

Annual Reporting for VA0088617

The permittee shall submit the annual report to the Department in accordance with the following schedule:

Reporting Period	Annual Report Due Date
April 1, 2015 through December 31, 2015	March 31, 2016
January 1, 2016 through December 31, 2016	March 31, 2017
January 1, 2017 through December 31, 2017	March 31, 2018
January 1, 2018 through December 31, 2018	March 31, 2019
January 1, 2019 through December 31, 2019	March 31, 2020
January 1, 2020 through March 31, 2020	March 31, 2021*

*Report covers period from January 1, 2022 through December 31, 2022

Each annual report shall include the following background information:

The permittee and permit number of the program submitting the annual report;

Henrico County / VA0088617

Any modifications to the MS4 Program Plan as a result of the annual report;

None

The reporting dates for which the annual report is being submitted; and

January 1, 2022 through December 31, 2022

Certification as per Part II.K.

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

submitting false information, including the possibility of fine and imprisonment for knowing violations."

John Vithoulkas, County Manager

Name / Title

 3/28/2023
Signature / Date

For a municipality, state, federal, or other public agency signature by either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a public agency includes:

- 1) *The chief executive officer of the agency, or*
- 2) *A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.*

A summary of the implementation of each of the components established under Part I.B. and an evaluation of the effectiveness of each component. Additionally, the annual report shall include a summary of progress toward development of new MS4 Program components developed in accordance with the due dates as specified in the permit. The permittee should attempt to limit any component's narrative summary to no longer than two-pages plus any necessary tables and figures.

Part I.B.1 - Planning

A stormwater retrofit project summary that includes potential stormwater management projects to be completed during the term of the permit is posted on the County's website. The information in the Annual Report Supplement and MS4 Program Plan adequately addresses the permit requirements.

Part I.B.2.a - Construction Site Runoff and Post Construction Runoff from Areas of New Development and Development on Prior Developed Lands

The County implements an Erosion and Sediment Control Program and a Stormwater Management Program that have been determined to be consistent with state law and regulations. Implementation of the programs listed in this section will adequately address the permit concerns for this MS4 program element.

APPROVED AS TO FORM

COUNTY ATTORNEY

Part I.B.2.b - Retrofitting on Prior Developed Lands

The status of the retrofit projects listed in part I.B.1 that are being conducted during this permit term is provided in the Annual Report Supplement. The information included in the summary adequately addresses the permit requirements.

Part I.B.2.c - Roadways

The various Departments / Divisions that are responsible for maintaining roads, streets, and parking lots are aware of proper management goals / objectives. Inventories of County-maintained roads, streets and parking lots have also been developed as well as the stormwater treatment details required by the MS4 Permit. Implementation of the programs listed in this section will adequately address the permit concerns for this MS4 program element.

Part I.B.2.d - Pesticide, Herbicide, and Fertilizer Application

County-maintained lands have been evaluated to determine where nutrients are applied to more than one contiguous acre and the Departments / Divisions responsible for the County-maintained lands have been made aware of proper management goals / objectives. Summaries of the implementation details are included in the Annual Report Supplement as required by the MS4 Permit. Implementation of the programs listed in this section will adequately address the permit concerns for this MS4 program element.

Part I.B.2.e - Illicit Discharges and Improper Disposal

The County continues to implement programs to identify and eliminate illicit discharges. The County also has a program to inspect sanitary sewer system. Community cleanups, litter prevention and collection programs, and development design requirements are in place to reduce floatables. Summaries of the implementation details are included in the Annual Report Supplement as required by the MS4 Permit. Implementation of the programs listed in this section will adequately address the permit concerns for this MS4 program element.

Part I.B.2.f - Spill Prevention and Response

The County continues to implement programs to prevent, contain, and respond to spills that may discharge into the MS4. These programs involve cooperation with various Departments / Divisions. The results of the implementation of these programs are included in the Annual Report Supplement as required by the MS4 Permit. Implementation of the programs listed in this section will adequately address the permit concerns for this MS4 program element.

Part I.B.2.g - Industrial and High Risk Runoff

The County continues to implement a program to identify and control pollutants in stormwater discharges to the MS4 from industrial and high risk runoff facilities. Summaries of the implementation details are included in the Annual Report Supplement as required by the MS4 Permit. Implementation of the programs listed in this section will adequately address the permit concerns for this MS4 program element.

Part I.B.2.h - Stormwater Infrastructure Management

The County continues to implement programs to maintain the County's stormwater infrastructure and to update the accuracy and inventory of the storm sewer system. The Departments / Divisions responsible for County maintained lands are aware of the management goals / objectives and summaries of the implementation details are included in the Annual Report Supplement as required by the MS4 Permit. Implementation of the programs listed in this section will adequately address the permit concerns for this MS4 program element.

Part I.B.2.i - County Facilities

County-maintained facilities have been evaluated to determine which ones are High Priority Municipal Facilities and the Departments/Divisions responsible for County facilities are aware of proper management goals / objectives. Summaries of the implementation details are included in the Annual Report Supplement as required by the MS4 Permit. Implementation of the programs listed in this section will adequately address the permit concerns for this MS4 program element.

Part I.B.2.j - Public Education / Participation

The various Departments / Divisions in the County implement many public education programs with the goal of increasing the stormwater knowledge

of target audiences and changing behavior to result in pollutant reductions. Summaries of the program activities and the audiences reached are listed in the Annual Report Supplement as required by the MS4 Permit. Implementation of the programs listed in this section will adequately address the permit concerns for this MS4 program element.

Part I.B.2.k - Training

The various Departments / Divisions in the County conduct and makes available to County staff many training opportunities to address the topics required by the MS4 Permit. Summaries of the training opportunities and the number of staff attending are listed in the Annual Report Supplement as required by the MS4 Permit. Implementation of the programs listed in this section will adequately address the permit concerns for this MS4 program element.

Part I.B.2.l - Water Quality Screening Programs

The County implements both dry and wet weather screening programs in accordance with the requirements of the MS4 permit. Summaries of the implementation details are listed in the Annual Report Supplement as required by the MS4 Permit. Implementation of the programs listed in this section will adequately address the permit concerns for this MS4 program element.

Part I.B.2.m - Infrastructure Coordination

The Annual Infrastructure Coordination meeting between County and VDOT representatives occurred on December 8, 2022. During the meeting, all topics required by the MS4 Permit were discussed and the meeting summary is included in the Annual Report Supplement as required by the MS4 Permit.

A summary report of the monitoring programs listed under Part I.C

Summaries of the results of the monitoring programs listed under Part I.C are included in the Annual Report Supplement.

A summary of the implementation of each component listed under Part I.D.

The TMDL Action Plans required by Part I.D have been developed and are posted on the County's website. A summary of projects implemented during this reporting period are included in the Annual Report Supplement.

The Specific Reporting Requirements identified in this state permit.

The Specific Reporting Requirements are addressed in the Annual Report Supplements.

HENRICO COUNTY MS4 PROGRAM PLAN

**PART I.A.1
AUTHORIZED DISCHARGES**

There are no Specific Reporting Requirements associated with this part of the MS4 Permit.

HENRICO COUNTY MS4 PROGRAM PLAN

**PART I.A.2
PERMITTEE RESPONSIBILITIES**

Each annual report shall include a current list of roles and responsibilities.

The roles and responsibilities for the appropriate Departments and Divisions have been established and are provided in the applicable part of the MS4 Program Plan. Given the extent of the tasks associated with the MS4 Permit and the numerous Departments and Divisions that have a role in implementing the requirements of the MS4 Permit, the roles and responsibilities have not been repeated here. Please refer to the MS4 Program Plan for the current list of roles and responsibilities.

Each annual report shall include a list of those circumstances of non-compliance outside of the permittee's control.

Circumstance of Non-Compliance Outside County's Control From January 1, 2022 through December 31, 2022	Date
None	

HENRICO COUNTY MS4 PROGRAM PLAN

**PART I.A.3
LEGAL AUTHORITY**

There are no Specific Reporting Requirements associated with this part of the MS4 Permit.

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.A.4 MS4 PROGRAM RESOURCES

A copy of the fiscal year's budget including its proposed capital and operation and maintenance expenditures necessary to accomplish the activities required by this state permit shall be submitted with each annual report.

The County's Approved Budget for Fiscal Year 2022 - 2023 can be found at <https://henrico.us/pdfs/finance/ApprovedBudgetFY23/FY23%20Budget%20Book%20Full.pdf> Given the size of the document, the budget has not been included in this Annual Report Supplement.

	Approved Overall Budget	Approved Funding for MS4 Program Compliance	Source(s) of Funding
CAPITAL	\$110,742,282	\$5,198,000	General Fund Enterprise Funds
OPERATION AND MAINTENANCE	\$176,162,613	\$11,276,117.70	General Fund Internal Service Fund Enterprise Funds

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.A.5

PERMIT MAINTENANCE FEES

A statement regarding payment of the applicable MS4 permit maintenance fee, including check date and check number shall be included with each annual report. Note: Please do not include copies of checks or other bank records.

A check (check # 1645991, dated October 27, 2022) for the MS4 Permit Maintenance Fee (\$8,800.00) was submitted on October 27, 2022 to:

Virginia Department of Environmental Quality
Treasurer or Virginia - DEQ
P. O. Box 1104
Richmond, VA 23218

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.A.6 MS4 PROGRAM PLAN

Utilizing the last annual report prior to this state permit effective date as a baseline, the permittee's first annual report submitted under this state permit (Initial Report) shall include the necessary updates to describe implementation of this MS4 Program Plan and meet the conditions described in this section.

The current MS4 Program Plan can be found at <http://henrico.us/works/engineering-environmental-services/2015-ms4-permit-and-ms4-program-plan/>.

NOTE: For purposes of the next permit cycle, the fourth annual report submitted under this state permit will be considered the updated MS4 Program Plan to be reviewed as part of permit reissuance.

Noted.

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.A.7
MS4 PROGRAM REVIEW AND UPDATES

All modifications and proposed modifications shall be reported in accordance with this section of the permit.

The current MS4 Program Plan can be found at <http://henrico.us/works/engineering-environmental-services/2015-ms4-permit-and-ms4-program-plan/>.

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.A.7
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2022 THROUGH DECEMBER 31, 2022

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PART I.B.1 PLANNING

The permittee shall provide a current web link to the analysis no later than 12 months after the effective date of this state permit with each annual report.

The stormwater management retrofit project summary can be found at <http://henrico.us/works/engineering-environmental-services/stormwater-retrofit-projects-summary/>.

**HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.1
ANNUAL REPORT SUPPLEMENT
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HENRICO COUNTY MS4 PROGRAM PLAN

PART I.B.2.a

**MS4 PROGRAM IMPLEMENTATION
CONSTRUCTION SITE RUNOFF AND POST CONSTRUCTION
RUNOFF FROM AREAS OF NEW DEVELOPMENT AND
DEVELOPMENT ON PRIOR DEVELOPED LANDS**

Each annual report shall contain the number of regulated land disturbing activities approved and the total number of acres disturbed.

Number of Regulated Land Disturbing Activities Approved between January 1, 2022 and December 31, 2022	Total Number of Acres Disturbed
84	580.68

Each annual report shall contain the number of land disturbing activity inspections conducted and the number and type of each enforcement action taken.

ESC and SWM Inspection and Enforcement Actions conducted between January 1, 2022 December 31, 2022	Number of Actions
ESC Inspection - Complete	5,616
ESC Inspection - Follow-Up	366
Pre-Construction Meeting	135
SWPPP - Complete	478
SWPPP - Follow-Up	16
Notice to Comply	90
Stop Work Order	18

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PART I.B.2.a

ANNUAL REPORT SUPPLEMENT

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Each annual report shall include a summary of actions taken by the permittee to implement Part I.B.2.a)1) through 3) of this state permit.

No other actions such as additional staff, revised roles/responsibilities, etc. were taken between January 1, 2022 and December 31, 2022, to implement the local ESC and SWM programs.

**HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.a
ANNUAL REPORT SUPPLEMENT
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PART I.B.2.b

**MS4 PROGRAM IMPLEMENTATION
RETROFITTING ON PRIOR DEVELOPED LANDS**

Each annual report shall include a status update for those projects for which implementation began during the reporting period.

**Retrofit Projects for which Implementation* began
between January 1, 2022 and December 31, 2022**

None

* For purposes of this reporting requirement, implementation means the construction or installation of the retrofit project.

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.B.2.c
MS4 PROGRAM IMPLEMENTATION
ROADWAYS

The permittee shall include a copy of the written protocols identified in Part I.B.2.c)(2) with the annual report due March 31, 2019.

The written protocols were included in the annual report that was due March 31, 2019.

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PART I.B.2.d

**MS4 PROGRAM IMPLEMENTATION
PESTICIDE, HERBICIDE, AND FERTILIZER APPLICATION**

Each annual report submitted after March 31, 2016 shall report on compliance with the turf and landscape nutrient management plan implementation schedule and include a list of the permittee’s properties for which turf and landscape nutrient management plans have been implemented during the reporting year and the cumulative total of acreage under turf and landscape nutrient management plans.

MS4 Municipal Management Areas (MMMA) on which Turf and Landscape Nutrient Management Plans were implemented between January 1, 2022 and December 31, 2022		
MMMA	MMMA Description (if applicable)	Acreage Covered
	None	
TOTAL		

Turf and Landscape Nutrient Management Compliance	
Total acres requiring coverage by a Turf and Landscape Nutrient Management Plan	279.18
Total acres managed by a Turf and Landscape Nutrient Management Plan	279.18
Percentage of identified acres requiring coverage by a Turf and Landscape Nutrient Management Plan that is covered by a Turf and Landscape Nutrient Management Plan	100

HENRICO COUNTY MS4 PROGRAM PLAN

Each annual report shall include the number of acres managed under Integrated Pest Management Plans.

Acres managed under Integrated Pest Management Plans	184.843
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PART I.B.2.e

**MS4 PROGRAM IMPLEMENTATION
ILLICIT DISCHARGES AND IMPROPER DISPOSAL**

Each annual report shall include a list of illicit discharges identified, the source, a description of follow-up activities and whether the illicit discharge has been eliminated.

Illicit Discharges Identified between January 1, 2022 and December 31, 2022		
IDDE00846		
Fuel spill from gas station affecting private & County MS4	<p>01/09/2022 - Fire and DEQ notified me of an after-hours spill response that was traced to a nearby gas station.</p> <p>01/10/2022 - Met DEQ and Fire onsite, and Fire had already traced the material to a gas station. I obtained the plans and determined that an oil/water separator at the gas station is the likely source of the emulsified diesel. The gas station company sent out contractors to evaluate the OWS and their underground fuel tanks, as well as a contractor to determine the extent of the issue. DEQ's petroleum group rep also met us onsite, and we all discussed cleanup plans. Fire had already placed booms the night they received the call, but additional booms will be installed. HEPACO came out to empty the OWS, and the emulsified product will be recovered using a vac truck.</p> <p>01/14/2022 – DEQ required HEPACO to go back out and jet the storm system to remove any residual material. The material was captured with another</p>	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.B.2.e

ANNUAL REPORT SUPPLEMENT

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	<p>vac truck further down the line.</p> <p>05/02/2022 - DEQ sent notification of another similar issue at this gas station. The fueler overfilled the tank and then allowed the remainder to drain out into the lot and in the storm drain, resulting in impacts to County MS4, private MS4, and a private BMP. Fire placed booms to prevent impacts to the creek. HEPACO was onsite and working with DEQ to remediate.</p>	
IDDE00847		
<p>Allowable Discharge</p>	<p>01/24/2022 - Neighbor complained about a pipe draining from this property and onto the sidewalk, which creates icy conditions in the winter.</p> <p>The chlorine test was negative, and there was no indication that the material being pumped was wash water. The pipe is likely draining a sump pump, which is common in this area. Let the complainant know that this is an allowable discharge. She also had a concern about a leaky fire hydrant that I forwarded to DPU.</p>	<p>Illicit discharge eliminated</p>
IDDE00849		
<p>Oil leakage from vehicle in the roadway</p>	<p>01/26/2022- A complaint from neighbors in the area came in regarding excessive oil leaking from a vehicle in the roadway.</p> <p>1/26/2022- Used oil dry to absorb the oil that had come out from under the vehicle. The majority of the material was under the vehicle and unable to be absorbed. No impacts to storm system. Spoke with the Fire Marshal's office, and they planned to visit the homeowner at the end of the day. They asked for my letter to take with them to discuss the violation. I reached out to Community Maintenance to let them know the inspection and registration were both expired.</p>	<p>Illicit discharge eliminated</p>

**HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.e
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	<p>1/28/2022- The vehicle had been removed, so I was able to use oil dry to remove free product. The asphalt was deteriorating in several places, and the staining was still very heavy. I contacted Road Maintenance, and they agreed to do a dig out in the next few weeks, as work and weather allows.</p> <p>1/26/2022- The Fire Marshal's office called to say the homeowner is an elderly gentleman who is bedridden, and his son is the owner of the car. The son refused to accept responsibility and wanted the letter addressed to him.</p> <p>1/27/2022- Spoke with Community Maintenance and the Fire Marshall's office, and I was told that the vehicle owner accepted the new letter with his name on it, and he has plans to take the vehicle to be repaired tomorrow.</p>	
IDDE00850		
Active Construction Site Concern	<p>02/02/2022- Received an anonymous voicemail stating that there was black material all over a construction site.</p> <p>02/02/2022- Contacted the ESC inspector and was told that he would take care of it and ensure there are no impacts to the MS4 or state waters.</p>	Illicit discharge eliminated
IDDE00851		
Possible Gravel In The Storm Drain	<p>02/17/2022- A police officer received a complaint about a lawn company blowing gravel into the roadway and in a storm drain.</p> <p>02/18/2022- Inspected the county-owned MS4 and did not see any gravel. I did note a negligible amount of gravel in the curb line, but I saw no indication of intentional dumping.</p>	Illicit discharge eliminated

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IDDE00852		
Stockpile Concerns	<p>02/18/2022- Received a call from a homeowner concerned about a neighbor digging up his backyard and piling the dirt in the street.</p> <p>02/18/2022- Met the ESC inspector for the area, and we talked to the homeowner to see what he was doing. He was adding a driveway that went to his side yard so he could park his truck there since he had received a violation from the county for it being in the ROW. He has filed appropriate paperwork for getting a permit to build his driveway. His landscaping activity is under 2,500 sq. feet, and he said that he would have the dirt removed by the end of the day. He also mentioned a drainage concern along Ridge Top Rd, so I reached out to the Residential Drainage Coordinator to provide assistance.</p>	Illicit discharge eliminated
IDDE00853		
Oil leakage from vehicle into storm drain	<p>03/14/2022- Car leaking oil onto pavement and in storm drain</p> <p>03/14/2022- Spoke with the Road Maintenance inspector who called it in--most of the material had been absorbed into the pavement, but he used oil dry to remove any remaining free product. The inside of the storm drain looked stained, and the outfall showed no evidence of oil.</p>	Illicit discharge eliminated
IDDE00854		
Hydraulic oil along the roadway	<p>03/16/2022- DPU forwarded a complaint from a homeowner who is concerned about a private trash company that leaks hydraulic oil on the roadway throughout his neighborhood.</p> <p>03/16/2022- Contacted the trash company, and they said they do typically clean up with oil dry if they are made aware of a spill. I let them know that they</p>	Illicit discharge eliminated

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	have to come back and remove the oil dry once it has absorbed the material. I also let them know that the complainant would like to discuss the matter with them.	
IDDE00855		
Concrete washout concerns	<p>03/15/2022- Environmental Inspector called about discolored water around a concrete washout.</p> <p>03/15/2022- The water had no odor or sheen. It was determined to be discolored due to tannins.</p>	Illicit discharge eliminated
IDDE00856		
Discolored BMP	<p>03/21/2022- Citizen complaint sent to Roads about a discolored BMP.</p> <p>03/21/2022- Met onsite with DEQ and found that County crews were investigating a broken water line upstream.</p>	Illicit discharge eliminated
IDDE00857		
Oil leakage from vehicle into roadway	<p>03/21/2022- Homeowner called the Road Dept to state that her neighbor was repairing his car in the street and leaking oil on the roadway.</p> <p>03/22/2022- the material had been cleaned with oil dry prior to my inspection.</p>	Illicit discharge eliminated
IDDE00858		
Oil leakage from vehicle into roadway	<p>03/23/2022- Road Maintenance sent pictures of a tractor trailer leaking oil onto the roadway.</p> <p>03/23/2022- Contacted the phone number listed online for the company name and informed the owner that his vehicle cannot leak on our roadway. He stated that the vehicle had been repaired two days prior. I told him that we would clean up the spill, but that he needed to prevent this in the future. Road Maintenance sent out staff to clean the oil on the roadway.</p>	Illicit discharge eliminated

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IDDE00859		
Concrete slurry discharge	<p>03/24/2022- Environmental Inspector called to report a concrete slurry discharge from a concrete company next to his project.</p> <p>03/24/2022- Met with DEQ onsite to verify the material was coming from the concrete facility. No county infrastructure impacted. DEQ will follow up with the company and determine its permit status.</p>	Illicit discharge eliminated
IDDE00860		
Stream discoloration	<p>03/29/2022- Inspector and citizen complaints came in regarding discoloration of stream and mud tracking on roadway.</p> <p>03/29/2022- A different inspector on a nearby construction site confirmed the stream discoloration was likely due to dewatering through a filter bag. He addressed the mud tracking issues with the contractor, and they provided a planned timeline for remediation. DEQ was informed of the findings and plan.</p>	Illicit discharge eliminated
IDDE00861		
Chemical dumping from cleaning company	<p>03/31/2022- Property management company reached out to make us aware that a tenant who does carpet cleaning is dumping his dirty/chemical water into the backyard of the property he rents.</p> <p>03/31/2022- Forwarded to DEQ, as no county infrastructure is impacted.</p>	Illicit discharge eliminated
IDDE00862		
Clearing and illegal dumping within wetlands	<p>04/04/2022- A complaint was forwarded regarding buried refrigerators and tree clearing in the wetlands.</p> <p>04/04/2022- Forwarded to DEQ</p>	Illicit discharge eliminated
IDDE00863		
Septic issue	04/06/2022- Complaint forwarded regarding a	Illicit discharge

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impacting adjacent ditch	<p>septic issue reaching the ditch. 04/07/2022- The material in the ditch was iron bacteria, and no odor was noted.</p> <p>05/11/2022- Received another complaint regarding septic in ditch at this property. Contacted the complainant to let them know that the ditch has iron bacteria in it and no odor. The complainant admitted there was no odor and that the main concern was about an uncapped well in that homeowner's backyard. I let her know that we had also received that complaint from other neighbors, and we had already forwarded that to VDH.</p>	eliminated
IDDE00864		
Food manufacturer causing grease on roadway	<p>04/11/2022- Call received stating that a food manufacturer was causing grease to be all over the roadway and vehicles.</p> <p>04/11/2022- Visited site with DEQ, as it is a state-permitted facility. There was no evidence of any issues in the roadway.</p>	Illicit discharge eliminated
IDDE00865		
Foam reported in stream generated by large truck	<p>04/11/2022- Community Revitalization sent a complaint stating that a large truck had a hose in the stream, causing the water to become foamy and white.</p> <p>04/11/2022- Visited the site with DEQ, and we determined that the hose was used to pull water from the stream. We spoke with one of the construction inspectors in the area, and she confirmed that she had spoken with the gentleman before, and he was using the water for his drilling company.</p>	Illicit discharge eliminated
IDDE00866		
Improper cleaning	04/14/2022- Inspector called to notify of improper coil cleaning techniques that resulted in impacts to	Illicit discharge eliminated

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possibly impacting MS4	the MS4. 04/14/2022- The cleaning operation was stopped, and booms were placed at the inlet to prevent further impacts.	
IDDE00867		
Film in creek	5/20/2022- Homeowner noticed oil film on creek. 05/25/2022- Complaint was sent to my group on 05/25. I contacted DEQ, and they had handled that issue with no source identified. I left a voicemail with the homeowner to let her know that DEQ was onsite that day.	Illicit discharge eliminated
IDDE00868		
Yard debris	5/16/2022- Complaint sent regarding homeowner who owns landscaping business and buries the waste in the yard. Photos sent show concrete and asphalt debris. 5/16/2022- DEQ, Fire, and Community Revitalization plan to meet on this issue. No impacts to MS4.	Illicit discharge eliminated
IDDE00869		
Propylene Glycol spill	06/01/2022- DGS sent notification of a propylene glycol spill from their chiller that reached the MS4. 06/01/2022- Absorbent material was placed to try to remove any remaining free product. Their group inspected the creek and did not see any impacts.	Illicit discharge eliminated
IDDE00870		
Trash truck leaking	06/03/2022- Homeowner sent in complaint about county trash trucks leaking on the roadway when they come through. 06/03/2022- Forwarded to DPU. They contacted the complainant and sent in the spill cleanup contractor.	Illicit discharge eliminated

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	09/02/2022- Same complainant sent notification of a DPU issue that left staining along the roadway, despite cleanup efforts. Forwarded to DPU and let homeowner know someone from DPU would address the issue.	
IDDE00871		
Oily sheen	06/03/2022- MS4 tech forwarded oily sheen concerns. 06/07/2022- The material was iron bacteria.	Illicit discharge eliminated
IDDE00872		
Sewage Odor at an outfall	06/23/2022- DPW staff sent notification of a sewage odor at an outfall. 06/23/2022- Forwarded to DPU for investigation of the nearby sanitary sewer main.	Illicit discharge eliminated
IDDE00873		
Sediment laden water discharged into MS4	06/24/2022- ESC supervisor sent notification of Verizon work in ROW that was generating sediment-laden water being discharged to MS4. 06/24/2022- Contacted the person who administers the permits to work in the ROW, which require adherence to ESC regulations. Advised they use inlet protection during operations if the water cannot be pumped through a filter bag.	Illicit discharge eliminated
IDDE00874		
Oil leaching out of the ground	06/27/2022- Received notification of oily substance leaching out of ground and flowing to storm drain. 03/23/2021 - Chlorine tested several points from dead fish to where live fish were found again, no positives. Did not note any discoloration or odors. No obvious cause.	Illicit discharge eliminated

