$99,999	14.3%
$100,000+	48.5%
Housing Units & Family Type	
% Owner Occupied Units	73.2%
% of HH with Children	38.6%
Race	
White	49.1%
Asian	2.9%
Black/African American	41.6%
Other	6.4%

Communities Served

- Bel Alton
- Benedict
- Bryans Road
- Bryantown
- Charlotte Hall
- Cobb Island
- Hughesville
- Indian Head
- Issue
- La Plata
- Marbury
- Newburg
- Pomfret
- Port Tobacco
- Waldorf
- White Plains

SOMAR Communications

The WPRP airs PSA commercials on radio stations broadcasted by Southern Maryland Radio (SOMAR) Communications, Inc. of Lexington Park, Maryland. SOMAR is a local radio network serving southern Maryland with three stations: WSMD STAR 98.3 FM (Pop), WKIK 102.9 FM/WKIK 560 AM (Mainstream Country), and WMDM 97.7 FM (Classic Rock). These three stations encompass a wide range of music genres, thereby appealing to a wide listening audience.



In FY 2023, The WPRP aired the commercial, *Use Less Salt*, in both English and Spanish (72 times each during February and March. The script (see below) was read by a Latino radio personality.

Use Less Salt (English)

Homeowners and businesses — save money and the environment by using less salt this winter!

1. *Use salt only when a storm is imminent*
2. *If the storm doesn't happen, sweep up any unused salt for later use.*
3. *Only use salt where it's absolutely needed and apply the least amount necessary.*
4. *Evenly distribute, never leave extra piles, and sweep up any spills.*
5. *On thicker ice, use sand or natural cat litter for added traction.*
6. *Consider using chloride-free deicers.*
7. *AND remember to store salt in a dry, covered area.*

Together we can all be the solution to water pollution!

Go to CharlesCountyMD.gov/watershed to learn more. A message from the Charles County Watershed Protection & Restoration Program.

Use Menos Sal (Español)

Propietarios de viviendas y empresas: ¡Ahorren dinero y protejan el medio ambiente utilizando menos sal este invierno!

1. *Use sal solo cuando una tormenta sea inminente*
2. *Si la tormenta no ocurre, recoja la sal no utilizada para usarla más tarde.*
3. *Solo use sal donde sea absolutamente necesario y aplique la menor cantidad de sal necesaria.*
4. *Distribuya uniformemente la sal*
5. *Nunca deje pilas adicionales de sal y barra los derrames.*
6. *No ponga sal encima de la nieve, quite la nieve primero con una pala.*
7. *En hielo más grueso, use arena o arena para gatos natural para mayor tracción.*
8. *Considere el uso de anticongelantes sin cloruro.*
9. *Y recuerde guardar la sal en un lugar seco y cubierto.*

¡JUNTOS PODEMOS SER LA SOLUCIÓN A LA CONTAMINACIÓN DEL AGUA!
VAYA A CHARLESCOUNTYMD.GOV/WATERSHED PARA OBTENER MÁS INFORMACIÓN.
Un mensaje del Programa DE Protección y Restauración de Cuencas del Condado de Charles.

Outreach Events

Rain Barrel & Composting Workshops

Charles County WPRP in collaboration with the University of Maryland (UMD) Extension and Nanjemoy Creek Environmental Education Center, held rain barrel and composting workshops during two Saturdays in FY 2023 (October 22, 2022 and April 22, 2023). Two rain barrel sessions and two composting sessions were held on these dates for a total of four rain barrel sessions and four composting sessions. Attendance numbers are listed in the table below.

Rain barrels are only available for purchase to attendees of the workshop ($30.00 for Charles County residents, $65.00 for non-Charles County residents). Composting bins were handed out to all who registered and attended the composting workshops, free of charge.

Applications to the County's Stormwater Remediation Fee rebate program were made available at the end of every rain barrel session to County residents. Several questions were answered about the rules of the rebate program and the purpose of the Charles County stormwater remediation fee. Various WPRP promotional items and educational materials were available free of charge. The educational materials covered topics such as water pollution prevention at home and work, stormwater impacts, stormwater management, and best maintenance practices for stormwater facilities.

Rain Barrel and Composting Workshop Attendance in FY 2023

Workshop Date	Rain Barrels	
	Barrels Purchased	Attendance
10/22/2022	45	12
4/22/2023	47	18
Total	**92**	**30**

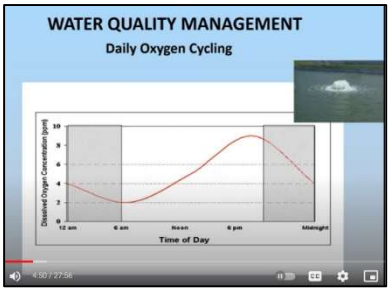
Wednesday Water Webinars

In 2023, the UMD Extension staff educated the community on proper septic system maintenance, well water protection, and pond management with a series of *Wednesday Water Webinars*. The workshops were virtual, one-hour sessions, held on the third Wednesdays of the month. All ten webinars were taught by Dr. Andrew Lazur through Zoom and recorded. The recordings were uploaded to https://extension.umd.edu/resource/wednesday-water-webinars-recorded and https://www.youtube.com/playlist?list=PLlYVlIyavc0sIbpBtYtRy-IS_W4QDbFFs .

Holding the seminars online allowed citizens to attend without the need to travel. The format of the Zoom webinars allowed for class participation with questions and answers. WPRP staff recommended to septic system owners to attend the septic webinars and to watch the recorded webinars on the UMD, Extension YouTube channel.

Wednesday Water Webinars in FY 2023

Title	Month
Aquatic Plant Management in Ponds	Jun
How a Septic System Works	May
Simple Steps to Protect your Water Well	Apr
Septic System Maintenance	Mar
Warning Signs that a Septic System Is Not Working Effectively	Jan
Top Contaminants in Well Water	Dec
Types of Septic Systems	Nov
Top Things to Know about Septic Systems	Sep
Drinking Water Treatment 101	Oct
Prolonging the Life of Your Septic System	July
	TOTAL



Shred/Household Hazardous Waste Collection/Cleanup Events

Eight Charles County shred events were held by DPW throughout FY 2023. These free events provide citizens the opportunity to recycle paper documents securely. During the year, approximately 745 vehicles delivered a total of 32.3 tons of paper.

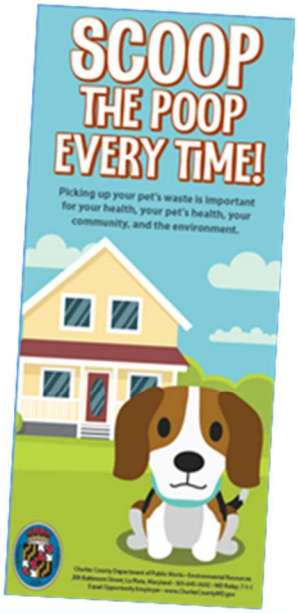
FY 2023 Hazardous Waste Collection: No. Households	
Jul	205
Aug	312
Sep	250
Oct	185
Nov	150
Dec	100
Jan	140
Feb	75
Mar	150
Apr	150
May	250
Jun	150
TOTAL:	2,117

Also in FY 2023, a total of 2,117 households took part in Charles County household hazardous waste collection events. These monthly collection events provide citizens a safe and responsible method to dispose of hazardous waste including pesticides, herbicides, fertilizer, gasoline, oil-based paint, cleaning supplies, pool chemicals, fluorescent lights, mercury thermometers, and other poisons found in the home. Residents were instructed to correctly label any container that did not have a readable-original label.

Charles County volunteers are the driving force behind community cleanup events. Volunteers see firsthand the detrimental impacts litter has on waterways, wildlife, and the environment within their watershed and are committed to be part of the solution.

In FY 2023, Charles County held their third annual countywide community cleanups, on the Charles County Community Cleanup one-day event. Residents and businesses were encouraged to select a community or public space to clean and beautify. Twelve volunteer groups took part in the one-day event, removing nearly four tons of debris and litter from neighborhoods, communities, and parks. During April, county citizens also participated in the Potomac River Watershed Cleanup collecting over eleven tons of trash and marine debris from ten locations along County waterways. Through the County's Adopt-A-Road and Adopt-A-Spot program, Charles County volunteers completed 140 cleanup events along adopted roadways.

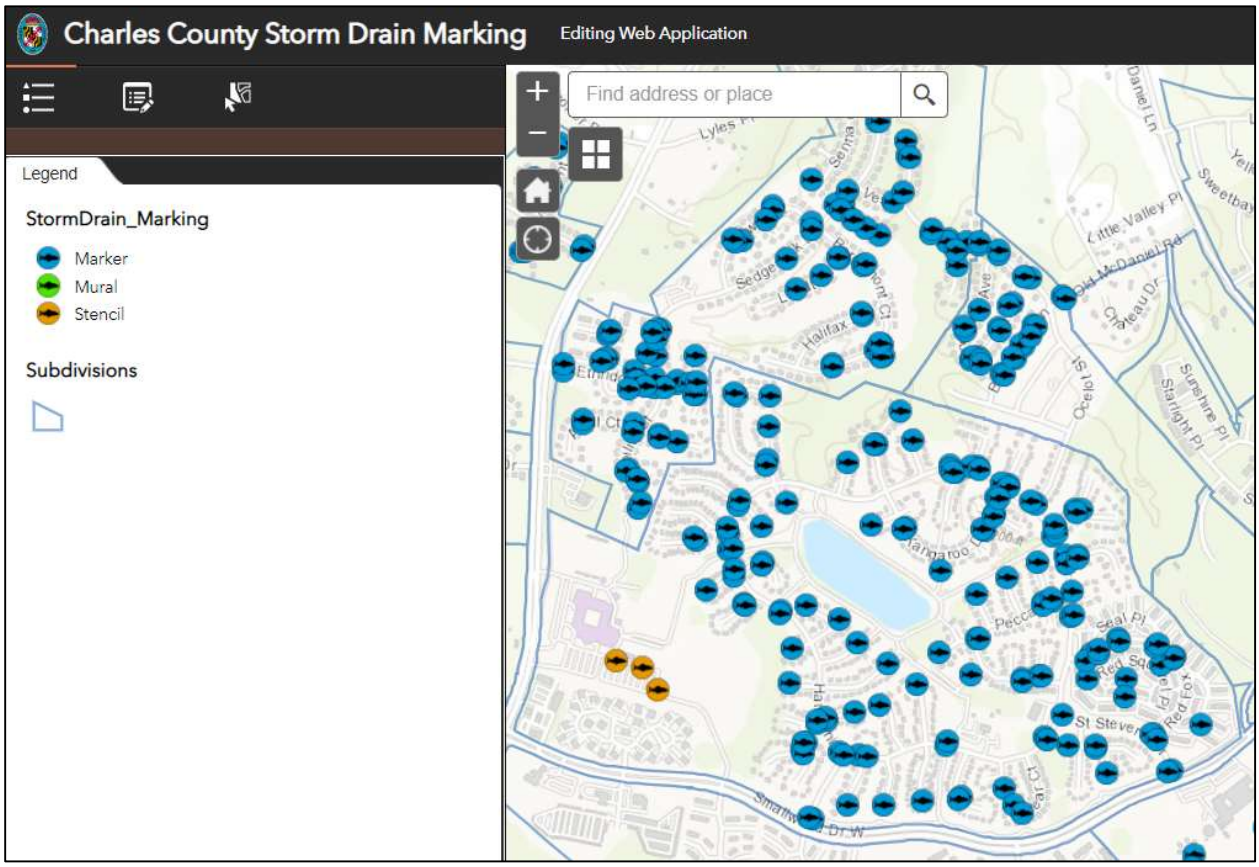
Educational Materials – Brochures



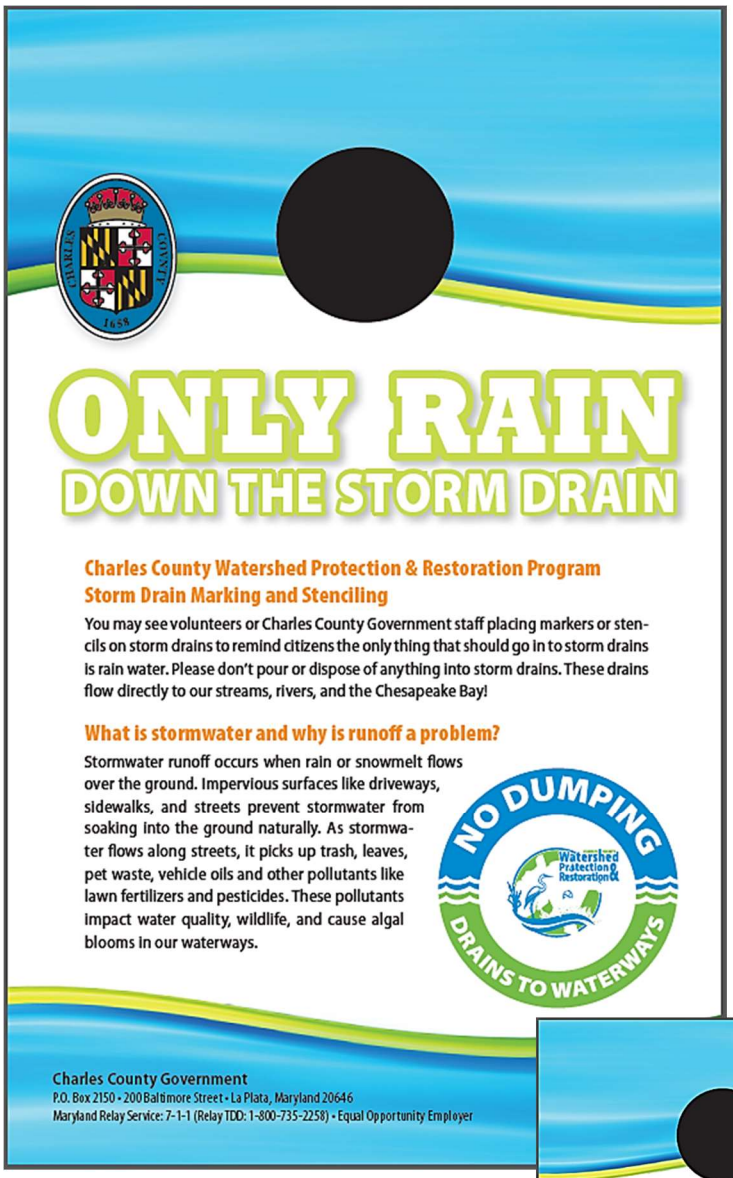
Storm Drain Stenciling/Marking Program

The WPRP Storm Drain Stenciling/Marking Program continued in FY 2023. Since 2017, this volunteer-based program helps raise awareness about stormwater pollution and encourages stewardship in Charles County communities. Volunteer groups choose whether to use stencil kits and paint (on loan from the WPRP staff) or to install aluminum storm drain markers with special adhesive. The markers are preprinted with "NO DUMPING, DRAINS TO WATERWAY."

