

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, 2021 thru December 31, 2021

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, 2021 through December 31, 2021

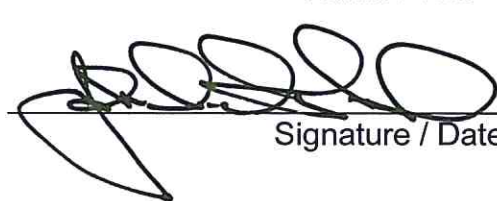
Certification as per Part II.K.

"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 Vithoukas, County Manager

Name / Title

 / 3/21/22

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.

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 1, 2021. 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, 2021 through December 31, 2021	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 2021 - 2022 can be found at <https://henrico.us/pdfs/finance/ApprovedBudgetFY21/ApprovedBudgetFY2021.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	\$68,104,869	\$2,402,677	General Fund Enterprise Funds
OPERATION AND MAINTENANCE	\$211,781,258	\$7,519,374	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 # 1462801, dated August 26, 2021) for the MS4 Permit Maintenance Fee (\$8,800.00) was submitted on September 1, 2021 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.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.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, 2021 and December 31, 2021	Total Number of Acres Disturbed
150	538.77

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, 2021 December 31, 2021	Number of Actions
ESC Inspection - Complete	5,176
ESC Inspection - Follow-Up	352
PreConstruction Meeting	129
SWPPP - Complete	527
SWPPP - Follow-Up	31
Notice to Comply	103
Stop Work Order	19

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.B.2.a

ANNUAL REPORT SUPPLEMENT

JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

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.

Henrico County Code, Chapters 19 (Subdivisions) and 24 (Zoning) were reorganized and updated, effective September 1, 2021. Implementation of the local ESC and SWM programs were not affected.

No other actions such as additional staff, revised roles/responsibilities, etc. were taken between January 1, 2021, and December 31, 2021, to implement the local ESC and SWM programs.

HENRICO COUNTY MS4 PROGRAM PLAN

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, 2021 and December 31, 2021**

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.

HENRICO COUNTY MS4 PROGRAM PLAN

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's) on which Turf and Landscape Nutrient Management Plans were implemented between January 1, 2021 and December 31, 2021		
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	277.85
Total acres managed by a Turf and Landscape Nutrient Management Plan	277.85
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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HENRICO COUNTY MS4 PROGRAM PLAN

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, 2021 and December 31, 2021		
IDDE00750		
Yard drain draining to roadway	01/04/2021 - Constant water from a yard drain is reportedly leaving a slippery material in the gutter. 01/04/2024 - DPW staff chlorine tested the water, and it was negative. The yard drain water does not appear to be contaminated, and the material is algae. I let the complainant know that yard drainage is an allowable discharge to our storm system and forwarded her concerns to Road Maintenance for a drainage evaluation.	Illicit discharge eliminated
IDDE00751		
Unknown material from service garage	01/21/2021 - DPU staff noticed evidence of some material leaving the garage area and in the concrete apron to the entrance of an equipment company. 02/02/2021 - The infrastructure on this street is private, and no mapped drains were located near this property. Forwarded to DEQ.	Illicit discharge eliminated
IDDE00752		
Dumped demo materials	01/21/2021 - A citizen reported to DPW staff that a demo crew dumped large concrete pieces on a property adjacent to a stream.	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.B.2.e

ANNUAL REPORT SUPPLEMENT

JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

	01/21/2021 - It was recommended that Building Inspections be contacted regarding a demo permit, and that the E&S inspector for the area could determine if there is a limits of disturbance issue and refer to the Water Quality Analyst to determine if this is an RPA violation.	
IDDE00753		
Chlorine detected	01/21/2021 - Chlorine detected in MN000000030522. 01/22/2021 - Forwarded to DPU.	Illicit discharge eliminated
IDDE00754		
Muddy flow and trash in state waters	01/22/2021 - A Hanover County resident contacted DPU and DPW about an increased muddy flow and trash in the Chickahominy, and he thinks it's possible that something in Henrico could be contributing to the issue. 01/22/2021 - Spoke with the complainant to get a better idea of what was going on. I let him know that I would be including DEQ on the inspection, as it involves state waters. Field visit has been rescheduled several times due to weather and availability. 02/09/2021 - Met onsite with the complainant, DEQ, and the environmental inspector covering some projects in the area. No conclusion was able to be drawn from looking at the trash in the river. DPU confirmed that their landfill does not have any issues and there is no evidence of trash leaving their site. The builder and developer in an upstream community have been made aware of the issue and were reminded that they need to ensure no trash is leaving the site.	Illicit discharge eliminated
IDDE00755		
Drainage	01/26/2021 - Received drainage complaint	Illicit