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IDDE00875		
Significant fish kill	<p>07/10/2022- DEQ sent notification of a significant fish kill over the weekend. Over 1,000 fish are estimated dead, and the dissolved oxygen levels were extremely low.</p> <p>07/11/2022- Visited the site and spoke with DEQ. They were fielding all citizen inquiries and coordinating with the golf course.</p>	Illicit discharge eliminated
IDDE00876		
Overflowing containers	<p>07/08/2022- Community Revitalization sent pictures of overflowing oil containers that had been set at the curb at a residential property.</p> <p>07/08/2022- Contacted First Call for removal.</p>	Illicit discharge eliminated
IDDE00877		
Algae in curb-line	<p>07/08/2022- Homeowner contacted Road Maintenance about algae in the curb line.</p> <p>07/08/2022- Forwarded to DPU for positive chlorine from water seeping up out of asphalt. They said they have no issues in that line. Forwarded to Residential Drainage Coordinator to work with Road Maintenance on a solution.</p>	Illicit discharge eliminated
IDDE00878		
Discolored water at an end treatment	<p>07/14/2022- DPW staff noticed dried material at an inlet and traced it to discolored water in an end treatment.</p> <p>07/19/2022- Met DEQ onsite and noticed a nearby ditch was discolored from recent concrete work. Material was dry, and the water in the stream looked normal.</p>	Illicit discharge eliminated
IDDE00879		
Trash and	07/20/2022- Homeowner sent an after-hours email	Illicit discharge

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debris	<p>stating that their neighbor has a lot of trash, tall grass, and roaches that are invading the complainant's house.</p> <p>07/21/2022- No trash noted on this property or in the MS4. A pile of dumped material was at the end of the cul-de-sac--sent Road Maintenance a picture so they could generate a work order for removal.</p>	eliminated
IDDE00880		
Iron bacteria	<p>07/21/2022- MS4 tech sent photos of suspect material in an end treatment.</p> <p>07/21/2022- The material was iron bacteria.</p>	Illicit discharge eliminated
IDDE00881		
Cloudy liquid discharge	<p>07/26/2022- MS4 Inspector saw a pipe discharging cloudy liquid to a storm drain.</p> <p>07/26/2022- Spoke with the manager of the company to let them know that discharging their water from their saws for granite/stone cutting is prohibited and that they need to find an appropriate alternative disposal method.</p>	Illicit discharge eliminated
IDDE00882		
Sanitary Sewer Smell	<p>07/28/2022- Homeowner contacted DPW about a strong sanitary sewer smell in his neighborhood. DPU had already been contacted at time of notification.</p> <p>07/28/2022- Forwarded to DEQ in case they had any complaints in the area.</p>	Illicit discharge eliminated
IDDE00883		
Hydraulic spill cleanup	<p>08/05/2022- Road Maintenance sent notification of a large hydraulic spill in a neighborhood that left homeowners dissatisfied with the remediation actions.</p>	Illicit discharge eliminated

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	<p>08/05/2022- Spoke with GFL, and they said they had staff onsite continuing to remove free product from the roadway. They stated that no storm drains or waterways had been impacted, and they understood that they needed to address the issue before the rain that afternoon.</p> <p>08/11/2022- Homeowner called to say that hydraulic oil was still on the roadway. Met Road Maintenance and GFL onsite, and further cleanup measures were performed. DEQ worked with GFL on ongoing cleanup.</p>	
IDDE00884		
Grease Spill	<p>08/12/2022- Received voicemail stating that a retail lot with restaurants had a grease spill that customers were driving through.</p> <p>08/12/2022- Met DEQ onsite to provide infrastructure mapping for the cleanup contractor to use in order to block the outfall.</p>	Illicit discharge eliminated
IDDE00885		
Construction dumpster leak	<p>08/17/2022- Rec & Parks called about a construction dumpster leaking in the storm drain on their property.</p> <p>08/17/2022- Contacted Environmental Inspector to have their group work with the contractor and Rec & Parks to resolve the issue.</p>	Illicit discharge eliminated
IDDE00886		
Oil in the roadway	<p>8/22/2022- Road Maintenance sent notification of a homeowner who stated that their neighbor is changing oil in the roadway and spilling it. The inspector was not sure of the exact address, but it could be the same as referenced in IDDE00660 (the complainant is the same).</p>	Illicit discharge eliminated

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	8/22/2022- Let RM know to have her contact me next time she sees the work being done. RM confirmed there was just staining and no free product at the time of the complaint.	
IDDE00887		
Sewage odor complaint	8/24/2022- Homeowner contacted Standing Water Initiative about stormwater that smells like sewage. 8/25/2022- Conducted site visit with SWI and spoke with the neighbor. The issue was involved private drainage structures, and no sewage odors were noted. This case was forwarded to the Residential Drainage Coordinator.	Illicit discharge eliminated
IDDE00888		
Positive chlorine test	9/02/2022- MS4 tech found a flow that tested positive for chlorine. 09/02/2022- Forwarded to DPU	Illicit discharge eliminated
IDDE00889		
Power washing without proper controls	09/06/2022- Received a call stating that a power washing company is willfully ignoring DEQ guidance on preventing their wash water from entering storm drains. 09/06/2022- Met DEQ onsite and saw an employee of this company power washing without protecting the storm drain. We let him know this was unacceptable, and he agreed to use plastic he had on his truck to block the drain and to let his management know that we require them to block the drains. DEQ had worked with this company the week before in another locality, and they are going to follow up with management.	Illicit discharge eliminated
IDDE00890		
Sewer Overflow	09/07/2022- Building Inspections called to say there was a sewer overflow issue at a restaurant.	Illicit discharge eliminated

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	09/07/2022- Visited the site and determined the private infrastructure connects to County MS4. Contacted DEQ because of the close proximity to state waters. Spoke with the manager, and he confirmed that they had been dealing with the issue for several days but had no luck getting a plumber out to fix the blockage. DEQ spoke with upper management to come to an agreement on emergency work needing to be done to resolve the issue.	
IDDE00891		
Oil in Roadway	<p>09/23/2022- Received notification of oil on roadway from a leaky vehicle.</p> <p>9/23/2022- Source of leak was not present. Staining noted with very little free product. Used oil dry to absorb material on the roadway.</p> <p>10/11/2022- Received an email from Public utilities regarding the potential of an IDDE event via an automotive discharge. Upon conducting an on-site inspection, we observed residuals of an apparent oil leak and attempted to contact the resident of 2314 Maplewood Road, however the resident did not answer the door. Applied automotive oil absorbent to remove residuals. We will follow-up with the resident via mail.</p>	Illicit discharge eliminated
IDDE00892		
Grease discharge	<p>09/26/2022- Received notification of a possible discharge from a fast-food restaurant.</p> <p>9/26/2022- There was no evidence of a discharge related event upon performing an inspection of the site.</p>	Illicit discharge eliminated
IDDE00893		

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Paint/Stucco discharge	<p>9/27/2022- A citizen reported the potential of an illicit discharge into the storm water system by a contractor.</p> <p>9/28/2022- Conducted an inspection with DEQ at the site of the reported discharge (IN000000013591). Upon inspection, it was determined that an illicit discharge had indeed taken place. The DEQ representative and myself inspected the outfall/end-treatment (EN000000000425) associated with the event , however did not discover any signs of discharge residuals at the outfall. DEQ followed up with the contractor and resolution was obtained via the contractor cleaning up all spoils related to the discharge.</p>	Illicit discharge eliminated
IDDE00894		
Abandoned Furniture	<p>9/27/2022- Received a complaint via voicemail regarding debris and abandoned furniture.</p> <p>9/27/2022- Contacted the source of the complaint via phone and instructed them to contact Community Maintenance regarding the issue of blowing debris and abandoned furniture. The resident informed me that they left a message for Linda Goode. I also reached out to Makeba Berry of Community Maintenance and provided the residents contact information, she stated she would be reaching out to the resident regarding the matter.</p>	Illicit discharge eliminated
IDDE00895		
Discolored water in Stream	<p>1/05/2022- Inspector sent notification from contractor of black water in stream across from construction site.</p> <p>11/28/2022- Received notification that the sediment is rapidly accumulating again.</p>	Illicit discharge eliminated

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	<p>1/05/2022- Met onsite with the inspector and water quality analyst to see if we could determine why the water was black. The readings on the water were normal, so we went upstream to see if we could determine a cause. Received permission to access the stream from a homeowner's private property, and I noticed several massive leaf piles, one of which had started falling in the stream. The black water appeared to only be downstream of the leaves, leading me to believe tannins were the cause of the discoloration. Notified DEQ for a private property to state waters issue</p> <p>11/18/2022- ESC Inspector sent notification of unusual sediment accumulation in the stream. Reached out to DEQ and waiting to set a date to visit the site.</p> <p>11/22/2022- Inspector said contractor at HS cleaned the material.</p>	
IDDE00896		
Hydraulic leak	<p>12/05/2022- Received a call from the Division of Fire stating that he notice an excavator had ruptured a hydraulic line on an active construction site.</p> <p>12/05/2022- The ESC inspector responsible for the site was informed of the incident and conducted a site visit. During the visit he ensured that the contractor removed all contaminated soil and any fluid that was present within the gutter pan.</p>	Illicit discharge eliminated
IDDE00897		
Sediment discharge	<p>12/15/2022- Sediment discharge from a single family home.</p>	Illicit discharge eliminated

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	12/16/2022- Contacted the area inspector responsible for the discharge site. She indicated that she was aware of the issue and was working with the contractor to have it resolved. Conducted a site inspection of IN000000027209 and did not observe any residual sediment from the event.	
IDDE00898		
Potential paint discharge	12/21/2022- Citizen called regarding a white substance entering the storm sewer 12/27/2022- Conducted a site visit and checked adjacent inlet for any residuals of a spill. I did not observe any substances within the D.I. Contacted the complainant to notify them of my observation.	Illicit discharge eliminated
IDDE00899		
Sanitary sewer discharge	12/27/2022- Received report of sanitary overflow. 12/27/2022- Forwarded to DPU	Illicit discharge eliminated

Sewer Discharges between January 1, 2022 and December 31, 2022		
1/16/22	A sewage overflow occurred at Almond Creek SPS. The overflow occurred from 1 manhole onto the surrounding grass area and into Almond Creek. Approximately 14,800 gallons of sewage spilled. The overflow occurred due to heavy rain and snow melts on saturated soil.	The area surrounding the spill was cleaned and lime applied
1/17/22	A stoppage in the sanitary sewer main caused a sewage spill from MH	The stoppage was removed and

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	#065SW016, located at 2133 Park Lane. The sewage overflowed into a tributary of the Jordans Branch. Approximately 470 gallons of sewage spilled.	the overflowed stopped. The stoppage was found to be grease blockage in the mainline. The area of the overflow was cleaned.
1/28/22	A stoppage in the sanitary sewer main caused a sewage spill from MH #404NE032, located at 4923 Meredith Woods Road. The sewage overflowed into a tributary of the Meredith Branch. Approximately 500 gallons of sewage spilled.	The stoppage was removed and the overflowed stopped. The stoppage was found to be grease blockage in the mainline. The area of the overflow was cleaned.
2/1/22	A stoppage in the sanitary sewer main caused a sewage spill from MH #255SW053 to MH #255SW069, located at 1390 Gaskins Road. The sewage overflowed into a tributary of the Deep Run. Approximately 1,350 gallons of sewage spilled.	The stoppage was removed and the overflowed stopped. The stoppage was found to be grease blockage in the mainline. The area of the overflow was cleaned.
3/21/22	A stoppage in the sanitary sewer main caused a sewage spill from MH #221NE015 and MH #221NE016, located in an	The stoppage was removed and the overflowed

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	easement at 202 East Gray Street. The sewage overflowed into an unnamed tributary of White Oak Swamp Creek. Approximately 1,080 gallons of sewage spilled.	stopped. The stoppage was found to be gravel accumulation in the main. The area of the overflow was cleaned.
4/29/22	A stoppage in the sanitary sewer main caused a sewage spill from MH #106SE027 and MH #106SE024, located in an easement at 500 Meriwether Avenue. The sewage overflowed into an unnamed tributary of Horse Swamp Creek. Approximately 2,075 gallons of sewage spilled.	The stoppage was removed and the overflowed stopped. The stoppage was found to be tree roots, rags and sludge in the main. The area of the overflow was cleaned, including surface washing of the affected area.
4/30/22	A stoppage in the sanitary sewer main caused a sewage spill from MH #253SE063 and MH #253SE018, located in an easement at 8811 Derbyshire Road. The sewage overflowed into an unnamed tributary of the James River. Approximately 882 gallons of sewage spilled.	The stoppage was removed and the overflowed stopped. The stoppage was found to be grease in the main. The area of the overflow was cleaned, including surface washing of the affected area.

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5/10/22	A stoppage in the sanitary sewer main caused a sewage spill from MH #266NW024 and MH #266SW002, located in an easement at 8326 Audley Lane. The sewage overflowed into an unnamed tributary of the Chickahominy River. Approximately 2,225 gallons of sewage spilled.	The stoppage was removed and the overflowed stopped. The stoppage was found to be debris accumulation behind a service lateral protruded into the main.
5/10/22	A separation of the sanitary sewer main between MH #266SW002 and MH #266SW007 caused a sewage spill, located in an easement at 8324 Audley Lane. The sewage overflowed into an unnamed tributary of the Chickahominy River. Approximately 18,850 gallons of sewage spilled.	A bypass was put in place and will stay in place until repairs completed. A contractor is working to replace the entire sewer main between MH #266SW002 and MH #266SW007
6/2/22	A sewer bypass pump failed to cause a sewage spill from MH #200NE501, located near 9101 Staples Mill Road. The sewage spill overflowed into Rocky Branch Creek. Approximately 990 gallons of sewage spilled.	A new bypass pump was put in service and the overflow stopped. The County is closely monitoring the bypass pump.
6/22/22	A stoppage in the sanitary sewer main caused a sewage spill from MH #409SW009, located at 2271 Lincoln Ridge	The stoppage was removed and the overflowed

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	Lane. The sewage overflowed into a North Run (stream). Approximately 2,250 gallons of sewage spilled.	stopped. The stoppage was found to be grease blockage in the mainline. The area of the overflow was cleaned.
9/2/22	A stoppage in the sanitary sewer main caused a sewage spill from MH #584SE510, located at 10546 Farm Meadow Drive. The sewage overflowed into a curb inlet and discharged into an unnamed tributary and then to an unnamed pond between Farm Meadow Drive and Meadow Pond Court. Approximately 200 gallons of sewage spilled.	The stoppage was removed and the overflowed stopped. The stoppage was found to be grease blockage in the mainline. The area of the overflow was cleaned, including surface washing of the affected area.
11/25/22	A stoppage in the sanitary sewer main caused a sewage spill from MH #406SE030, located at 9633 Dove Hollow Lane. The sewage overflowed into a curb inlet and discharged into an unnamed creek. Approximately 276 gallons of sewage spilled.	The stoppage was removed after a CCTV inspection. The stoppage was found to be grease in the line. The area of the overflow was cleaned.

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12/11/22	A stoppage in the sanitary sewer main caused a sewage spill from MH #048SW007, located at 2400 Farrand Drive. The sewage overflowed into a unnamed tributary of Gillies Creek. Approximately 165 gallons of sewage spilled.	The stoppage was removed and the overflowed stopped. The stoppage was found to be grease blockage in the mainline. The area of the overflow was cleaned.
12/15/22	A sewage overflow occurred upstream of the Almond Creek SPS. The overflow occurred from SMH# 052NE009 onto the surrounding grass area and into Almond Creek. Approximately 5,809 gallons of sewage spilled. The overflow occurred due to heavy rain.	A cleanup of the area was performed, and lime applied.
12/16/22	A sewage overflow occurred upstream of the Gillies Creek SPS. The overflow occurred from SMH#047SW017 & SMH#006405 onto the surrounding grass area and into Gillies Creek. Approximately 36,511 gallons of sewage spilled. The overflow occurred due to heavy rain.	Area of the overflow was cleaned and lime applied.
2/16/22	There was a corrosion breach in a 12" ductile iron gas vent pipe connected to two 54" force mains at the Creighton Road Venting Station located at 3820 Creighton Road. The overflow occurred across 50' of open field before entering the storm sewer inlet that leads to an unnamed creek. Approximately 2,100 gallons of sewage	Area of the overflow was cleaned and lime applied. A contractor is scheduled to make repair of the 12" vent line.

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	spilled.	
12/22-23/22	A sewage overflow occurred upstream of the Almond Creek SPS. The overflow occurred from SMH#052NE009 onto the surrounding area. Approximately 8,550 gallons of sewage spilled. The overflow occurred due to heavy rain.	Area of the overflow was cleaned and lime applied.
12/23-24/22	A sewage overflow occurred upstream of the Gillies Creek SPS. The overflow occurred from SMH#047SW017 onto the surrounding area. Approximately 5,550 gallons of sewage spilled. The overflow occurred due to heavy rain.	A cleanup of the area was performed, and lime applied
12/28/22	A sewage overflow occurred at Almond Creek SPS. The overflow was due to heavy rain. Sewage overflowed from one sanitary sewer manhole at the station. Approximately 901,400 gallons of sewage spilled.	A cleanup of the area was performed, and lime applied.

Each annual report shall include the amount of linear feet of sanitary sewer inspected during the reporting year.

Length of Sanitary Sewer Inspected between January 1, 2022 and December 31, 2022	447,603
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The initial annual report shall include a description of the procedures the permittee will implement to reduce floatables as required by Part I.B.2.e)3).

Public Works

DPW requires trash racks on all curb inlets in proposed shopping centers, fast food restaurants, convenience stores, auto parts stores, and other

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facilities where significant trash, debris and other contaminants may be generated. Due to flooding and safety issues, trash racks are not permitted on any inlets in the public right-of-way. The minimum design standards for the trash racks are specified in Chapter 15 of the Henrico County Environmental Compliance Manual.

Henrico County employs SOAR 365 to remove litter from County rights-of-way. The pick-up is performed daily, and progress is tracked in pounds of litter removed as well as the number of bags of litter removed. SOAR 365 is also used bi-weekly on the West and East End maintenance yards to reduce floatables from entering the MS4. Program effectiveness is evaluated based on the pounds of litter removed, as this decreases the quantity of floatables entering the MS4. Between 01/01/2022 and 12/31/2022, SOAR 365 removed 337,521.90 pounds or 11,250.73 bags of litter and 169 tires from county rights-of-way and maintenance facilities.

Public Utilities

- Division of Solid Waste implemented programs:
 - Neighborhood clean-ups are a program designed to allow neighborhoods with homeowner's associations with an opportunity to remove trash/debris from their property. There is no qualification process for neighborhoods to be selected. This program was suspended in March 2020 due to COVID-19 pandemic.
 - Community clean-ups are a program designed to allow older neighborhoods with an opportunity to remove trash/debris from their property. There is a qualification process for neighborhoods to be selected. This program was restarted in September 2021 after a pause for COVID-19 pandemic.
 - Hazardous Material Disposal is a program where residents can bring their oil/antifreeze/paints/solvents to the public use areas for disposal.
 - Bulky Waste Program is a program where residents can request a pickup of large items, brush, etc. from their property for a fee. This program was restarted in July 2021 after a pause for COVID-19 pandemic.

- Keep Henrico Beautiful implemented programs:

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- Because We Care Program is a program where groups or individuals can sign up to adopt any County road, park community or school within the County.
- Litter Removal Education is a program where we discuss the importance of Keeping Henrico Beautiful by not littering.
- “Magic of Recycling” – Litter prevention program that targets kids ages 4-7.
- Watershed Education Partnership – We now partner with NOAA BWISE grant that trains teachers in watershed education and teaches 6th graders watershed education.
- ORBIT Program – We now partner with the Henrico Sheriff’s Office to provide an inmate work crew to help keep Henrico roadways free of loose trash.
- Don’t Trash Central Virginia – This is a partnership with PLAN RVA and several other localities. We are promoting a litter free Central Virginia.
- Clean Business Award – This is a program where Keep Henrico Beautiful selects one business from each magisterial district that promotes a litter-free Henrico and is well maintained.
- Land Lover Award – This is a program where Keep Henrico Beautiful selects one residential property from each magisterial district that is attractively landscaped, well maintained, utilizes a recycling program and uses best management practices such as rain barrels.
- Land Lover Series – Partnership with Henrico County Libraries to educate the public on sustainable practices for their homes and yards. Includes composting, pollinator gardens, native plants, tree maintenance, etc.
- Stream Cleanups – Partnership with Henricopolis to utilize volunteers and county staff to cleanup local streams of litter.
- DPU Native Plant Demonstration Garden – created outside of Public Utilities’ Woodman Road office building. Plants are identified for any visitors and will be used as educational tool for native plant information on social media.
- Native Plant Festival – First year brought in environmental groups and focused on native plants and watershed management. Next year this will be called Plant Native! with the same focus. One speaker discussed watershed management in landscaping and another speaker described how native plants help water infiltrate the ground.

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- Stewart the Turtle and Choose to Reuse – New promotional campaign aimed at getting people to say no to plastic bags and use reusable options instead. We have a Choose to Reuse page on our website and we are giving out reusable bags at grocery stores.

Each following annual report shall include a list of sites monitored, a summary of the monitoring protocols used, and a summary of the monitoring results and analyses.

This reporting language was originally included in a draft version of the MS4 Permit and was related to a "floatables monitoring" condition. Prior to finalization of the MS4 Permit, the "floatables monitoring" condition was eliminated after DEQ reviewed the federal rule making document and determined this condition was not required. However, the reporting language was moved to Part I.B.2.e without being edited to remove reference to the "monitoring" that was no longer required. When this oversight was discovered, DEQ agreed that the reporting element could be interpreted to read:

Each following annual report shall include a summary of the County's efforts to reduce floatables and an evaluation of the effectiveness of those efforts.

Therefore, the following revised Specific Reporting Requirement is addressed in this Annual Report.

Each following annual report shall include a summary of the County's efforts to reduce floatables and an evaluation of the effectiveness of those efforts.

Although the reductions can't be quantified, observations of several sites on which trash racks have been installed display that the County's trash rack program appears to be effective at reducing floatables.

DPW removed 337,521.90 pounds or 11,520.73 bags of litter from the County ROW using SOAR365.

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Department of Public Utilities views its program to reduce floatables as a success. During this reporting period, Public Utilities have removed the following from our community:

- Public Utilities have collected 23 tons of tires.
- Solid Waste division has collected 23,529 gallons of used oil/antifreeze at our public use areas.
- Solid Waste division has collected 5,157 gallons of oil-based paint & solvents at our public use areas.
- Keep Henrico Beautiful has collected 377 bags of trash from our roadsides, communities, schools and parks with their programs.

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MS4 PROGRAM IMPLEMENTATION SPILL PREVENTION AND RESPONSE

Each annual report shall include a list of spills, the source (identified to the best of the permittee's ability), and a description of follow-up activities taken.

Spills that Occurred between January 1, 2022 and December 31, 2022	
DATE	Provide description of spill, list the material spilled and the quantity, and address what cleanup methods were used.
01/04/2022	Various petroleum products leaked from machinery during emergency snow operations. Main area of spills was on the asphalt area near the west end shop. Oil booms were placed to block inlets. Universal pads and oil dry were used to clean up visible residue. Materials were disposed of in oily debris barrels.
01/19/2022	One and a half gallons of hydraulic fluid leaked from truck 605 on the west end yard. Spill was contained to Jesse Chavis Dr and the truck bay. Oil dry applied and disposed of in oily debris barrels.
01/25/2022	Improper washing of spreaders following snow operations resulted in an oily sheen entering inlets on our west end yard. Only a small amount, approximately ¼ a gallon, was released into the inlets. Inlets were blocked with booms and sheen was collected at the systems inlet into our BMP. Debris was disposed of in oily debris barrels
02/01/2022	DPU WRF - NPW leaked from the Biocarb Shack due to a 4" NPW valve leak. This leak was caught quickly, estimate less than 150 gallons.
02/13/2022	Hydraulic line on truck #785 ruptured, releasing approximately 15 gallons of hydraulic fluid. Oil dry was applied to the area to absorb free material. Once free was absorbed, used oil dry was disposed of in Clean Harbors

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	used oil debris barrels.
03/02/2022	Tractor was found leaking diesel fuel (less than 1 gallon). No impact to stormwater. Absorbent pads and peat moss was used to clean up material and disposed of in the used oil debris barrel.
03/03/2022	DPU WRF - Minor spill (<5gal non-potable water) released from abandoned irrigation line. Documented internally in WRF SWPPP.
03/11/2022	Petroleum spill from an unknown source leaked approximately ¼ gallon onto the asphalt. Oil dry was applied and disposed of in oily debris barrels.
03/16/2022	There was a transmission fluid leak from a vehicle at the drive thru tunnel at Fairfield Area Library. The fluid was discovered at 4:30 PM on the concrete pad of the drive thru. The amount of quantity released was approximately 0.5 gallons. Oil-dri was placed and swept up after the fluid was absorbed. Everything was contained to the immediate area. All materials were properly disposed of and there was no impact to storm water facilities
03/23/2022	Oil had leaked from equipment (less than 1 gallon). No impact to storm water. Absorbent pads and peat moss was used to clean up material and disposed of in the used oil debris barrel.
03/25/2022	Cleaned up small lubricant spill on CAM Service Line. Covered with oil absorbent material, swept up contaminated material after oil was absorbed, and added material to CAM designated waste bin inside shop area.
04/05/2022	DPU WRF - <2 gallons MLSS leaked onto grass around NRCY pump 11B. Leak stopped within 5 min and lime applied to the affected area.
04/05/2022	Front loader blew its hydraulic line in the gravel area on the west end yard. 4 gallons were spilled. Spill was contained to the gravel area and the impacted gravel was excavated and placed in oily debris barrels.