After projects are complete, the storm drain locations are uploaded to a GIS map dedicated to the program. An example is shown below. Stenciled storm drain locations appear as a yellow circle. Locations of marked storm drains are shown in blue. No storm drains were stenciled in FY 2023. No new storm drains were in need of marking in FY 2023 allowing the DPW Roads Division staff to concentrated their efforts on replacing damaged plastic markers with the WPRP's durable aluminum storm drain markers.



Door Hangers

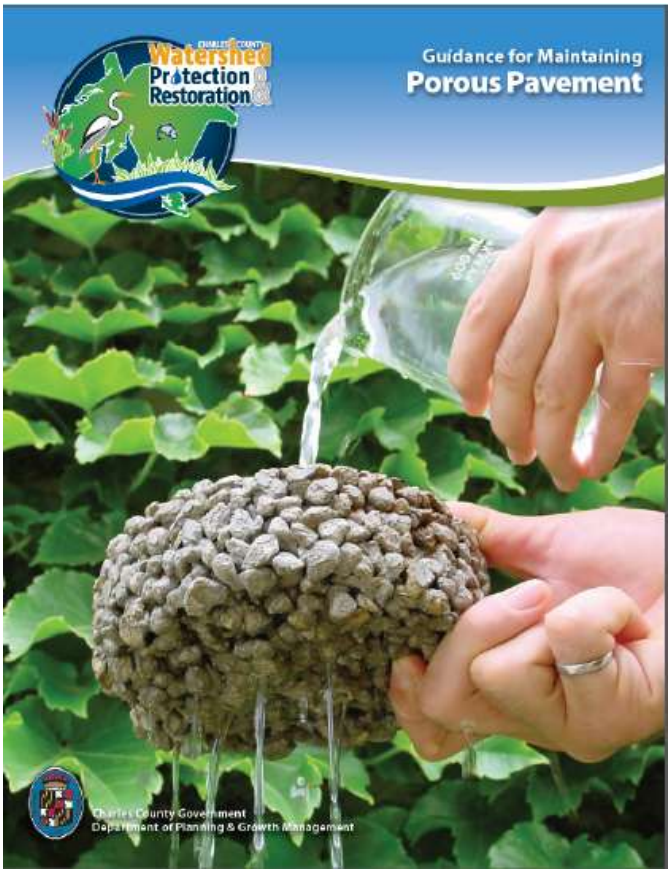


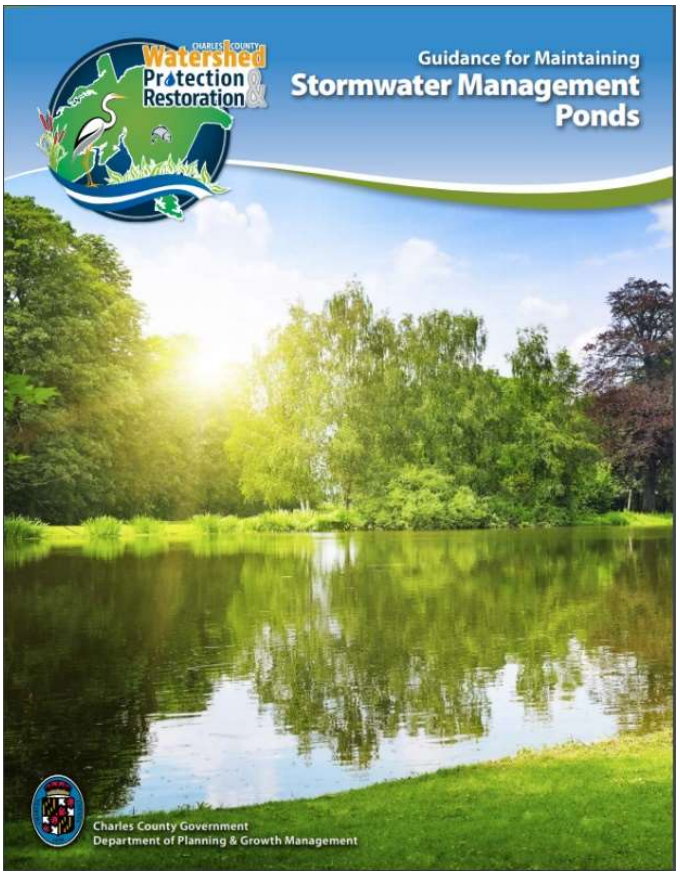
Residential and Community Stormwater Management Implementation and Facility Maintenance Outreach

The WPRP and stormwater inspection staff continued to be available to homeowners and HOAs to answer questions and provide guidance on stormwater treatment facilities and practices. Staff also distributed guidance brochures on stormwater management implementation and facility maintenance for:

- *Stormwater Management Ponds* (English & Spanish)
- *Rain Gardens, Bioswales, and Micro-Bioretention*
- *Porous Pavement,* and
- *Dry Wells*

The booklets describe in detail the purpose of the stormwater facilities and how to properly maintain them. They were distributed to individual homeowners, at HOA meetings, community walkthroughs, trainings/workshops, and at public events such as the County Fair and Citizen's Academy. They also remain available online on the PGM Stormwater Management Facilities webpage.





County stormwater inspectors regularly distribute these guidance booklets to property owners and HOAs during inspections. If a homeowner is not present, the inspector leaves the inspection results and contact information on a door hanger.

Stormwater Management Facilities

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Stormwater management facilities are used to:

- Capture stormwater runoff from impervious surfaces, like roads, rooftops, parking areas, and driveways to prevent downstream flooding and allow time for natural infiltration underground.
- Remove pollutants from stormwater runoff before the water is discharged into local streams.

These facilities include rain gardens, bioswales, micro-bioretention facilities, drywells, porous pavement, grass channels, ponds and other structural and non-structural stormwater management facilities. If they are functioning correctly, stormwater facilities help slow down stormwater and remove pollutants before the water is discharged into local streams.

Who Is Responsible For Maintenance?

Privately maintained stormwater management facilities are maintained by the facility owner. The county does not have direct maintenance responsibility.

However, Charles County is still responsible under state and federal stormwater permits for ensuring that the facilities remain in place, operate properly and are functional. To this end the county has established an inspection schedule for all privately maintained facilities, together with reporting and enforcement procedures for communicating inspection results to facility owners and gaining maintenance compliance.

Which Codes Determine Maintenance Responsibility?

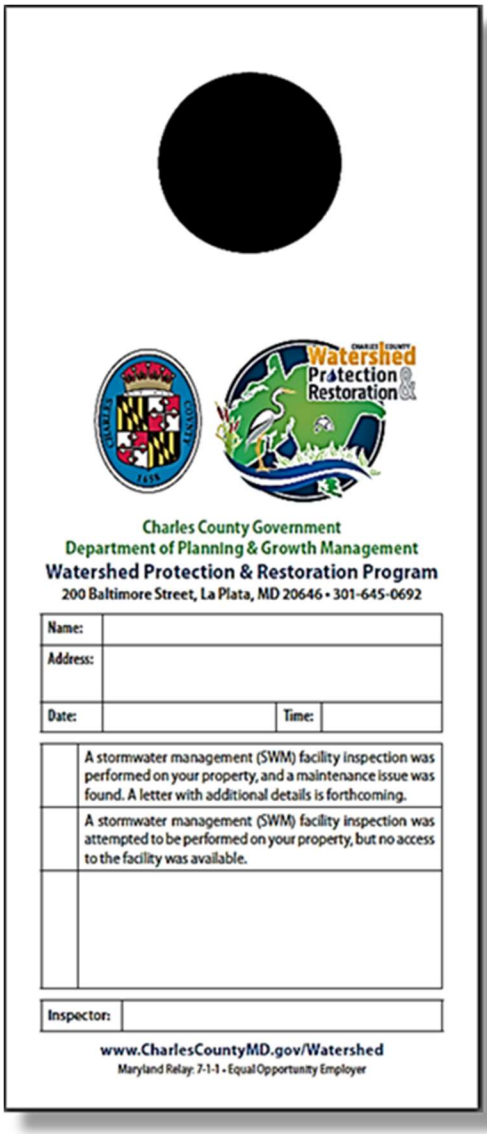
Chapter 274-53 of The Code of Charles County, Maryland **"Responsibility of owner or occupant".**

"The owner of any property containing a stormwater management system, or any other person or agent in control of such property, shall perform or cause to be performed preventive maintenance of all completed ESD treatment practices and structural stormwater management systems to ensure proper functioning."

Charles County, MD / Division 2: Code of Ordinances and Resolutions / Part II: General Legislation / Stormwater Management

Can I Remove the Stormwater Management Facility on My Property?

No, you cannot remove these facilities if they have been required by Charles County as part of your building installation. The County maintains a database of all required stormwater management structures and is required to inspect the facilities every three (3) years ensuring that the facilities remain in place, are properly operated, and functional.



Charles County Government
Department of Planning & Growth Management
Watershed Protection & Restoration Program
200 Baltimore Street, La Plata, MD 20646 • 301-645-0692

Name:	
Address:	
Date:	Time:

	A stormwater management (SWM) facility inspection was performed on your property, and a maintenance issue was found. A letter with additional details is forthcoming.
	A stormwater management (SWM) facility inspection was attempted to be performed on your property, but no access to the facility was available.

Inspector:	

www.CharlesCountyMD.gov/Watershed
Maryland Relay: 7-1-1 • Equal Opportunity Employer

Mantenimiento 101

Lista de verificación de mantenimiento constante

Cortar el césped y el manejo de la vegetación son tareas de mantenimento frecuentemente descuidadas para los estaques. Cortar el césped y controlar la vegetación puede reducir o eliminar los problemas de mantenimiento estructurales.

1. Cortar el césped

Corte el césped en las siguientes áreas **al menos dos veces al año**:

- Pendientes superiores y aguas abajo de la presa
- Pendientes aguas arriba de la presa (estanques secos)
- 25 pies alrededor de la estructura de control (estanques secos)
- Canales de entrada, alrededor de cabeceras y tuberías dentro del área del estanque
- Canal de salida

Los estanques húmedos diseñados con componentes recreativos o estéticos requieren un corte más frecuente, **cada 1 a 3 semanas** durante los meses más cálidos.

2. Manejo de la vegetación

Los árboles y la vegetación leñosa deben eliminarse de las siguientes áreas **al menos dos veces por año**:

- Pendientes superiores, aguas arriba, y aguas abajo de la presa
- Canales de entrada y salida
- 25 pies alrededor de la estructura de control
- Canales, cabeceras, y tuberías en el área del estanque

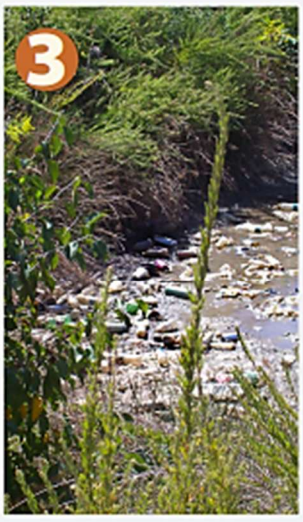
3. Eliminar basura y escombros

Realice la remoción de basura y escombros **mensualmente** en las siguientes áreas:

- Dentro y alrededor del estanque
- Dentro y alrededor del estante de basura en la estructura de control

4. Eliminar fuentes de contaminación

Conozca las fuentes de contaminación en su propiedad y trate de reducirlas o eliminarlas.



Página 4

In 2023, the Charles County WPRP held its first *Residential Rain Garden and Porous Pavement Summit* and hand-on maintenance workshop for homeowners. Read more about this new training series in the next section.

Chesapeake Bay Trust Grant Partnership Program

Charles County continued their partnership with the Chesapeake Bay Trust (CBT) in FY 2023 to administer grants funded by the Stormwater Remediation Fee. The Outreach and Restoration Grant program provides funds for outreach projects that raise public awareness and engage citizens about challenges and solutions to restoring natural resources, such as green spaces, parks, streams, rivers, and bays. The grant program also provides funds for on-the-ground community-based restoration projects that benefit Charles County's rivers, streams, native plants, trees, and the Chesapeake Bay, as well as a combination of outreach and restoration for the maximum award of up to $70,000.

Grants Awarded in FY 2023

Advancing the Care and Maintenance of County Rain Gardens on Private Property: $17,475 – University of Maryland Environmental Finance Center*:*

The University of Maryland (UMD) – Environmental Finance Center (EFC) was awarded an outreach and restoration grant to continue outreach and knowledge building for homeowners about proper care and maintenance of rain gardens and porous pavement. EFC began this effort by first developing an outreach and education plan designed to reach homeowners and Homeowners Associations (HOAs) who are required to maintain their rain gardens and/or porous pavement. A pilot *Residential Rain Gardens and Porous Pavement Summit* was held in the spring of 2023 offering homeowners an opportunity to learn about 1) the importance of their rain gardens and/or porous pavement; 2)

the necessary maintenance they require; and 3) daily upkeep. Information tables were manned by Extension office staff, Master Gardeners, and private service providers at the end of the summit.