HENRICO COUNTY MS4 PROGRAM PLAN

concern	<p>regarding runoff from the Tuckahoe shopping center.</p> <p>01/26/2021 - Forwarded to Road Maintenance to have their drainage group assess the situation.</p>	discharge eliminated
IDDE00756		
Aeration in state waters	<p>01/26/2021 - MMA consultant and DPU sent photo of bubbles on stream.</p> <p>01/26/2021 - Contacted DEQ and let them know I suspected it to be aeration based on the photo and the recent rains. They agreed and relayed this info back to DPU.</p>	Illicit discharge eliminated
IDDE00757		
Dumped items along roadway	<p>01/27/2021 - Received notification of trash bags and a Christmas tree that had been dumped along the roadway.</p> <p>01/27/2021 - Forwarded to Road Maintenance and let the complainant know that it had been sent to the appropriate group.</p>	Illicit discharge eliminated
IDDE00758		
BMP & wetland concerns	<p>01/06/2021 - A resident sent in various concerns regarding the wetlands and maintenance of the BMP.</p> <p>01/29/2021 - Met onsite with BMP specialist and Water Quality Analyst to walk the property with the complainant. She had many concerns regarding the BMP and the adjacent wetlands, as well as trash on a nearby dormant construction site. Forwarded the construction site trash concerns to the E&S inspector for the area, and the trash was removed that day.</p> <p>02/02/2021 - Citizen called to ask about what was being applied to treat the water in the BMP. I let her know that I do not know, but that pond/lake</p>	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.e
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

	management companies are allowed to treat water to prevent algal blooms, although that is not a concern this time of year. I suggested she contact a company to ask general questions or try to catch the company that treats her BMP next time they are out. She was unable to get any information from her HOA on this, but she is concerned about chemicals and their impacts on migratory birds. Referred her to DEQ, as the BMP is private discharges to state waters.	
IDDE00759		
Chlorine detected	02/04/2021 - Chlorinated water detected in MN000000028342 02/05/2021 - Forwarded to DPU.	Illicit discharge eliminated
IDDE00760		
Chlorine detected	02/04/2021 - Chlorinated water detected in IN018676. 02/05/2021 - Forwarded to DPU.	Illicit discharge eliminated
IDDE00761		
Dumped furniture	02/06/2021 - Cabinet dumped in alley. 02/08/2021 - Forwarded to Road Maintenance and Community Maintenance.	Illicit discharge eliminated
IDDE00762		
Sheen in roadway	02/09/2021 - Received notification of sheen on roadway along Pinetree Dr. 02/09/2021 - Noted oil sheen along roadway in front of two houses and in a paved parking area. Contacted First Call for cleanup.	Illicit discharge eliminated
IDDE00763		