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04/07/2022	DPU WRF - <50 gallons of NPW released onto ground while testing alum chemical application points along SEDC. Water infiltrated into ground quickly. No impact.
04/13/2022	Upon removal of a snow rig from truck 698, 1/3 a gallon of hydraulic fluid spilled into the trucks bay. The spill was contained and cleaned up using oil dry. The waste was disposed of in barrels once all free material was collected
04/14/2022	General services contractor was cleaning the air conditioner coils and didn't block the inlet. A diluted mixture entered the inlet. Chemical booms were placed at the inlets upon discovery. The main component of the cleaner was sodium hydroxide. Approximately 5 gallons of the cleaner was used. The quantity of the spill was below the reportable quantity for the material. Waste produced from the spill was placed in a separate debris barrel.
04/15/2022	Truck 795 had a hydraulic leak of about ¼ a gallon. The spill was contained to the truck's bay and the asphalt lot on the west end yard. Oil dry was applied to absorb the free material and waste was disposed of in debris barrels.
05/04/2022	Truck 21065 blew its radiator line spilling approximately 5 gallons of antifreeze into the asphalt lot and truck bay. Crews were present and immediately applied absorbent to collect all the free material. The truck was moved, and the line was repaired. Waste materials were disposed of in Clean Harbors barrels.
05/12/2022	DPU WRF - <25 gallons of non-potable water (NPW) released onto ground (grass and road between south end of ENR 5 and Carbon Feed facility). Firehose came out of ENR #5 when attempting to fill the reactor with NPW. This was caught quickly (<2min). NPW was left to evaporate.
05/17/2022	DPU WRF - <50 gallons of NPW were released onto the ground surrounding a NPW yard hydrant. NPW hydrant at north end of ENR 5 was throttled and leaking through the weep hole. NPW was left to evaporate.
05/18/2022	A spill in the indoor storage bay was located during a walk-through of the west end yard. The spill was approximately one to two gallons of hydraulic fluid. The spill resulted from a leaking hydraulic line on sweeper 751. Oil dry was

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	applied and disposed of after cleaning up in oily debris barrels.
05/19/2022	DPU Solid Waste – First Call Environmental was called to respond to a release of hydraulic fluid on Goodall Road. Area of release was cleaned by FCE staff. No known impacts to stormwater or the conveyance system.
05/20/2022	Approximately ¼ gallon of engine oil leaked from tractor #629. Oil dry was applied to the area to absorb free material and disposed of in Clean Harbors barrels.
06/01/2022	Airstack chiller chilled water piping failure containing propylene glycol (Approximately 300-400 gallons). Leak suspected to have occurred overnight as evidence was found the following morning. Nothing was leaking at the time of arrival. Fluids were found to be lost with evidence of residual in the parking lot but no flow was observed and there was no material to clean up.
06/03/2022	DPU Solid Waste – First Call Environmental was called to respond to a release of oil at 3300 Logan Hills Court. Area of release was cleaned by FCE staff. No known impacts to stormwater or the conveyance system.
06/06/2022	DPU Solid Waste – First Call Environmental was called to respond to a release from a refuse vehicle on Battersea Lane. Area of release was cleaned by FCE staff. No known impacts to stormwater or the conveyance system.
06/08/2022	Tractor #676 leaked less than ¼ gallon onto the pavement of East End Bay #1. Oil dry was applied to absorb any residual material. Used oil dry was disposed of into Clean Harbors barrels.
06/24/2022	DPU Solid Waste – First Call Environmental was called to respond to a release of hydraulic fluid at 4305 Alston Avenue. Area of release was cleaned by FCE staff. No known impacts to stormwater or the conveyance system.
06/27/2022	Approximately 1 gallon of hydraulic fluid leaked from Gradall #637 onto gravel. Absorbent pads placed beneath Gradall #637 to collect any excess hydraulic fluid. Effected gravel was disposed of into Clean Harbors barrels.
07/11/2022	Approximately ½ a gallon of hydraulic fluid leaked from roller 611 in its bay on the west end yard. The spill was

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	contained to the bay and had no impacts. The spill was absorbed with oil dry, and waste was disposed of in clean harbors barrels.
07/25/2022	Hydraulic fluid leaked from mowing equipment (less than 1 gallon). No impact to storm water. Absorbent pads and peat moss was used to clean up material and disposed of in the used oil debris barrel.
07/25/2022	Truck 574 spilled approximately 3 gallons of hydraulic fluid into its bay following a hydraulic line rupture. The spill was contained immediately by crews and the used oil dry was disposed of clean harbors barrels. There were no impacts outside of the covered bay.
07/25/2022	Hydraulic line on Gradall #637 ruptured and approximately 2-3 gallons of hydraulic fluid leaked onto concrete in bay. A boom was placed around the spill area to contain the hydraulic fluid. Oil dry was applied to absorb excess material. Pillows and pads were placed under area where hydraulic fluid was originating from to collect any additional material that may leak.
07/26/2022	DPU WRF – Underground leak of 12% NaOCl. Surfaced and discovered by staff at 9:28 AM. Appropriate notifications made. No known environmental impacts at this time – material appears to be bound in soil. Soil has been excavated and will be tested and appropriately disposed of. WRF will be working with Schnabel Engineering for consulting services for remediation.
08/11/2022	Unknown equipment leaked ¼ gallon of petroleum-based substance. The spill was contained to the asphalt area behind the shop. The spill was treated with oil dry and disposed of in clean harbors barrels.
08/18/2022	DPU WRF - <1 gallon of MicroC 2000 glycerine and non-potable water leaked from a pin hole in carbon feed piping at the south end of ENR 9 & 10. Leak was isolated within 2 minutes of being found. Lime was applied to affected grass area. No discharge to stormwater.
08/19/2022	Front-end Loader leaking on CAM Service Line. Covered with oil absorbent material, swept up contaminated material after oil was absorbed, and added material to

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	CAM designated waste bin inside shop area. Cleaned entire area with shop floor scrubber.
08/29/2022	Oil/fluid stain found in lot. No odor, nothing to absorb, and no impact to storm water. No cleanup was needed as material dried before it was found and dried before impacting storm water
09/01/2022	DPU Solid Waste – First Call Environmental was called to respond to a release of oil on Morton Drive. Area of release was cleaned by FCE staff. No known impacts to stormwater or the conveyance system.
09/05/2022	DPU Solid Waste – First Call Environmental was called to respond to a release of trash at Gaskins Road and Three Chopt Road. Area of release was cleaned by FCE staff. No known impacts to stormwater or the conveyance system.
09/07/2022	DPU WRF - <1 gallon of polymer leaked outside northern entrance door of Solids Handling facility. Spilled material was directed to plant sewer drain and used stay-dry absorbent to collect residual. No discharge to stormwater.
09/09/2022	DPU Solid Waste – First Call Environmental was called to respond to a release of paint at 9705 Electra Lane. Area of release was cleaned by FCE staff. No known impacts to stormwater or the conveyance system.
09/22/2022	Less than a ¼ gallon of Dial Antibacterial Soap & water was spilled on the asphalt lot behind the shop. The spill was from equipment being washed on the asphalt, not the wash station. The spill was contained to the asphalt lot by using universal booms and pads to absorb the materials and universal booms were used to block adjacent inlets. Contaminated material, booms, and pads were disposed of in Clean Harbors barrels.
09/28/2022	Approximately 2-3 gal of hydraulic fluid leaked from loader #642 onto pavement behind shop building and equipment bay #4. Oil dry was applied to area and removed using indoor sweeper.
09/29/2022	Oil leaked from a parked tractor at the Varina Area Library. The oil was discovered at 12:00 PM. The amount of quantity released was 1 gallon. Oil-dri was placed and

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	swept up after the fluid was absorbed. Everything was contained to the immediate area. All materials were properly disposed of and there was no impact to storm water facilities.
10/06/2022	Hydraulic fluid leaked from roller #790 into East end bay #4. Oil dry was applied to the area to absorb free material and disposed of in Clean Harbors barrels.
10/06/2022	DPU WRF - <2 gallon of non-hazardous MicroC 2000 glycerine and non-potable water leaked from a flange on metal piping at the south end of ENR 9 & 10. Leak was isolated within 5 minutes of being found. Lime was applied to affected soils. Affected soils were then removed and replaced with clean soil. No discharge to stormwater.
10/14/2022	Approximately 1 gallon of hydraulic fluid leaked from backhoe #650 into gravel lot. The contaminated gravel was removed and placed into Clean Harbors barrels for pick up. New gravel was placed onto effected area.
10/26/2022	Approximately 2-3 gallons of hydraulic fluid leaked from the hydraulic line for the spreader on truck #608 while being brought into the shop for repairs. Oil dry was applied to the area to absorb the material on the asphalt lot behind the shop. The used oil dry was removed using an indoor sweeper and contaminated oil dry was placed in Clean Harbor barrels for pick up. The spill was contained to the asphalt lot behind the shop.
10/26/2022	Glycol from a leaking pump in the mechanical room at Mental Health – Woodman Road was discovered at 8:00 AM. The amount of quantity released was 1.5 gallons. SERVPRO was contacted and responded to the leak. Everything was contained to the immediate area. SERVPRO cleaned up and properly disposed of all materials and there was no impact to storm water facilities.
11/16/2022	DPU Operations - <0.5 quart of hydraulic fluid/oil leaked from vehicle (unknown of what vehicle) at 10401 Woodman Road – rear parking lot. All fluid/oil was cleaned up via an absorbent pad. Absorbent pad disposed of in the trash. No discharge to stormwater
12/05/2022	DPU Solid Waste – First Call Environmental was called to

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	respond to a release of hydraulic fluid at 3309 Logan Hill Court. Area of release was cleaned by FCE staff. No known impacts to stormwater or the conveyance system.
12/19/2022	DPU WRF - At 2:42 PM on Monday December 19, 2022, It was reported that there appeared to be small leak at the non-potable water piping that serves as pump seal water piping. The insulated piping has a small dripping leak. Non-potable water was shut off to the piping immediately after report at 2:47 PM. The NPW will remain shut off until the piping is repaired. The cause of the leaking is under investigation. We are not sure how long the piping has been leaking, the small dripping is not easily noticeable. It is possible it has been leaking since last Friday, December 16. It is possible that the total discharge volume is up to 100 gallons over that period.

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MS4 PROGRAM IMPLEMENTATION
INDUSTRIAL AND HIGH RISK RUNOFF

The annual report due March 31, 2016 shall include a list of all known industrial and high risk dischargers including any non-VPDES regulated industrial and commercial stormwater dischargers determined by the permittee as contributing a significant pollutant load and that discharge to the MS4 system, a schedule of inspections and procedures for inspecting outfalls.

Industrial and High Risk Dischargers Determined to be Contributing a Significant Pollutant Load to the MS4 between January 1, 2022 and December 31, 2022		
Industrial and High Risk Discharger	VPDES Permit (Permit # or None)	Outfalls to the following to MS4 Structure(s)
No Industrial and High Risk Dischargers were found to be contributing a significant pollutant load to the MS4.		

No fewer than fifty MS4 structures that Industrial and High Risk Runoff Facilities discharge into will be inspected during each permit year and each will be inspected at least once during the permit cycle. In addition, Industrial and High Risk Runoff Facilities outfalls with a history of contributing significant pollutant loading to the MS4 during the previous permit year will be re-inspected the following permit year. These outfalls will be subject to the established inspection procedure, including evaluations of identified flows and maintenance and repair needs.

Each annual report shall report on implementation of the inspection schedule and include a list of the facilities and/or facility outfalls inspected during the reporting period.

During the permit year, fifty outfalls from Industrial and High-Risk Dischargers were inspected.

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Inspections of Outfalls from Industrial and High Risk Dischargers
conducted between January 1, 2022 and December 31, 2022

Industrial and High Risk Discharger	Outfall Location	Inspection Date	Determined to be Contributing Significant Pollutant Load to the MS4?
IC0871	IN000000024076	10/10/2022	No
IC0013	MH000000008957	07/25/2022	No
IC0013	MH000000008958	07/25/2022	No
IC0003	IN000000016226	05/23/2022	No
IC0003	IN000000016231	05/23/2022	No
IC0003	MN000000024775	06/03/2022	No
IC0992	MN000000018697	11/28/2022	No
IC1506	MN000000074869	11/28/2022	No
IC2052	MN000000074869	11/28/2022	No
IC0946	MN000000018697	11/28/2022	No
IC0839	MH000000002186	11/7/2022	No
IC0768	IN000000025552	10/31/2022	No
IC0833	IN000000022206	10/31/2022	No
IC0980	IN000000022208	10/31/2022	No
IC0980	IN000000022206	10/31/2022	No
IC0299	IN000000022206	10/31/2022	No
IC0768	IN000000025545	10/31/2022	No
IC0583	IN000000022206	10/31/2022	No
IC0995	IN000000017115	10/24/2022	No
IC0834	IN000000005555	10/24/2022	No
IC2096	IN000000006236	10/24/2022	No
IC0865	IN000000005555	10/24/2022	No
IC2412	IN000000005555	10/24/2022	No
IC2272	IN000000005714	10/24/2022	No
IC2096	IN000000006231	10/24/2022	No
IC0874	IN000000005714	10/24/2022	No
IC2096	IN000000006233	10/24/2022	No
IC1159	IN000000017113	10/24/2022	No

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IC2459	MN000000019775	10/11/2022	No
IC1011	MN000000018978	10/11/2022	No
IC0924	IN000000025493	10/10/2022	No
IC0891	IN000000007680	10/10/2022	No
IC0502	IN000000017836	10/10/2022	No
IC0049	IN000000002547	10/10/2022	No
IC1163	IN000000015812	10/10/2022	No
IC0561	IN000000015808	10/10/2022	No
IC0561	IN000000015812	10/10/2022	No
IC1910	IN000000025356	10/10/2022	No
IC1348	IN000000025493	10/10/2022	No
IC1215	IN000000017111	10/06/2022	No
IC0635	IN000000046849	10/05/2022	No
IC1222	IN000000045879	10/04/2022	No
IC0365	IN000000031006	09/29/2022	No
IC1118	MN000000011934	09/29/2022	No
IC0866	EN000000001782	09/29/2022	No
IC0239	IN000000025085	09/28/2022	No
IC0904	IN000000025529	09/28/2022	No
IC2539	MN000000033449	09/28/2022	No
IC0855	IN000000005663	09/28/2022	No
IC0855	IN000000005910	09/28/2022	No

Inspections of Industrial and High Risk Dischargers determined to be contributing significant pollutant load to the MS4 conducted between January 1, 2022 and December 31, 2022		
Industrial and High Risk Discharger ID#	Inspection Date	Results of Inspection
No Industrial and High Risk Dischargers were found to be contributing a significant pollutant load to the MS4. Therefore, no Industrial and High Risk Dischargers were inspected during the permit year.		

Each annual report shall include a list of referrals to the Department.

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Industrial and High Risk Dischargers referred to the Virginia Department of Environmental Quality between January 1, 2022 and December 31, 2022

Industrial and High Risk Discharger	Referral Date	Reason for Referral
No Industrial and High Risk Dischargers were referred to the Virginia Department of Environmental Quality during the permit year. VPDES Industrial Stormwater Permitted Facilities located in Henrico County are listed below.		

DMRs received from VPDES Industrial Stormwater Permitted Facilities* as of December 31, 2022

Permitted Facility	VPDES Permit #	DMR Date Received
Alfa Laval Incorporated	VAR051131	No DMRs Received
Amazon.com Services LLC -RIC4	VAR052549	No DMRs Received
AMF Bakery Systems	VAR050885	No DMRs Received
Amware Pallet Services, LLC- Symbia- Richmond	VAR052533	No DMRs Received
BFI Waste Systems of Virginia LLC- BFI Old Dominion Landfill	VAR052236	No DMRs Received
Bunge Oils Incorporated	VAR050595	No DMRs Received
CHEP Recycled Pallet Solutions LLC	VAR052375	No DMRs Received

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Coca Cola Sandston	VAR050709	No DMRs Received
CSX Transportation Inc. – Bryan Park Terminal	VAR051056	No DMRs Received
Ennis-Flint Incorporated	VAR051550	No DMRs Received
Gillies Creek Industrial Recycling	VAR052249	No DMRs Received
Henkel Corporation	VAR050574	No DMRs Received
Henrico County DPU Springfield Road Waste Management	VAR051025	No DMRs Received
Henrico County Water Reclamation Facility	VAR051633	No DMRs Received
Hilex Poly Company LLC	VAR051636	No DMRs Received
IMTT – Virginia LLC	VAR052455	No DMRs Received
Johns Manville	VAR051167	07/29/2022
Lee Hy Paving Corporation	VAR051024	No DMRs Received
Mondelez Global LLC	VAR051209	No DMRs Received
Polykon Manufacturing LLC – Seppic Inc.	VAR052405	No DMRs Received

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Premier Fixtures LLC	VAR050656	No DMRs Received
Rolling Frito Lay	VAR051607	No DMRs Received
San J International	VAR050623	No DMRs Received
S.B. Cox Recycling Center MRF	VAR051869	No DMRs Received
The East End Landfill	VAR050624	No DMRs Received
TRANSFLO Terminal Services TTSI	VAR051821	No DMRs Received
WestRock CP LLC – Laburnum	VAR052154	No DMRs Received

* The list of Permitted Facilities was obtained on February 07, 2023 from the VDEQ website.

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PART I.B.2.h

**MS4 PROGRAM IMPLEMENTATION
STORMWATER INFRASTRUCTURE MANAGEMENT**

Each annual report shall include a progress report on efforts to repair failed storm sewer outfalls.

Progress Reports on Efforts to Repair Failed Storm Sewer Outfalls			
OUTFALL ID	DATE	ACTION	RESULT
EN000000005316	4/29/2022	MAINTENANCE ACTIVITY	REPAIR
EN000000007390	5/23/2022	MAINTENANCE ACTIVITY	REMOVE DEBRIS & REGRADE
EN000000011089	7/15/2022	SCREENING INSPECTION	TRASH & SEDIMENT BUILDUP
EN000000000744	6/4/2022	MAINTENANCE ACTIVITY	REMOVE DEBRIS
EN000000000744	6/4/2022	MAINTENANCE ACTIVITY	REMOVE DEBRIS
EN000000002096	6/27/2022	MAINTENANCE ACTIVITY	MOW
EN000000001770	9/27/2022	SCREENING INSPECTION	REPAIR NEEDED
EN000000003084	10/5/2022	SCREENING INSPECTION	REPAIR NEEDED
EN000000008980	9/12/2022	MAINTENANCE ACTIVITY	CLEAR PIPE & MOW SEDIMENT / DEBRIS BUILDUP
EN000000002628	10/14/2022	SCREENING INSPECTION	SEDIMENT / DEBRIS BUILDUP
EN000000008614	10/19/2022	MAINTENANCE ACTIVITY	INSTALL RIPRAP
EN000000007455	12/19/2022	MAINTENANCE ACTIVITY	REMOVE SEDIMENT
EN000000008474	12/19/2022	MAINTENANCE ACTIVITY	INSTALL RIPRAP
EN000000008614	12/28/2022	MAINTENANCE ACTIVITY	INSTALL RIPRAP

Each annual report shall include a list of activities including inspections, maintenance, and repair of stormwater infrastructure operated by the permittee as required in Part I.B.2.h)1), including the total number of stormwater facilities operated by the permittee, the type and number of stormwater facilities inspected and maintained; the linear feet of storm sewer system owned and/or operated by the permittee, and the linear feet of storm sewer system inspected.

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MS4 Infrastructure Inspected* between January 1, 2022 and December 31, 2022		
MS4 Infrastructure Type	Unit	Inspected
Inlets	each	5,025
Manholes	each	969
Junction Boxes	each	67
End Treatments	each	1,173
Mains	linear feet	1,675,917

* includes Screening Inspections, Screening Inspection Follow-Ups, Construction Acceptance Inspections, Maintenance Evaluations, and Repair and/or Maintenance Activities

During this permit year (January 1, 2022 and December 31, 2022), 18.91% of the MS4 infrastructure was inspected.

Since the effective date of the MS4 Permit (April 1, 2015 thru December 31, 2022), 96.49% of the MS4 infrastructure has been inspected.

Inspection, Maintenance, and Repair Actions conducted on MS4 Infrastructure between January 1, 2022 and December 31, 2022			
MS4 Infrastructure Type	Inspections	Maintenance	Repair
Inlets	5,126	3,064	68
Manholes	989	60	2
Junction Boxes	67	8	1
End Treatments	1,218	21	2
Mains	17,811	1,809	35

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On-Line* County-Operated SWM Facilities Inspected and/or Maintained between January 1, 2022 and December 31, 2022			
Type	Total	Inspected	Maintained
50/10 BASIN (5)	12	7	0
50/10 UNDERGROUND (6)	14	14	0
BAYFILTER (200)	1	1	0
BAYSEPARATOR (205)	1	1	0
BIORETENTION 1 (145)	5	5	0
BIORETENTION BASIN/TRENCH (10)	11	10	0
DRY DETENTION - POND (177)	1	0	0
DRY DETENTION - UNDERGROUND (178)	10	8	1
DRY SWALE 2 (151)	2	2	0
EXTENDED DETENTION BASIN (15)	31	31	0
EXTENDED DETENTION BASIN W/A SHALLOW MARSH (16)	2	2	0
EXTENDED DETENTION POND 1 (175)	1	1	0
FILTERRA (215)	29	27	0
GRASS CHANNEL (110)	1	1	0
GRASSED SWALE (20)	11	11	0
IMBRIUM JELLYFISH (250)	1	1	0
INFILTRATION BASIN/TRENCH (25)	7	7	0
PERMEABLE PAVEMENT 1 (135)	6	5	0
RETENTION BASIN (WET POND) (30)	8	8	0
SHEETFLOW TO VEGETATED FILTER OR CONSERVED OPEN SPACE 1 (105)	7	7	0

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SHEETFLOW TO VEGETATED FILTER OR CONSERVED OPEN SPACE 2 (106)	4	3	0
STORMCEPTOR (225)	1	1	0
STORMFILTER (220)	5	4	0
STORMTREAT (230)	3	2	0
STORMWATER360 (235)	5	1	0
VEGETATED FILTER STRIP (40)	2	1	0
Total	181	161	1

* Facilities with either an Active or Accepted status as of December 31, 2022

On-Line Privately-Operated SWM Facilities Discharging to the MS4 that were Inspected and/or Maintained between January 1, 2022 and December 31, 2022			
Type	Total	Inspected	Maintained
50/10 BASIN (5)	57	13	5
50/10 UNDERGROUND (6)	80	8	1
BAYSAVER (210)	1	0	0
BIORETENTION 1 (145)	1	0	0
BIORETENTION 2 (146)	1	0	0
BIORETENTION BASIN/TRENCH (10)	22	3	1
DRY DETENTION - POND (177)	4	1	0
DRY DETENTION - UNDERGROUND (178)	12	1	0
DRY SWALE 1 (150)	1	0	0
EXTENDED DETENTION BASIN (15)	197	20	2
EXTENDED DETENTION BASIN W/A SHALLOW MARSH (16)	46	4	1
FILTERRA (215)	199	125	78
GRASSED SWALE (20)	6	0	0
IMBRIUM JELLYFISH (250)	2	0	0
INFILTRATION BASIN/TRENCH (25)	8	0	0
RETENTION BASIN (WET POND) (30)	60	16	12
SAND FILTER (35)	64	11	2

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STORMCEPTOR (225)	1	0	0
STORMTREAT (230)	4	1	0
STORMWATER360 (235)	20	3	2
VEGETATED FILTER STRIP (40)	1	0	0
VORTEXSEPARATOR (245)	2	0	0
Total	789	206	94

* Facilities with either an Active or Accepted status

County-Owned/Operated Culverts and Pipes Inventoried as of December 31, 2022 and Inspected between January 1, 2022 and December 31, 2022	
Culverts and Pipes Inventoried (miles)	Culverts and Pipes Inspected between January 1, 2022 and December 31, 2022 (miles)
1,078.4	178.0

Each annual report shall provide a summary of actions taken by the permittee to address failure of privately maintained SWM facilities owners to abide by maintenance agreements.

<p>The number of privately-maintained SWM facilities that:</p> <ul style="list-style-type: none"> 1) discharge to the MS4, 2) needed <i>required</i> maintenance and/or repair based on a previous inspection, and 3) are subject to a recorded maintenance agreement, <p>where the owner(s) failed to perform <i>required</i> maintenance and/or repair as directed by the County.</p>	110
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A second maintenance letter documenting the required punchlist of repairs is sent the owners of these facilities. Owners have 30 days from receipt of the letter to contact the County BMP inspector with a plan for repairs and a tentative schedule. The owner is to contact the inspector at the start of any maintenance work and at its completion. The facility is re-inspected after completion of work. If no contact is made or no action is taken by the owner after the second punchlist, then these items are forwarded to the County Attorney's office for legal action.

Each annual report shall include a list of activities including inspections performed and notifications of needed maintenance and repair of stormwater facilities not operated by the permittee as required by Part I.B.2.h)2).