Invitations to the summit were mailed through the U.S. Postal Service to all homeowners, property owners, HOAs, maintenance providers, and property managers recorded as owning rain gardens and/or porous pavement. Even though only 36 property owners attended the summit, 541 individuals visited the landing page, and of those, 148 visited the registration page.

As a follow-up to the summit, Charles County WPRP, in partnership with the Chesapeake Conservation Landscaping Council and the UMD, held an outdoor rain garden maintenance training for homeowners in a demonstration rain garden owned by, and courtesy of, Christ Church La Plata. This well-maintained and highly functional rain garden was installed by the Port Tobacco River Conservancy with partial funding from the Charles County CBT grant. Ten homeowners attended, including an HOA representative who oversees the management of several HOA rain gardens.

University of Maryland College Park
Fostering Deicing Salt Stewardship in Charles County through Education: $18,362—University of Maryland College Park

The Potomac and Port Tobacco Rivers and Mattawoman Creek in Charles County are impaired by chloride. The University of Maryland and MDE are developing a voluntary training program for private applicators focused on the proper use of deicing salt geared towards seasonal landscaping workers and homeowners. UMD College Park drafted a homeowner deicing salt education factsheet and an outline of seasonal landscape worker education factsheet.

Plans for an educational video for seasonal landscape workers was initiated with the College of Southern Maryland in June 2023. This effort is ongoing.

Aquatic Invasive Species Removal Program: $15,980—Through Piscataway Eyes TPE Inc.

The Aquatic Invasive Species Control Program improves the Chesapeake Bay ecosystem by reducing the number of invasive species within it while also providing sustenance to hungry tribal members. The Aquatic Invasive Species Control Program removes approximately 3,000 pounds of invasive fish from the waterways per year. The WPRP and CBT grant funding supported expansion of the program during FY 2023.

During the grant period, an expert-led team of anglers who are Piscataway Conoy tribal citizens fished waterways within the Mattawoman Creek area to help control the populations of northern snakeheads and blue catfish and the catch was donated to low-income elders and families with children in the tribal community.

During April, May and June of 2023, approximately 780 blue catfish and snakeheads were removed from the Chesapeake Bay watershed, primarily in Mattawoman Creek, by teams of over a dozen tribal youth volunteer teams led by expert anglers. Teams led by Thomas Proctor fished one to three days per week. The team led by Matthew Swann and Bernard Swann fished one to two days a week and a team led by Jesse Swann fished one day per week. Youth volunteers were mentored in how to use practical skills in angling and outdoorsmanship and how to navigate future careers and family life.

All of the invasive species removed by the anglers were donated to tribal elders in need, who otherwise would be facing hunger and malnutrition. Recipients provided overwhelmingly positive feedback, and many shared their favorite fish recipes adapted to cooking with catfish or snakeheads.

Mallows Bay BioBlitz 2023: $7,489— National Marine Sanctuary Foundation (NMFS)

The "ghost fleet" of shipwrecks at Mallows Bay and the surrounding park in Charles County offers a unique habitat for a variety of species. Two BioBlitz events were held that gathered much needed data on the ecology of the park using the *iNaturalist* app to identify species that inhabit Mallows Bay, including invasive species, and to identify potential impacts of climate change on the species. In additional to gathering valuable data, the BioBlitz events also brought members of the local community together, built relationships between the community and NMSF, and promoted Mallows Bay for human connection.

Over one hundred people registered for the event through the registration form with approximately fifty attending including 23 "observers" (people who uploaded observations to *iNaturalist*), 105 "identifiers" (people who helped name the species of the photos that were uploaded), and 391 observations of 230 distinct species collected that day.

Compared to the *iNaturalist* observations for Mallows Bay prior to the BioBlitz, the event led to a 63% increase in the number of observations for the sanctuary, bringing the total number of *iNaturalist* observations at Mallows Bay to over 1,000. This includes 140 new species observed during the BioBlitz that had not previously been recorded at Mallows Bay. This is a significant amount of new ecological data for the sanctuary, which will inform research, monitoring, and management efforts, as well as the development of outreach and interpretation products.

The attendance from the local community was strong as well. Girl Scout troops, families, individuals, several members of our Sanctuary Advisory Council (SAC), and even a group from the Charles County Citizens Academy attended. Many participants were from Charles County, but several attendees also traveled from Anne Arundel County, Washington D.C., and Northern Virginia. The BioBlitz also strengthened National Marine Sanctuary's relationship with organizational partners who volunteered to support the event. Southern Maryland Audubon Society led a guided bird hike, Maryland DNR did a net seining activity, Atlantic Kayak supplied kayak tours, and the Smithsonian Environmental Research Center (SERC) conducted an electro-fishing survey. They formed relationships with new partners as well, such as the Nanjemoy Creek Environmental Education Center, who helped manage the "science station," and Kerry Wixted, a local environmental educator and naturalist who led a guided hike. The Charles County media department also filmed videos and interviews throughout the day and created a video about the BioBlitz that is now featured on the "Your Charles County" YouTube channel https://youtu.be/gzrrAmLf8H0?si=aL4jGTlFwZryFK9a.

Student Outreach

Neighborhood Creative Arts Center (NCAC) Nature Fest 2023:

NatureFest 2023 was a collaborative effort of several organizations to educate children on the importance of watersheds for protecting wildlife and horticulture in Charles County. Educational activities at the festival helped children to develop skills for conservation, composting, litter control, water pollution, growing produce, recognizing and protecting native plants and animal life, maintaining bees, waste reduction, recycling/upcycling, and how to make others aware of why we need to protect our watershed resources. *NatureFest 2023* took place on Saturday, April 26, at Tilghman Lake Park in La Plata. The festival was free of charge and served over 250 children with a large and diverse set of activities at the event.

Partnering organizations included the Charles County Master Gardeners, Southern Maryland

Audubon Society, Charles County School System - Nanjemoy Creek Environmental Education Center (NCEEC), Melwood Horticultural Training Center, Charles County Public Works, Rotary Interact Club, Charles County 4-H, Charles County Master Naturalists, and Deez L'Town Beez, Inc. For more information about Nature Fest and the Neighborhood Creative Arts Center, please visit: https://www.neighborhoodcreativeartscenter.org/nature-fest .

Virtual Career Days for Middle School

The WPRP continued outreach and education for students during FY 2023. Charles County Public Schools keep a Virtual Career Day website that features approximately 68 presentations from the community covering seven major career fields. The *Virtual Career Day* link (https://sites.google.com/view/ccpsvirtualcareerday/science-technology) was distributed to approximately 5,500 middle school students and includes a presentation by WPRP staff in the Science & Technology category. The presentation teaches students basic watershed concepts; stormwater pollution sources; provides ideas on how to help protect their watershed; suggests volunteer opportunities; lists clubs to join; and gives advice on how to prepare for a career in watershed protection and restoration.

Septic System Maintenance Incentives, Outreach & Education

Septic Pump-Out/Riser Reimbursement Program

The Septic Pump-Out Reimbursement Program was started in 2015 as an incentive program to encourage homeowners to change their behavior by either getting their septic tank pumped for the first time and/or to pump their tank more frequently (once every three to five years). For over eight years the program has been reimbursing approved septic system owners between $100 to $182.50 for a pump-out. On average, the County has approved 850 pump-out reimbursements per year with a primary goal to have most septic tanks pumped regularly, at least once every five years. This frequency is the smallest standard for greatest performance to prevent leachate from seeping into surface water, breakage, or drain field failures.

Septic Program Reimbursements

Fiscal Year	# of Pump-Outs	# of Risers
2015	832	-
2016	783	-
2017	606	-
2018	760	-
2019	779	36
2020	948	142
2021	1238	215
2022	857	207
2023	830	135

Charles County has an estimated 25,500 homes that use a private septic system, indicating the five-year pumping goal is reached when 5,100 tanks are pumped per year. According to FY 2021 numbers from the Mattawoman treatment plant, there were approximately 1,740 septic tanks pumped. , hence, the program goal (5,500 pump-outs per year) has never been met.

Based on the findings of a recent cost effectiveness analysis, WPRP staff recommended in 2022 that the Septic Tank Riser Installation Reimbursement Program continue but that the Septic Tank Pump-Out Reimbursement Program be brought to a close since in the long run, risers are a better investment (a one-time purchase that provides permanent access to septic tanks necessary for conducting inspections, pump-outs, cleanings, and repairs). Risers are a considerably more effective educational tool as well. They serve as a visual, above-ground reminder to homeowners to get routine maintenance. Since 2019, approximately 600 riser rebates have been issued, with potential for an additional 25,000.

WPRP staff, with help from the Charles County Extension Office, the Health Department, and the County's Media Services continue to draw attention to the issue of septic system maintenance by recommending that homeowners have their septic system inspected and cleaned regularly.

UMD Webinars

In 2023, the UMD Extension education staff conducted their live series, *Wednesday Water Webinar.* The series taught proper septic system care and maintenance and why it is important. Webinars were virtual, held on the third Wednesday of the month, and included questions and answers with the instructor. Lesson titles included:

- Warning Signs That a Septic System Is Not Working Effectively
- Top Things to Know about Septic Systems
- Prolonging the Life of Your Septic System

All webinars were taught by Dr. Andrew Lazur through Zoom and recorded. The recordings were uploaded to https://extension.umd.edu/resource/wednesday-water-webinars-recorded and https://www.youtube.com/playlist?list=PLlYVlIyavc0sIbpBtYtRy-IS_W4QDbFFs. Several septic system owners were referred to the webinars and recordings by WPRP staff.

Bay Restoration Fund (BRF) Grant Program:

The BRF is a State-supported fund that replaces conventional septic tanks with nitrogen-reducing units or connects existing dwellings to sewer treatment utility. For low-income households, BRF funding can be used to replace a failing septic system. The program's purpose has been to reduce the amount of harmful nutrients entering the Chesapeake Bay and its tributaries from failing septic systems.

Public information on how to apply for a Bay Restoration Fund Grant continues to be available on the Charles County Health Department website at https://CharlesCountyhealth.org/percolation-sewage-bay-restoration/ and the Charles County Government website at https://www.CharlesCountyMD.gov/government/planning-and-growth-management/septic-system-reimbursement-programs.

MDE's Water and Wastewater Permitting Requirements and Guidance for the Regulated Community

The County supplies the following information regarding NPDES permitting requirements, pollution prevention plan development, proper housekeeping and spill prevention and response, upon request and to violators or potential violators of the County's IDDE regulations:

Maryland Wastewater Permits Program
https://mde.state.md.us/programs/Water/wwp/Pages/index.aspx

https://mde.maryland.gov/programs/LAND/Documents/EPA%20Sector%20P%20Transportation%20Facilities%20Fact%20Sheet%2012.2006%2011%20pgs.pdf

Maryland Water Permit Applications
https://mde.maryland.gov/programs/Permits/WaterManagementPermits/Pages/waterpermits.aspx

Maryland NPDES Industrial & General Surface Water Discharge Permits
http://www.mde.state.md.us/programs/Water/wwp/Pages/IndustrialSurfaceDischargePermits.aspx

Maryland Guidance for Developing Your Storm Water Pollution Prevention Plan
http://mde.maryland.gov/programs/Permits/WaterManagementPermits/Documents/Marina%20GP/16MA/16MA%20MDE%20SWPPP%20Guidance%20for%20Marinas.pdf

Maryland Stormwater Pollution Prevention Guidance
https://mde.maryland.gov/programs/Permits/WaterManagementPermits/Documents/GDP%20Stormwater/MD%20Stormwater%20Hotspots.pdf

Maryland General Permit for the Discharge of Exterior Vehicle Washwater to Groundwater from Commercial Vehicle Washing Operations
https://mde.maryland.gov/programs/Water/wwp/Documents/GENERAL_VW_PERMIT_FINAL_sig.pdf

Maryland Spill Response - Toll Free Number (866) 633-4686
http://mde.maryland.gov/programs/Crossmedia/EmergencyResponse/Pages/ERHome.aspx

In FY 2023, the following contacts continued to be made available to government personnel and the public:

County & State Agency Contacts for Reporting Discharges
Unrelated to Stormwater/Storm Drain System*

Sewage
Department of Public Works Utilities – Operations Support
301-609-7400
(24 hours/day, 7 days /week)

Septic Systems
Charles County Health Department
301-609-6900

Salt Storage,
Sediment & Erosion Control Failure,
Charles County, PGM – Codes, Permits and Inspections Services (CPIS)
301-645-0622
301-645-0692

Industrial
Maryland Department of the Environment (MDE)
Water Management Administration, Compliance Program
410-537-3510 (regular business hours)
866-633-4686 (emergencies, after hours)

Hazardous Material
Charles County Hazardous Material Team
Emergency Management
301-609-3429
301-609-3430
Safety Emergency: 911

Town of La Plata
301-934-8421
301-932-3870

Town of Indian Head
301-743-5511
301-753-6633

State Highway Administration
1-800-543-2515 or locally at 410-582-5650

Maryland Department of Transportation
410-865-1000

*** Related to Stormwater/Storm Drain System**
Charles County, PGM – Codes, Permits and Inspections Services (CPIS)
301-645-0622
301-645-0692

MDE: 866-633-4686 (environmental emergencies, after hours)
mde.wsacompliance@maryland.gov

IV.E. Stormwater Restoration

Overview of Permit Conditions

In compliance with §402(p)(3)(B)(iii) of the CWA, MS4 permits must require stormwater controls to reduce the discharge of pollutants to the MEP and such other provisions as the department determines appropriate for the control of such pollutants. Additionally, by regulation at 40 CFR §122.44, BMPs and programs implemented pursuant to this permit must be consistent with applicable stormwater WLAs developed under EPA established or approved TMDLs (see list of EPA established or approved TMDLs attached and incorporated as Appendix A). The impervious acre restoration requirements and associated pollutant reductions described below for Charles County are consistent with Maryland's Phase III Watershed Implementation Plan (WIP) for the Chesapeake Bay TMDL and 2025 nutrient load targets, and for local TMDL implementation targets described by the County in its TMDL Watershed Implementation Plans.