HENRICO COUNTY MS4 PROGRAM PLAN

Home heating oil in ditch	<p>02/09/2021 - Received notification of bright red liquid in a ditch and a strong odor.</p> <p>02/09/2021 - Contacted First Call for after-hours response to go confirm it is heating oil and to contain the spill. Contacted DEQ tanks and pollution response, as well as the VEOC. DEQ responded to the site and worked with First Call to contain the site for the tanks group to evaluate in the morning. A responsible party has been identified by DEQ.</p> <p>02/11/2021 - DEQ provided an update on the cleanup and said that the bulk of cleanup activities will resume after the upcoming weather events, but all material is contained and will not leave the site.</p>	Illicit discharge eliminated
IDDE00764		
Dark water in ditch	<p>03/02/2021 - Report of dark ditch water near parked tractor trailers.</p> <p>03/02/2021 - The dark water is likely due to tannins, and an oil pad was used to make sure there was no petroleum product in the water. No odors noted.</p>	Illicit discharge eliminated
IDDE00765		
Unknown pipe draining to MS4	<p>03/10/2021 - A white pipe is running from a greenhouse to a storm drain.</p> <p>03/10/2021 - No material leaving the pipe. A letter will be sent asking the homeowners to call us to explain what the pipe drains.</p> <p>03/23/2021 - Spoke with the homeowner, and she explained that the drain is to help with their yard drainage issues.</p>	Illicit discharge eliminated
IDDE00766		
Leaf and pet waste complaint	<p>03/15/2021 - Complaint regarding HOA leaf contractor blowing leaves into wetlands and pet waste bags in storm drains in a private neighborhood.</p>	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN

	03/15/2021 - Although the area is private, I coordinated with the HOA property management company to provide the county's pet waste information they can send an e-blast to all residents. I explained that the information we usually provide on leaf collection may not be applicable, as the private neighborhood does not use the county's leaf services, and the leaf contractor has been educated on not blowing leaves into the wetlands.	
IDDE00767		
Litter and loitering concerns	<p>03/15/2021 - Complaint regarding loitering and litter on a trail that runs along a stream in an apartment community.</p> <p>03/15/2021 - Forwarded the concern to Community Maintenance and let the complainant know that we do not have authority in a private community.</p>	Illicit discharge eliminated
IDDE00768		
Sediment in stream	<p>03/15/2021 - After-hours complaint received regarding 'cloudy substance' in stream. The complainant believed it to be related to underground power line burial in a nearby neighborhood.</p> <p>03/15/2021 - Photograph sent by complainant showed sediment in the stream. Contacted DEQ and they contacted the power company to determine what happened. A stockpile near an unprotected storm drain had caused the issue.</p>	Illicit discharge eliminated
IDDE00769		
Possible illegal car repair business	<p>04/01/2021 - Complaint sent regarding possible illegal car repair business with fluids on ground.</p> <p>04/01/2021 - Spoke with the complainant, and she confirmed oil was contained to private property. She wants to hear back from Community Maintenance to determine if this is a zoning violation. I sent this information back to them, and I told the complainant</p>	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.e
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

	to contact me if she does not hear back. I also gave her information for VDH for her groundwater contamination concerns for her well.	
IDDE00770		
Unknown pipe concern	<p>03/16/2021 - Neighbor complained about a pipe discharging from another house.</p> <p>03/17/2021 - Complainant couldn't locate pipe initially. Pipe was found and had lime near it. Was not discharging.</p>	Illicit discharge eliminated
IDDE00771		
Unknown pipe discharging to MS4	<p>03/10/2021 - Concern sent about pipe discharging to storm drain in neighborhood.</p> <p>03/10/2021 - Pipe not discharging at time of inspection. No odors or colors noted. Sent a letter to the homeowner to ask about what is being discharged.</p> <p>03/23/2021 - Spoke with homeowner, and she said that the pipe is draining excess stormwater in her yard. Gave her contact information for private property drainage specialist.</p>	Illicit discharge eliminated
IDDE00772		
Leaky vehicle	<p>04/07/2021 - Complaint of leaking vehicle</p> <p>04/07/2021 - Responded to complaint from resident regarding a leaking vehicle in cul-de-sac. Pavement was stained but there was no free product to remove. No oil had reached the MS-4 staining appeared minor. Complainant also mentioned residential vehicle washing on Selma Lane. I did not see evidence of washing during my inspection.</p> <p>02/21/2020 - Inspected the area and noted flow. Observed some sinking in the roadway.</p>	Illicit discharge eliminated
IDDE00773		
Oil container overflowing	03/26/2021 - FMO sent a request to meet on private property to look at a used oil container that had	Illicit discharge