Facility ID	Action Date	Action Type
BMP00909	1/1/2022	MAINTENANCE ACTIVITY
BMP01189	1/3/2022	OWNER INSPECTION
BMP01188	1/3/2022	OWNER INSPECTION
BMP00453	1/3/2022	OWNER INSPECTION
BMP01187	1/3/2022	OWNER INSPECTION
BMP01186	1/3/2022	OWNER INSPECTION
BMP00454	1/3/2022	OWNER INSPECTION
BMP01724	1/4/2022	EDUCATION
BMP00140	1/7/2022	MAINTENANCE ACTIVITY
BMP02124	1/11/2022	INVENTORIED
BMP02125	1/13/2022	INVENTORIED
BMP02125	1/14/2022	REVISION TO APPROVE DESIGN
BMP02127	1/14/2022	INVENTORIED
BMP02128	1/14/2022	INVENTORIED
BMP02125	1/18/2022	CONSTRUCTION INSPECTION
BMP02130	1/19/2022	INVENTORIED
BMP02131	1/20/2022	INVENTORIED
BMP01744	1/21/2022	EDUCATION
BMP01743	1/21/2022	EDUCATION
BMP01745	1/21/2022	EDUCATION

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BMP02091	1/24/2022	RECEIPT OF CERTIFICATION
BMP02132	1/24/2022	INVENTORIED
BMP02134	1/24/2022	INVENTORIED
BMP02135	1/24/2022	INVENTORIED
BMP02115	1/26/2022	CONSTRUCTION INSPECTION
BMP02064	1/31/2022	CONSTRUCTION INSPECTION
BMP02116	1/31/2022	CONSTRUCTION INSPECTION
BMP02065	1/31/2022	CONSTRUCTION INSPECTION
BMP02037	2/2/2022	RECEIPT OF CERTIFICATION
BMP02147	2/3/2022	INVENTORIED
BMP02148	2/3/2022	INVENTORIED
BMP02149	2/3/2022	INVENTORIED
BMP02154	2/4/2022	INVENTORIED
BMP02155	2/4/2022	INVENTORIED
BMP02156	2/4/2022	INVENTORIED
BMP02157	2/4/2022	INVENTORIED
BMP02158	2/4/2022	INVENTORIED
BMP00909	2/8/2022	MAINTENANCE INSPECTION
BMP02067	2/9/2022	CONSTRUCTION INSPECTION
BMP01989	2/9/2022	MAINTENANCE ACTIVITY
BMP00924	2/9/2022	EDUCATION
BMP02064	2/9/2022	CONSTRUCTION INSPECTION
BMP02037	2/10/2022	CONSTRUCTION INSPECTION
BMP01718	2/10/2022	CONSTRUCTION INSPECTION
BMP02067	2/10/2022	CONSTRUCTION INSPECTION
BMP02159	2/10/2022	INVENTORIED
BMP02067	2/11/2022	CONSTRUCTION INSPECTION
BMP00909	2/11/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP02125	2/15/2022	CONSTRUCTION INSPECTION
BMP02067	2/15/2022	CONSTRUCTION INSPECTION
BMP01925	2/16/2022	CONSTRUCTION INSPECTION
BMP02160	2/16/2022	INVENTORIED
BMP01925	2/17/2022	CONSTRUCTION INSPECTION

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BMP00909	2/18/2022	EDUCATION
BMP02125	2/22/2022	CONSTRUCTION INSPECTION
BMP01925	2/22/2022	CONSTRUCTION INSPECTION
BMP02088	2/28/2022	CONSTRUCTION INSPECTION
BMP00666	3/1/2022	MAINTENANCE ACTIVITY
BMP01892	3/1/2022	OWNER INSPECTION
BMP00663	3/1/2022	MAINTENANCE ACTIVITY
BMP02125	3/1/2022	CONSTRUCTION INSPECTION
BMP00673	3/1/2022	MAINTENANCE ACTIVITY
BMP02121	3/1/2022	CONSTRUCTION INSPECTION
BMP00669	3/1/2022	MAINTENANCE ACTIVITY
BMP00670	3/1/2022	MAINTENANCE ACTIVITY
BMP00672	3/1/2022	MAINTENANCE ACTIVITY
BMP00665	3/1/2022	MAINTENANCE ACTIVITY
BMP00667	3/1/2022	MAINTENANCE ACTIVITY
BMP00671	3/1/2022	MAINTENANCE ACTIVITY
BMP02157	3/2/2022	RECEIPT OF CERTIFICATION
BMP00665	3/2/2022	OWNER INSPECTION
BMP00667	3/2/2022	OWNER INSPECTION
BMP00669	3/2/2022	OWNER INSPECTION
BMP00672	3/2/2022	OWNER INSPECTION
BMP00663	3/2/2022	OWNER INSPECTION
BMP02088	3/2/2022	CONSTRUCTION INSPECTION
BMP00666	3/2/2022	OWNER INSPECTION
BMP00670	3/2/2022	OWNER INSPECTION
BMP00673	3/2/2022	OWNER INSPECTION
BMP00671	3/2/2022	OWNER INSPECTION
BMP02125	3/3/2022	CONSTRUCTION INSPECTION
BMP02037	3/4/2022	ACCEPTANCE INSPECTION
BMP02161	3/4/2022	CONSTRUCTION INSPECTION
BMP02088	3/4/2022	CONSTRUCTION INSPECTION
BMP02088	3/7/2022	CONSTRUCTION INSPECTION
BMP01677	3/10/2022	MAINTENANCE ACTIVITY
BMP01679	3/10/2022	MAINTENANCE ACTIVITY

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BMP01678	3/10/2022	MAINTENANCE ACTIVITY
BMP02088	3/10/2022	CONSTRUCTION INSPECTION
BMP01677	3/11/2022	OWNER INSPECTION
BMP01679	3/11/2022	OWNER INSPECTION
BMP01678	3/11/2022	OWNER INSPECTION
BMP01236	3/11/2022	MAINTENANCE ACTIVITY
BMP00722	3/14/2022	OWNER INSPECTION
BMP02157	3/14/2022	CONSTRUCTION INSPECTION
BMP02125	3/14/2022	CONSTRUCTION INSPECTION
BMP01236	3/14/2022	OWNER INSPECTION
BMP00691	3/15/2022	MAINTENANCE INSPECTION
BMP00692	3/15/2022	MAINTENANCE INSPECTION
BMP00697	3/15/2022	MAINTENANCE INSPECTION
BMP00970	3/15/2022	MAINTENANCE INSPECTION
BMP00690	3/15/2022	MAINTENANCE INSPECTION
BMP00694	3/15/2022	MAINTENANCE INSPECTION
BMP00895	3/15/2022	MAINTENANCE INSPECTION
BMP00894	3/15/2022	MAINTENANCE INSPECTION
BMP01044	3/15/2022	MAINTENANCE INSPECTION
BMP00689	3/15/2022	MAINTENANCE INSPECTION
BMP01628	3/15/2022	MAINTENANCE INSPECTION
BMP00896	3/15/2022	MAINTENANCE INSPECTION
BMP00693	3/15/2022	MAINTENANCE INSPECTION
BMP00696	3/15/2022	MAINTENANCE INSPECTION
BMP00893	3/15/2022	MAINTENANCE INSPECTION
BMP02161	3/15/2022	CONSTRUCTION INSPECTION
BMP00687	3/15/2022	MAINTENANCE INSPECTION
BMP00688	3/15/2022	MAINTENANCE INSPECTION
BMP00406	3/15/2022	MAINTENANCE INSPECTION
BMP00695	3/15/2022	MAINTENANCE INSPECTION
BMP00072	3/15/2022	MAINTENANCE INSPECTION
BMP02161	3/15/2022	INVENTORIED
BMP00909	3/17/2022	MAINTENANCE ACTIVITY
BMP02162	3/17/2022	INVENTORIED

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BMP02163	3/17/2022	INVENTORIED
BMP01109	3/18/2022	MAINTENANCE INSPECTION
BMP01101	3/18/2022	MAINTENANCE INSPECTION
BMP01102	3/18/2022	MAINTENANCE INSPECTION
BMP01105	3/18/2022	MAINTENANCE INSPECTION
BMP01103	3/18/2022	MAINTENANCE INSPECTION
BMP00272	3/18/2022	MAINTENANCE INSPECTION
BMP01116	3/18/2022	MAINTENANCE INSPECTION
BMP01181	3/18/2022	MAINTENANCE INSPECTION
BMP02108	3/18/2022	CONSTRUCTION INSPECTION
BMP00271	3/18/2022	MAINTENANCE INSPECTION
BMP00273	3/18/2022	MAINTENANCE INSPECTION
BMP01092	3/18/2022	MAINTENANCE INSPECTION
BMP00266	3/18/2022	MAINTENANCE INSPECTION
BMP01104	3/18/2022	MAINTENANCE INSPECTION
BMP01121	3/18/2022	MAINTENANCE INSPECTION
BMP01097	3/18/2022	MAINTENANCE INSPECTION
BMP01108	3/18/2022	MAINTENANCE INSPECTION
BMP01117	3/18/2022	MAINTENANCE INSPECTION
BMP01713	3/18/2022	MAINTENANCE INSPECTION
BMP01096	3/18/2022	MAINTENANCE INSPECTION
BMP01120	3/18/2022	MAINTENANCE INSPECTION
BMP01094	3/18/2022	MAINTENANCE INSPECTION
BMP01098	3/18/2022	MAINTENANCE INSPECTION
BMP01111	3/18/2022	MAINTENANCE INSPECTION
BMP01112	3/18/2022	MAINTENANCE INSPECTION
BMP01115	3/18/2022	MAINTENANCE INSPECTION
BMP01099	3/18/2022	MAINTENANCE INSPECTION
BMP01122	3/18/2022	MAINTENANCE INSPECTION
BMP01095	3/18/2022	MAINTENANCE INSPECTION
BMP01107	3/18/2022	MAINTENANCE INSPECTION
BMP01093	3/18/2022	MAINTENANCE INSPECTION
BMP01119	3/18/2022	MAINTENANCE INSPECTION
BMP01106	3/18/2022	MAINTENANCE INSPECTION

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BMP01110	3/18/2022	MAINTENANCE INSPECTION
BMP01091	3/18/2022	MAINTENANCE INSPECTION
BMP01118	3/18/2022	MAINTENANCE INSPECTION
BMP01113	3/18/2022	MAINTENANCE INSPECTION
BMP01114	3/18/2022	MAINTENANCE INSPECTION
BMP01100	3/18/2022	MAINTENANCE INSPECTION
BMP02164	3/18/2022	INVENTORIED
BMP02107	3/21/2022	CONSTRUCTION INSPECTION
BMP02165	3/21/2022	INVENTORIED
BMP02108	3/23/2022	CONSTRUCTION INSPECTION
BMP02107	3/23/2022	CONSTRUCTION INSPECTION
BMP01718	3/23/2022	CONSTRUCTION INSPECTION
BMP02161	3/24/2022	CONSTRUCTION INSPECTION
BMP02084	3/28/2022	RECEIPT OF CERTIFICATION
BMP02108	3/28/2022	CONSTRUCTION INSPECTION
BMP02107	3/28/2022	CONSTRUCTION INSPECTION
BMP02108	3/30/2022	CONSTRUCTION INSPECTION
BMP02064	4/4/2022	CONSTRUCTION INSPECTION
BMP02166	4/4/2022	CONSTRUCTION INSPECTION
BMP00085	4/6/2022	MAINTENANCE INSPECTION
BMP02107	4/6/2022	CONSTRUCTION INSPECTION
BMP02166	4/6/2022	CONSTRUCTION INSPECTION
BMP02107	4/8/2022	CONSTRUCTION INSPECTION
BMP02131	4/8/2022	CONSTRUCTION INSPECTION
BMP02166	4/8/2022	CONSTRUCTION INSPECTION
BMP02108	4/8/2022	CONSTRUCTION INSPECTION
BMP02121	4/8/2022	CONSTRUCTION INSPECTION
BMP02166	4/8/2022	INVENTORIED
BMP02084	4/11/2022	ACCEPTANCE INSPECTION
BMP02167	4/11/2022	INVENTORIED
BMP01206	4/12/2022	MAINTENANCE ACTIVITY
BMP01202	4/12/2022	MAINTENANCE ACTIVITY
BMP01200	4/12/2022	MAINTENANCE ACTIVITY
BMP01670	4/12/2022	REVISION TO APPROVED

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		DESIGN
BMP01203	4/12/2022	MAINTENANCE ACTIVITY
BMP01201	4/12/2022	MAINTENANCE ACTIVITY
BMP02166	4/13/2022	CONSTRUCTION INSPECTION
BMP01205	4/13/2022	OWNER INSPECTION
BMP01203	4/13/2022	OWNER INSPECTION
BMP01204	4/13/2022	MAINTENANCE ACTIVITY
BMP01202	4/13/2022	OWNER INSPECTION
BMP01207	4/13/2022	OWNER INSPECTION
BMP01206	4/13/2022	OWNER INSPECTION
BMP01200	4/13/2022	OWNER INSPECTION
BMP01207	4/13/2022	MAINTENANCE ACTIVITY
BMP01205	4/13/2022	MAINTENANCE ACTIVITY
BMP02108	4/13/2022	CONSTRUCTION INSPECTION
BMP01204	4/13/2022	OWNER INSPECTION
BMP01201	4/13/2022	OWNER INSPECTION
BMP02169	4/14/2022	CONSTRUCTION INSPECTION
BMP02170	4/14/2022	CONSTRUCTION INSPECTION
BMP02161	4/20/2022	CONSTRUCTION INSPECTION
BMP02041	4/21/2022	RECEIPT OF CERTIFICATION
BMP02169	4/21/2022	INVENTORIED
BMP02170	4/21/2022	INVENTORIED
BMP01670	4/22/2022	CONSTRUCTION INSPECTION
BMP02131	4/22/2022	CONSTRUCTION INSPECTION
BMP02103	4/26/2022	RECEIPT OF CERTIFICATION
BMP02088	4/29/2022	RECEIPT OF CERTIFICATION
BMP01779	5/2/2022	MAINTENANCE ACTIVITY
BMP01670	5/2/2022	CONSTRUCTION INSPECTION
BMP01779	5/3/2022	OWNER INSPECTION
BMP02174	5/3/2022	INVENTORIED
BMP02161	5/6/2022	RECEIPT OF CERTIFICATION
BMP02161	5/9/2022	RECEIPT OF CERTIFICATION
BMP02161	5/11/2022	CONSTRUCTION INSPECTION
BMP00909	5/16/2022	MAINTENANCE ACTIVITY

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BMP02103	5/17/2022	ACCEPTANCE INSPECTION
BMP01925	5/19/2022	CONSTRUCTION INSPECTION
BMP02175	5/19/2022	INVENTORIED
BMP02176	5/19/2022	INVENTORIED
BMP02177	5/19/2022	INVENTORIED
BMP02178	5/19/2022	INVENTORIED
BMP02179	5/19/2022	INVENTORIED
BMP02180	5/19/2022	INVENTORIED
BMP02072	5/20/2022	RECEIPT OF CERTIFICATION
BMP02181	5/23/2022	INVENTORIED
BMP01544	5/26/2022	CONSTRUCTION INSPECTION
BMP01738	6/1/2022	EDUCATION
BMP02149	6/3/2022	CONSTRUCTION INSPECTION
BMP02127	6/3/2022	CONSTRUCTION INSPECTION
BMP01852	6/3/2022	ACCEPTANCE INSPECTION
BMP01865	6/3/2022	ACCEPTANCE INSPECTION
BMP02164	6/3/2022	CONSTRUCTION INSPECTION
BMP01738	6/6/2022	CONSTRUCTION INSPECTION
BMP02127	6/6/2022	CONSTRUCTION INSPECTION
BMP01277	6/6/2022	MAINTENANCE ACTIVITY
BMP02149	6/6/2022	CONSTRUCTION INSPECTION
BMP02164	6/6/2022	CONSTRUCTION INSPECTION
BMP01278	6/6/2022	MAINTENANCE ACTIVITY
BMP01279	6/6/2022	MAINTENANCE ACTIVITY
BMP00575	6/7/2022	OWNER INSPECTION
BMP00576	6/7/2022	MAINTENANCE ACTIVITY
BMP00576	6/7/2022	OWNER INSPECTION
BMP00575	6/7/2022	MAINTENANCE ACTIVITY
BMP01279	6/7/2022	OWNER INSPECTION
BMP01278	6/7/2022	OWNER INSPECTION
BMP01277	6/7/2022	OWNER INSPECTION
BMP01738	6/8/2022	CONSTRUCTION INSPECTION
BMP02149	6/8/2022	CONSTRUCTION INSPECTION
BMP02072	6/8/2022	ACCEPTANCE INSPECTION

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BMP02149	6/8/2022	EDUCATION
BMP01738	6/9/2022	CONSTRUCTION INSPECTION
BMP02149	6/9/2022	CONSTRUCTION INSPECTION
BMP02122	6/13/2022	CONSTRUCTION INSPECTION
BMP02123	6/13/2022	CONSTRUCTION INSPECTION
BMP00393	6/13/2022	CONSTRUCTION INSPECTION
BMP02041	6/13/2022	EDUCATION
BMP02149	6/13/2022	CONSTRUCTION INSPECTION
BMP01738	6/13/2022	CONSTRUCTION INSPECTION
BMP02149	6/13/2022	EDUCATION
BMP01110	6/14/2022	MAINTENANCE ACTIVITY
BMP01096	6/14/2022	MAINTENANCE ACTIVITY
BMP01099	6/14/2022	MAINTENANCE ACTIVITY
BMP01100	6/14/2022	MAINTENANCE ACTIVITY
BMP01107	6/14/2022	MAINTENANCE ACTIVITY
BMP01115	6/14/2022	MAINTENANCE ACTIVITY
BMP01186	6/14/2022	MAINTENANCE ACTIVITY
BMP01188	6/14/2022	MAINTENANCE ACTIVITY
BMP01102	6/14/2022	MAINTENANCE ACTIVITY
BMP01105	6/14/2022	MAINTENANCE ACTIVITY
BMP01111	6/14/2022	MAINTENANCE ACTIVITY
BMP01118	6/14/2022	MAINTENANCE ACTIVITY
BMP01114	6/14/2022	MAINTENANCE ACTIVITY
BMP01098	6/14/2022	MAINTENANCE ACTIVITY
BMP01108	6/14/2022	MAINTENANCE ACTIVITY
BMP01109	6/14/2022	MAINTENANCE ACTIVITY
BMP01116	6/14/2022	MAINTENANCE ACTIVITY
BMP01117	6/14/2022	MAINTENANCE ACTIVITY
BMP01104	6/14/2022	MAINTENANCE ACTIVITY
BMP01113	6/14/2022	MAINTENANCE ACTIVITY
BMP01119	6/14/2022	MAINTENANCE ACTIVITY
BMP01091	6/14/2022	MAINTENANCE ACTIVITY
BMP01103	6/14/2022	MAINTENANCE ACTIVITY
BMP01097	6/14/2022	MAINTENANCE ACTIVITY

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BMP01106	6/14/2022	MAINTENANCE ACTIVITY
BMP01101	6/14/2022	MAINTENANCE ACTIVITY
BMP01112	6/14/2022	MAINTENANCE ACTIVITY
BMP01094	6/14/2022	MAINTENANCE ACTIVITY
BMP01187	6/14/2022	MAINTENANCE ACTIVITY
BMP01092	6/14/2022	MAINTENANCE ACTIVITY
BMP01093	6/14/2022	MAINTENANCE ACTIVITY
BMP01095	6/14/2022	MAINTENANCE ACTIVITY
BMP01189	6/14/2022	MAINTENANCE ACTIVITY
BMP01186	6/15/2022	OWNER INSPECTION
BMP01189	6/15/2022	OWNER INSPECTION
BMP01188	6/15/2022	OWNER INSPECTION
BMP01187	6/15/2022	OWNER INSPECTION
BMP02057	6/16/2022	RECEIPT OF CERTIFICATION
BMP01544	6/16/2022	RECEIPT OF CERTIFICATION
BMP00288	6/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01670	7/5/2022	CONSTRUCTION INSPECTION
BMP02169	7/5/2022	RECEIPT OF CERTIFICATION
BMP02184	7/5/2022	INVENTORIED
BMP02170	7/6/2022	RECEIPT OF CERTIFICATION
BMP00924	7/7/2022	EDUCATION
BMP02123	7/11/2022	CONSTRUCTION INSPECTION
BMP00406	7/11/2022	MAINTENANCE ACTIVITY
BMP00393	7/11/2022	CONSTRUCTION INSPECTION
BMP02122	7/11/2022	CONSTRUCTION INSPECTION
BMP00390	7/14/2022	MAINTENANCE INSPECTION
BMP02185	7/18/2022	INVENTORIED
BMP00468	7/20/2022	RETIREMENT
BMP00437	7/20/2022	MAINTENANCE INSPECTION
BMP00470	7/20/2022	MAINTENANCE INSPECTION
BMP00838	7/20/2022	MAINTENANCE INSPECTION
BMP00435	7/20/2022	MAINTENANCE INSPECTION
BMP01010	7/20/2022	MAINTENANCE INSPECTION

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BMP01012	7/20/2022	MAINTENANCE INSPECTION
BMP00469	7/20/2022	MAINTENANCE INSPECTION
BMP00443	7/20/2022	MAINTENANCE INSPECTION
BMP00473	7/20/2022	MAINTENANCE INSPECTION
BMP00440	7/20/2022	MAINTENANCE INSPECTION
BMP00462	7/20/2022	MAINTENANCE INSPECTION
BMP01243	7/20/2022	MAINTENANCE INSPECTION
BMP01014	7/20/2022	MAINTENANCE INSPECTION
BMP00441	7/20/2022	MAINTENANCE INSPECTION
BMP00438	7/20/2022	MAINTENANCE INSPECTION
BMP00357	7/20/2022	MAINTENANCE INSPECTION
BMP01013	7/20/2022	MAINTENANCE INSPECTION
BMP00436	7/20/2022	MAINTENANCE INSPECTION
BMP00467	7/20/2022	RETIREMENT
BMP00434	7/20/2022	MAINTENANCE INSPECTION
BMP01011	7/20/2022	MAINTENANCE INSPECTION
BMP01242	7/20/2022	MAINTENANCE INSPECTION
BMP00439	7/20/2022	MAINTENANCE INSPECTION
BMP00362	7/20/2022	MAINTENANCE INSPECTION
BMP00213	7/22/2022	EDUCATION
BMP00895	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01093	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00893	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00896	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01092	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00894	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01303	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00970	7/22/2022	PUNCHLIST DEVELOPMENT AND

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		DISTRIBUTION
BMP01097	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01109	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01118	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01119	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01713	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01098	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01113	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01099	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01106	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01108	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01181	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01101	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01091	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01103	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01115	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01116	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01096	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00406	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION

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BMP01117	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00266	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01104	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01112	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01628	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01095	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01110	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00406	7/22/2022	OWNER INSPECTION
BMP00281	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01100	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01105	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01114	7/22/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00462	7/25/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP02186	7/26/2022	INVENTORIED
BMP02187	7/26/2022	INVENTORIED
BMP00552	7/28/2022	MAINTENANCE ACTIVITY
BMP00552	7/28/2022	MAINTENANCE INSPECTION
BMP00895	8/1/2022	EDUCATION
BMP00696	8/1/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00666	8/1/2022	MAINTENANCE ACTIVITY
BMP00692	8/1/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00694	8/1/2022	PUNCHLIST DEVELOPMENT AND

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		DISTRIBUTION
BMP00894	8/1/2022	EDUCATION
BMP00671	8/1/2022	MAINTENANCE ACTIVITY
BMP00665	8/1/2022	MAINTENANCE ACTIVITY
BMP00690	8/1/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00893	8/1/2022	EDUCATION
BMP00663	8/1/2022	MAINTENANCE ACTIVITY
BMP00693	8/1/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00695	8/1/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01044	8/1/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00689	8/1/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00670	8/1/2022	MAINTENANCE ACTIVITY
BMP00669	8/1/2022	MAINTENANCE ACTIVITY
BMP00691	8/1/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00697	8/1/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00687	8/1/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00896	8/1/2022	EDUCATION
BMP00688	8/1/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00072	8/1/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00673	8/1/2022	MAINTENANCE ACTIVITY
BMP00667	8/1/2022	MAINTENANCE ACTIVITY
BMP00672	8/1/2022	MAINTENANCE ACTIVITY
BMP01259	8/2/2022	MAINTENANCE ACTIVITY
BMP01262	8/2/2022	MAINTENANCE ACTIVITY
BMP01258	8/2/2022	MAINTENANCE ACTIVITY
BMP01260	8/2/2022	MAINTENANCE ACTIVITY

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BMP01236	8/2/2022	MAINTENANCE ACTIVITY
BMP02148	8/2/2022	CONSTRUCTION INSPECTION
BMP01261	8/2/2022	MAINTENANCE ACTIVITY
BMP00671	8/3/2022	OWNER INSPECTION
BMP00666	8/3/2022	OWNER INSPECTION
BMP00670	8/3/2022	OWNER INSPECTION
BMP00672	8/3/2022	OWNER INSPECTION
BMP00665	8/3/2022	OWNER INSPECTION
BMP00669	8/3/2022	OWNER INSPECTION
BMP01261	8/3/2022	OWNER INSPECTION
BMP00673	8/3/2022	OWNER INSPECTION
BMP01260	8/3/2022	OWNER INSPECTION
BMP00663	8/3/2022	OWNER INSPECTION
BMP01262	8/3/2022	OWNER INSPECTION
BMP01258	8/3/2022	OWNER INSPECTION
BMP01259	8/3/2022	OWNER INSPECTION
BMP01236	8/3/2022	OWNER INSPECTION
BMP00667	8/3/2022	OWNER INSPECTION
BMP00970	8/4/2022	EDUCATION
BMP02148	8/9/2022	CONSTRUCTION INSPECTION
BMP01044	8/9/2022	EDUCATION
BMP01730	8/9/2022	CONSTRUCTION INSPECTION
BMP01730	8/9/2022	REVISION TO APPROVED DESIGN
BMP01044	8/23/2022	EDUCATION
BMP01303	8/23/2022	EDUCATION
BMP01628	8/23/2022	EDUCATION
BMP01014	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00440	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00439	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00443	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION

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BMP01013	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01242	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01012	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00470	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00438	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00434	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01243	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00436	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00357	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00469	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01010	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00473	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00838	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00362	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00441	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01011	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP02064	8/24/2022	CONSTRUCTION INSPECTION
BMP00435	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00437	8/24/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION

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BMP00082	8/26/2022	MAINTENANCE INSPECTION
BMP00970	8/29/2022	EDUCATION
BMP01095	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00266	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00082	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01118	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00281	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01181	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01093	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01097	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01112	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01120	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01117	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01104	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01108	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01101	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01102	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01121	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00272	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01713	8/30/2022	PUNCHLIST DEVELOPMENT AND

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BMP01099	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01103	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01106	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00273	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01094	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01116	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01119	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01105	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01109	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01110	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01113	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01122	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01100	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01114	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01092	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01096	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01098	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01107	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION

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BMP01115	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01111	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00271	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01091	8/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP02125	9/1/2022	RECEIPT OF CERTIFICATION
BMP01877	9/1/2022	RECEIPT OF CERTIFICATION
BMP00462	9/1/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00952	9/1/2022	MAINTENANCE INSPECTION
BMP00952	9/6/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00952	9/7/2022	MAINTENANCE ACTIVITY
BMP01543	9/8/2022	ACCEPTANCE INSPECTION
BMP01544	9/8/2022	ACCEPTANCE INSPECTION
BMP00524	9/13/2022	MAINTENANCE INSPECTION
BMP01809	9/13/2022	MAINTENANCE INSPECTION
BMP01078	9/13/2022	MAINTENANCE INSPECTION
BMP00538	9/13/2022	MAINTENANCE INSPECTION
BMP00038	9/13/2022	MAINTENANCE INSPECTION
BMP00545	9/13/2022	MAINTENANCE INSPECTION
BMP01330	9/13/2022	MAINTENANCE INSPECTION
BMP01331	9/13/2022	MAINTENANCE INSPECTION
BMP00537	9/13/2022	MAINTENANCE INSPECTION
BMP00962	9/13/2022	MAINTENANCE INSPECTION
BMP00963	9/13/2022	MAINTENANCE INSPECTION
BMP01327	9/13/2022	MAINTENANCE INSPECTION
BMP00039	9/13/2022	MAINTENANCE INSPECTION
BMP01839	9/13/2022	MAINTENANCE INSPECTION
BMP00462	9/13/2022	EDUCATION
BMP01329	9/13/2022	MAINTENANCE INSPECTION
BMP01458	9/13/2022	MAINTENANCE INSPECTION