1. *Annual alternative control practices used by Charles County to meet its prior MS4 permit's impervious acre restoration requirement shall be:*

    a. *Continued annually at the same level of implementation (e.g., street lane miles swept, septic systems pumped) under this permit;*

    b. *Replaced with 138 impervious acres using stormwater management BMPs, programmatic initiatives, or alternative control practices in accordance with the 2021 Accounting Guidance; or*

    c. *A combination of a and b above.*

FY 2023 Status

Under the County's prior MS4 permit (issued in FY 2015), 138 impervious acres of annual alternative control practices were implemented. These practices must be continued or replaced in accordance with the 2021 Accounting Guidance to prevent backsliding or loss of restoration progress.

Practices continued from the previous FY 2015 permit use the accounting methods in place at the time of implementation. The three practices implemented by the County include street sweeping, storm drain vacuuming and septic pump-outs. These will be maintained using the 2014 Accounting Guidance, except for street sweeping for which accounting methods changed prior to the 2021 Accounting Guidance to require a minimum number of four repeat sweeps per year. The County focuses on high priority areas for street sweeping and does not repeat sweeping unless necessary.

The following tables track the status of the County's prior annual alternative control practices.

Table 23: FY 2015 MS4 Permit Annual Alternative Control Practices

BMP Type	Equivalent Impervious Area (EIA)	Status	Notes
Street Sweeping	75.69	Replaced	See table below for replacement.
Storm Drain Vacuuming	40.23	Ongoing	This ongoing BMP is credited at 0.03 EIA each per the 2014 Accounting Guidance. Additional credits are 0.02 EIA each per the 2021 Accounting Guidance.
Septic System Pumping	22.4	Ongoing	This ongoing BMP is credited at 0.03 EIA each per the 2014 Accounting Guidance. Additional credits are 0.02 EIA each per the 2021 Accounting Guidance.
TOTAL	138.32		

Table 24: FY 2015 Permit Replacement Restoration Projects

FY 2015 Permit Restoration Projects	Year Removed	EIA Removed	Replacement Restoration Projects	Year Replaced	EIA Replacement
Street Sweeping	2020	75.69	St. Charles Stream Restoration	2020	7.1
			Potomac Heights Shoreline Stabilization	2020	70.20
Total		**75.69**			**77.3**

Overview of Permit Conditions

2. *The impervious acre restoration requirements described below are in addition to the requirements listed in Part IV.E.1 of this permit.*

3. *By December 29, 2027, Charles County shall commence and complete the restoration of 1,083 impervious acres that have not been treated to the MEP by implementing stormwater BMPs, programmatic initiatives, or alternative control practices in accordance with the 2021 Accounting Guidance.*

FY 2023 Status

Charles County began restoration of 1,083 impervious acres immediately after the FY 2015 permit completed in December 2019. Following are updates on Capital Projects that will count towards the 1,083 impervious acres.

Capital Projects Complete or Under Construction

Apple Creek Stream Restoration
(County Permit # VCI 160055)

Design completed May 2019.
Construction began July 2019.

Impervious Treatment: 18.02 acres

Approx. cost per acre treated: $45,325

Status: Construction Complete March 2020

LaPlata High School Stormwater Retrofit
(County Permit # N/A)

Design completed May 2018.
Construction began May 2019.

Impervious Treatment: 29 acres

Approx. cost per acre treated: $27,368

Status: Construction Complete May 2020

St. Charles Parkway Stream Restoration
(County Permit # VCI 170053)

Design completed August 2019.
Construction began December 2019.

Impervious Treatment: 7.1 acres

Approx. cost per acre treated: $115,521

Status: Construction Completed June 2020

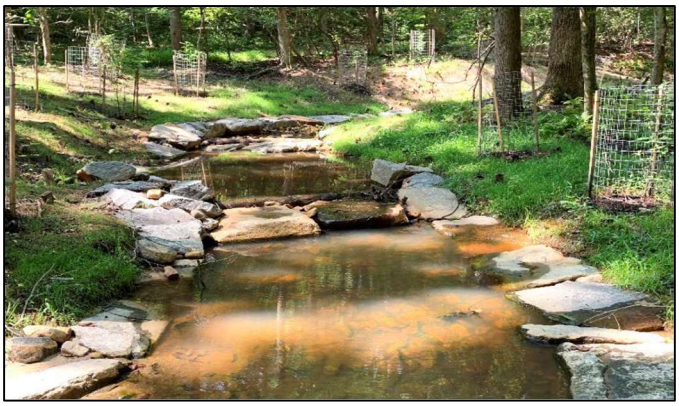
Thomas Higdon ES Stream Restoration
(County Permit # VCI 170071)

Design completed August 2019.
Construction began December 2019.

Impervious Treatment: 50 acres

Approx. cost per acre treated: $21,768

Status: Construction Complete June 2020



Potomac Heights Shoreline Restoration
(County Permit # VCI 180003)

Design completed September 2019.
Construction began November 2019.

Impervious Treatment: 70.2 acres

Approx. cost per acre treated: $21,621

Status: Construction Complete June 2020

Cliffton Shoreline Stabilization Phase 1&2
(County Permit # VCI 160056 Phase1)
(County Permit # VCI 170096 Phase2)

Design completed August 2017 Phase 1.
Design completed May 2019 Phase 2.
Construction began July 2019.

Impervious Treatment: 82.16 acres Phase 1
Impervious Treatment : 92.72 acres Phase 2

Approx. cost per acre treated: $17,437

Status: Construction Complete July 2020

General Smallwood Middle School
(County Permit # VCI 170032)

Design completed February 2019.
Construction began May 2019.

Impervious Treatment: 4.64 acres

Approx. cost per acre treated: $108,814

Status: Construction Complete September 2020

Bensville Park Stormwater Retrofits and Tree Planting
(County Permit # VCI 170079)

Design completed September 2018
Construction began May 2019.

Impervious Treatment: 7.93 acres

Approx. cost per acre treated: $54,105

Status: Construction Complete November 2020

Best Buy Stormwater Pond Retrofit
(County Permit # DSP 190036)

Design completed April 2019.
Construction began June 2020

Impervious Treatment: 4.62 acres

Approx. cost per acre treated: $70,671

Status: Construction Complete May 2021

Cedar Tree Stormwater Pond Retrofit
(County Permit # DSP 190047)

Design completed April 2019.
Construction began June 2020

Impervious Treatment: 3.61 acres

Approx. cost per acre treated: $51,271

Status: Construction Complete June 2021

Ruth B. Swann Main Channel Stream Restoration
(County Permit # DSP 190020)

Design completed September 2019
Construction began November 2020

Impervious Treatment: 106.07 acres

Approx. cost per acre treated: $13,250

Status: Construction Complete September 2022

Hunt Club/Bridle Path Stream Restoration

(County Permit # DSP 190022)

Design completed July 2019
Construction began November 2021

Impervious Treatment: 37.79 acres

Approx. cost per acre treated: $28,182

Status: Construction Complete May 2022

Marbella Subdivision Stream Restoration and Outfall Stabilizations
(County Permit # DSP 190107)

Design completed July 2021
Construction start date TBD

Impervious Treatment: 63.5 acres (originally)

Approx. cost per acre treated: $33,100 (originally)

Status: On hold for re-design to include two cross culvert replacements due to flooding issues

CSM Tributary Stream Restoration
(County Permit # DSP 190030)

Design completed May 2020
Construction began January 2022

Impervious Treatment: 53.5 acres

Approx. cost per acre treated: $22,850

Status: Construction Complete September 2022

Acton Village/Westdale Drive Stream Restoration
(County Permit # DSP # 200027)

Design completed October 2022
Construction began October 2022

Impervious Treatment: 10.91 acres

Approx. cost per acre treated: $100,500 (CDBG Grant funded)

Status: Substantially Complete September 2023

Ruth B. Swann Tributary Restoration
(County Permit # DSP 190051)

Design Completed July 2021
Construction began June 2022

Impervious Treatment: 19.38 acres

Approx. cost per acre treated: $52,500

Status: Construction Complete June 2023

Ruth B. Swann Upper Stream Restoration
(County Permit # DSP 190080)

Design Completed August 2022
Construction to Start April 2024

Impervious Treatment: 22.96 acres

Approx. cost per acre treated: $88,700

Status: Construction to Start April 2024

Worthington Subd/Wilton Court Pond Retrofit
(County Permit # DSP 190034)

Design Completed July 2022
Construction start date TBD

Impervious Treatment: 10.24 acres

Approx. cost per acre treated: $40,800

Status: Procurement

White Oak Village Wet Pond Retrofit
(County Permit # DSP 200058)

Design Completed April 2021
Construction began May 2021 (Sinkhole/Pipes Installation)

Impervious Treatment: 20.48 acres

Approx. cost per acre treated: $43,500

Status: Procurement

Capital Projects under Design & Estimated Impervious Acres to be Treated

The following impervious acres are taken from the most recent engineered drawings or concepts and are subject to change based on final approved engineered drawings.

Board of Education Projects (Subtotal: 71.6 Acres)
Milton Somers Middle School Steam Restoration and Stormwater Pond Retrofit (Town of LaPlata Permit) – 39.4 Impervious Acres
Mitchell Elementary School Outfall Stabilization, Stream Restoration and Bioretention (County Permit # DSP 200029) – 32.2 Impervious Acres

Stream Restoration Projects (Subtotal: 367.81 Acres)
Port Tobacco Stream Upper/Lower (County Permit # DSP 200035) – Estimated 56 Impervious Acres (Reduced from 84.6 Impervious Acres due to subtraction of Compton property)
Locust Grove Farm Stream (County Permit # CSD Concept) – 26.65 Impervious Acres
Oak Ridge Park Western Stream (County Permit # DSP 200025) – 210.16 Impervious Acres
Oak Ridge Park Eastern Stream – 76 Impervious Acres

Stormwater Management Facilities/ Step Pool Conveyance Projects (Subtotal: 54.06 Acres)
South Hampton Pond Retrofits & Step Pool Conveyance (County Permits # DSP 190073-76) – 37.4 Impervious Acres
White Plains Golf Course Pond Retrofit (County Permit # DSP 190097) – 16.66 Impervious Acres

Miscellaneous Projects (Subtotal: 10.5 Acres)
Waldorf Urban Redevelopment Corridor Infrastructure Improvements Study – Impervious Acres TBD
White Plains Failing Septic Connection to Sewer (Gateway Blvd. and Park Ave.) (County Permit # VCI 080048) – 10.5 Impervious Acres
Southerland Failing Septic Connection to Sewer – Impervious Acres TBD

4. *By December 29, 2023, Charles County shall complete the stormwater BMPs, programmatic initiatives, or alternative control practices listed in the Year 1 BMP Portfolio provided in Appendix B. Charles County may replace individual practices listed in Appendix B with others that meet the requirements of the 2021 Accounting Guidance as long as the total restoration at the end of year one meets the implementation benchmark schedule in Table 1.*

   "Benchmark" as used in this permit is a quantifiable goal or target to be used to assess progress toward the impervious acre restoration requirement or WLAs, such as a numeric goal for stormwater control measure implementation. If a benchmark is not met, the County should take appropriate corrective action to improve progress toward meeting permit objectives. Benchmarks are intended as an adaptive management aid and generally are not considered to be enforceable.

Appendix B: Year 1 BMP Portfolio – New and Replacement BMPs

GEODATABASE ID	PROJECT NAME	BMP TYPE	NUMBER OF BMPS	IMPERVIOUS ACRES TREATED	LENGTH RESTORED
Capital Projects – New Restoration					
CH17ALN000005	St. Charles Parkway	STRE	1	7.1	552 Linear Feet (LF)
CH20ALN000028	Potomac Heights	SHST	1	70.20	1,755 LF
CH17ALN000011	Apple Creek	STRE	1	18.02	748 LF
CH16RST000097	La Plata High School	PWED	1	29	NA
CH17ALN000014	Higdon Elementary School	STRE	1	50	1,480 LF
CH18ALN000004	Cliffton	SHST	1	82.16	2,054 LF
CH20ALN000027	Cliffton	SHST	1	92.72	2,318 LF
CH19RST000006	Cedar Tree	PPKT	1	3.61	NA
CH19RST000005	Best Buy	PWET	1	4.62	NA
CH16RST000014	Smallwood Middle School	BIO	1	2.07	NA
CH17RST000067	Smallwood Middle School	BIO	1	2.57	NA
CH17RST000062	Bensville Park	ODSW	1	1.15	NA
CH17RST000002	Bensville Park	ODSW	1	1.69	NA
CH17RST000063	Bensville Park	FSND	1	3.33	NA
CH17APY000456	Bensville Park	FPU	1	1.76	NA
Other					
	Septic Denitrification	SEPD	10	1.5	NA
TOTAL				371.5	

**The impervious acres treated for Best Buy has been corrected from 12.66 shown in Appendix B to 4.62 acres.*

FY 2023 Status

The FY 2015 permit term ended in December 2019 and all projects completed after that date count towards the current permit term. From January 2020 through FY 2022, the Year 1 benchmark projects listed above were completed, including an additional 64 septic dentrification upgrades and 11 connections of on-site septic disposal systems to the public sanitary sewer system, shown on Table 28.