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.e
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

on private property	<p>overflowed due to rainwater.</p> <p>03/26/2021 - Met DEQ & FMO onsite, and we spoke to the homeowner about the used oil container. She said she suspected it belonged to a former tenant she had living in her apartment, and she would be happy to properly dispose of it. We also educated her on the improperly stored car batteries and chemicals in the parking lot. Parking lot is private and eventually connects to MS4.</p>	eliminated
IDDE00774		
Mobile car wash	<p>03/30/2021 - DPU staff sent notification of a mobile car wash business washing in a shopping center parking lot.</p> <p>03/30/2021 - There is no stormwater infrastructure near the washing area, and the landscaped island nearby prevents any wash water from flowing further in the parking lot. This does not leave the asphalt area.</p>	Illicit discharge eliminated
IDDE00775		
Concrete washing from private property to MS4	<p>03/30/2021 - Neighbor sent complaint to Building Inspections about nearby homeowner who regularly washes concrete in the gutter in front of his house.</p> <p>03/30/2021 - Did not note any evidence of concrete washing in the concrete gutter. Let the complainant know that I did not see anything, but that she should call me in the future if she sees it again.</p> <p>17/2021 - Received an email from the complainant letting me know that the concrete washing activity has occurred again. Did not note any evidence in the gutter.</p> <p>06/21/21 - Incorrect address. Found the issue, and a letter was sent on 06/22.</p> <p>07/20/2021 - Met with the homeowner and</p>	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.e
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

	<p>discussed the issue. He stated that he had been repairing cracks in his driveway when a rainstorm came through. He understands the importance of clean stormwater and will try to make sure he is not doing this work before rain.</p> <p>10/01/2021 - Complainant stated the same homeowner was tilling his yard and sediment was being discharged into the curblin. Left a voicemail for the homeowner and shoveled dirt out of curb.</p> <p>10/01/2021 - Received a complaint from the same complainant stating that the homeowner is doing yardwork that's causing a muddy water discharge to the gutter. Inspected the site and the homeowner made effort to stop the discharge. No active discharge. Removed sediment from curblin and left voicemail for homeowner.</p>	
IDDE00776		
Sediment bag failure	<p>03/04/2021 - Received notification from E&S staff that a sediment bag failure caused a significant quantity of sediment to flow through the MS4 to a creek.</p> <p>03/04/2021 - Contacted DEQ PReP, and they directed us to reach out to DEQ's Stormwater Manager, who then coordinated with Henrico on appropriate follow-up actions.</p>	Illicit discharge eliminated
IDDE00777		
Dead fish in stream	<p>03/23/2021 - Homeowner called to make us aware of many dead fish in the stream across the street from her house.</p> <p>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.</p> <p>03/24/2021 - Met onsite with DEQ, and we all</p>	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.e
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

	agreed that there were several possible factors that could have caused the fish kill but nothing conclusive at this time.	
IDDE00778		
Trash truck hydraulic release	<p>04/12/2021 - Trash truck released hydraulic and caused staining on the streets of neighborhood</p> <p>04/12/2021 - DPW forwarded complaint to DPU, and they had contractor respond and clean up spills. DPW personnel inspected storm sewer, BMPs, and creek and did not see any evidence of free product nor any sheen from spills. Pavement was stained but there was no longer any recoverable product at the time of inspection.</p>	Illicit discharge eliminated
IDDE00779		
Pet waste in storm drain	<p>04/12/2021 - Pet waste being thrown in storm sewer in front of 3120 River Bluffs Court</p> <p>04/13/2021 - Removed pet waste from storm sewer inlet IN000000021470. Checked additional inlets in neighborhood but did not see any other pet waste. Owner of 3120 River Bluffs called the complaint into DEQ and they forwarded it to us. Owner stated that his neighbor, was throwing the dog waste in the storm drain. He then sent me a video of his neighbor throwing something into the storm drain. He also stated that a Resource Officer for the community was contacted last year regarding this issue and had spoken to the neighbor and asked him to stop this activity. The complainant said the activity stopped but has started back up again. See folder for videos and additional information. Will send educational postcards to neighborhood and discuss issue with resource office. May send a letter to the person dumping pet waste if appropriate.</p> <p>05/14/2021 - Sent letter to the responsible party with a copy to the county attorney's office.</p>	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN
 PART I.B.2.e
 ANNUAL REPORT SUPPLEMENT
 JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