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BMP01459	9/13/2022	MAINTENANCE INSPECTION
BMP01781	9/13/2022	MAINTENANCE INSPECTION
BMP00539	9/13/2022	MAINTENANCE INSPECTION
BMP00027	9/13/2022	MAINTENANCE INSPECTION
BMP01328	9/13/2022	MAINTENANCE INSPECTION
BMP00172	9/13/2022	MAINTENANCE INSPECTION
BMP01543	9/15/2022	ACCEPTANCE INSPECTION
BMP01544	9/15/2022	MAINTENANCE ACTIVITY
BMP01542	9/15/2022	MAINTENANCE ACTIVITY
BMP01382	9/16/2022	MAINTENANCE ACTIVITY
BMP01387	9/16/2022	MAINTENANCE ACTIVITY
BMP01379	9/16/2022	MAINTENANCE ACTIVITY
BMP01386	9/16/2022	MAINTENANCE ACTIVITY
BMP01383	9/16/2022	MAINTENANCE ACTIVITY
BMP01390	9/16/2022	MAINTENANCE ACTIVITY
BMP01389	9/16/2022	MAINTENANCE ACTIVITY
BMP01380	9/16/2022	MAINTENANCE ACTIVITY
BMP01388	9/16/2022	MAINTENANCE ACTIVITY
BMP01391	9/16/2022	MAINTENANCE ACTIVITY
BMP01385	9/16/2022	MAINTENANCE ACTIVITY
BMP01384	9/16/2022	MAINTENANCE ACTIVITY
BMP00357	9/19/2022	MAINTENANCE ACTIVITY
BMP01382	9/20/2022	OWNER INSPECTION
BMP01386	9/20/2022	OWNER INSPECTION
BMP01389	9/20/2022	OWNER INSPECTION
BMP01388	9/20/2022	OWNER INSPECTION
BMP01379	9/20/2022	OWNER INSPECTION
BMP01385	9/20/2022	OWNER INSPECTION
BMP01390	9/20/2022	OWNER INSPECTION
BMP01387	9/20/2022	OWNER INSPECTION
BMP01383	9/20/2022	OWNER INSPECTION
BMP01391	9/20/2022	OWNER INSPECTION
BMP01380	9/20/2022	OWNER INSPECTION
BMP01384	9/20/2022	OWNER INSPECTION

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BMP01925	9/22/2022	RECEIPT OF CERTIFICATION
BMP02100	9/22/2022	RECEIPT OF CERTIFICATION
BMP02100	9/22/2022	ACCEPTANCE INSPECTION
BMP01924	9/22/2022	ACCEPTANCE INSPECTION
BMP02064	9/23/2022	CONSTRUCTION INSPECTION
BMP01730	9/27/2022	MAINTENANCE INSPECTION
BMP00204	9/27/2022	MAINTENANCE INSPECTION
BMP00206	9/27/2022	MAINTENANCE INSPECTION
BMP02119	9/28/2022	RECEIPT OF CERTIFICATION
BMP01796	9/29/2022	MAINTENANCE INSPECTION
BMP00895	10/1/2022	MAINTENANCE ACTIVITY
BMP00896	10/1/2022	MAINTENANCE ACTIVITY
BMP00893	10/1/2022	MAINTENANCE ACTIVITY
BMP00894	10/1/2022	MAINTENANCE ACTIVITY
BMP02147	10/3/2022	RECEIPT OF CERTIFICATION
BMP01678	10/3/2022	MAINTENANCE ACTIVITY
BMP02149	10/3/2022	RECEIPT OF CERTIFICATION
BMP01677	10/3/2022	MAINTENANCE ACTIVITY
BMP01679	10/3/2022	MAINTENANCE ACTIVITY
BMP02148	10/3/2022	RECEIPT OF CERTIFICATION
BMP01327	10/5/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01839	10/5/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01458	10/5/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00443	10/5/2022	EDUCATION
BMP00439	10/5/2022	MAINTENANCE ACTIVITY
BMP00441	10/5/2022	MAINTENANCE ACTIVITY
BMP00435	10/5/2022	MAINTENANCE ACTIVITY
BMP00436	10/5/2022	MAINTENANCE ACTIVITY
BMP00438	10/5/2022	MAINTENANCE ACTIVITY
BMP01781	10/5/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION

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BMP00437	10/5/2022	MAINTENANCE ACTIVITY
BMP00434	10/5/2022	MAINTENANCE ACTIVITY
BMP01328	10/5/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00440	10/5/2022	MAINTENANCE ACTIVITY
BMP01459	10/5/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01331	10/5/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01330	10/5/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00462	10/5/2022	EDUCATION
BMP00462	10/5/2022	MAINTENANCE ACTIVITY
BMP01329	10/5/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01809	10/5/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01730	10/5/2022	OWNER INSPECTION
BMP01730	10/6/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00523	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01010	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01012	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01013	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00524	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01011	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00691	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00687	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION

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BMP00693	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00696	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00963	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01078	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00539	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00082	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00962	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00537	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00694	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00688	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00689	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00692	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00695	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00538	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01014	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00690	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00545	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00697	10/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP02057	10/10/2022	ACCEPTANCE INSPECTION

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BMP01398	10/11/2022	MAINTENANCE INSPECTION
BMP01538	10/11/2022	MAINTENANCE INSPECTION
BMP00074	10/11/2022	MAINTENANCE INSPECTION
BMP00298	10/12/2022	MAINTENANCE INSPECTION
BMP00012	10/13/2022	MAINTENANCE INSPECTION
BMP00013	10/13/2022	MAINTENANCE INSPECTION
BMP00298	10/13/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00203	10/13/2022	MAINTENANCE INSPECTION
BMP01796	10/13/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00039	10/13/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01398	10/13/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00016	10/13/2022	MAINTENANCE INSPECTION
BMP00038	10/13/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00203	10/13/2022	EDUCATION
BMP00172	10/13/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00277	10/14/2022	MAINTENANCE INSPECTION
BMP00276	10/14/2022	MAINTENANCE INSPECTION
BMP00639	10/17/2022	MAINTENANCE INSPECTION
BMP00638	10/17/2022	MAINTENANCE INSPECTION
BMP00496	10/17/2022	MAINTENANCE INSPECTION
BMP00325	10/17/2022	MAINTENANCE INSPECTION
BMP01273	10/17/2022	MAINTENANCE INSPECTION
BMP00494	10/17/2022	MAINTENANCE INSPECTION
BMP00498	10/17/2022	MAINTENANCE INSPECTION
BMP00721	10/17/2022	MAINTENANCE INSPECTION
BMP00493	10/17/2022	MAINTENANCE INSPECTION
BMP00719	10/17/2022	MAINTENANCE INSPECTION
BMP00579	10/17/2022	MAINTENANCE INSPECTION
BMP01073	10/17/2022	MAINTENANCE INSPECTION

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BMP01816	10/17/2022	MAINTENANCE INSPECTION
BMP00477	10/17/2022	MAINTENANCE INSPECTION
BMP00495	10/17/2022	MAINTENANCE INSPECTION
BMP01272	10/17/2022	MAINTENANCE INSPECTION
BMP01885	10/17/2022	MAINTENANCE INSPECTION
BMP00926	10/17/2022	MAINTENANCE INSPECTION
BMP01548	10/17/2022	MAINTENANCE INSPECTION
BMP00497	10/17/2022	MAINTENANCE INSPECTION
BMP00907	10/17/2022	MAINTENANCE INSPECTION
BMP01815	10/17/2022	MAINTENANCE INSPECTION
BMP00802	10/20/2022	MAINTENANCE INSPECTION
BMP00068	10/20/2022	MAINTENANCE INSPECTION
BMP00803	10/20/2022	MAINTENANCE INSPECTION
BMP00079	10/21/2022	MAINTENANCE INSPECTION
BMP00080	10/21/2022	MAINTENANCE INSPECTION
BMP01718	10/24/2022	ACCEPTANCE INSPECTION
BMP01538	10/25/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00012	10/25/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00277	10/25/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00016	10/25/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00276	10/25/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00014	10/28/2022	MAINTENANCE INSPECTION
BMP00803	10/31/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00082	10/31/2022	EDUCATION
BMP00802	10/31/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP02122	11/1/2022	RECEIPT OF CERTIFICATION
BMP02197	11/1/2022	INVENTORIED
BMP02105	11/2/2022	REVISION TO APPROVED

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		DESIGN
BMP01718	11/3/2022	EDUCATION
BMP02107	11/3/2022	REVISION TO APPROVED DESIGN
BMP02106	11/3/2022	REVISION TO APPROVED DESIGN
BMP02123	11/8/2022	RECEIPT OF CERTIFICATION
BMP00393	11/8/2022	RECEIPT OF CERTIFICATION
BMP00592	11/9/2022	MAINTENANCE INSPECTION
BMP00855	11/9/2022	MAINTENANCE INSPECTION
BMP00353	11/10/2022	OWNER INSPECTION
BMP01367	11/10/2022	OWNER INSPECTION
BMP00592	11/10/2022	OWNER INSPECTION
BMP00855	11/10/2022	OWNER INSPECTION
BMP00046	11/10/2022	OWNER INSPECTION
BMP00658	11/10/2022	OWNER INSPECTION
BMP00109	11/10/2022	OWNER INSPECTION
BMP00110	11/10/2022	OWNER INSPECTION
BMP00178	11/10/2022	OWNER INSPECTION
BMP02202	11/18/2022	INVENTORIED
BMP02203	11/18/2022	INVENTORIED
BMP02205	11/18/2022	INVENTORIED
BMP00087	11/22/2022	MAINTENANCE INSPECTION
BMP00310	11/22/2022	MAINTENANCE INSPECTION
BMP00316	11/22/2022	MAINTENANCE INSPECTION
BMP01191	11/22/2022	MAINTENANCE INSPECTION
BMP01881	11/22/2022	EDUCATION
BMP00308	11/22/2022	MAINTENANCE INSPECTION
BMP01270	11/22/2022	MAINTENANCE INSPECTION
BMP00313	11/22/2022	MAINTENANCE INSPECTION
BMP00314	11/22/2022	MAINTENANCE INSPECTION
BMP00318	11/22/2022	MAINTENANCE INSPECTION
BMP00927	11/22/2022	MAINTENANCE INSPECTION
BMP01149	11/22/2022	MAINTENANCE INSPECTION

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BMP00309	11/22/2022	MAINTENANCE INSPECTION
BMP00315	11/22/2022	MAINTENANCE INSPECTION
BMP00963	11/22/2022	MAINTENANCE ACTIVITY
BMP00312	11/22/2022	MAINTENANCE INSPECTION
BMP00905	11/22/2022	MAINTENANCE INSPECTION
BMP01185	11/22/2022	MAINTENANCE INSPECTION
BMP00962	11/22/2022	MAINTENANCE ACTIVITY
BMP01309	11/22/2022	MAINTENANCE INSPECTION
BMP00317	11/22/2022	MAINTENANCE INSPECTION
BMP00908	11/22/2022	MAINTENANCE INSPECTION
BMP01287	11/22/2022	MAINTENANCE INSPECTION
BMP00462	11/22/2022	MAINTENANCE INSPECTION
BMP00311	11/22/2022	MAINTENANCE INSPECTION
BMP00337	11/22/2022	MAINTENANCE INSPECTION
BMP00463	11/22/2022	MAINTENANCE INSPECTION
BMP01192	11/22/2022	MAINTENANCE INSPECTION
BMP01670	11/22/2022	RECEIPT OF CERTIFICATION
BMP02206	11/22/2022	INVENTORIED
BMP00081	11/23/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00068	11/23/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00079	11/23/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00477	11/23/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00080	11/23/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00014	11/23/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00074	11/23/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00325	11/23/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01628	11/28/2022	MAINTENANCE ACTIVITY

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BMP01303	11/28/2022	MAINTENANCE ACTIVITY
BMP01120	11/29/2022	MAINTENANCE ACTIVITY
BMP01121	11/29/2022	MAINTENANCE ACTIVITY
BMP01122	11/29/2022	MAINTENANCE ACTIVITY
BMP00281	11/29/2022	MAINTENANCE ACTIVITY
BMP00639	12/1/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00579	12/1/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00638	12/1/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00719	12/1/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01718	12/2/2022	RECEIPT OF CERTIFICATION
BMP01628	12/2/2022	SCREENING INSPECTION
BMP01303	12/2/2022	SCREENING INSPECTION
BMP02042	12/2/2022	RECEIPT OF CERTIFICATION
BMP00926	12/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00907	12/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00721	12/7/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP02042	12/13/2022	ACCEPTANCE INSPECTION
BMP00498	12/15/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00493	12/15/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00494	12/15/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01885	12/15/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00495	12/15/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00497	12/15/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION

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BMP00496	12/15/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01073	12/15/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01670	12/16/2022	CONSTRUCTION INSPECTION
BMP01779	12/20/2022	OWNER INSPECTION
BMP02202	12/22/2022	ACCEPTANCE INSPECTION
BMP01875	12/22/2022	OWNER INSPECTION
BMP01876	12/22/2022	OWNER INSPECTION
BMP02040	12/22/2022	OWNER INSPECTION
BMP01548	12/27/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01815	12/27/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01816	12/27/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01273	12/27/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01272	12/27/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01738	12/28/2022	CONSTRUCTION INSPECTION
BMP01044	12/28/2022	EDUCATION
BMP01044	12/28/2022	MAINTENANCE ACTIVITY
BMP00087	12/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00337	12/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00317	12/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00318	12/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00905	12/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00308	12/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00312	12/30/2022	PUNCHLIST DEVELOPMENT AND

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		DISTRIBUTION
BMP00316	12/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00313	12/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00908	12/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00314	12/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00309	12/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00311	12/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP02181	12/30/2022	RECEIPT OF CERTIFICATION
BMP00927	12/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00360	12/30/2022	MAINTENANCE INSPECTION
BMP00315	12/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00310	12/30/2022	PUNCHLIST DEVELOPMENT AND DISTRIBUTION

The MS4 service area map including outfalls and information included in Part I.B.2.h)3) shall be submitted no later than 18 months after the effective date of this state permit. The information shall be submitted as an electronic file in one of the following formats shapefile, geodatabase, .xls, .xlsx, .csv, .mdx, .dbf, delimited text, XML, or other file approved by the Department.

The requested information was delivered to DEQ on September 27, 2016.

The fourth annual report shall include an updated list of all information requested in Part 1.B.2.h)5).

Noted.

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PART I.B.2.i
MS4 PROGRAM IMPLEMENTATION
COUNTY FACILITIES

There are no Specific Reporting Requirements associated with this part of the MS4 Permit for this permit year.

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.B.2.j

**MS4 PROGRAM IMPLEMENTATION
PUBLIC EDUCATION / PARTICIPATION**

Each annual report shall include a list of permittee public outreach and education activities and the estimated number of individuals reached through the activities. An evaluation of program effectiveness, as outlined in the MS4 Program Plan with recommendations for future changes shall also be included.

Public Outreach and Education Goals and Activities			
Department / Division	Activity	Date	# of Individuals / Households Reached
Goal: Promote, publicize, and facilitate public reporting of the presence of illicit discharges or improper disposal of materials into the MS4			
DPW - EESD	Illicit Discharge Reporting	01/01/2022 - 12/31/2022	54
DPW – EESD	Environmental educational mailing sent to residents in response to complaints, educating them on proper pet waste disposal, trash and landscape debris disposal, pollution prevention and an only rain down the drain message.	1/19/2022	400
Community Revitalization	Code enforcement activities, related to specific obligations under the MS4 Program, conducted in conformance with the County’s zoning and environmental ordinances to identify and resolve code violations (inoperable vehicles, tag & tows, trash & debris, outside storage, and junk storage) negatively impacting communities	Multiple	4608

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	and the environment		
Goal: Continue to promote individual and group involvement in local water quality improvement initiatives including the promotion of local restoration and clean-up projects, programs, groups, meetings and other opportunities for public involvement			
DPU – KHB	Dorey Park Cleanup	01/01/2022	7 Volunteers
		02/19/2022	24 Volunteers
DPU – KHB	Woodlawn Cemetary Cleanup	04/06/2022	13 Volunteers
		04/22/2022	19 Volunteers
DPU – KHB	Lynhaven Garden Meeting	02/24/2022	2 Volunteers
DPU – KHB	Stream Health and Macro Testing	03/05/2022	19 Volunteers
DPU – KHB	Jordan’s Branch Stream Cleanup	04/23/2022	12 Volunteers
		06/02/2022	10 Volunteers
DPU – KHB	Moody MS Litter Cleanup	04/28/2022	35 Volunteers
DPU – KHB	Deep Run Litter Cleanup	05/16/2022	10 Volunteers
DPU – KHB	James River Regional Cleanup	09/10/2022	28 Volunteers
DPU – KHB	Milkweed for Monarchs	02/03/2022	6 Volunteers
		02/17/2022	16 Volunteers
DPU – KHB	Native Plant Demonstration	06/29/2022	3 Volunteers
		11/05/2022	23 Volunteers
		11/10/2022	25 Volunteers
DPU – KHB	Native Plant Festival	04/30/2022	2000 Attendees
Police	Police Range improved process for disposing of old canisters	8/15/22	3
Henricopolis	Rain Barrel Outreach	January 1, 2022 – December 31, 2022	34
Henricopolis	Soil Test Voucher Program	January 1, 2022 – December 31, 2022	576
Goal: Develop an outreach program with public and private golf courses located within Henrico County that discharge to the permittee’s MS4 that would encourage implementation of integrated management practice (IMP) plans and techniques to reduce runoff of fertilizer and pesticides			
	MS4 Outreach for Private Golf	12/21/2022	5

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Rec & Parks	Course Owners / Operators		
Goal: Promote, publicize, and facilitate the proper management and disposal of used oil and household hazardous wastes			
DPU - Admin	Household Hazardous Waste Video – Twitter & Facebook	04/20/2022	Twitter – 1,020 Facebook - 198
Fire	MS4 educational posters in all stations	Always	Unknown
Goal: Promote and publicize the proper disposal of pet waste and household yard waste			
Community Revitalization	Neighborhood meetings conducted to discuss zoning and environmental ordinances (grass & weeds, trash & debris, inoperative vehicles, outside storage, etc.). The meetings are also used to promote opportunities such as the Assistance Program, enterprise zones, and CDBG fund projects	Multiple	153
Community Revitalization	To help maintain healthy, attractive neighborhoods, community cleanups for designated neighborhoods are designed to educate and assist residents in the disposal of large bulky items or other structures, such as yard debris or unwanted furniture and appliances, harboring a bawdy place	Multiple	13
Goal: Promote and publicize the use of the permittee's litter prevention program			
DPW – Road Maintenance	Leaf violations with leaf litter prevention information	01/01/2022 - 12/31/2022	100
DPU – KnHB	School presentations to classes on litter prevention/recycling	January 1, 2022 – December 31, 2022	145 Henrico County Students
DPU – KHB	Educational booth at events –	January 1,	5200 Henrico

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	recycling education, litter prevention, pet waste disposal and waste disposal	2022 – December 31, 2022	County Residents
DPU – KHB	Land Lover and Clean Business Awards	07/12/2022	50 Residents
Henricopolis	Virginia Conservation Assistance Program	Jan 1, 2022 – December 31, 2022	38 site visits
Goal: Promote and publicize methods for residential car washing that minimize water quality impacts			
DPW-EESD	Car Wash Brochures	April - September 2022	467
Goal: Promote and publicize the proper use, application, and disposal of pesticides, herbicides, and fertilizers by public, commercial, and private applicators and distributors			
Extension Service	Ornamental Pest Update Presentation (Virtual) Southern States	1/19/2022	55
Extension Service	Pesticide Recertification Program (Virtual) <i>Virginia Greenhouse Growers Association</i>	1/25/2022	15
Extension Service	Environmentally Friendly Lawns Henrico Extension MG Intern Training	01/27/2022	14
Extension Service	Pests of Right of Way Presentation (Virtual) <i>Green Industry Professional Seminar</i>	01/28/2022	110
Extension Service	M-A-T-E Recertification Program <i>Virginia Turfgrass Council</i>	02/03/2022	58
Extension Service	Personal Protective Equipment Presentation <i>Virginia Sports Turf Managers Assoc.</i>	02/08/2022	33

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Extension Service	Commercial Pesticide Applicator Recertification Program (Virtual) <i>CVNLA Short Course</i>	02/11/2022	59
Extension Service	Pesticide Safety and the PMG <i>Northern Neck Master Gardener Interns</i>	02/24/2022	29
Extension Service	Environmentally Friendly Lawns <i>Hanover Extension MG Intern Training</i>	03/08/2022	19
Extension Service	Turf and Landscape Weed ID and Management Presentation <i>Northern Neck Turf and Ornamental Short Course</i>	03/09/2022	15
Extension Service	Pesticide Safety and the PMG <i>Henrico Master Gardener Interns</i>	03/10/2022	15
Extension Service	Ornamental Pest Update Presentation (Virtual) <i>RVA Government Employee Recertification Program</i>	03/23/2022	39
Extension Service	Environmentally Friendly Lawns <i>Dinwiddie Extension MG Intern Training</i>	04/07/2022	7
Extension Service	Urban Pest Update & Pesticide Safety Presentations	11/29/2022	6
Extension Service	<i>New Kent Private Pesticide Applicator Recertification</i> Urban Pest Update & Pesticide Safety Presentations <i>Hanover Private Pesticide Applicator Recertification</i>	12/06/2022	13
Goal: Encourage private property owners to implement voluntary stormwater management techniques and/or retrofits			
Henricopolis	Virginia Conservation Assistance Program	Jan 1, 2022 – December 31, 2022	38 site visits

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DPW – Road Maintenance	Mission Tomorrow	10/26 - 10/27/2022	12,000
DPW – Road Maintenance	Fall Energy Fair	10/12/2022	150

Evaluations of Program Effectiveness

Public Utilities

DPU believes their outreach program is effective in getting the word out to our citizens. We utilize many different methods to ensure our residents are notified. We utilize social media, we hold programs within our schools, and we attend neighborhood/community functions.

Fire

With new updated information and procedures that Henrico County Div. of Fire intends to implement pertaining to MS4 and environmental needs, the Division of Fire intends to continue and improve upon the information being provided to county employees and the public.

It is the opinion that the displaying of the MS4 posters can provide some of the needed information and provide a constant reminder to employees and the public the importance of understanding, following, and maintaining the procedures and information pertaining to the environment and the needs to protect it. By providing access to the stations, and information pertaining to fire safety and other needs. This may be accomplished through a question-and- answer session, lecture, show & tell, and/or display of information.

Community Revitalization

Participation in neighborhood meetings, code enforcement, and community programs like the annual cleanups and revitalization projects are critical to programmatic success and sustaining environmental quality. Program effectiveness can be evaluated through these efforts; for example, we have assisted in detecting illicit discharge, achieved compliance towards BMP

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cleanups, and increased citizens' awareness of environmental and zoning ordinances. These activities are in partnership with field inspectors proactively identifying code violations impacting communities and quality of life.

Recreation and Parks

Henrico County Recreation & Parks connected with the private and public golf courses in an effort to educate Golf Directors and Superintendents on best practices and nutrient management plans. As a result of the outreach, information packets were extended to the following golf courses:

The Crossings Golf Club;
Glenwood Golf Club;
Lakeside Park Club;
The Dominion Club;
The First Tee at Belmont; and
Country Club of Virginia.

The outreach effort reached approximately 6 individuals and we believe the information was well received. This was a great opportunity to connect with local golf courses and establish a positive relationship for future educational sessions and communication. Program goals are listed below:

- raise awareness about the importance of implementing a nutrient management plan;
- discuss best practices for golf courses; and
- answer questions pertaining to the county's MS4 permit.

Recommendations for Future Changes

Currently, we have no recommendations for future changes.

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Extension Service

Pesticide Applicator Recertification Sessions
<p>During 2022, 178 commercial pesticide applicators were trained for recertification by the Henrico Extension Office. A total of 178 commercial applicators gained additional knowledge in pesticide safety and Integrated Pest Management (IPM) practices related to ornamental plants and turf. As a result of this pesticide safety education, 178 commercial applicators successfully maintained their pesticide applicator certification to legally apply pesticides in Virginia.</p> <p>Additionally, during 2022, 67 private certification pesticide applicators were trained for recertification by the Henrico Extension Office. A total of 67 private applicators gained additional knowledge in pesticide safety and Integrated Pest Management (IPM) practices related to ornamental plants and crops. As a result of this pesticide safety education, 67 private category applicators successfully maintained their pesticide applicator certification to legally apply pesticides in Virginia.</p>
Initial Pesticide Applicator Certification Sessions
<p>During 2022, 6 individuals seeking commercial pesticide applicator status were trained for initial certification testing by the Henrico Extension Office. A total of 6 individuals seeking commercial pesticide applicator certification gained knowledge in pesticide safety and Integrated Pest Management (IPM) practices related to ornamental plants and turf.</p>

Community Revitalization

Participation in neighborhood meetings, code enforcement, and community programs like the annual cleanups and revitalization projects are critical to programmatic success and sustaining environmental quality. Program effectiveness can be evaluated through these efforts; for example, we have assisted in detecting illicit discharge, achieved compliance towards BMP cleanups, and increased citizens' awareness of environmental and zoning ordinances. These activities are in partnership with field inspectors

HENRICO COUNTY MS4 PROGRAM PLAN

proactively identifying code violations impacting communities and quality of life.

Public Works

DPW EESD - Due to COVID-19, many of the County's opportunities to educate the public in person were put on hold. As a result of this, efforts were made to address public education virtually, through mailings, and on social media. These alternative formats allowed us to continue to our public education and outreach in an effective manner.

DPW Road Maintenance believes the outreach programs are effective in getting information out to our citizens. Various methods are used to notify as many citizens as possible, with the majority of outreach coming from community events and individual notification. Due to COVID-19, in-person outreach was limited in 2022.

The leaf program's mailing method for communicating leaf pickup was the primary outreach program this year. Leaf collection program effectiveness is assessed annually by the total number of customer-placed vacuum leaf orders received and completed, the total number of violation orders processed and completed, and customer feedback. Recommendations for future changes will be based on the assessment of program effectiveness and updates will be made as necessary to improve the program overall.

Henrico County employs SOAR 365 to remove litter from County right-of-ways. The pick-up is performed daily, and progress is tracked in pounds of litter removed as well as the number of bags of litter removed. SOAR 365 is also used bi-weekly on the West and East End maintenance yards to reduce floatables from entering the MS4. Program effectiveness is evaluated based on the pounds of litter removed, as this decreases the quantity of floatables entering the MS4. Between 01/01/2022 and 12/31/2022, SOAR 365 removed 319,273.80 pounds or 10,642.46 bags of litter and 201 tires from county right-of-ways and maintenance facilities.