5. *Charles County may acquire Nutrient Credits for Total Nitrogen (TN), Total Phosphorus (TP), and Total Suspended Solids (TSS) in accordance with COMAR 26.08.11 to meet its impervious acre restoration requirement in Part IV.E.3 of this permit. For acquiring Nutrient Credits in place of impervious acre restoration, an equivalent impervious acre shall be based on reducing 18.08 pounds of TN, 2.23 pounds of TP, and 8,046 pounds of TSS. The maximum allowable credits obtained from trades with wastewater treatment plants shall not exceed 108 equivalent impervious acres restored.*

6. *Any Nutrient Credits acquired by Charles County for meeting the restoration requirements of this permit shall be maintained and verified in accordance with COMAR 26.08.11 and reported to the Department in annual reports unless they are replaced at a one to one acre ratio by local stormwater management BMPs, programmatic initiatives, or alternative control practices in accordance with the 2021 Accounting Guidance.*

7. *Charles County shall use the annual restoration benchmark schedule provided in Table 1 below to achieve its impervious acre implementation requirement by the end of the permit term.*

Annual Restoration Benchmark Schedule, Table 1

Metric	*Year 1*	*Year 2*	*Year 3*	*Year 4*	*Year 5*
Cumulative Percent Impervious Acre Restoration Completed	*15%*	*30%*	*48%*	*72%*	*100%*

8. *In each year's annual report, Charles County shall:*

   a. *Submit to the Department a list of BMPs, programmatic initiatives, and alternative control practices to be completed in the following year to work toward meeting its impervious acre restoration benchmark:*

      i. *The list of BMPs, programmatic initiatives, or alternative control practices shall be submitted in the Year 1 BMP Portfolio format provided in Appendix B; and*

      ii. *Charles County may replace individual practices listed in its annual BMP Portfolio as long as the total implementation rate at the end of each year meets the annual restoration benchmark schedule in Table 1.*

   b. *Evaluate progress toward meeting its annual restoration benchmark according to the*

schedule in Table 1 and adjust the benchmark appropriately based upon:

i. Actual BMP implementation rates; and

ii. Anticipated implementation rates and annual restoration benchmark schedule needed in the remaining years of this permit for meeting the final impervious acre restoration requirement by December 29, 2027.

Progress Towards Restoration Benchmarks

In FY 2023 the following permanent projects have been completed totaling 202.28 impervious acres treated. This brings the Year 1 total to 657.14 or 60% of the total planned restoration, which exceeds the Year 2 benchmark of 45%.

Table 25: Restoration Projects Completed in FY 2023

GEODATABASE ID	PROJECT NAME	BMP TYPE	NUMBER OF BMPS	IMPERVIOUS ACRES TREATED	LENGTH RESTORED (Linear Feet)
Capital Projects – New Restoration					
CH17ALN000013	Ruth B Swann Main	STRE	1	106.07	1,509 LF
CH17ALN000012	Hunt Club – Bridle Path	STRE	1	37.79	1,795 LF
CH17ALN000008	CSM Tributaries	STRE	3	53.5	1,330 LF
Other					
	Septic Denitrification	SEPD	25	4	NA
	Septic Connection	SEPC	4	0.92	NA
TOTAL				202.28	

The County is currently working on the Year 3 benchmark with an additional 3% (31.79 acres) impervious surface restoration underway. These projects include the following:

Table 26: Restoration Projects Planned for Completion in FY 2024

GEODATABASE ID	PROJECT NAME	BMP TYPE	NUMBER OF BMPS	IMPERVIOUS ACRES TREATED	LENGTH RESTORED
Capital Projects – New Restoration					
CH21ALN000003	Ruth B Swann Trib	STRE	1	17.08	1,644 LF
CH22ALN000001	Ruth B Swann Trib Outfalls	OUT	6	2.3	687 LF
CH21ALN000001	Acton Village – Westdale	STRE	1	10.91	728 LF
Other					
	Septic Denitrification	SEPD	10	1.5	NA
TOTAL				31.79	

Summary of Progress Towards the FY 2023 MS4 Permit

Annual Alternative Control Practices

The credit for the annual alternative the credits must be averaged over the five-year permit period and are used to maintain the level of effort of the FY 2015 MS4 permit. No additional credits for these practices are proposed for the FY 2023 MS4 permit.

Table 27: Tracking of Annual Alternative Control Practices

	FY 2021 # of Units	FY 2021 Acres	FY 2022 # of Units	FY 2022 Acres	FY 2023 # of Units	FY 2023 Acres
Inlet Cleaning	319.2 tons	40.23	60.65 tons	24.26	115.13 tons	20.4
Septic Pump-outs	1,627	32.54	1,499	29.98	1,458	36.61

(1) Inlet Cleaning: 40.23 acres accounts for maintenance of 2015 MS4 permit level of effort using pre-2021 Guidance. To exceed maintenance level requires a Standard Operating Procedure per 2021 Guidance.
(2) Septic Pump-outs: 22.4 acres (747 units) accounts for maintenance of 2019 level of effort using pre-2021 Guidance (0.03 acre/unit). Units exceeding 747 use 2021 Guidance (0.02 acre/unit).

Table 28: Tracking of Permanent Alternative Control Practices

	FY 2020 (post FY 2015 permit) #	FY 2020 Acres	FY 2021 #	FY 2021 Acres	FY 2022 #	FY 2022 Acres	FY 2023 #	FY 2023 Acres
Septic Denitrification	25	4	14	2.24	35	5.6	25	4
Septic Connection to Sanitary Sewer	2	.46	3	0.69	6	1.38	4	0.92
TOTAL	37	4.46	17	2.93	41	6.98	29	4.92

(1) Septic Denitrification Upgrades: Pre-2021 Guidance allowed for 0.26 acre/unit; 2021 Guidance allows for 0.16 acre/unit.
(2) Septic Connection: Pre-2021 Guidance allowed for 0.39 acre/unit; 2021 Guidance allows for 0.23 acre/unit.

The following table summarizes the County's progress towards impervious restoration requirement of 1,083 acres. The data is also included in the enclosed MS4 Geodatabase, in the *Impervious Surface Table*.

Table 29: Impervious Surface Restoration Summary Towards Goal of 1,083 Acres

	Half of FY 2020 (Jan 1 - Jun 30)	FY 2021	FY 2022	FY 2023
Impervious Surface Area Total (Countywide)	10,637	10,637	10,637	10,637
Baseline Acres (uncontrolled baseline impervious w/o SWM)	7,887	7,887	7,887	7,887
Planned Acres for Restoration during the current permit term	1,083	1,083	1,083	1,083
Capital Projects Completed in Reporting Year	164	195.68	0	197.36
Other Permanent Projects Completed in Reporting Year	4.46	2.93	6.98	4.92
Total Completed in Reporting Year	**168.46**	**279.42**	**6.98**	**202.28**
Restored Acres Total during the current permit term	**168.46**	**447.88**	**454.86**	**657.14**

(1) The Impervious Surface Area Total is based on impervious surface from 2011 aerial photos.
(2) The Impervious Acres Total does not include impervious surface on federal, state, town, or industrial stormwater permit properties. It does include County Government and Board of Education owned properties in towns.
(3) Annual operational restoration projects are based on averages over the permit period.

The total restoration achieved from the prior FY 2015 MS4 permit must be maintained to prevent backsliding. Street sweeping is no longer proposed to be tracked towards impervious restoration and is to be replaced by the projects shown on the following table and Table 27. Additionally, any other projects that are not continually verifiable and maintained will be replaced and tracked on the following table.

Table 30: Maintenance of 20% Impervious Restoration Completed for the FY 2015 MS4 Permit

2019 Restoration Project	Year Removed	EIA Removed	Replacement Restoration	Year Replaced	EIA Replacement
Street Sweeping 5-year Avg.	2020	75.69	St. Charles Stream Restoration	2020	7.1
			Potomac Heights Shoreline Stabilization	2020	70.20
Various Shoreline and Outfall Stabilizations not maintained	2021	20	TBD	TBD	TBD
Total		**75.69**			**77.3**

IV.F. Countywide TMDL Stormwater Implementation Plan

Overview of Permit Conditions

1. *Where Charles County has submitted an implementation plan for a TMDL identified in Appendix A, the County shall, within one year of the effective date of this permit, address all outstanding comments needed for the Department's approval of the plan.*

2. *Within one year of EPA's approval or establishment of a new TMDL having a stormwater WLA, Charles County shall submit an implementation plan to MDE for approval. The TMDL implementation plan shall be based on MDE's TMDL analysis, or equivalent and comparable Charles County water quality analysis, that includes:*

    a. *A list of stormwater BMPs, programmatic initiatives, or alternative control practices that will be implemented to reduce pollutants for the TMDL;*

    b. *A description of the County's analysis and methods, and how they are comparable with MDE's TMDL analysis; and*

    c. *Final implementation dates and benchmarks for meeting the TMDL's applicable stormwater WLA. Once approved by MDE, any new TMDL implementation plan shall be incorporated in the Countywide TMDL Stormwater Implementation Plan and subject to the annual progress report requirements under Part IV.F.3 of this permit.*

3. *For all TMDLs and WLAs listed in Appendix A, the County shall annually document, in one Countywide Stormwater TMDL Implementation Plan, updated progress toward meeting these TMDL WLAs.*

FY 2023 Status

The County's implementation plans for TDMLs identified in Appendix A of the FY 2023 permit have all been approved by MDE, apart from the sediment TMDL for Patuxent River Lower nontidal segments. Because the monitoring data for Patuxent River Lower shows good conditions not in need of restoration, the County is currently in the process and applying *MDE's Delisting Methodology for Biological Assessments in Maryland's Integrated Report*. It is anticipated that the "Final Justification for Delisting" document will be completed in 2024.

In FY 2023 the County completed a Countywide Stormwater TMDL Implementation Plan to show progress, update to recent modeling spreadsheets, and adapt the strategies. After presenting it to the County Planning Commission a 30-day public comment period was opened. Per MDE's concurrence, the plan addresses the Chesapeake Bay segments listed in Appendix A, together as one TMDL for the whole County. The plan and spreadsheets are in Appendix F.

4. *Charles County shall provide continual outreach to the public and other stakeholders, including other jurisdictions or agencies holding stormwater WLAs in the same watersheds, regarding its TMDL stormwater implement plans. Charles County shall solicit input from the public, collaborate with stakeholders, and incorporate any relevant comments that can aid in achieving local stormwater WLAs. To allow for public participation, Charles County shall:*

    a. *Maintain a list of interested parties for notification of TMDL development actions;*

    b. *Provide notice on the County's webpage outlining how the public may obtain information on the development of TMDL stormwater implementation plans and opportunities for comment;*

    c. *Provide copies of TMDL stormwater implementation plans to interested parties upon request;*

    d. *Allow a minimum of 30-day comment period before finalizing TMDL stormwater implementation plans; and*

    e. *Document in final TMDL stormwater implementation plans how the County provided public outreach and adequately addressed all relevant comments.*

FY 2023 Status

The County maintains a website for the Watershed Restoration Program with a tiny URL: www.CharlesCountyMD.gov/Watershed for easy access. All of the County's TMDL Restoration Plans can be reached from this landing page. Alternately, the full URL for TMDL plans is: https://www.charlescountymd.gov/government/planning-and-growth-management/stormwater-management/tmdl-total-maximum-daily-load-stormwater-restoration-plan.

As noted above the County completed a Countywide Stormwater TMDL Implementation Plan in FY 2023. Although this plan did not address any new TMDLs, the prior TMDL schedules and project lists were updated. Because of these modifications, the County presented the plan at the October 2, 2023 County Planning Commission meeting which was recorded and posted for public access at: https://reflect-charlescountymd.cablecast.tv/CablecastPublicSite/show/785?site=1.

The Planning Commission meeting was advertised in the local newspaper and a draft plan was made available for a 30-day public comment period. All comments are included in the plan as an Appendix. The draft plan was posted for public viewing at: https://legistarweb-production.s3.amazonaws.com/uploads/attachment/pdf/2207638/Charles_County_Stormwater_Plan_DRAFT_2023.10.03.pdf.

IV.G. Assessment of Controls

Overview of Permit Conditions

Charles County shall conduct BMP effectiveness and watershed assessment monitoring, and polychlorinated biphenyls (PCB) source tracking for assessing progress toward improving local water quality and restoring the Chesapeake Bay. The 2021 MS4 Monitoring Guidelines: BMP Effectiveness and Watershed Assessments (hereafter 2021 Monitoring Guidelines), shall be referenced for addressing the technical guidelines and requirements outlined below.

1. *BMP Effectiveness Monitoring*

   By April 30, 2023, or by July 1 of each year, the County shall notify MDE which option it chooses for BMP effectiveness monitoring. The two options are:

   a. *The County shall collaborate with MDE in a Pooled Monitoring Advisory Committee administered by the Chesapeake Bay Trust (CBT) for determining monitoring needs and selecting appropriate monitoring studies. To implement the required monitoring, the County shall pay $75,000, or an amount to be proposed by the permittee based on demonstrated past permit monitoring expenditures, annually into a pooled monitoring CBT fund. Enrollment in the program shall be demonstrated through a memorandum of understanding (MOU) between the County and CBT by September 1 of each year. The terms of the BMP effectiveness MOU are described in the 2021 Monitoring Guidelines. The County shall remain in the program for the duration of this permit term; or*

   b. *The County shall continue monitoring in the Mattawoman Creek watershed, or select and submit for MDE's approval a new BMP effectiveness study for monitoring by April 30, 2023. Monitoring activities shall occur where the cumulative effects of watershed restoration activities, performed in compliance with this permit, can be assessed. The minimum criteria for chemical, biological, and physical monitoring are as follows:*

      i. *Chemical Monitoring:*

         - *Eight (8) storm events shall be monitored per year at each monitoring location with at least two occurring per quarter. Quarters shall be based on calendar year. If exceptional weather patterns (e.g. extended dry weather periods) or other circumstances (e.g. equipment failures) occur during the reporting year, the County shall provide documentation of such circumstance(s);*

- *Discrete samples of stormwater flow shall be collected at the monitoring stations using automated or manual sampling methods.*

- *At least three (3) samples determined to be representative of each storm event shall be submitted to a laboratory for analysis according to methods listed under 40 CFR Part 136 and event mean concentrations (EMC) shall be calculated;*

- *Baseflow sampling shall occur quarterly as near as the mid-point of each season (e.g., February for the first quarter, May for the second quarter, August for the third quarter, and November for the fourth quarter) as is practicable to allow for 72 hours of preceding dry time following baseflow sampling best practices;*

- *Storm flow and baseflow measurements shall be recorded at the outfall and in-stream stations for the following parameters:*

Stormwater and Baseflow Representative Samples (Parameters)
Total Suspended Solids (TSS)
Bacteria (E. coli or enterococcus spp.)
Chloride
Discharge (flow)
Biochemical Oxygen Demand (BOD_5) or Total Organic Carbon (TOC)
Orthophosphate
Total Nitrogen (TN)
Nitrate + Nitrite
Total Ammonia (sewer signal)
Total Phosphorus (TP)

- *Continuous flow measurements shall be recorded for the parameters listed at the in-stream monitoring station or other practical location based on the approved study design:*

Continuous Measurements (Parameters)
Temperature
pH
Discharge (flow)
Turbidity (Optional per 2021 MS4 Monitoring Guidelines)
Conductivity

- *Data collected from stormwater, baseflow, and continuous monitoring shall be used to estimate annual and seasonal pollutant loads and reductions, and for the calibration of watershed assessment models.*

- *If the County elects to continue monitoring Mattawoman Creek, or selects a new BMP effectiveness study for monitoring, the County shall submit a revised sampling plan for approval to address the new monitoring parameters provided above with the first annual report. An approved sampling plan under a prior MS4 permit for the County shall continue until MDE approves a new sampling plan proposed under this permit.*

FY 2023 Status

Pooled Monitoring for BMP Effectiveness

On March 24, 2023 Charles County notified MDE that it would be participating in the pooled monitoring option for BMP Effectiveness Monitoring. The final five-year agreement with the Chesapeake Bay Trust was fully executed on July 10, 2023, and a copy provided to MDE.