IDDE00780		
Tractor trailer discharge in ditch	<p>04/13/2021 - Tractor trailer overturned in ditch and released fluids to ditch.</p> <p>04/13/2021 - DPW was repairing ditch and shoulder after tractor trailer accident on Monday. They found free product in the ditch and a heavy oil odor in the soil in the ditch. DPW staff used sorbents pads to remove free product, but the product continued to seep from the soil, so First Call was deployed. They used booms to contain the oil in the ditch and covered the area in plastic until they can come back and excavate. Excavation planned for near future, they just need to mark utilities and plan for lane closure.</p> <p>04/15/2021 - First Call Env conducted boom maintenance today after rains. Plan to excavate next week or the following week. Ditch will continue to be boomed.</p> <p>04/26/2021 - First Call excavated ditch and added back clean fill, shaped ditch and seeded. Office of Emergency Operations was notified of lane closure. Booms were removed. Clean up is completed.</p>	Illicit discharge eliminated
IDDE00781		
Spill in stream	<p>04/05/2021 - DEQ reached out to ask a few questions about a spill that had taken place on Sunday, 04/04, and was addressed by HFD.</p> <p>04/05/2021 - DEQ was working with the RP to address cleanup. They reached out to determine if there were any water intakes in the impacted creek. DPU confirmed that there were none in that area.</p>	Illicit discharge eliminated
IDDE00782		
Sediment in wetlands & creek	<p>03/24/2021 - Sediment from a construction site had impacted wetlands and the creek.</p> <p>03/24/2021 - Notified DEQ and put the inspector in</p>	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.e
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

	touch with DEQ Stormwater Manager for appropriate follow-up actions.	
IDDE00783		
Iron oxide	<p>04/09/2021 - Homeowner called about slimy, white, foamy stormwater runoff in front of her house.</p> <p>04/09/2021 - Met homeowner onsite and determined the material was iron oxide. Used an oil pad to show her that there was no petroleum present and explained that the foam was likely due to detritus.</p>	Illicit discharge eliminated
IDDE00784		
Mobile car wash	<p>04/13/2021 - A concerned citizen called to ask about the legality of a mobile car wash in a private parking lot.</p> <p>04/13/2021 - The parking lot in question does not drain to our MS4. Gave him the phone number to DEQ and explained that they would likely just request the wash move to the gravel area in the lot. He also wanted the phone number to the permit center to ask if the mobile car wash needs a business license.</p>	Illicit discharge eliminated
IDDE00785		
Upham Brook sewer odor	<p>04/21/2021 - EPA received a complaint regarding strong sewer odor near Upham Brook.</p> <p>04/21/2021 - DEQ contacted our group to see if we knew of anything, and I let them know that a sewer rehab project has been going on in the area for a while. I put him in touch with the inspector on the project.</p> <p>04/22/2021 - The inspector visited the site and determined that the odor from the bypass was the source of the issue, and there were no impacts to Upham Brook.</p>	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN

IDDE00786		
Cement truck washout inquiry	<p>04/21/2021 - DPW main email received an email asking if it is acceptable for a cement truck to wash material down a storm drain and indicated this had just occurred.</p> <p>04/21/2021 - Emailed the person to ask where this had happened and to let them know it is a prohibited activity, but I did not receive a response.</p>	Illicit discharge eliminated
IDDE00787		
Unknown pipe	<p>04/26/2021 - The property next to a single-family home under construction has a large, green pipe at the back.</p> <p>04/26/2021 - Spoke with the inspector for the site, who had been contacted by a building inspector to ask about the legality of the pipe. The house is on septic, so the pipe is not related to sanitary sewer. Contacted drainage specialist in Roads to determine if the pipe drains to MS4 or state waters, as nothing had been mapped in GIS.</p> <p>04/27/2021 - The drainage specialist visited the site and said it is not draining to the MS4, and that based on what he was seeing, it is draining the stormwater from the property.</p>	Illicit discharge eliminated
IDDE00788		
Sanitary sewer overflow and high <i>E. coli</i> levels in stream	<p>04/29/2021 - Road Maintenance litter crew contractor reported unusual material held by the trash berm.</p> <p>04/29/2021 - Road Maintenance reached out for our investigation, and they contacted First Call and DPU. DPU met onsite and said they believed the material to be grease, while First Call said it was sewage. Odor indicated the material was organic, but we had the material removed from the waterway. The Water Reclamation Facility agreed to accept the material, and they will be testing it to</p>	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN
 PART I.B.2.e
 ANNUAL REPORT SUPPLEMENT
 JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