Each annual report shall provide a summary of voluntary retrofits completed on private property used to demonstrate pollutant reduction requirements. Note that

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any voluntary project for which the permittee seeks to use for pollutant reduction requirements must be tracked and reported.

Voluntary Retrofits Completed on Private Property Used to Demonstrate Compliance with Pollutant Reduction Requirements	0
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Each annual report shall provide a summary of voluntary stormwater management techniques encouraged on private property.

Voluntary Stormwater Management Techniques Encouraged on Private Property			
Department / Division	Activity	Date	# of Individuals / Households / Reaches
Henricopolis	<p>Below are 11 different voluntary stormwater BMPs that Henricopolis can provide technical and financial assistance for County property owners. For more information, refer to http://henrico.us/services/virginia-conservation-assistance-program/</p> <p style="text-align: center;"><u>Basic BMPs</u> Impervious Surface Removal <u>Intermediate Level BMPs</u> Conversion Landscaping Rain Gardens Dry Well Rainwater Harvesting Vegetated Stormwater Conveyance <u>Advanced BMPs</u> Bioretention Infiltration Basin Constructed Wetlands Permeable Pavement Green Roofs</p>	Jan 1, 2022 – December 31, 2022	32 inquiries; 1 practice completed

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MS4 PROGRAM IMPLEMENTATION TRAINING

Each annual report shall include a list of training events, the date and the estimated number of individuals attending each event.

****ITEMS IN RED ARE EXAMPLES – PLEASE TRY TO FOLLOW A SIMILAR STRUCTURE. IF YOU ARE NOT SURE WHICH TOPIC CATEGORY APPLIES TO YOUR TRAINING, PLEASE PUT YOUR TRAININGS UNDER THE “OTHER” CATEGORY FOR OUR REVIEW****

Training Topics and Events Attended Between January 1, 2022 and December 31, 2022		
Event	Date	# of Individuals
Topic: The permittee shall provide biennial training to appropriate field personnel in the recognition and reporting of illicit discharges		
Illicit Discharge Recognition and Reporting Webnet Training Div. of Fire	Multiple	618
HazMat update: All Division of Fire operational personnel are trained to the level of Hazardous Materials Operations (HMO). The initial HMO program consists of 40 hrs. of tested content and is provided in the employee's initial recruit training program. Annual recertification training is mandatory and ensures competency maintenance, including spill response procedures.	Multiple	618
Illicit Discharge Recognition and Reporting Webnet Training DPW Road	12/15/2022	46

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Maintenance West End		
Illicit Discharge Recognition and Reporting WebNet Training- Recreation and Parks	December 2022	100
Good Housekeeping and Pollution Prevention (In Person) - DPW Road Maintenance West End	12/15/2022	48
Semiannual meetings with MMA covering the implementation of the MS4 support & proposal for intra-County reporting (Community Revitalization)	03/01/2022	1
	10/12/2022	1
DPU Illicit Discharge Recognition and Reporting Training – Webnet	Multiple	69
Illicit Discharge Recognition and Reporting Webnet Training	10/11/2022	1
MS4 Good Housekeeping and Pollution Prevention Training- Henrico Public Schools	12/22/22	1
MS4 Illicit Discharge Recognition and Reporting- Henrico Public Schools	12/22/22	1
Topic: The permittee shall provide biennial training to appropriate employees in good housekeeping and pollution prevention practices that are to be employed in and around County recreation facilities; maintenance and public works facilities; and roads, streets, and parking lots.		
MMA Annual and Quarterly SWPPP Training (DPW Maintenance)	03/01/2022	6
	05/18/2022	5
	08/03/2022	5
	10/10/2022	4
MMA Annual and Quarterly SWPPP Training (Fire)	02/28/2022	6
	03/07/2022	3
	03/10/2022	1
	03/22/2022	1
	03/29/2022	1
	04/23/2022	1
DPU SWPPP Training - NEO	02/24/22	9
	12/21/22	3

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DPU Good Housekeeping & Pollution Prevention Training - Webnet	Multiple	80
MS4 Good Housekeeping Webnet Training- Recreation and Parks	November 2022	100
General ESMS Awareness- Henrico County Public Schools	12/22/22	10
Leaking Fluids from Equipment	12/22/22	15
<p>Topic: The permittee shall ensure that employees, and require that contractors, who apply pesticides and herbicides are properly trained or certified per the Virginia Pesticide Control Act (§3.2-3900 et seq. of the Code of Virginia). The requirements of the Virginia Pesticide Control Act are established by the Virginia Pesticide Control Board</p>		
<p>Opportunities related to this component were limited due to COVID.</p>		
<p>Topic: The permittee shall have a program to ensure that County plan reviewers, inspectors, program administrators and construction site operators (e.g. responsible land disturber) are trained and obtain the appropriate certifications to the extent required under the Virginia Erosion and Sediment Control Law and attendant regulations</p>		
DEQ Inspector for Erosion & Sediment Control	08/23/22-08/24/2022	1
	04/05/2022-04/06/22	1
DEQ Erosion and Sediment Control Plan Reviewer	10/18/22-10/20/2022	1
DEQ Armoring Inspection Reports	3/2/2022	1
DEQ Regulatory SWPPP Inspections for Localities	2/3/2022	1
Five Easy Rules for Erosion and Sediment Control	3/4/2022	1
Where the Water Goes	2/15/2022	1
Seeding Demystified	4/7/2022	1

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	01/06/2022	1
Forest Open Space Part 1: Soil Restoration	3/16/2022	1
Is Soil Compaction That Bad	3/7/2022	1
DEQ: Plants for Bioretention	4/8/2022	1
Wetland Delineation Course	5/23/22- 5/26/2022	3
DEQ: Program Administrator	10/25/2022 & 11/3/2022	1
DEQ: Dealing with Difficult Site Dilemmas	3/9/2022	1
DEQ: Erodibility, Sedimentation, and Sediment Basin Design	3/4/2022	1
DEQ: Vermin Control in Stormwater BMPs	5/17/2022	1
Topic: The permittee shall have a program to ensure that the applicable County employees obtain the appropriate certifications as required under the Virginia Stormwater Management Act and its attendant regulations to implement the modified stormwater management design criteria		
DEQ Stormwater Management Inspector Certification Course (DPW – EESD)	04/19/2022 - 04/20/2022	1
	11/29/2022- 11/30/2022	1
Where the Water Goes	04/06/2022	1
DEQ: SWM Plan Reviewer	08/30/22- 09/01/22	3
Topic: The appropriate emergency response employees shall have training in spill response.		
ESMS Training – Oral presentation and	05/12/2022	10

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Q&A session (Schools)		
MS4 and Spill Response and Spill Notification Card Training – DPW Road Maintenance West End	2/28/202	41
SPCC Training – DPU WRF Staff	02/07/2022	9
	12/19/2022	12
SPCC Training – DPW Operations Staff	08/03/2022	8
Spill Drill-DPU	12/5/2022	9
SPCC Training – Jail East Facility Staff	3/2022	21
SPCC Training – Buildings and Grounds Staff	3/3/2022	9
SPCC Training – DPU WRF Staff	12/19/2022	12
Topic: Other		
AST/UST Operator Training (DGS)	1/20/2022	1
MMA Q4 Site Visit (DGS) – Boiler maintenance/protocols; UST inspection protocols; Waste management protocols	10/11/2022	9
Virginia Marine Debris Conference (DPU & DPW)	09/27-28/2022	3
We work with MMA to maintain compliance and work on improvements to facilities based on feedback. (Police)	8/1/2022	1
Hazardous Material Handling- Henrico County Public Schools	12/22/22	10

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MS4 PROGRAM IMPLEMENTATION WATER QUALITY SCREENING PROGRAMS

Each annual report shall include the total number of outfalls included as part of the permittee's MS4, the number of outfalls screened during the reporting period, a list of locations upon which dry weather screening was conducted, the results, and any follow-up actions including maintenance and/or repair of infrastructure or outfalls performed as a result of the dry weather screening.

# of MS4 Outfalls	3,122
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# of Outfalls Screened between 1/1/2022 and 12/31/2022*	1,135
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* includes all end treatments for which a Screening Inspection was conducted, not just those that are identified as MS4 Outfalls

Dry Weather Screening Conducted between 1/1/2022 and 12/31/2022		
MS4 Outfall	Findings	Follow-Up Action
EN000000000277	No Issues Identified	None Required
EN000000000315	No Issues Identified	None Required
EN000000000317	No Issues Identified	None Required
EN000000000334	No Issues Identified	None Required
EN000000000349	No Issues Identified	None Required
EN000000000350	No Issues Identified	None Required
EN000000000353	No Issues Identified	None Required
EN000000000444	No Issues Identified	None Required
EN000000000553	No Issues Identified	None Required
EN000000000922	No Issues Identified	None Required
EN000000001477	No Issues Identified	None Required
EN000000001782	No Issues Identified	None Required
EN000000001847	No Issues Identified	None Required

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EN000000001850	No Issues Identified	None Required
EN000000002010	No Issues Identified	None Required
EN000000002085	No Issues Identified	None Required
EN000000002221	No Issues Identified	None Required
EN000000003084	No Issues Identified	None Required
EN000000003821	No Issues Identified	None Required
EN000000004501	No Issues Identified	None Required
EN000000004874	No Issues Identified	None Required
EN000000004937	No Issues Identified	None Required
EN000000006118	No Issues Identified	None Required
EN000000006304	No Issues Identified	None Required
EN000000006881	No Issues Identified	None Required
EN000000006882	No Issues Identified	None Required
EN000000007442	No Issues Identified	None Required
EN000000007536	No Issues Identified	None Required
EN000000008090	No Issues Identified	None Required
EN000000008100	No Issues Identified	None Required
EN000000008322	No Issues Identified	None Required
EN000000008323	No Issues Identified	None Required
EN000000008590	No Issues Identified	None Required
EN000000008916	No Issues Identified	None Required
EN000000009435	No Issues Identified	None Required
EN000000011242	No Issues Identified	None Required
EN000000012151	No Issues Identified	None Required
EN000000013146	No Issues Identified	None Required
EN000000008321	No Issues Identified	None Required
EN000000008322	No Issues Identified	None Required
EN000000008323	No Issues Identified	None Required
EN000000008324	No Issues Identified	None Required
EN000000008325	No Issues Identified	None Required
EN000000008326	No Issues Identified	None Required
EN000000008327	No Issues Identified	None Required
EN000000008328	No Issues Identified	None Required
EN000000008329	No Issues Identified	None Required

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EN00000008330	No Issues Identified	None Required
EN00000008331	No Issues Identified	None Required
EN00000008332	No Issues Identified	None Required
EN00000008333	No Issues Identified	None Required
EN00000008334	No Issues Identified	None Required
EN00000008335	No Issues Identified	None Required
EN00000008336	No Issues Identified	None Required
EN00000008337	No Issues Identified	None Required
EN00000008338	No Issues Identified	None Required
EN00000008339	No Issues Identified	None Required
EN00000008340	No Issues Identified	None Required
EN00000008341	No Issues Identified	None Required
EN00000008342	No Issues Identified	None Required
EN00000008343	No Issues Identified	None Required
EN00000008344	No Issues Identified	None Required
EN00000008345	No Issues Identified	None Required
EN00000008346	No Issues Identified	None Required
EN00000008347	No Issues Identified	None Required
EN00000008348	No Issues Identified	None Required
EN00000008349	No Issues Identified	None Required
EN00000008350	No Issues Identified	None Required
EN00000008351	No Issues Identified	None Required
EN00000008352	No Issues Identified	None Required
EN00000008353	No Issues Identified	None Required
EN00000008354	No Issues Identified	None Required
EN00000008355	No Issues Identified	None Required
EN00000008356	No Issues Identified	None Required
EN00000008357	No Issues Identified	None Required
EN00000008358	No Issues Identified	None Required
EN00000008359	No Issues Identified	None Required
EN00000008360	No Issues Identified	None Required
EN00000008361	No Issues Identified	None Required
EN00000008362	No Issues Identified	None Required
EN00000008363	No Issues Identified	None Required

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EN00000008364	No Issues Identified	None Required
EN00000008365	No Issues Identified	None Required
EN00000008366	No Issues Identified	None Required
EN00000008367	No Issues Identified	None Required
EN00000008368	No Issues Identified	None Required
EN00000008369	No Issues Identified	None Required
EN00000008370	No Issues Identified	None Required
EN00000008371	No Issues Identified	None Required
EN00000008372	No Issues Identified	None Required
EN00000008373	No Issues Identified	None Required
EN00000008374	No Issues Identified	None Required
EN00000008375	No Issues Identified	None Required
EN00000008376	No Issues Identified	None Required
EN00000008377	No Issues Identified	None Required
EN00000008378	No Issues Identified	None Required
EN00000008379	No Issues Identified	None Required
EN00000008380	No Issues Identified	None Required
EN00000008381	No Issues Identified	None Required
EN00000008382	No Issues Identified	None Required

Follow-Up Actions Performed as a Result of the Dry Weather Screening Conducted between 1/1/2022 and 12/31/2022	
MS4 Structure	Follow-Up Action
None	None

The annual report due March 31, 2016 shall include the written procedures for wet weather screening.

DPW will develop a list of MS4 structures subject to wet weather screening based on the areas of concern as identified by the County that are within the drainage area to the MS4 structure, including:

- (1) fertilizer storage yards,
- (2) mulch / soil storage yards,

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- (3) building supply storage yards,
- (4) used automobile lots,
- (5) construction equipment storage areas,
- (6) automobile salvage yards, and
- (7) areas of previously identified spill / IDDE complaints.

DPW will screen no fewer than 25 of the MS4 structures identified as subject to wet weather screening each year between January 1, 2016 and December 31, 2019.

DPW will screen no fewer than 10 of the MS4 structures identified as subject to wet weather screening between January 1, 2020 and March 31, 2020.

The MS4 structures will be subject to the established inspection procedure, evaluating identified flows and maintenance and repair needs.

Depending on the information observed and gathered during the wet weather screening inspections, identified flows may need to be sampled to determine the source of the flow. Whether or not samples are collected, suspected illicit discharges will be forwarded to the IDDE investigator as a potential illicit discharge for follow-up.

Each annual report shall include a list of locations upon which wet weather screening was conducted, the results, weather conditions at the time sample was collected to include date and approximate time of most recent storm event preceding sample collection, long term trends analyses, and any follow-up actions including maintenance and/or repair of infrastructure or outfalls performed as a result of the wet weather screening.

The data does not lend itself to an analysis of any long-term trends at this time.

Wet Weather Screening Conducted between 1/1/2022 and 12/31/2022				
MS4 Structure	Last Significant Rainfall	Findings	Sample Collected	Weather Conditions at the time of Sample
EN000000000210	< 2 days	No Issues	No	N/A
EN000000000336	< 2 days	No Issues	No	N/A

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EN000000000337	< 2 days	No Issues	No	N/A
EN000000000710	< 2 days	No Issues	No	N/A
EN000000000719	< 2 days	No Issues	No	N/A
EN000000000425	< 2 days	No Issues	No	N/A
EN000000000460	< 2 days	No Issues	No	N/A
EN000000000461	< 2 days	No Issues	No	N/A
EN000000000488	< 2 days	No issues	No	N/A
EN000000000491	< 2 days	No Issues	No	N/A
IN000000000017	< 2 days	No Issues	No	N/A
IN000000000892	< 2 days	No Issues	No	N/A
IN000000001239	< 2 days	No Issues	No	N/A
IN000000001240	< 2 days	No Issues	No	N/A
IN000000001241	< 2 days	No Issues	No	N/A
IN000000001242	< 2 days	No issues	No	N/A
IN000000001243	< 2 days	No Issues	No	N/A
IN000000001244	< 2 days	No Issues	No	N/A
IN000000001245	< 2 days	No Issues	No	N/A
MN000000001292	< 2 days	No Issues	No	N/A
MN000000002340	< 2 days	No Issues	No	N/A
MN000000002341	< 2 days	No Issues	No	N/A
MN000000002342	< 2 days	No Issues	No	N/A
MN000000002344	< 2 days	No Issues	No	N/A
MN000000002346	< 2 days	No Issues	No	N/A

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**Follow-Up Actions Performed as a Result of the Wet Weather Screening Conducted
between 1/1/2022 and 12/31/2022**

MS4 Structure

Follow-Up Action

There are no follow-up actions as a result of wet weather screening as no issues were identified.

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MS4 PROGRAM IMPLEMENTATION INFRASTRUCTURE COORDINATION

Annual Coordination Meeting – The permittee shall meet annually with VDOT for purposes of overall coordination on priority issues for the permittee’s MS4 program plan (including operations and maintenance elements) and TMDL action planning relevant to the interconnectivity of the MS4s.

The Annual Coordination Meeting was held in-person at VDOT Richmond District Complex with an option for virtual participation on December 8, 2022. In addition to representatives from VDOT and Henrico County, Chesterfield County staff were also present. The following participated:

Holly Sepety	VDOT
Jacob Bauckman	VDOT
Scott Crafton	VDOT
Alex Forasté	VDOT
Michelle Fults	VDOT
Tracey Harmon	VDOT
David Wilson	VDOT
JJ Lightfoot	VDOT
Kun Dong	VDOT
Kendall Allen	VDOT
John Olenik	VDOT
Joe Parfitt	VDOT
Stacey Garrett	Henrico County
Robin Wilder	Henrico County
Deana Williams	Henrico County
Scott Flanigan	Chesterfield County
Grayson Hughes	Chesterfield County
Kimberly Mervine	Chesterfield County
Aidan Kalua'u	Chesterfield County

Mapping – The permittee shall inform VDOT of the status of its mapping program, identifying any uncertainty regarding ownership or actual location of MS4

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components associated with the physically-interconnected MS4s, and working to resolve such uncertainty. The permittee shall coordinate with VDOT to identify any areas within the permittee's municipal boundaries that drain to the VDOT MS4.

VDOT, Chesterfield, and Henrico discussed their mapping efforts, including current and upcoming projects. All have mapping available as previously requested by the other attendees.

Chesapeake Bay TMDL Action Plans – The permittee shall inform VDOT of the means, methods, and schedule by which the permittee will implement the reductions required by the Chesapeake Bay TMDL Special Condition (Part I.D.1) when those means and methods may impact the physically-interconnected MS4s. The parties are encouraged to cooperate with one another where the siting or design of best management practices (BMPs) may be accelerated or otherwise improved by mutual cooperation.

Henrico's Chesapeake Bay TMDL Action Plan was discussed and is available for review.

The permittee shall coordinate with VDOT to identify any areas within the permittee's municipal boundaries that drain to the VDOT MS4 and are unaccounted for in the Chesapeake Bay TMDL Action Plan developed by VDOT or the permittee. The unaccounted areas shall be quantified (acres) in the Chesapeake Bay TMDL Action Plan submitted by the permittee.

Henrico's action plan quantifies the areas accounted for (and unaccounted for) in the load reduction calculations in accordance with its permit.

Other TMDL Action Plans – The permittee shall inform VDOT of TMDL Action Plans and major milestones implemented for other (i.e., non-Chesapeake Bay) TMDLs when those plans may impact the physically-interconnected MS4s. The parties are encouraged to cooperate with one another where the siting or design of BMPs may be accelerated or improved by mutual cooperation.

Henrico's other TMDL Action Plans are available on its website.

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Credit for TMDL Implementation – Permit specific BMP retrofit requirements shall not be double-counted in the calculation of load reductions. If the permittee undertakes the project, the permittee shall be entitled to full credit for the project but may share credit with VDOT on mutually agreeable terms, which shall be in writing.

During the development of the TMDL Action Plans, Henrico did not include any projects that could potentially result in "double-counting" of pollutant reductions achieved in the physically interconnected MS4.

Illicit Discharge Detection & Elimination – The permittee shall continue to be responsible for implementing a program for illicit discharge detection and elimination, including dry weather field screening, for the permittee's portion of the physically-interconnected MS4. As part of the annual coordination meeting, described in item (1) above, the permittee shall coordinate with VDOT on the identification of high-risk industrial facilities. The permittee shall establish procedures for notifying VDOT when an illicit discharge is identified in the VDOT MS4.

Henrico discussed its illicit detection and elimination (IDDE) program. When an illicit discharge that drains to the physically interconnected MS4 is found, Henrico will notify VDOT and DEQ via email.

Water Quality Monitoring – The permittee shall conduct water quality monitoring as required by Part I.B.2.l) and Part I.C of this state permit. The permittee shall make available to VDOT all monitoring data collected from areas where the physically interconnected MS4 discharges to the VDOT MS4 or received flow from the VDOT MS4. The permittee and VDOT are encouraged to cooperate with one another to establish a joint monitoring network.

The water quality monitoring provisions of the MS4 Permit were discussed and any monitoring data collected from areas that drain into or from the physically interconnected MS4 is available to VDOT.

PART I.C.1

MONITORING REQUIREMENTS

BIOLOGICAL STREAM MONITORING

Each annual report shall include a summary of the monitoring results, analyses, and an interpretation of that data with respect to long-term patterns/trends.

Taxa Richness

Taxa Richness is the number of different taxa represented in an ecological community. Taxa Richness is simply a count of the taxa, and it does not take into account the relative abundances of each taxa. At most sites, Taxa Richness for the 2022 sampling year was higher than that of the previous years' data. There was no appreciable change in Taxa Richness from the spring sampling event to the fall sampling event. Taxa Richness is expected to decrease with increasing perturbation.

EPT Index

EPT Index is a subset of the above Richness measure. It is the number of taxa in the insect orders Ephemeroptera, Plecoptera, and Trichoptera, which are generally more environmentally sensitive. EPT Index has not changed dramatically at any site since monitoring for this program began in 2015. There was slight increase of this metric at three of the five sites from the spring sampling event to the fall sampling event. EPT Index is expected to decrease with increasing perturbation.

Dominant Taxon

Dominant Taxon measures the percent abundance of individuals in the single most abundant taxon. This metric was slightly higher during the spring sampling event at four of the five sites. Dominant Taxon is expected to increase with increasing perturbation.

Hilsenhoff Biotic Index

The Hilsenhoff Biotic Index (HBI) estimates the overall tolerance of the community in a sampling area, weighted by the relative abundance of each taxonomic group. Organisms are assigned a tolerance number from 0 to 10 pertaining to the group's known sensitivity to organic pollutants - 0 being most sensitive, 10 being most tolerant. HBI values range from 0 to 10 as well. Low HBI values reflect a higher abundance of sensitive groups, thus a lower level of pollution. This measurement has remained fairly

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consistent at all sites throughout the duration of the monitoring. 2021 HBI scores were very similar from the spring sampling event to the fall sampling event.

% Gatherers

This measures the percent abundance of individuals in the sample whose primary functional mechanism for obtaining food (functional feeding group (FFG)) is to collect/gather depositional organic matter. Although generally within the range of previously recorded data, this percentage metric increased at three of the five sites from the spring sampling event to the fall sampling event. This percentage is expected to decrease with increasing perturbation for the stream.

% Predators

This measures the percent abundance of individuals in the sample whose primary functional mechanism for obtaining food (FFG) is to attack prey and ingest whole organisms or their parts. This measurement substantially increased at four of the five sites from the spring to the fall sampling event. Consistent values for this metric indicate a stable system and source of lower trophic level organisms able to support a healthy population of higher trophic level organisms.

% Scrapers

This measures the percent abundance of individuals in the sample whose primary functional mechanism for obtaining food (FFG) is to graze on substrate or periphyton-attached algae and associated material. This percentage metric decreased at four of the five sites between the spring sampling event and the fall sampling event. This metric is expected to decrease with increasing perturbation.

Biological Condition Index

The integrity of the Access Database used to calculate prior year's metric scores was compromised prior to the publishing of the 2016 Annual Report. Therefore, it is difficult to compare this year's Biological Condition Index data with prior years' data, and long term trends cannot be easily determined. Apart from Cornelius Creek and Hungary Creek having varying results, the Biological Condition Index has remained fairly consistent at most sites. Inconsistency in the Index may indicate the stream has the potential to support a substantial biological community, however habitat is not completely stable. Hungary Run was recently restored and is actively maturing which should result in more habitat stability over time.

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Habitat Suitability Index

Habitat Suitability Index assesses the relative quality of each sites' habitat based on a local reference reach. All streams except for Stony Run had upward trends in their Habitat Suitability Index. This is likely an anomaly and will be watched closely in subsequent years.