Chemical Monitoring

Charles County continued the long-term chemical monitoring program in the Acton-Hamilton watershed from July 2022 through December 2022 under the FY 2015 MS4 permit and then ceased once the FY 2023 MS4 permit was issued.

Chemical monitoring was performed at two instream stations on a tributary to Piney Run within the Acton Hamilton watershed that were established in April 2015. Site AH001 is located just downstream of a large culvert near the intersection of US 301 and Business Park Road. Site AH002 is located just upstream of the culvert under Hamilton Road. The locations of the monitoring sites were unchanged from previous reporting years.

The location of each station was selected based on its proximity to planned water quality improvements within the Acton-Hamilton watershed. The sites were established prior to construction of the water quality projects to develop a pre-retrofit baseline for pollutant inflow to the receiving channel.

An In-Situ level logger and staff plate were installed at each station on June 18, 2015. Prior to installation, flow depth was measured at a surveyed cross-section at each station to determine the discharge from a rating table. This method was used for the 2015 through the 2021 reporting

years. A new cross-section and rating table were established for the 2022 reporting year due to damage to the previous monitoring station.

Four storms were sampled at the Acton-Hamilton sites during FY2022. Storm event samples were collected on 9/30/2022, 10/13/2022, 11/11/2022, 12/15/2022.

The monitoring protocols included three discrete samples, representative of the rising limb, peak, and falling limb of the storm hydrograph for each storm event, collected at each monitoring station. All samples were collected manually so that *Escherichia coli* (*E. coli*) and TPH (Total Petroleum Hydrocarbons) could also be analyzed. Martel Laboratories in Towson, Maryland performed the laboratory analysis for each event. Due to the duration of some storm events and the proximity of the sites to the laboratory, most of the discrete *E. coli* samples were delivered to laboratory after the method holding time for both sites.

The results from the chemical monitoring for this reporting year are contained in the *Chemical Monitoring Table* of the enclosed MS4 geodatabase. Per discussion and concurrence from MDE, discharge in CFS, cannot be reported because it is a point in time, whereas the reporting is for an entire event. A spreadsheet containing intensity and total storm volume data is found in Appendix G.

Table 31: Number of Samples for Chemical Monitoring at the Acton-Hamilton Stations

		Wet Weather Sample		Baseflow Sample	
Year	**Month**	**AH001**	**AH002**	**AH001**	**AH002**
2015	April	1	1	1	1
	June	2	2	-	-
	September	1	1	-	-
	October	1	1	-	-
	November	2	2	-	-
2016	January	1	1	-	-
	April	1	1	-	-
	May	1	1	-	-
	June	1	1	-	-
2017	March	1	1	-	-
	April	1	1	-	-
	May	2	2	-	-
	August	1	1	-	-
	September	1	1	-	-
	October	2	2	-	-

2018	March	2	2	-	-
	April	1	1	-	-
	July	-	-	1	1
	August	1	1	-	-
	October	2	2	-	-
	November	1	1	-	-
2019	January	1	1	-	-
	March	1	1	-	-
	June	2	2	-	-
2020	April	1	1	1	1
	May	1	1	-	-
	June	1	1	-	-
	September	2	2	-	-
	October	1	1	-	-
	November	1	1	-	-
2021	March	2	2	-	-
	June	2	2	-	-
	September	2	2	-	-
	October	1	1	-	-
	December	1	1	-	-
2022	March	1	1	-	-
	April	1	1	-	-
	June	2	2	-	-
	September	1	1	-	-
	October	1	1	-	-
	November	1	1	-	-
	December	1	1	-	-

Acton-Hamilton Continuous Flow Data

Continuous flow data was collected at the AH001 and AH002 sites during the 2022 reporting year. At the AH002 site, the water level logger was lost due to a large storm event in June 2020, then reset and lost again during another large storm event in January 2021. Maintenance was conducted at the station, and a new cross section established for the discharge calculations. This

cross section was used to compute discharges for the 2022 reporting year, based on the Manning's equation rating table developed previously.
The upstream level logger had a malfunction and did not collect data for a portion of the reporting year. However, during each sampled storm event, manual readings were taken for level based on the staff plate installed at each site. These data were used to fill in gaps for discharge measurements, allowing hydrographs to be developed for each site during each storm event, and event mean concentrations established.

Acton-Hamilton Event Mean Concentrations

Using the modeled stage-discharge relationship for each station and the laboratory results for each discrete sample collected at the sites, event mean concentrations (EMCs) were computed. EMCs were weighted based on the volume of flow for each limb of the storm. Volume was calculated using each station's level logger data and the modeled stage-discharge rating curve. The chemical concentrations were multiplied by the flow volume, summed, and divided by the total flow volume to compute a weighted average for each storm event.

If a parameter was not detected in the laboratory analysis, a value of zero was used for the low end of the possible range, and the detection limit was used for the high end of the range. The flow-weighted EMCs for each storm for both ranges were then averaged over each season. Seasonal averages were weighted per seasonal flow volume and averaged to determine the average annual EMC for each parameter at each site. Average flow-weighted EMCs by calendar year for the Acton-Hamilton sites (AH001 and AH002) are provided in Tables 32 and 33.

Table 32: Annual Average Flow-Weighted EMC and Number of Events Sampled, AH001

FY	TKN	NO_x	TP	TSS	BOD	Pb	Cu	Zn	TPH	E-coli	Hardness
	mg/L Event					ug/L Event			mg/L Event	MPN Event	ug/L Event
2014/15[1,2]	0.783	0.203	0.163	683	7.083	5.123	10.343	82.443	1.13	21,730 3	26,434 3
2015/16[2]	0.928	0.258	0.158	558	4.798	1.838	9.618	71.048	0.98	10,092 8	30,787 8
2016/17[2]	1.528	0.348	0.158	748	4.868	4.288	11.038	71.198	3.26 8	7,507 8	33,882 8
2017/18[3]	0.357	0.227	0.117	417	2.747	1.637	8.627	58.97	1.27	3,310 7	32,962 7
2018/19[3]	0.368	0.308	0.148	368	2.378	2.248	7.868	63.158	2.88	78,846 8	24,587 8
2019/20[3]	0.377	0.267	0.117	317	3.057	2.437	8.167	64.267	2.27	5,941 7	38,277 7
2020/21[3]	0.208	0.228	0.098	308	3.258	2.768	8.368	53.008	1.48	3,335 8	40,325 8
2021/22[3]	0.518	0.248	0.158	428	3.158	2.278	8.628	56.738	1.58	18,037 8	32,092 8

2022/23[4]	1.04 4	0.20 4	0.11 4	21 4	4.42 4	1.27 4	5.06 4	42.26 4	2.94 4	3,423 4	37,169 4
NURP	2.35	0.96	0.47	140	11.00	180.0	50.00	180.00			

[1]Values were revised after initial submission to calculate annual EMCs weighted per season.
[2]Annual average EMCs were calculated by averaging the seasonal EMCs with non-detected samples set to zero.
[3]Annual average EMCs were calculated by averaging the seasonal average of EMCs with non-detected samples set to zero and EMCs with non-detected samples set to the detection limit.
[4]All tests were completed during the 2022 calendar year but reported as 2023FY.

Table 33: Annual Average Flow-Weighted EMC and Number of Events Sampled, AH002

FY	TKN	NO_x	TP	TSS	BOD	Pb	Cu	Zn	TPH	E-coli	Hardness
	mg/L Event					ug/L Event			mg/L Event	MPN Event	ug/L Event
2014/15[1,2]	1.14 3	0.83 3	0.35 3	209 3	7.52 3	7.11 3	8.16 3	78.61 3	4.1 3	15,117 3	28,937 3
2015/16[2]	0.84 8	0.31 8	0.20 8	59 8	4.92 8	1.68 8	5.18 8	58.31 8	0.3 8	9,511 8	33,429 8
2016/17[2]	1.52 8	0.34 8	0.15 8	74 8	4.86 8	4.28 8	11.03 8	71.19 8	3.26 8	7,507 8	33,882 8
2017/18[3]	0.35 7	0.29 7	0.16 7	73 7	1.95 7	2.79 7	4.81 7	39.59 7	1.1 7	3,915 7	26,803 7
2018/19[3]	0.48 8	0.42 8	0.21 8	182 8	2.25 8	5.23 8	4.00 8	44.89 8	3.4 8	42,074 8	22,358 8
2019/20[3]	0.41 7	0.28 7	0.21 7	78 7	3.66 7	3.91 7	5.26 7	47.52 7	1.7 7	7,881 7	32,404 7
2020/21[3]	0.20 8	0.21 8	0.10 8	48 8	2.49 8	2.23 8	3.56 8	30.71 8	1.4 8	4,778 8	35,005 8
2021/22[3]	0.71 8	0.24 8	0.18 8	79 8	3.72 8	2.74 8	4.52 8	37.87 8	1.4 8	9,655 8	28,601 8
2022/23[4]	0.53 4	0.30 4	0.14 4	16 4	2.73 4	1.00 4	2.19 4	20.63 4	1.5 4	3,665 4	33,812 4
NURP	2.35	0.96	0.47	140	11.00	180.0	50.00	180.00			

[1]Values were revised after initial submission to calculate annual EMCs weighted per season.
[2]Annual average EMCs were calculated by averaging the seasonal EMCs with non-detected samples set to zero.
[3]Annual average EMCs were calculated by averaging the seasonal average of EMCs with non-detected samples set to zero and EMCs with non-detected samples set to the detection limit.
[4]All tests were completed during the 2022 calendar year but reported as 2023FY.

Chemical Monitoring Assessment

The results of the laboratory analysis (both individual samples and EMCs) were reviewed for the storm events during the permit period. Findings are summarized below:

AH001 – Upstream Site

- A first flush effect was not pronounced during sampling.
- There is a generalized downward trend in annual average pollutant concentrations for pollutants with the exceptions of BOD, TPH, E Coli, and Hardness, with some variability.
- High BOD levels were recorded in the 11/11/2022 storm event for the first flush.
- The eight-hour holding time for *E. coli* was exceeded for six of the samples.

AH002 – Downstream Site

- A first flush effect was not present at this sampling station this year as in the last two sampling years. This may be an effect of the wetland system upstream of the monitoring site.
- There is a generalized downward trend in annual average pollutant concentrations for TSS, TKN, NOx, TP, Cu, Zn, and E Coli, with some variability.
- Lead was only above the detection limit for one sample.
- The eight-hour holding time for *E. coli* was exceeded for six of the samples.

Federal and State acute and chronic criteria are presented in Table 4 below. The laboratory data are compared, where possible, to these criteria to assess the extent of possible pollution within this watershed. Criteria are used to protect against both short-term and long-term effects. Numeric criteria are important where the cause of toxicity is known or for protection against pollutants with potential human health impacts or bioaccumulation potential. Narrative criteria can be the basis for limiting toxicity in discharges where a specific pollutant can be identified as contributing to the toxicity.

Criteria do not exist for all parameters measured at the monitoring stations. In addition, a clear cause and effect relationship between water quality and ecological condition is difficult to determine. However, these comparisons can be used as general indicators of water quality impairment. Both State and Federal criteria are based on ambient stream conditions. Chronic criteria consider the maximum levels at which aquatic life can survive if continuously subjected to a pollutant concentration. Acute criteria reflect the maximum level at which an aquatic organism can survive if periodically subjected to a pollutant concentration. Since storm events represent a periodic condition, wet-weather samples are compared only to acute criterion.

Table 34: State and Federal Water Quality Criteria Available for Parameters Sampled

Pollutant	Water Quality Criteria		Reference
	Chronic	Acute	
Metals ((µg/L):			
Lead	2.5	65	COMAR 26.08.02.03-2
Copper	9	13	COMAR 26.08.02.03-2

Zinc	120	120	COMAR 26.08.02.03-2
Other Pollutants (mg/L):			
Total Phosphorus	0.10		1972 305(a) Report to Congress (EPA 440/9-74-001)
BOD_5	7		Quality Criteria for Water, EPA 1986
Nitrate	10		Quality Criteria for Water, EPA 1986
TSS	500		1972 305(a) Report to Congress (EPA 440/9-74-001)
TKN	None		---
TPH	None		---
Hardness	None		---
E. Coli(1) (MPN/100ml)	235		COMAR 26.08.02.03-3

(1): Used most restrictive standard as a conservative approach: frequent full body contact recreation criterion.