	<p>determine what it could be. DEQ was notified, and they agreed the material was likely organic. DPU said they will be testing their lines to look for any issues on their end.</p> <p>05/28/2021 - DPU informed us of an ongoing overflow issue at an apartment complex that allows for material to spill onto a private road and into a storm drain on a state road. They will be investigating the issue and working with the complex management company.</p> <p>06/09/2021 - Met DEQ, Building Inspections, and DPU onsite to investigate the issue. There were several private sanitary manholes that had evidence of regular overflows. The storm sewer along Laburnum Ave had evidence of overflow material, and the tributary that feeds Gillies Creek had sewer fungus and a strong odor. The stream under Nine Mile Rd will be tested for E. coli, as it flows to Hechler Lake, where the issue originated. Planned a meeting with the regional property manager to discuss cleanup methods.</p> <p>06/11/2021 - Met with DPU and the Regional Property Manager. DPU discussed proper sanitary cleaning methods, and I let her know that they cannot just jet the storm system and that the material must be captured and properly disposed. The capture point cannot be at the creek.</p> <p>06/18/2021 - Lab results came back for the 5 sample locations along the stream that feeds Hechler Lake. All results exceeded the state standard for E. coli in freshwater. DPU will be investigating their lines upstream of this location.</p>	
IDDE00789		
Trash truck hydraulic	05/10/2021 - DPU had a hydraulic issue on a trash truck and sent notification to our group per County	Illicit discharge

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.e
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

release	SOP. 05/10/2021 - DPU stated ~45 gal of hydraulic oil spilled with about 2 gallons entering the storm drain. They brought in a cleanup contractor to remove all free product. No waterways impacted.	eliminated
IDDE00790		
Pesticide spill on roadway	05/14/2021 - DEQ sent notification of a mosquito spray company that had a pesticide spill out of the back of a truck. 05/14/2021 - DEQ sent correspondence with VDACS, and they were working together to resolve the issue. The complainant had a vehicle number and company name, so DEQ contacted the company to let them know that they need to be more cautious with their pesticide tanks and that they need to notify the locality when they have spills. No recoverable material reported by VDACS, as the material spilled while the vehicle was moving.	Illicit discharge eliminated
IDDE00791		
Water leak	05/26/2021 - Forwarded correspondence between DPW and DPU regarding a water leak. 05/26/2021 - DPU will resolve the issue.	Illicit discharge eliminated
IDDE00792		
Dumped concrete on private property	05/27/2021 - Received complaint about an apartment complex dumping leaves, whole trees, and concrete from a tennis court into the creek. 06/01/2021 - Forwarded information to DEQ and met them onsite to walk the creek. The materials were noted in the wooded area behind the apartments, but none of the material was located in the creek. I let the complainant know that our groups would not be able to enforce this, but that Community Revitalization might be able to help.	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.e
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

IDDE00793		
Mineral oil spill	<p>06/08/2021 - DEQ sent pollution incident report as a notification.</p> <p>06/09/2021 - Pollution record noted: A vehicle struck a pole with a 500 kVA pole mounted transformer breaking the pole and causing the transformer to fall to the ground. The accident caused a fire that burned the vehicle, the pole, and the transformer. As a result of the accident and the fire, approximately 100 gallons of non-PCB mineral oil contained within the transformer was released to the ground and caught fire. The initial spill was contained to the street and curb area beneath the pole, but the large amount of water used to extinguish the flames carried oily water to two curb inlets near the accident site. Oily water pooled behind sediment accumulated in the storm drain catch basins. Crews used a solids vacuum truck to remove oily water and impacted sediment from storm drain catch basins and placed absorbent booms in catch basins to remove any residual oil mobilized during upcoming rain events. Impacted soils at the base of the pole were removed using hand tools and the vacuum truck. Loose absorbents were applied to the pavement and curb line to remove oil from those surfaces. All impacted materials were removed from the site for disposal.</p>	Illicit discharge eliminated
IDDE00794		
Sediment-laden water discharged to storm drain	<p>06/15/2021 - Building Inspections sent notification of dirt in the storm drain from a homeowner installing a pool.</p> <p>06/16/2021 - Met onsite and spoke with a friend of the homeowner who was doing the work. They had hoses in the driveway that were discharging the water and dirt being pumped out of the ground where the pool was going. This was running along the curb and gutter and into a storm drain. He did</p>	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.e
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