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Henrico County 2022 Bioassessment Metrics

Spring 2022 Bioassessment	Cornelius Creek	Stony Run	Broadwater Creek	Hungary Creek	Upham Brook	Reference Reach
Taxa Richness	38	26	32	22	21	49
EPT Index	13	9	9	3	5	8
% Dominant Taxon	15.36	18.42	15.27	24.15	15.41	14.47
HBI	4.79	5.50	5.47	6.06	5.24	5.52
% Gatherers	36.87	32.04	21.68	58.94	34.67	37.82
% Predators	9.37	5.71	9.31	2.42	1.54	10.77
% Scrapers	10.91	13.44	36.49	4.35	20.96	14.38

Fall 2022 Bioassessment	Cornelius Creek	Stony Run	Broadwater Creek	Hungary Creek	Upham Brook	Reference Reach
Taxa Richness	31	12	34	29	25	49
EPT Index	8	3	9	0	5	8
% Dominant Taxon	26.6	26.15	12.97	25.13	25.06	14.47
HBI	5.07	6.86	5.48	6.73	5.38	5.52
% Gatherers	17.82	55.38	19.33	60.8	39.85	37.82
% Predators	6.38	12.31	13.49	30.15	3.51	10.77
% Scrapers	23.14	6.15	35.41	5.28	12.03	14.38

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Henrico County 2022 Bioassessment Metric Scores

Spring Bioassessments	Cornelius Creek	Stony Run	Broadwater Creek	Hungary Creek	Upham Brook	Reference Reach
Taxa Richness	88	60	74	51	49	114
EPT Index	118	82	82	27	45	73
% Dominant Taxon	100	96	100	89	100	101
HBI	77	66	67	58	70	66
% Gatherers	97	84	57	155	91	100
% Predators	78	48	78	20	13	90
% Scrapers	22	27	74	9	43	29
Total:	83	66	76	59	59	82
% Comparability w/ Reference Reach:	101	81	93	72	72	
Biological Condition:	Non-impaired	Non-impaired	Non-impaired	Slightly Impaired	Slightly Impaired	

Fall Bioassessments	Cornelius Creek	Stony Run	Broadwater Creek	Hungary Creek	Upham Brook	Reference Reach
Taxa Richness	72	28	79	67	58	114
EPT Index	73	27	82	0	45	73
% Dominant Taxon	86	87	102	88	88	101
HBI	73	46	66	48	68	66
% Gatherers	47	146	51	160	105	100
% Predators	53	103	112	251	29	90
% Scrapers	47	13	72	11	25	29
Total:	64	64	81	89	60	82
% Comparability w/ Reference Reach:	79	79	99	109	73	
Biological Condition:	Slightly Impaired	Non-impaired	Non-impaired	Non-impaired	Slightly Impaired	

Biological Condition Criteria

- 0-22% - Severely Impaired
- 23-50% - Moderately Impaired
- 51-78% - Slightly Impaired
- 79-100% - Non-impaired

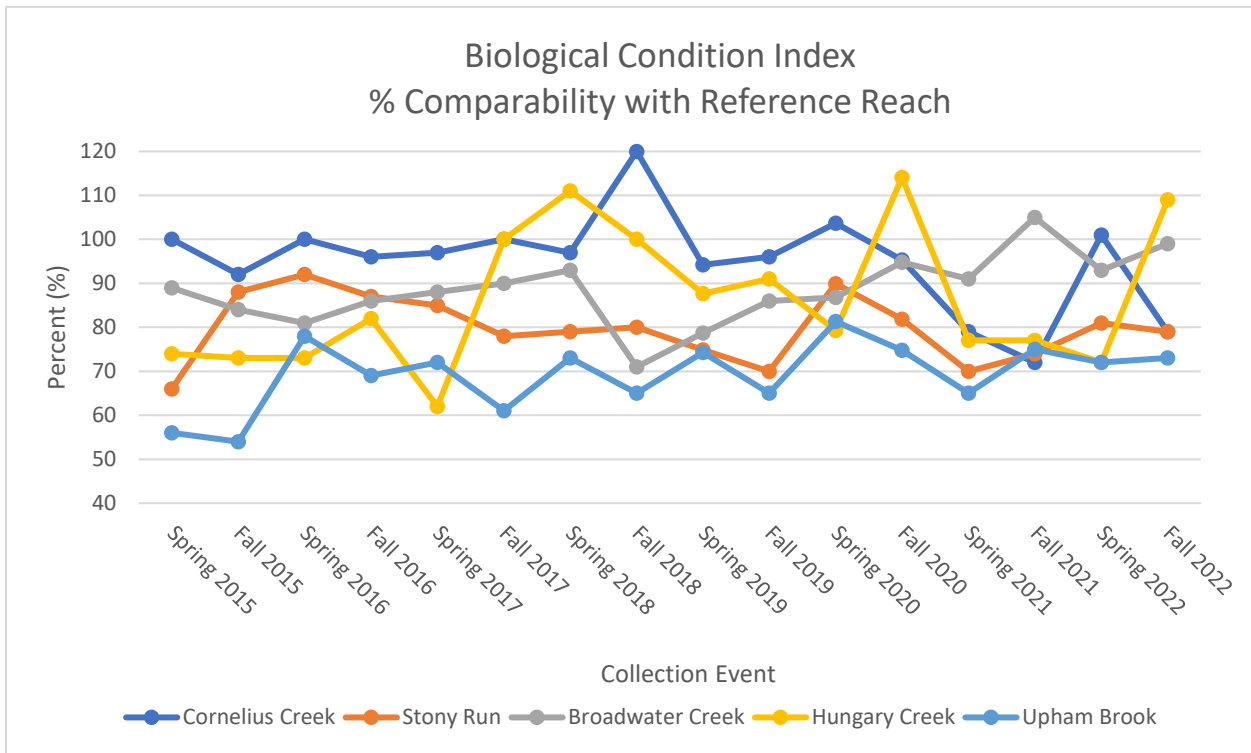
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Table Spring 2022
Summary of Stream Habitat Assessment Results
Henrico County Stream Bioassessment Program
05/01/2022 through 05/31/2022

	Scoring Range		Reference											
	Poor	to Optimal	Hnr2001Lo	CRC07.S01	DSR04.S01	HLS17.S02	NHC13.S01	UPB17.S02						
<u>Substrate and Instream Cover</u>														
Epifaunal substrate/available cover	0-20	17	16	14	15	12	16	16						
Pool substrate characterization	0-20	16	13	18	16	9	16	16						
Pool variability	0-20	17	16	9	11	6	18	18						
<u>Channel Morphology</u>														
Sediment deposition	0-20	14	17	19	16	10	11	11						
Channel flow status	0-20	16	10	15	18	13	8	8						
Channel alteration	0-20	18	19	20	19	18	12	12						
Channel sinuosity	0-20	15.5	12	15	11	8	10	10						
<u>Riparian and Bank Structure</u>														
Bank stability	0-10	8	4	8	8	9	8	8						
Bank stability	0-10	8.5	4	8	8	9	8	8						
Bank vegetation protection	0-10	7	10	9	9	8	5	5						
Bank vegetation protection	0-10	8	10	9	9	8	9	9						
Riparian vegetative zone width	0-10	10	10	2	10	9	4	4						
Riparian vegetative zone width	0-10	10	10	8	8	9	9	9						
Total Score		165	151	154	158	128	134	134						
Percent of Reference Site			92	93	96	78	81	81						
Resulting Habitat Suitability			Comparable	Comparable	Comparable	Supporting	Supporting	Supporting						

Habitat Criteria
 >90% = Comparable to reference
 75-89 = Supporting
 60 - 74 = Fairly supporting
 <59 = non-supporting

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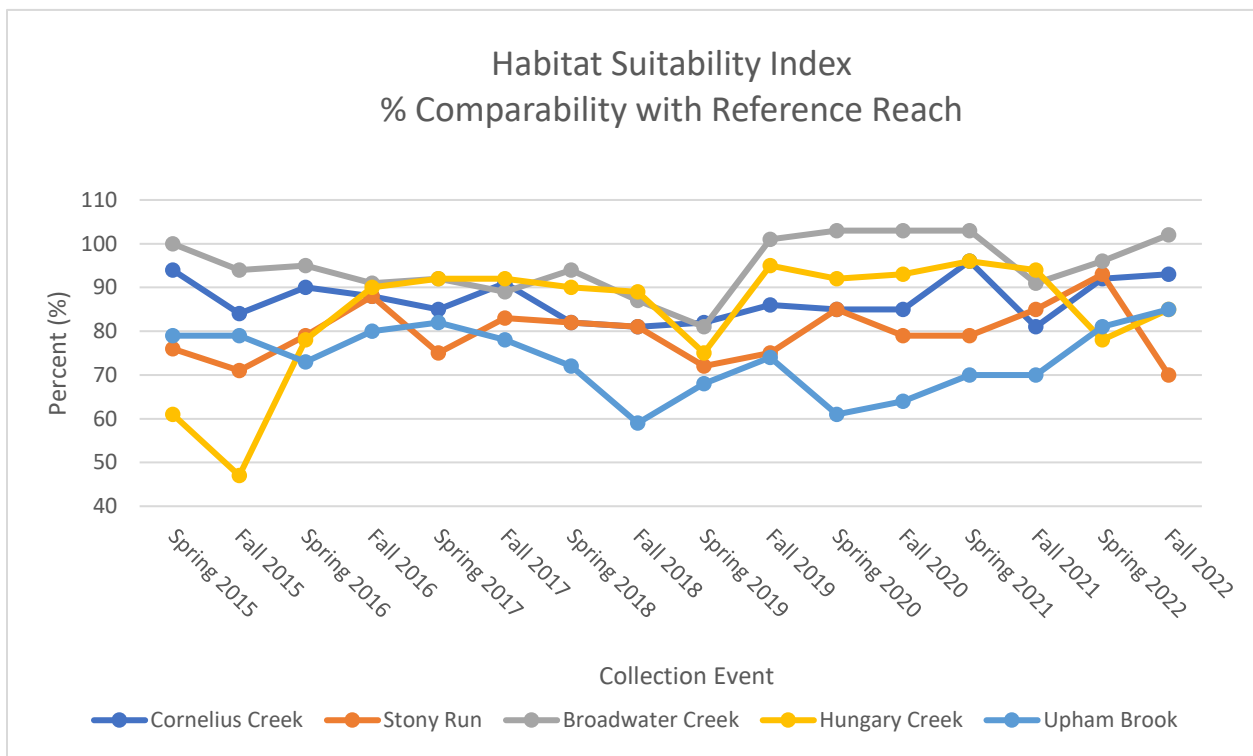
Table Fall 2022
 Summary of Stream Habitat Assessment Results
 Henrico County Stream Bioassessment Program
 11/01/2022 through 11/30/2022

	<i>Scoring Range</i>	<i>Reference</i>										
	<i>Poor to Optimal</i>											
	<i>Hnr2001Lo</i>	<i>CRC07.S01</i>	<i>DSR04.S01</i>	<i>HLS17.S02</i>	<i>NHC13.S01</i>	<i>UPB17.S02</i>						
<u><i>Substrate and Instream Cover</i></u>												
Epifaunal substrate/available cover	0-20	17	14	12	17	14	17	14	17	14	17	17
Pool substrate characterization	0-20	16	16	16	17	16	17	9	16	9	16	16
Pool variability	0-20	17	17	9	19	17	19	8	17	8	17	17
<u><i>Channel Morphology</i></u>												
Sediment deposition	0-20	14	15	13	16	15	16	11	16	11	16	14
Channel flow status	0-20	16	14	8	18	16	18	19	16	19	16	19
Channel alteration	0-20	18	19	11	18	19	18	17	18	17	18	14
Channel sinuosity	0-20	15.5	13	12	12	13	12	12	12	12	12	9
<u><i>Riparian and Bank Structure</i></u>												
Bank stability	0-10	8	3	6	7	3	7	8	6	7	8	5
Right Bank	0-10	8.5	5	4	7	5	7	8	4	7	8	5
Bank vegetation protection	0-10	7	9	7	9	9	9	8	7	9	8	5
Bank vegetation protection	0-10	8	9	5	9	9	9	8	5	9	8	9
Riparian vegetative zone width	0-10	10	10	4	10	10	10	9	4	10	9	3
Riparian vegetative zone width	0-10	10	10	9	9	10	9	9	9	9	9	8
Total Score		165	154	116	168	140	168	140	116	168	140	141
Percent of Reference Site		93	93	70	102	85	102	85	70	102	85	85
Resulting Habitat Suitability		Comparable	Comparable	Partially S.	Comparable	Supporting	Comparable	Supporting	Partially S.	Comparable	Supporting	Supporting

Habitat Criteria
 >90% = Comparable to reference
 75-89 = Supporting
 60 - 74 = Partially supporting
 <59 = non-supporting

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PART I.C.2

MONITORING REQUIREMENTS IN-STREAM MONITORING

Beginning with the annual report due March 31, 2017, each annual report shall include a summary of the monitoring results and analyses and an interpretation of that data with respect to long-term patterns/trends.

The tables below include the data collected during the 2022 reporting year.

Cornelius Creek	1/25/2022	3/16/2022	5/4/2022	7/12/2022	9/22/2022	11/28/2022
pH	6.68	6.97	6.74	6.87	6.67	6.11
Dissolved Oxygen (mg/l)	9.96	11.52	9.19	8.39	7.85	11
Temperature (°C)	6.76	9.3	16.9	21.8	21.3	9.9
Total Suspended Solids (mg/l)	2	3.2	2.4	1.3	1.8	6
Ammonia as Nitrogen (mg/l)	BQL	BQL	BQL	BQL	BQL	BQL
Nitrate plus Nitrite Nitrogen (mg/l)	1.51	1.15	1.56	1.41	1.12	0.5
Total Kjeldahl Nitrogen (mg/l)	0.11	0.22	0.49	0.39	0.22	0.84
Total Nitrogen (calculated) (mg/l)	1.62	1.37	2.05	1.8	1.34	1.34
Dissolved Phosphorus (mg/l)	BQL	BQL	BQL	BQL	BQL	0.02
Total Phosphorus (mg/l)	0.02	0.03	0.02	0.02	0.02	0.1
Escherichia coli (CFU/100ml)	35	700	120	88	110	520
Air Temperature (°F)	52	59	69	80	83	62

BQL: Below Quantitation Level

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Broadwater Creek	1/25/2022	3/16/2022	5/4/2022	7/12/2022	9/22/2022	11/28/2022
pH	6.27	5.79	5.99	6.02	5.62	5.6
Dissolved Oxygen (mg/l)	8.36	10.11	7.79	7.64	7.77	8.9
Temperature (°C)	9.49	10.5	15.6	19.6	19.8	10.8
Total Suspended Solids (mg/l)	2.1	2	2.7	2.2	<1	4.5
Ammonia as Nitrogen (mg/l)	BQL	BQL	BQL	BQL	BQL	BQL
Nitrate plus Nitrite Nitrogen (mg/l)	0.63	0.57	0.81	1.08	1.09	0.35
Total Kjeldahl Nitrogen (mg/l)	0.11	0.2	0.77	0.42	0.21	1.13
Total Nitrogen (calculated) (mg/l)	0.74	0.57	1.58	1.5	1.3	1.48
Dissolved Phosphorus (mg/l)	0.01	0.02	0.04	0.03	BQL	0.05
Total Phosphorus (mg/l)	0.02	0.04	0.06	0.05	0.02	0.05
Escherichia coli (CFU/100ml)	16	52	890	32	120	470
Air Temperature (°F)	55	62	73	84	89	61

BQL: Below Quantitation Level

Upham Brook	1/25/2022	3/16/2022	5/4/2022	7/12/2022	9/22/2022	11/28/2022
pH	6.47	7.08	7.05	6.95	6.81	6.35
Dissolved Oxygen (mg/l)	9.99	11.34	7.1	5.26	6.52	9.8
Temperature (°C)	6.93	11	18.3	23.5	22.2	11.2
Total Suspended Solids (mg/l)	1.5	7.3	3.5	2.8	1.2	5.1
Ammonia as Nitrogen (mg/l)	BQL	BQL	BQL	BQL	BQL	BQL
Nitrate plus Nitrite Nitrogen (mg/l)	0.68	0.56	0.27	0.34	0.23	0.33
Total Kjeldahl Nitrogen (mg/l)	0.15	BQL	0.58	0.5	0.34	0.54
Total Nitrogen (calculated) (mg/l)	0.83	0.56	0.85	0.84	0.57	0.87
Dissolved Phosphorus (mg/l)	0.02	0.02	0.06	0.06	0.04	0.06
Total Phosphorus (mg/l)	0.03	0.04	0.08	0.09	0.06	0.1
Escherichia coli (CFU/100ml)	240	84	70	66	57	1100
Air Temperature (°F)	60	66	78	87	84	58

BQL: Below Quantitation Level

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Stony Run	1/25/2022	3/16/2022	5/4/2022	7/12/2022	9/22/2022	11/28/2022
pH	6.83	7.09	7.11	7.24	6.96	6.48
Dissolved Oxygen (mg/l)	8.77	12.06	8.3	7.19	7.15	10.2
Temperature (°C)	8.19	12.6	18.3	23.3	22.7	11.2
Total Suspended Solids (mg/l)	1.4	1.4	1.4	4.8	<1	3
Ammonia as Nitrogen (mg/l)	BQL	BQL	BQL	BQL	BQL	BQL
Nitrate plus Nitrite Nitrogen (mg/l)	0.59	0.38	0.3	0.4	0.2	0.2
Total Kjeldahl Nitrogen (mg/l)	0.17	0.24	0.71	0.45	0.41	0.46
Total Nitrogen (calculated) (mg/l)	0.76	0.62	1.01	0.85	0.61	0.66
Dissolved Phosphorus (mg/l)	0.01	BQL	0.02	0.03	0.03	0.02
Total Phosphorus (mg/l)	0.02	0.02	0.04	0.06	0.06	0.06
Escherichia coli (CFU/100ml)	88	99	68	120	33	350
Air Temperature (°F)	61	68	81	89	84	59

BQL: Below Quantitation Level

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Hungary Creek	1/25/2022	3/16/2022	5/4/2022	7/12/2022	9/22/2022	11/28/2022
pH	6.95	6.65	6.74	6.92	6.92	6.41
Dissolved Oxygen (mg/l)	8.6	10.65	8.08	5.79	7.37	9.2
Temperature (°C)	8.95	14.2	20.4	26	22.4	11.6
Total Suspended Solids (mg/l)	5.3	6	8.3	10.5	4.3	5
Ammonia as Nitrogen (mg/l)	BQL	BQL	BQL	BQL	BQL	BQL
Nitrate plus Nitrite Nitrogen (mg/l)	0.43	0.32	0.17	0.35	0.2	0.21
Total Kjeldahl Nitrogen (mg/l)	0.28	0.3	0.92	0.49	0.44	0.72
Total Nitrogen (calculated) (mg/l)	0.71	0.62	1.09	0.84	0.64	0.93
Dissolved Phosphorus (mg/l)	0.02	0.02	0.06	0.07	0.05	0.03
Total Phosphorus (mg/l)	0.07	0.05	0.07	0.09	0.07	0.07
Escherichia coli (CFU/100ml)	360	78	98	560	320	1100
Air Temperature (°F)	61	69	81	90	86	59

BQL: Below Quantitation Level

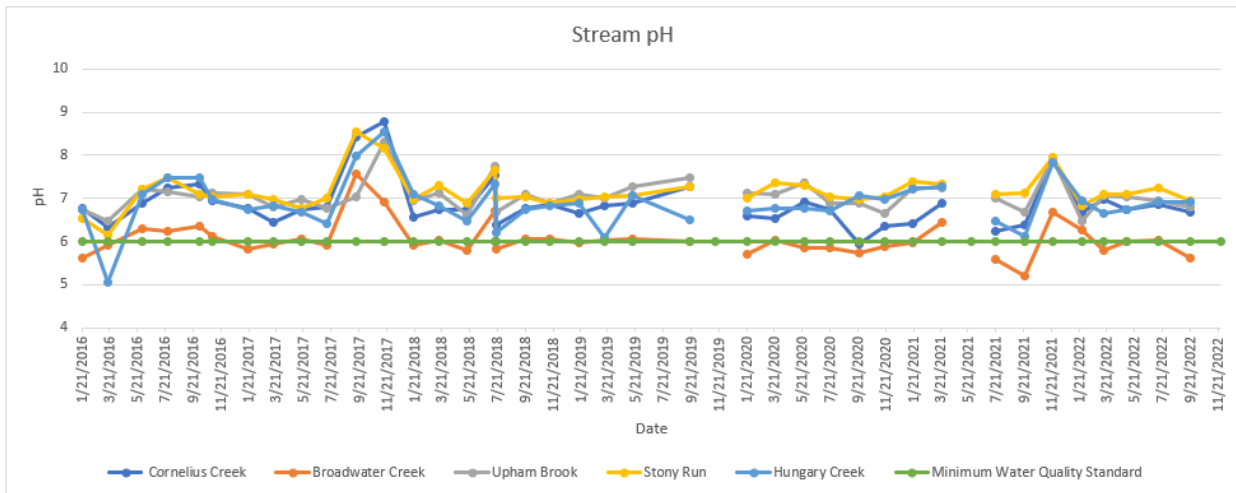
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Each data point on the following graphs represent the data collected during the permits reporting period. Where available, the appropriate Water Quality Standard is also included on the graph.

Stream pH

Stream pH has been consistent throughout the duration of the monitoring period except for the fall of 2017 and 2019 where a spike in pH was observed across all sites. This could be due to a faulty sensor.

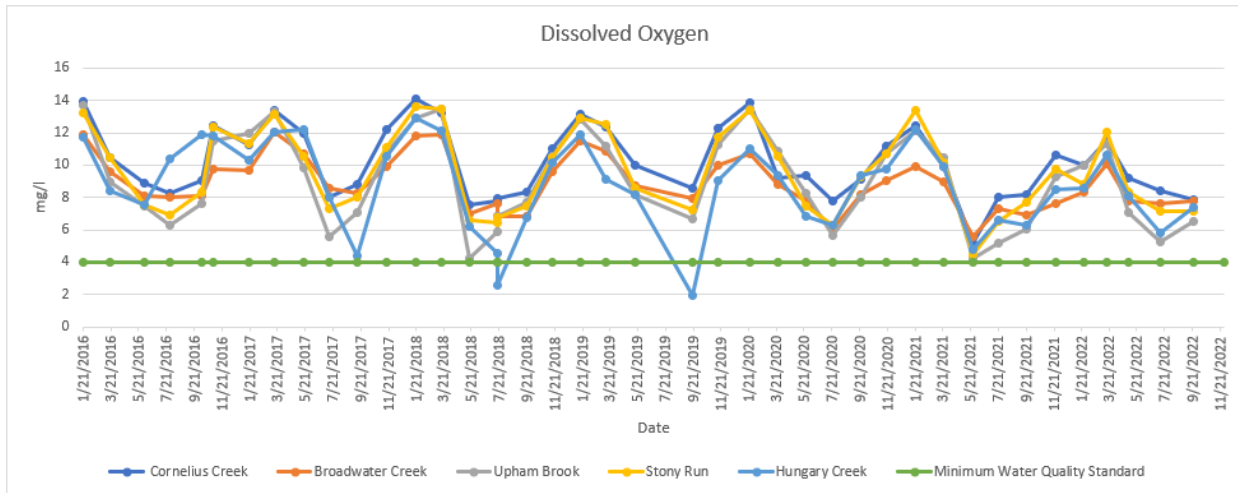


Note: Data unavailable for November 2019 and May 2021 sampling event.

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Dissolved Oxygen

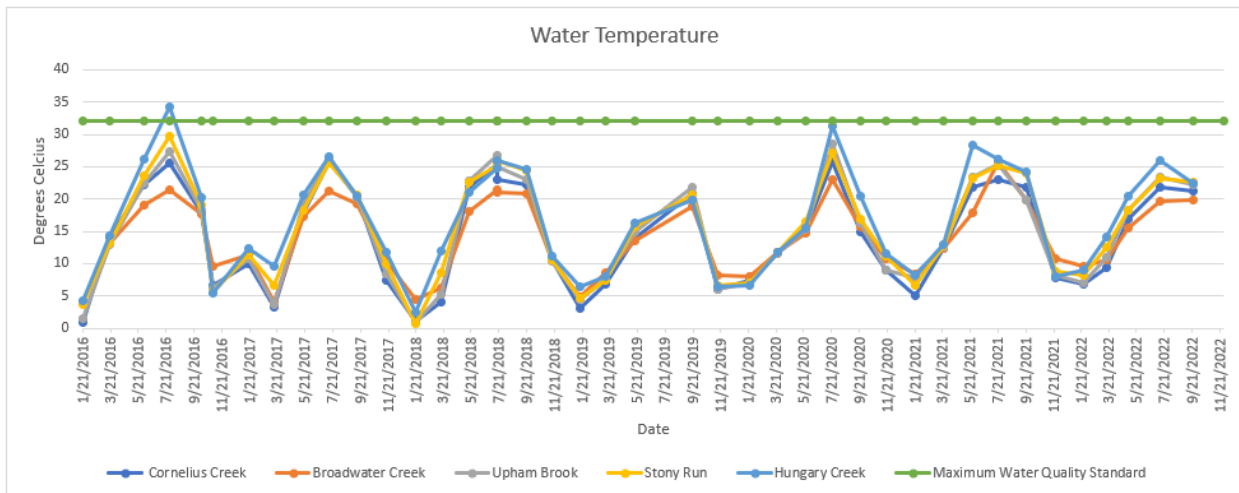
Aside from season variability noted across all sites, no discernable trend has been observed.



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Water Temperature

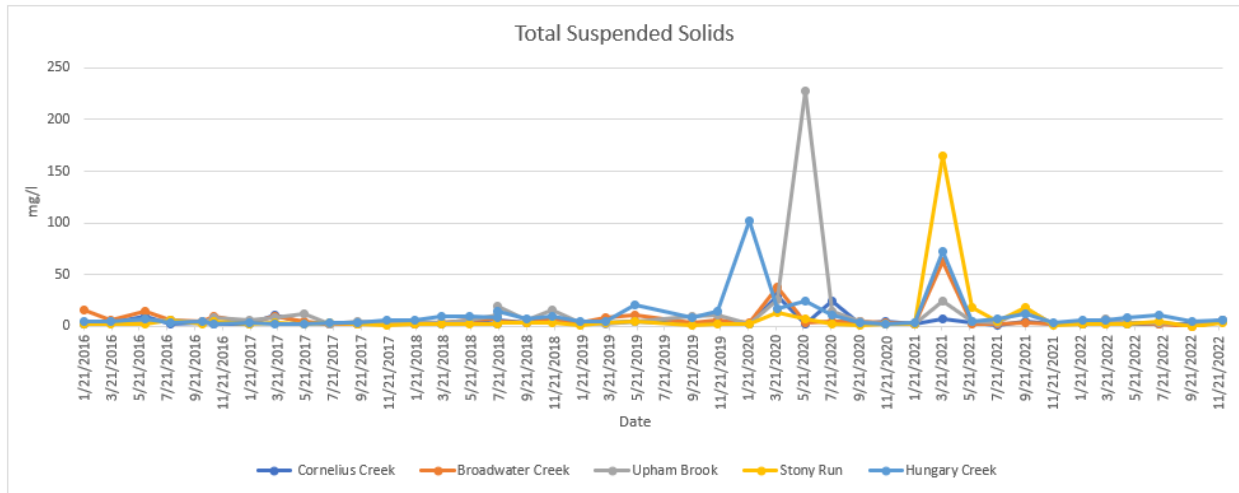
Aside from season variability noted across all sites, no discernable trend has been observed.