The results of the laboratory analysis (both individual samples and EMCs) for the 2022 reporting year were compared to the values reported in Table 4 as well as the Nationwide Urban Runoff Project (NURP) values reported in Tables 2 and 3. Findings are summarized below:

AH001 – Upstream Site

- All individual samples and EMC's for NOx were below State and Federal water quality criteria values.
- All individual samples and EMC's for TSS were below State and Federal water quality criteria values.
- All but one individual sample, and all EMCs for *E. coli* were above State and Federal water quality criteria.
- All but two samples were below the detection limit for Pb.
- All individual samples and EMC's for Zinc were below State and Federal water quality criteria values.

AH002 – Downstream Site

- All events were below State and Federal water quality values for BOD except the 11/11/2022 event.
- All individual samples and EMC's for NOx were below State and Federal water quality criteria values.
- Individual samples were above State and Federal water quality criteria values for total phosphorus except for the rising and falling samples in the 10/1/2022 event, and the falling limb of the 10/13/2022 event.
- All individual samples and EMC's for TSS were below State and Federal water quality criteria values.

- All individual samples and EMC's for lead were below State and Federal water quality criteria values.
- All individual samples and EMC's for copper were below State and Federal water quality criteria values.
- All individual samples and EMC's for zinc were below State and Federal water quality criteria values.
- All individual samples and EMCs for *E. coli* were above State and Federal water quality criteria values except for the first flush samples on 11/11/2022 and 12/15/2022.

Acton-Hamilton Comparison between AH001 and AH002 Over Sampling History

Overall, when comparing 2016 reporting year through 2022 reporting year data in Tables 2 and 3, the following trends were observed. TKN trended downward at the two sites between reporting years 2018 and 2021, then increased in 2022 and 2023. Nitrate and phosphorus have been trending downward for several years, with a small increase in 2022. Nitrate and phosphorus fell again in 2023, with the exception of at the downstream station, where nitrate again rose. This trend may be attributed to the constructed BMPs upstream of the monitoring stations. TSS had also been trending downward, with a temporary increase during 2022. BOD appears to be trending downward at the upstream station. Likewise, copper, and zinc appear to be trending downward at the downstream station. Overall at both stations, there is a downward trend for *E. coli* values, with the exception of reporting year 2022.

The goal of the annual chemical monitoring is to assess the conditions present within the Acton-Hamilton watershed before water quality projects are implemented. Once the water quality projects have been implemented, analysis of storm results will determine if these projects are significantly reducing sampled pollutants within the watershed. The constructed offline submerged gravel wetland and wetland along the main stem channel may be contributing to the reducing concentrations of TKN, nitrate, and phosphorus at both monitoring sites. As each facility matures and as more facilities are constructed over the next few years, pollutant EMCs may see a more significant reduction.

ii. <u>Biological Monitoring:</u>

- *Benthic macroinvertebrate samples shall be gathered each Spring between the outfall and in-stream stations or other practical locations based on an MDE approved study design; and*

- *The County shall use the Maryland Biological Stream Survey (MBSS) sampling protocols for biological and stream habitat assessment.*

iii. *Physical Monitoring:*

- *A geomorphologic stream assessment shall be conducted between the outfall and in-stream monitoring locations or in a reasonable area based on the approved study design. This assessment shall include an annual comparison of permanently monumented stream channel cross-sections and the stream profile; and*

- *A hydrologic and/or hydraulic model shall be used (e.g., TR-20, HEC-2, HEC-RAS, HSPF, SWMM, etc.) in the fourth year of the permit to analyze the effects of rainfall; discharge rates; stage; and, if necessary, continuous flow on channel geometry.*

iv. *Annual Data Submittal: The County shall describe in detail its monitoring activities for the previous year and include the following:*

- *EMCs submitted on MDE's long-term monitoring database as specified in Part V below;*

- *Chemical, biological, and physical monitoring results and a combined analysis for the approved monitoring locations;*

- *Any available analysis of surrogate relationships with the above monitoring parameters; and*

- *Any requests and accompanying justifications for proposed modifications to the monitoring program.*

FY 2023 Status

As noted above, on March 24, 2023 Charles County notified MDE that it would be participating in the pooled monitoring option for BMP Effectiveness Monitoring. Thus, additional biological and physical monitoring, which is typically performed in the spring, is no longer necessary for BMP Effectiveness.

2. *Watershed Assessment Monitoring*

By April 30, 2023, or by July 1 of each year, the County shall notify MDE which option it chooses for watershed assessment monitoring. The County must implement one of the two options as follows:

a. *The County shall collaborate with the Department in a Pooled Monitoring Advisory Committee administered by the CBT for determining appropriate watershed assessment monitoring. To implement the required monitoring, the County shall pay $134,100 annually into a pooled monitoring CBT fund. Enrollment in the program shall be demonstrated through an MOU between the County and CBT to be signed by September 1 of each year. The terms of the Watershed Assessment Monitoring MOU are described in the 2021 Monitoring Guidelines. The County shall remain in the program for the duration of this permit term; or*

b. *The County shall submit a comprehensive plan for watershed assessment and trend monitoring by April 30, 2024, related to stream biology and habitat, bacteria, and chlorides and commence monitoring upon MDE's approval. The plan shall follow the 2021 Monitoring Guidelines and include:*

   i. *Biological and habitat assessment monitoring at randomly selected stream sites using MBSS protocols;*

   ii. *Bacteria (i.e. E. coli, Enterococcus spp., or fecal coliform monitoring); and*

   iii. *Chloride assessment at one location.*

2. *PCB Source Tracking*

Within one year of permit issuance, Charles County shall develop a PCB source tracking monitoring plan for all applicable TMDL WLAs where watershed reductions are required to meet water quality standards. Charles County shall submit results and provide updates annually on the monitoring efforts.

FY 2023 Status

For this permit condition the County has selected to prepare a comprehensive plan for watershed assessment and trend monitoring, to include stream biology and habitat for 25 sites within the County; bacteria monitoring for one site within the County; and chloride monitoring for one site within the County. The comprehensive plan is due by April 30, 2024; however, the County has submitted the stream biology and habitat monitoring plan on October 2023 to MDE for review and approval.

This plan will be supplemented to include the other required monitoring parameters by April 30, 2024.

There are no PCB TMDL WLAs where watershed reductions are required by Charles County in order to meet water quality standards, thus a PCB source tracking monitoring plan is not applicable.

III.G. Program Funding

Overview of Permit Conditions

1. *Annually, a fiscal analysis of the capital, staffing, operation, and maintenance expenditures necessary to comply with all conditions of this permit shall be submitted by Charles County as required in PART V of the permit.*

2. *Adequate program funding to comply with all conditions of this permit shall be maintained. Lack of funding does not constitute a justification for noncompliance with the terms of this permit.*

FY 2023 Status

Funding Sources

Since the County's first generation NPDES MS4 permit was issued in 1997, the County has had dedicated enterprise funding to ensure permit compliance. The two original enterprise funds included the Environmental Service Fund and the Inspection and Review Fund. In 2013, the Watershed Protection and Restoration Fund was adopted. Revenues to support the enterprise funds are from the Environmental Service Fee, Lot Recordation Fee, Inspection and Review Fees, Stormwater Remediation Fee, and most recently a subsidy from the General Fund's Transfer Tax revenues. The adopted FY 2023 Enterprise Funds are in Appendix H.

1. Environmental Service Fund: The ESF is no longer the primary source of funding for MS4 permit compliance since replacement by the Watershed Protection and Restoration Fund. However, ESF litter control outreach and septic programs still support permit compliance.

2. Inspection and Review Fund: The MS4 permit requires the County to maintain acceptable stormwater management and erosion and sediment control programs for new development in accordance with the Annotated Code of Maryland. Operating revenues for these activities are generated primarily by service charges for engineering plan reviews, site plan reviews, grading inspection, erosion and sediment control inspections, storm drain and stormwater inspections, which are deposited in the Inspection and Review Fund. This fund is for salary and fringe of full time and contractual positions.

3. Watershed Protection and Restoration Fund (WPRF): In June 2013, Charles County adopted Chapter 275 of the Charles County Code, establishing the Watershed Protection and Restoration Program and associated Stormwater Remediation Fee. The WPRF may be used for: capital improvements for stormwater management, including stream and wetland restoration projects; operation and maintenance of stormwater management systems and facilities; public education and outreach related stormwater management or stream and wetland restoration; stormwater management planning, including mapping and assessment of impervious surfaces, as well as

related monitoring, inspection, and enforcement activities; reasonable costs necessary to administer the fund; and grants to nonprofit organizations for watershed restoration projects.

The Stormwater Remediation Fee is a flat rate charged to all improved properties countywide, except in the Towns of La Plata and Indian Head where the MS4 programs are funded and administered separately. Property owners in the County may obtain a 50% fee credit by demonstrating the use of onsite stormwater practices such as rain gardens, pervious paving, and other options. The following table shows the rates for the current permit term. Credits and exemptions are reported annually.

Fiscal Year	2020	2021	2022	2023	2024
Stormwater Remediation Fee	$78	$92	$115	$127	$146

In 2014 NPDES MS4 permit coverage was expanded countywide, however the lot recordation fee continues to apply only to new lots recorded in the Development District (revised boundary in 2016) because this continues to be the County's urban area. This fee was discontinued in FY 2021.

Fiscal Year	2020	2021
Lot Recordation Fee	$154	-

Since FY 2016, subsidies from the General Fund have been approved in order to maintain a stable fee. The subsidy is only applied as needed.

Fiscal Year	2020	2021	2022	2023	2024
General Fund Transfer	$550,000	$300,000	$0	$0	$0

WPRF Budget and Staff Positions

The WPRF supports applicable expenditures from County Departments including: Planning and Growth Management, Public Works, County Attorney's Office, and Fiscal and Administrative Services. The following tables summarizes the WPRF budget and staff positions.

Table 35: WPRF Budget - Fiscal Years 2020 through 2024

Fiscal Year	2020 Audited	2021 Audited	2022 Audited	2023 Unaudited	2024 Budget
Budget:	4,699,320	5,579,100	6,186,420	7,035,500	7,799,490
Revenue:					
Stormwater Remediation Fee	3,970,537	4,714,488	5,915,720	6,566,660	7,704,500
Recordation Fee per Lot	66,836	0	0	66,836	0
Miscellaneous	9,466	15,550	14,343	14,871	5,000
General Fund Subsidy	550,000	300,000	0	0	89,990
Total Operating Revenues	4,596,839	5,030,038	5,930,063	6,648,367	7,799,490
Expenditures:					
Salary & Fringe	705,838	1,065,151	1,189,668	1,371,521	1,684,400
Operating	1,810,778	1,891,509	2,161,178	2,332,391	3,201,990
Capital Project Transfer	67,000	343,200	249,000	77,000	77,000
Debt Service	1,702,492	2,146,031	1,972,586	2,331,480	2,835,500
Total Expenditures	4,286,108	5,445,891	5,572,432	6,112,392	7,799,490
Operating Gain/(Loss)	310,731	(415,853)	357,632	535,974	0
Fund Balance:					
Beginning	326,704	637,435	221,582	579,214	1,115,188
Ending	637,435	221,582	579,214	1,115,188	1,115,188

Table 36: WPRF Staff Positions - Fiscal Years 2020 through 2024

Dept.-Division	Position	2020	2021	2022	2023	2024
PGM-Admin	Director	0.1	0.1	0.1	0.1	0.1
PGM-Admin	Deputy Director	0.1	0.1	0.1	0.1	0.1
PGM-Admin	Assist to the Director	0.1	0.1	0.1	0.1	0.1
PGM-CPIS Permits	Engineer I-IV	1.8	1.8	1.8	1.7	-
PGM-CPIS-Insp	Chief	0.1	0.1	0.1	0.5	0.1
PGM-CPIS-Insp	Engineer Supervisor	0.1	0.1	0.1	0.3	-
PGM-CPIS-Insp	Permit Technician	0.3	0.0	0.0	0.0	-
PGM-CPIS-Insp	Admin Associate	-	0.1	0.1	0.1	0.1
PGM-CPIS-Insp	PGM Support Specialist	1.0	1.0	1.0	1.0	1.0
PGM-CPIS-Insp	Inspection Supervisor	-	1.0	1.0	1.0	1.0
PGM-CPIS-Insp	Inspector	2.0	2.0	2.0	2.0	2.0
PGM-Planning	Chief	0.3	0.3	0.3	0.3	0.3

PGM-Planning	Climate Resilience & Sustainability Officer	-	-	0.5	0.5	0.5
PGM-Planning	Assistant Chief	0.1	0.1	0.1	0.2	0.2
PGM-Planning	Assist to the Chief	0.1	-	-	0.3	0.3
PGM-Planning	Engineer I-IV	1.0	1.0	2.0	-	-
PGM-Planning	Planner IV	0.3	-	-	-	-
PGM-Planning	Planning Supervisor	-	0.3	0.3	-	-
PGM-Planning	Planner I-III	2.0	2.0	1.8	1.8	2.3
PGM-Planning	PGM Support Specialist	-	-	-	0.3	0.3
PGM-Planning	Admin Associate	-	0.3	0.3	-	-
PGM-Planning	Resource Analyst - GIS	0.1	0.3	0.3	0.3	0.3
PGM-Resource & Inf. Mgmt	Assistant to the Chief	-	-	-	-	0.3
PGM-Resource & Inf. Mgmt	Engineer Supervisor	-	-	-	-	0.3
PGM-Resource & Inf. Mgmt	Engineer I-III	-	-	-	-	3.5
DPW-Env Res	Env Compl. Officer	1.0	1.0	1.0	1.0	1.0
DPW-Roads	Bridge Mgmt/Proj Mgr	0.2	0.2	0.2	0.3	0.4
DPW-Roads	Roads Construction Inspector	0.2	0.2	0.2	0.3	0.4
TOTAL Full Time Equivalent (FTE)		10.7	12.1	13.2	12.2	14.6

ESF Budget and Staff Positions

A small percentage of the Environmental Service Fund is allocated to support the County's Septic Pump-Out Reimbursement Program implemented by the Department of Planning and Growth Management. This is because, a septic pumping is considered an alternative urban best management practice in MDE's 2021, *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated Guidance for NPDES Permits* and awarded 0.02 acres/septic pumped towards the impervious surface restoration goal.