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Total Suspended Solids (TSS)

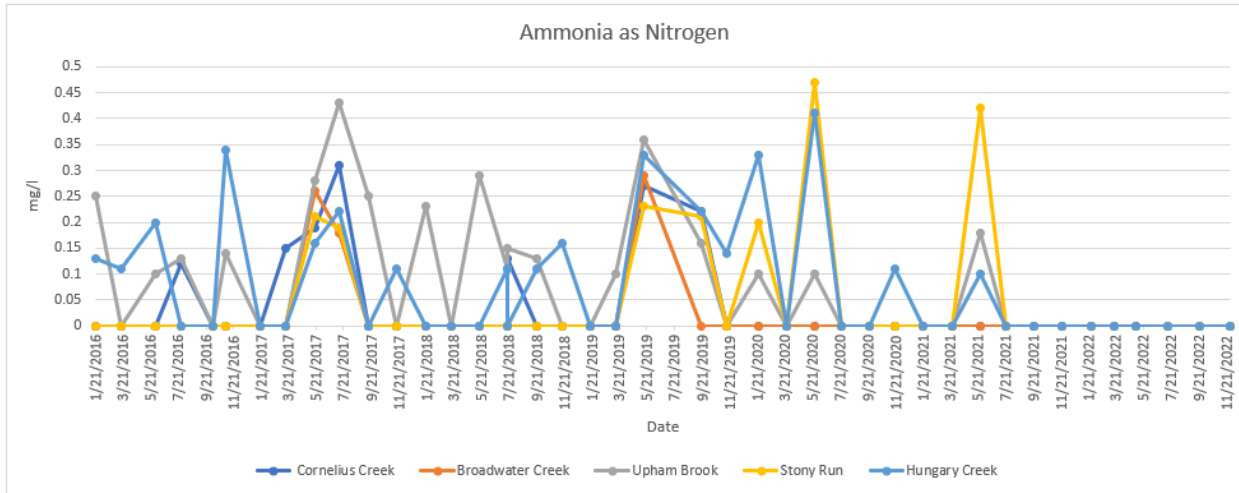
TSS has fluctuated between 0-50 mg/l across all sites throughout the duration of the monitoring, with the exception of a spike occurring at Hungary Creek and Upham Brook during the 2020 monitoring year and a spike during the March 2021 sampling event. These spikes appear to be correlated with significant precipitation events occurring recently before water samples were taken. The stream reaches located within highly urbanized environments could result in more intense flashy events causing upstream erosion and temporarily affecting stream turbidity. TSS spikes were only noted on singular collection events, and no long-term trends were identified.



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Ammonia as Nitrogen

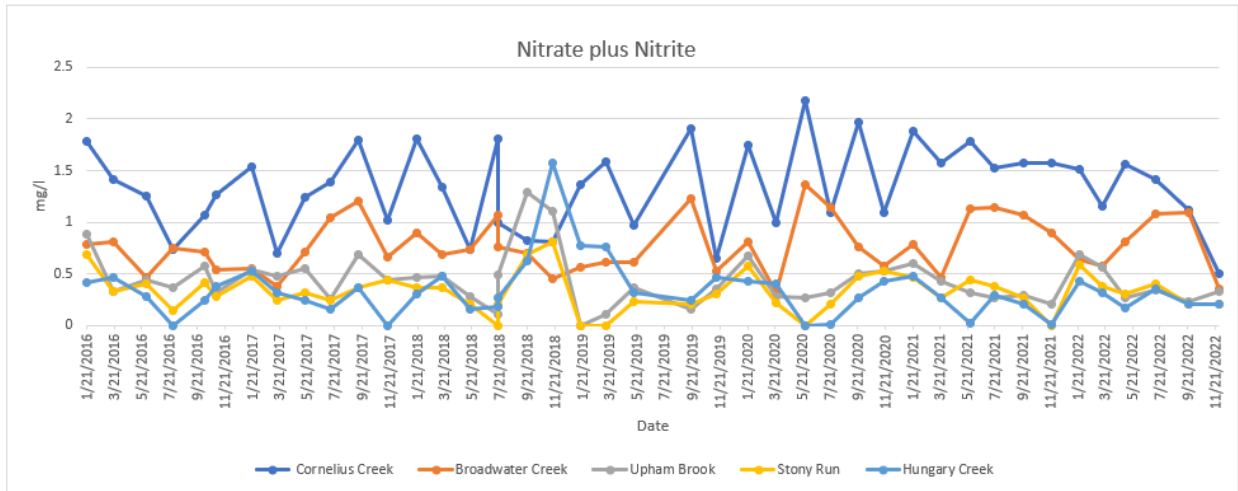
Ammonia as nitrogen has been variable across sites, but remaining within a range from 0 to 0.5 mg/l. This parameter has shown spikes through the summer months of some years. Seasonal spikes in ammonia could result from lower flow conditions experienced in the summer. All sites had below qualitative level for the 2022 sampling events.



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Nitrate plus Nitrite

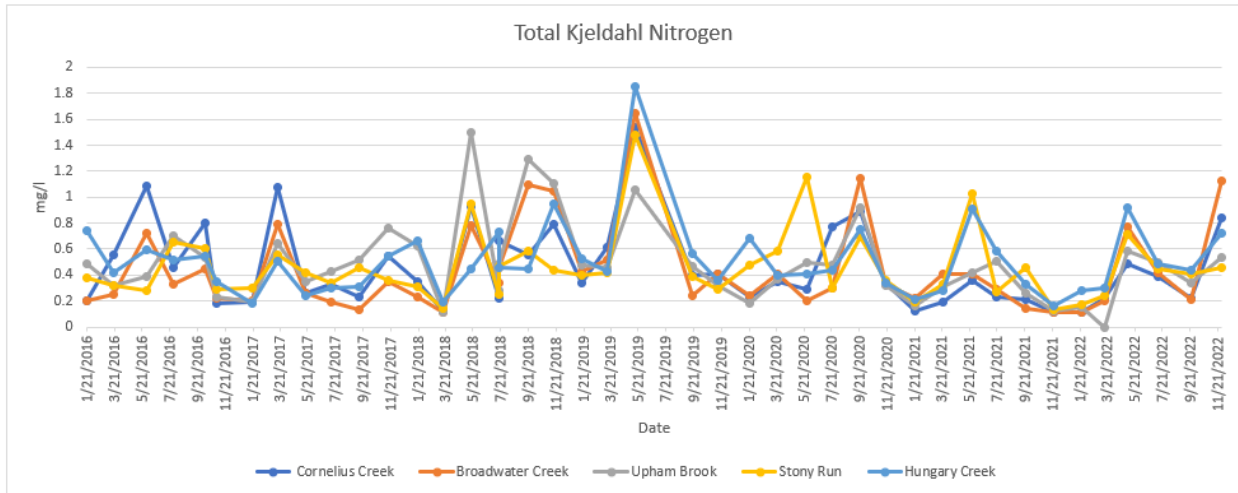
This parameter appears to fluctuate over time; however, it remains within a consistent range at each site. Cornelius Creek has notably higher values of Nitrate plus Nitrite. The watershed surrounding this reach of Cornelius Creek is dominated by agricultural lands, likely contributing a higher source of nitrogen fertilizer run-off.



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Total Kjeldahl Nitrogen

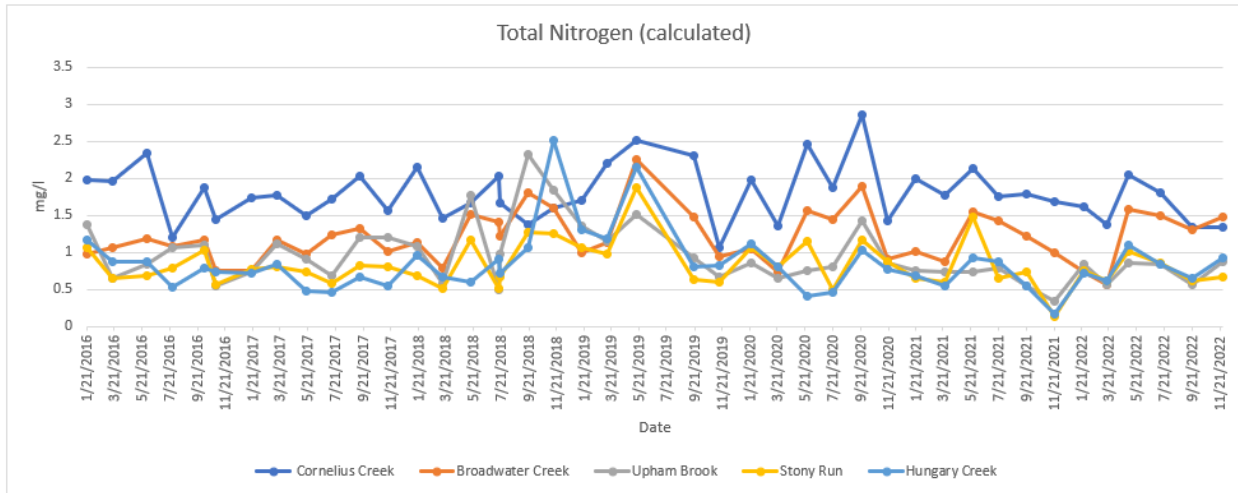
Total Kjeldahl Nitrogen appears to spike in the spring. This spike could result from the post-winter breakdown of organic material. This trend remained consistent during the 2022 sampling year.



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Total Nitrogen

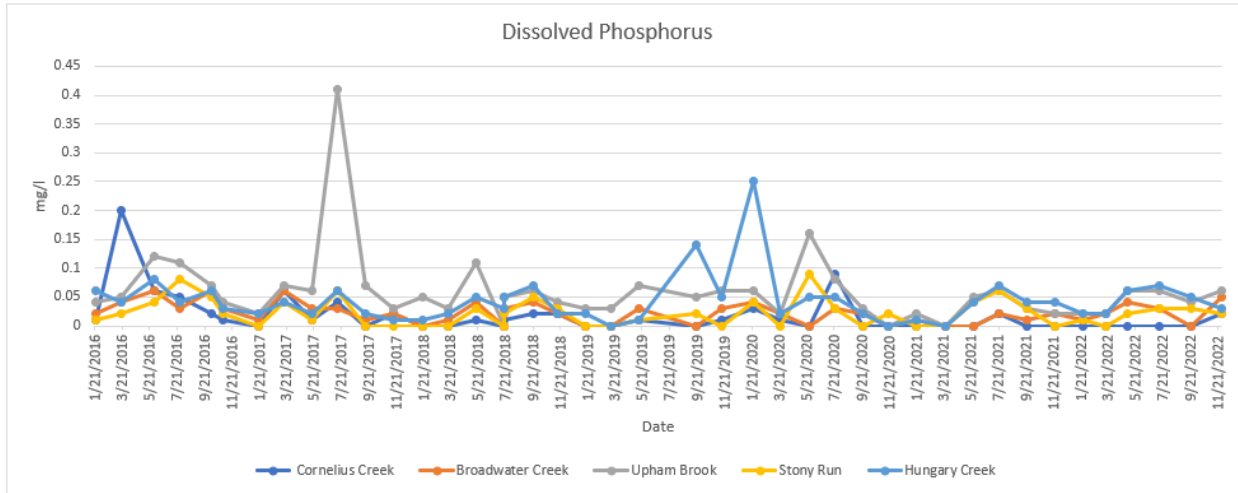
This parameter appears to fluctuate over time; however, it remains within a consistent range at each site. Cornelius Creek has recorded notably higher values of Total Nitrogen over the duration of the monitoring. The watershed surrounding this reach of Cornelius Creek is dominated by agricultural lands, likely contributing to a higher source of nitrogen fertilizer run-off.



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Dissolved Phosphorus

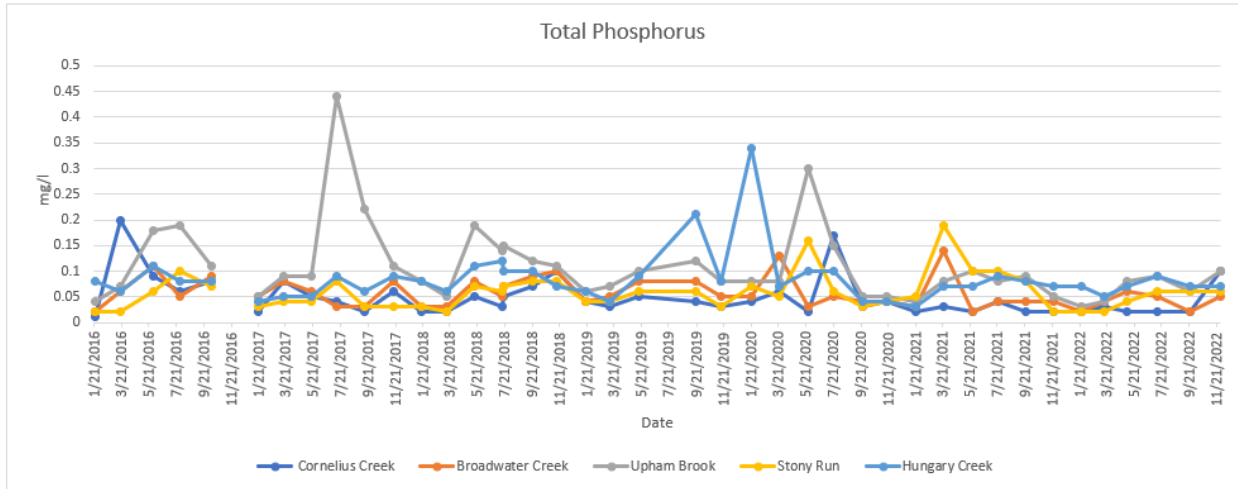
With the exception of a few spikes observed throughout the monitoring period, Dissolved Phosphorus has been consistent across time and sites. No discernable long-term trends have been identified.



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Total Phosphorus

With the exception of a few spikes observed throughout the monitoring period, Total Phosphorus has been consistent across time and sites. No discernable long-term trends have been identified.

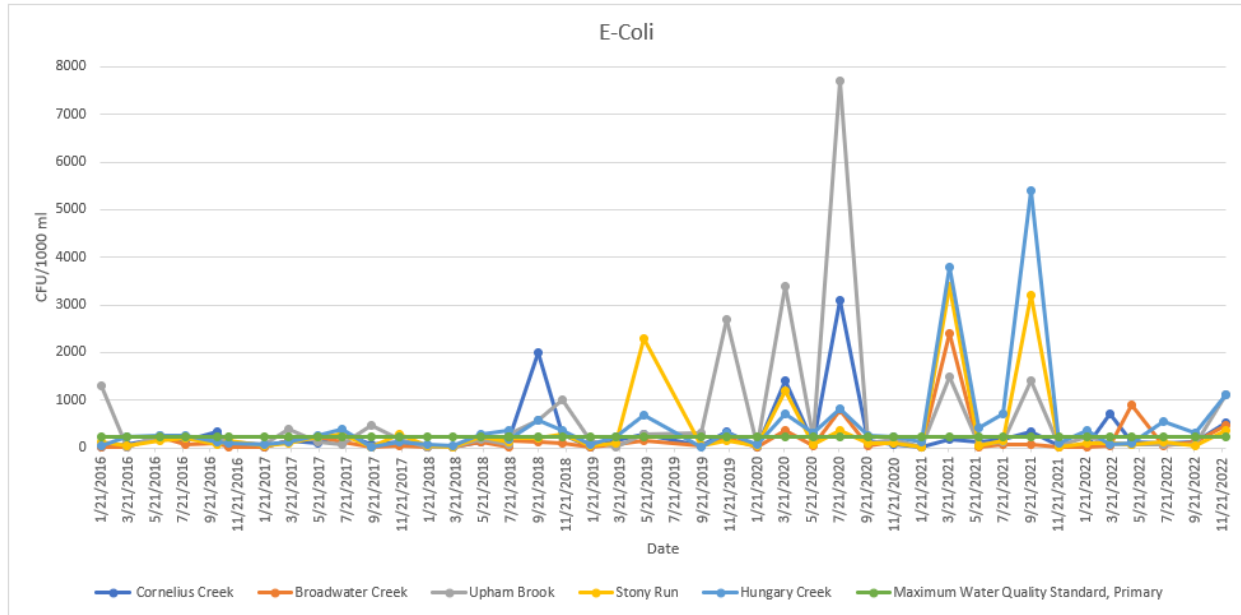


Note: Data unavailable for November 2016 sampling event.

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e-Coli

All sites have exhibited at least one spike in e-Coli over the monitoring period. No discernable trend has been observed across sites or over time. More data will be needed to identify any emerging long-term trends.



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PART I.C.3

MONITORING REQUIREMENTS STRUCTURAL AND SOURCE CONTROLS COMPLIANCE MONITORING AND TRACKING

Each annual report shall include a copy of the updated database in electronic format.

A spreadsheet (.xls format) of the required data from the County's electronic database of stormwater management facilities has been included in the digital submittal of the MS4 Program Plan and Annual Report Supplements. The spreadsheet includes data for the stormwater management facilities brought online between January 1, 2022 and December 31, 2022.

Each annual report shall include a summary of the program to ensure maintenance of private stormwater management facilities.

It is the responsibility of the Department of Public Works to inspect all privately owned and operated facilities. All privately owned facilities will be inspected a minimum of once every 5 years. All inspections will be documented in the online database (APEX) and in GIS. Any issues found during an inspection will be documented and a punchlist of repairs will be sent to the owner of the facility through certified mail. Owners will have 30 days from receipt of the letter to contact the County BMP inspector with a plan for repairs and a tentative schedule. The owner will contact the inspector at the start of any maintenance work and at its completion. The facility will be re-inspected after completion of work. If no contact is made or action is taken by the owner within a reasonable amount of time, a second punchlist of repairs will be sent. If no contact is made or action taken by the owner after the second punchlist, then these items will be sent to the County Attorney's office for legal action. All inspections will be completed by the county BMP inspector or other qualified person (either a licensed professional or an individual holding the SWM inspector certification issued by DEQ). All owner inspections that are documented will also be recorded in APEX.

Each annual report shall include a summary of the program to ensure maintenance of stormwater management facilities maintained by the permittee.

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On-Line* County-Operated SWM Facilities Inspected and/or Maintained between January 1, 2022 and December 31, 2022			
Type	Total	Inspected	Maintained
50/10 BASIN (5)	12	11	0
50/10 UNDERGROUND (6)	14	12	0
BAYFILTER (200)	1	1	0
BAYSEPARATOR (205)	1	1	0
BIORETENTION 1 (145)	3	3	0
BIORETENTION BASIN/TRENCH (10)	11	9	0
DRY DETENTION - POND (177)	1	0	0
DRY DETENTION - UNDERGROUND (178)	10	5	1
DRY SWALE 2 (151)	2	2	0
EXTENDED DETENTION BASIN (15)	30	30	0
EXTENDED DETENTION BASIN W/A SHALLOW MARSH (16)	2	2	0
EXTENDED DETENTION POND 1 (175)	1	1	0
FILTERRA (215)	29	27	0
GRASS CHANNEL (110)	1	1	0
GRASSED SWALE (20)	11	11	0
IMBRIUM JELLYFISH (250)	1	1	0
INFILTRATION BASIN/TRENCH (25)	7	7	0
PERMEABLE PAVEMENT 1 (135)	6	5	0
RETENTION BASIN (WET POND) (30)	8	8	0
SHEETFLOW TO VEGETATED FILTER OR CONSERVED OPEN SPACE 1 (105)	6	5	0
SHEETFLOW TO VEGETATED FILTER OR CONSERVED OPEN SPACE 2 (106)	4	3	0
STORMCEPTOR (225)	1	1	0

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STORMFILTER (220)	5	4	0
STORMTREAT (230)	3	1	0
STORMWATER360 (235)	5	5	0
VEGETATED FILTER STRIP (40)	2	0	0
Total	177	156	1

The annual report due March 31, 2019 under this permit shall include an updated list of stormwater management facilities existing prior to the effective date of this permit.

Noted.

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PART I.D.1

TMDL ACTION PLAN AND IMPLEMENTATION CHESAPEAKE BAY SPECIAL CONDITION

The permittee shall submit the Chesapeake Bay TMDL Action Plan to the Department for review and acceptance with the annual report due March 31, 2017.

The Chesapeake Bay TMDL Action Plan was submitted to the Department as part of the annual report submitted in March 2017.

Beginning with the annual report due on March 31, 2018, the permittee shall include a list of control measures implemented during the reporting period and the cumulative progress toward meeting the compliance targets for total nitrogen, phosphorus, and total suspended solids.

An additional 24 septic-to-sewer connections were made during the reporting period for a total of 342 (318 have been reported previously). These additional connections result in a reduction of 215.14 pounds of TN reduction.

$$\text{TN Reduction} = 3.6 \text{ lbs/year/person} \times 2.49 \text{ persons/household} \times 24 \text{ households}$$

$$\text{TN reduction} = 215.14 \text{ lbs/year}$$

In addition to the septic-to-sewer connections detailed above, the following project was implemented during the reporting period:

Project	Pollutant Reductions (lbs/year)			Completion Date
	Nitrogen	Phosphorous	Total Suspended Solids	
Tuckahoe Park Stream Restoration	797.81	226.51	76,926.31	09/15/2022

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Old Nine Mile Rd Landfill Stream Restoration	692.56	230.66	25,170.22	12/01/2022
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Cumulative Progress Toward Meeting Compliance Targets

Pollutant	Total Reduction Required During First Permit Cycle (lbs/yr)	Total Reductions Achieved to Date (lbs/yr)
Nitrogen	918.06	11,537.11
Phosphorus	176.93	2,280.48
Total Suspended Solids	102,340.90	706,958.96

No other control measures were implemented between January 1, 2022 and December 31, 2022. For purposes of this section of this report, *implemented* means completed.

Beginning with the annual report due March 31, 2018, each annual report shall include a list of control measures that were implemented during the reporting cycle and the estimated reduction achieved by the control. For stormwater management controls, the report shall include the information required in Part I.C.3.a) and shall include whether an existing stormwater management control was retrofitted, and if so, the existing stormwater management control type retrofit used

An additional 24 septic-to-sewer connections were made during the reporting period for a total of 342 (318 have been reported previously). These additional connections result in a reduction of 215.14 pounds of TN reduction.

$$\text{TN Reduction} = 3.6 \text{ lbs/year/person} \times 2.49 \text{ persons/household} \times 24 \text{ households}$$

$$\text{TN reduction} = 215.14 \text{ lbs/year}$$

In addition to the septic-to-sewer connections detailed above, the following project was implemented during the reporting period:

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Project	Pollutant Reductions (lbs/year)			Completion Date
	Nitrogen	Phosphorous	Total Suspended Solids	
Tuckahoe Park Stream Restoration	797.81	226.51	76,926.31	09/15/2022
Old Nine Mile Rd Landfill Stream Restoration	692.56	230.66	25,170.22	12/01/2022

Cumulative Progress Toward Meeting Compliance Targets

Pollutant	Total Reduction Required During First Permit Cycle (lbs/yr)	Total Reductions Achieved to Date (lbs/yr)
Nitrogen	918.06	11,537.11
Phosphorus	176.93	2,280.48
Total Suspended Solids	102,340.90	706,958.96

No other control measures were implemented between January 1, 2022 and December 31, 2022. For purposes of this section of this report, *implemented* means completed.

Beginning with the annual report due March 31, 2018, each annual report shall include a list of control measures that are expected to be implemented during the next reporting period and the expected progress toward meeting the compliance targets for total nitrogen, total phosphorus, and total suspended solids.

For purposes of this section of this report, *implemented* means completed.

No projects are expected to be implemented during the reporting period of January 1, 2023 and December 31, 2023.

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The permittee shall include the following as part of its reapplication package due no later than October 3, 2019:

- (a) Documentation that sufficient control measures have been implemented (or documentation detailing that implementation will be complete by the expiration date of this state permit) to meet the compliance target identified in this Special Condition. If temporary credits or offsets have been purchased in order to meet the compliance target, the list of temporary reductions utilized to meet the 5% reduction in this state permit and a schedule of implementation to ensure a permanent 5% reduction shall be provided; and
- (b) A draft second phase Chesapeake Bay TMDL Action Plan designed to reduce the existing POC loads by an additional seven times the required reductions in loading rates using Table 2 of Part I.D.1.b) of this state permit unless alternative calculations have been provided by the Commonwealth;
- (c) An additional 35% reduction in new sources developed between 2009 and 2014 and for which the land use cover condition was greater than 16%; and
- (d) Accounting for any modification to the applicable loading rate provided to the permittee as a result of TMDL modification.

The requested information was included in the permit reapplication package sent to DEQ on September 10, 2019. DEQ acknowledged receipt and deemed the reapplication package complete on September 27, 2019.

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.D.2

TMDL ACTION PLAN AND IMPLEMENTATION TMDL ACTION PLANS OTHER THAN THE CHESAPEAKE BAY TMDL

The permittee shall submit the required TMDL Action Plans to the Department for review and acceptance with the annual report due March 31, 2017.

Drafts of the required TMDL Action Plans were part of the annual report submitted in March 2017.

Beginning with the annual report due on March 31, 2018, the permittee shall report on the implementation of the TMDL Action Plans and associated evaluation including the results of any monitoring conducted as part of the evaluation.

Chickahominy River Benthic TMDL Action Plan

BMPs, Programs, and/or Projects Implemented during the MS4 Permit Year	Implementation Details
Erosion and Sediment Control Program	This program continues to be administered and implemented in accordance with the requirements of the state law and regulations. Details can be found in the MS4 Annual Supplement for Part I.B.2.a.
Stormwater Management Program	This program continues to be administered and implemented in accordance with the requirements of the state law and regulations. Details can be found in the MS4 Annual Supplement for Part I.B.2.a.
Illicit Discharge Detection and Elimination Program	This program continues to be administered and implemented in accordance with the requirements of the MS4 Permit. Details can be found in the MS4 Annual Supplement for Part I.B.2.e.

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SWM Facility and MS4 Infrastructure Inspection and Maintenance Programs	These programs continue to be administered and implemented in accordance with state law, regulations and the MS4 Permit. Details can be found in the MS4 Annual Supplements for Parts I.B.2.h and I.C.3.
Public Education, Public Outreach, and Employee Training	These efforts continue to be implemented in accordance with the MS4 Permit, the MS4 Program Plan, and the Chickahominy River Benthic TMDL Action Plan. Details of these efforts can be found in the MS4 Annual Supplements for Parts I.B.2.j and I.B.2.k.

Escherichia Coli TMDL Action Plan

BMPs and/or Programs Implemented during the MS4 Permit Year	Implementation Details
Illicit Discharge Detection and Elimination Program	This program continues to be administered and implemented in accordance with the requirements of the MS4 Permit. Details can be found in the MS4 Annual Supplement for Part I.B.2.e.
Public Education, Public Outreach, and Employee Training	These efforts continue to be implemented in accordance with the MS4 Permit, the MS4 Program Plan, and the Chickahominy River Benthic TMDL Action Plan. Details of these efforts can be found in the MS4 Annual Supplements for Parts I.B.2.j and I.B.2.k.