On October 16, 2018, the Charles County Commissioners adopted Bill No. 2018-08, which requires new home construction to install visible septic tank risers on each compartment of the septic tank for single-family dwellings that utilize on-site sewage disposal systems. Additionally, the Bill provides a reimbursement up to $100 per single-family dwelling for homeowners voluntarily choosing to have a septic tank riser installed, while sufficient funding is available. The County began implementation of the reimbursement program on December 1, 2018. The Septic Tank Risers program is in Chapter 122, Article I of the Charles County Code.

Table 37: ESF Budget for Septic Pump-Out Reimbursement Program – Fiscal Years 2020 through 2024

Fiscal Year	2020 Audited	2021 Audited	2022 Audited	2023 Unaudited	2024 Budget
Budget	$120,000	$254,500	$172,500	$184,300	185,300
Expenditures	$123,289	$254,648	$141,379	$129,480	0

A portion of the Environmental Service Fund is allocated to support the County's Education and Outreach Program to reduce litter entering the environment. The litter control and recycling outreach efforts increase recycling and educate the public on the importance of reducing, reusing, and recycling.

Table 38: ESF Budget for DPW's Education & Outreach – Fiscal Years 2020 through 2024

Fiscal Year	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Budget
Budget	227,000	210,400	239,000	316,200	451,800
Expenditures	208,426	211,499	204,100	245,478	0

Table 39: ESF Positions Dedicated towards Education and Outreach - Fiscal Years 2020 thru 2024

Department-Division	Position	2020	2021	2022	2023	2024
DPW- Env Resources	Recyc./Litter Control Superintendent	1.0	1.0	1.0	1.0	1.0
DPW- Env Resources	Recycling Manager	0.25	0.25	0.25	0.25	0.25
DPW- Env Resources	Recycling Supervisor	0.25	0.25	0.25	0.25	0.25
DPW- Env Resources	Recycling Supervisor	0.25	0.25	0.25	0.25	0.25

Capital Improvement Projects Budgets

Capital projects are the primary compliance tool in meeting Part IV.E Stormwater Restoration of the NPDES MS4 permit. The County's Capital Improvements Program (CIP) budget is funded by 30-year bonds. Payments on the bonds come from the WPRF and is noted as 'Debt Service' on Table 35.

In February 2004 the County began issuing bonds for the NPDES Retrofits Projects CIP budget. In March 2007 construction was initiated on the County's first watershed restoration projects. Individual project budgets and expenditures are listed in Table 41 below.

Table 40: NPDES MS4 Capital Improvements Bond Expenditures through Fiscal Year 2024

Bonds Issued to Date	Issued	Spent	Balance
2004 Public Improvement Bond	40,000	40,000	0
2006 Public Improvement Bond	100,000	100,000	0
2007 Public Improvement Bond	1,000,000	1,000,000	0
2008 Public Improvement Bond	400,000	400,000	0
2009 Public Improvement Bond	471,800	471,800	0
2010 Public Improvement Bond	500,000	500,000	0
2011 Public Improvement Bond	1,400,000	1,400,000	0
2012 Public Improvement Bond	700,000	700,000	0
2013 Public Improvement Bond	1,700,000	1,700,000	0
2014 Public Improvement Bond	3,000,000	3,000,000	0
2015 Public Improvement Bond	2,000,000	2,000,000	0
2016 Public Improvement Bond	4,880,000	4,880,000	0
2017 Public Improvement Bond	4,800,000	4,800,000	0
2018 Public Improvement Bond	5,000,000	5,000,000	0
2019 Public Improvement Bond	6,000,000	6,000,000	0
2020 Public Improvement Bond	3,800,000	3,800,000	0
2021 Public Improvement Bond	3,500,000	3,131,253	368,747
2022 Public Improvement Bond	6,060,000	2,260,164	3,799,836
2023 Public Improvement Bond	300,000	0	300,000
TOTAL	45,651,800	41,183,217	4,468,583

Table 41: Capital Improvement Expenditures through Fiscal Year 2024 for NPDES MS4 Projects

CIP for NPDES Retrofits	**Budget**	**Spent**	**Balance**
Carrington (8014)	$1,867,230	$1,867,219	complete
Pinefield (8023)	1,096,090	1,096,057	complete
Acton/Hamilton (8401008024)	1,788,240	1,762,589	25,651
Bryan's Road (8025)	1,915,880	1,912,855	complete
NPDES Study (8028)	24,740	24,738	complete
Fox Run (8030)	930,670	930,632	complete
Lancaster (8031)	73,010	72,997	complete
Northwood (8032)	28,830	28,830	complete
Ryon Woods (8033)	121,750	121,716	complete
White Plains Retrofits (8034)	564,630	564,629	complete
NPDES Mapping (8035)	716,110	716,103	complete
GIS Mapping (8036)	455,530	455,521	complete
Pinefield Temi Drive (8037)	1,126,320	1,126,283	complete
Holly Tree Farm Stream Restoration (8038)	1,632,490	1,632,468	complete
Stavors Road (8039)	0	0	complete
Acton Lane (8040)	282,700	282,676	complete

Cobb Island Drainage Study (8043)	20,710	20,704	complete
Potomac Heights (8046)	732,400	732,393	complete
Master Drainage Plan (8047)	186,390	183,332	complete
Feasibility & Concept Design (8400008048)	1,971,880	1,950,695	21,185
Port Tobacco (8049)	11,750	11,744	complete
Tanglewood (8050)	1,341,570	1,341,571	complete
Charles County Plaza (8051)	870,160	870,160	complete
Tenth District (8052)	97,250	97,239	complete
Swan Point WWTP Shoreline Stabilization (8053)	1,498,470	1,498,470	complete
Public Works Campus Stormwater Management Improvements (8400008055)	1,412,000	1,024,552	387,448
General Smallwood Middle School (8056)	509,000	508,998	complete
Lackey High School (8057)	115,220	115,220	complete
Poplar Court - Laurel Branch (8058)	112,750	112,881	complete
TC Martin Elementary School (8059)	51,360	51,360	complete
JP Ryon Elementary School (8060)	41,360	41,354	complete
Piccowaxen Middle School / Higdon Elementary School (8061)	67,810	67,798	complete
McDonough High School (8062)	49,410	49,393	complete
JC Parks Elementary School / Matthew Henson Middle School (8063)	87,340	87,337	complete
Mattawoman Middle School / Berry Elementary School (8065)	22,180	22,165	complete
Apple Creek Court (8066)	818,860	679,692	139,168
Floodplain Analysis Studies (8070008069)	473,610	213,969	259,641
Gilbert Run Watershed Dam Repairs (8070)	123,770	122,271	complete
Roof Top Disconnects Inspections (8071)	38,150	38,141	complete
Cliffton Shoreline Restoration (8401008072)	1,325,650	1,325,647	complete
Benedict Shoreline Restoration (8073)	864,190	864,156	complete
Friendship Farm Park (8074)	97,940	97,932	complete
GIS Mapping (8075)	42,250	42,244	complete
La Plata High School (8401008076)	795,980	691,406	104,574
Hale Court (8077)	65,880	65,864	complete
Adams Farm Lake (Lambeth Lake) (8078)	4,530	4,520	complete
Huntington Lake (8079)	4,530	4,520	complete
Wakefield Lake (8080)	4,530	4,520	complete
Post Office Road Lake (8081)	4,530	4,520	complete
Upper Zekiah Ponds (8082)	11,930	11,923	complete
Pinefield Drainage (8083)	1,164,980	1,164,977	complete
St. Charles Parkway Stream Restoration (8084)	728,560	728,556	complete

Bridle Path Stream Restoration (8401008085)	1,367,260	1,020,524	346,736
Ruth Swann Stream Restoration (8401008086)	1,618,310	1,403,972	214,338
Thomas Higdon Stream Restoration (8087)	1,065,780	1,065,777	complete
Marbella Subdivision (8401008088)	2,097,360	234,146	1,863,214
Longmeade Outfall Protection (8089)	96,830	96,803	complete
Bensville Park (8401008090)	1,120,740	1,073,536	47,204
Cliffton Shoreline Rest Phase II (8401008091)	1,501,620	1,501,613	complete
County-wide Shoreline Assessment (8095)	189,630	189,631	complete
Bryan's Road Storm Filter Maintenance (8096)	18,760	18,753	complete
Ruth B. Swann Tributary Channel Stream Restoration (8401008097)	1,184,400	926,611	257,789
Warren J. Willett Subdivision (8401008098)	6,000	3,172	2,828
Potomac Heights Shoreline Stabilization (8401008099)	1,392,520	1,392,717	complete
South Hampton Stormwater Management Pond Retrofits (8401008100)	360,670	347,853	12,817
Oak Ridge Park - Upper Western Branch Stream Restoration (8401008101)	234,680	219,794	14,886
Oak Ridge Park - Lower Western Branch Stream Restoration (8401008102)	146,060	134,586	11,474
Cedar Tree Pond Retrofit (8103)	180,030	180,030	complete
Wilton Court Pond Retrofit (8401008104)	390,390	113,475	276,915
Milton Somers Middle School- Pond Retrofit and Stream Restoration (8401008105)	1,682,220	282,833	1,399,387
CSM North Tributaries Stream Restoration (8401008106)	1,381,830	1,189,169	192,661
Oak Ridge Park - Upper Eastern Branch Stream Restoration (8401008108)	191,840	132,218	59,622
Oak Ridge Park - Lower Eastern Branch Stream Restoration (8401008109)	178,160	114,517	63,643
Best Buy Pond Retrofit (8110)	282,470	282,541	complete
CSM Lot 5 Outfall Stream Restoration (8111)	73,750	73,750	complete
White Plains Golf Course Pond Retrofit and Stream Restoration (8401008112)	117,090	110,081	7,009
Walter Mitchell Outfall Repair and Stream Restoration (8401008113)	1,891,150	262,358	1,628,792
Locust Grove Farm (8401008115)	309,500	173,593	135,907
Port Tobacco (Upper) Stream Restoration (8401008116)	217,530	212,271	5,259
Port Tobacco (Lower) Stream Rest. (8401008117)	2,501,210	233,623	2,267,587
Ruth B. Swann North Tributary Stream Rest. (8401008118)	2,148,000	224,910	1,923,090
White Oak Pond Retrofit (8401008119)	889,640	316,176	573,464

Westdale Drive Stream Imp (8401008122)	2,048,810	777,500	1,271,310
Gilbert Run Watershed Dam Repairs PH 2 (8050008124)	3,259,000	151,085	2,117,915
Full Delivery of Water Quality Improvement (8070008125)	1,638,000	4,573	1,633,927
Benedict Water Quality Study (8070008126)	28,210	28,205	complete
NPDES Swan Point Drainage (8401008128)	131,300	129,764	1,536
TBD (8401000000)	49,634,390	0	49,634,390
TOTAL	**$109,968,240**	**$42,069,697**	**$66,901,367**

The Capital Improvement Program appropriation for the NPDES Retrofit budget is the annual amount approved by the County Commissioners. The appropriations are cumulative towards the project total.

Table 42: Capital Improvement Program Appropriation per Fiscal Year

CIP Appropriation per Year	
FY03	214,000
FY04	220,000
FY05	224,000
FY06	72,000
FY07	778,000
FY08	1,452,000
FY09	2,127,000
FY10	2,409,000

CIP Appropriation per Year	
FY11	2,409,000
FY12	1,505,000
FY13	5,657,000
FY14	5,290,000
FY15	3,135,000
FY16	11,514,000
FY17	11,672,000
FY18	11,070,000

CIP Appropriation per Year	
FY19	11,346,000
FY20	11,017,000
FY21	7,958,000
FY22	8,922,000
FY23	8,956,000
FY24	3,150,000
FY25	TBD
FY26	TBD

Fiscal Analysis of Permit Conditions

Permit task implementation is supported by the enterprise funds listed above and includes staff salary, contractual costs, and other expenses. In summary, the cost for permit implementation:

Table 43: NPDES MS4 Permit Expenses per Permit Condition

Permit Condition	FY 2020 Audited	FY 2021 Audited	FY 2022 Audited	FY 2023 Unaudited
Source Identification	255,848	294,577	311,767	384,584
Stormwater Management	593,443	803,450	801,269	728,080
Erosion and Sediment Control	259,223	265,732	248,092	248,022
Illicit Detection &Elimination	46,268	74,543	102,726	96,075
Trash Elimination Education	216,280	219,407	212,672	214,468
Property Management	178,597	248,886	265,017	260,910
Inlet Cleaning	121,785	121,888	123,323	124,610
Street Sweeping	103,113	101,397	102,069	97,408

Road Maintenance - Other	737,553	805,445	859,725	1,900,667
Public Education	220,782	264,123	280,999	244,927
Watershed Assessment	10,421	13,832	37,778	30,595
Watershed Restoration	1,844,236	2,280,872	2,237,024	2,633,728
Chemical Monitoring	79,181	123,483	137,987	108,321
Biological Monitoring and	23,381	50,371	62,969	61,407
Physical Stream Assessment	15,973	24,954	35,110	17,878
Design Manual Monitoring	15,973	24,954	35,110	17,878
TMDL Assessments	31,856	44,767	57,999	30,425
Total Cost	$4,753,915	$5,906,796	$5,911,636	7,199,984

Financial Assurance Plan (FAP) and Watershed Protection and Restoration Program (WPRP) Annual Report

The FY 2023 WPRP Annual Report includes information on the number of subject properties, approved credits, hardships and appeals, and does not require Charles County Commissioner approval. The WPRP Annual Report is included in Appendix I.

On October 26, 2022, Charles County's FY 2023 FAP Resolution Number 2022-19 was approved by the Charles County Commissioners to fulfill requirements specified in the Annotated Code of Maryland, Environment Article, §4-202.1. This FAP is included in Appendix J of the FY 2022 MS4 Annual Report.