	not understand the issue and asked various questions about stormwater to indicate the sediment-laden water he was discharging was not an issue. He became combative, and I told him I would discuss the issue with my group to see if a filter bag would be the most appropriate filtration device in this scenario. Contacted the FMO for backup. The FMO sent someone who was able to shut down the work, and the homeowner came home to discuss this. The homeowner understood and went to buy a filter bag that was installed that day. Several E&S issues were noted by the inspector when he arrived, and he sent a report detailing what actions needed to be taken, including shoveling the dirt from the curb. I will send a work order to Road Maintenance to clean the storm drain.	
IDDE00795		
Sediment-laden water discharged to storm drain	<p>06/22/2021 - A homeowner had a pile of dirt in the street in front of his house during a rain event, which caused sediment-laden water to enter a nearby storm drain.</p> <p>06/22/2021 - Spoke with homeowners, and it appears their contractor put the pile there. The homeowner called the contractor to let him know that he could not do that, and they agreed to come remove the pile.</p>	Illicit discharge eliminated
IDDE00796		
Sewage in creek	<p>06/23/2021 - Received an after-hours email reporting sewage in the stream behind the complainant's house.</p> <p>06/24/2021 - Contacted the complainant to let them know I had forwarded his email to DPU. Contacted DEQ to make them aware of the issue.</p> <p>06/24/2021 - Met DEQ onsite and found the source of the break. DPU had also found the break, and</p>	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.e
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

	<p>they were in the process of getting a bypass set up and planned to bring in their contractor to make the repair.</p> <p>10/03/2021 - Complainant reached out to let me know that there was a strong sewage odor in the stream behind his house and wondered if there was another issue with the sewer repair upstream. I put him in touch with DPU for an update.</p>	
IDDE00797		
Algae in lake	<p>06/24/2021 - The Wyndham Foundation reached out about a potential algae issue in their lake.</p> <p>06/24/2021 - Met onsite and discussed a few options they could pursue, such as placing signage they used for an algal bloom in 2019 (see IDDE00556) and contacting a pond management company to see if anything could be done.</p>	Illicit discharge eliminated
IDDE00798		
Pool backwash discharge to MS4	<p>06/30/2021 - Received contact information for a homeowner who wanted to discuss how to properly backwash pool water.</p> <p>06/30/2021 - Called the homeowner and discussed the pool backwash. I told him I would come out next time he backwashes to chlorine test the water that leaves his property and at the point where it enters the storm drain. We will meet 07/07.</p> <p>07/07/2021 - Met with the homeowner and tested the discharge for chlorine at both locations. Both tests did not indicate a presence of chlorine.</p>	Illicit discharge eliminated
IDDE00799		
Dumped grass clippings in storm drain	<p>06/30/2021 – HOA management company called to provide the address of a homeowner who regularly dumps grass clippings in a storm drain.</p> <p>06/30/2021 – Another person from this office called</p>	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN

	<p>to ask about trash in a storm drain on a private road. I let her know that they could contact a private company to clean it, and I sent her examples of our postcards that they can send out for education.</p> <p>06/30/2021 - Called them back to let them know I had forwarded this to the Road Maintenance division.</p>	
IDDE00800		
Heavy flow in storm drain	<p>06/30/2021 - Heavy water flow seen in drain</p> <p>06/30/2021 - Likely an underground stream based on the size of the pipe. Will confirm with Road Maintenance</p> <p>07/05/2021 - RM confirmed the area is constantly wet and the pipes are sized to accommodate the water.</p>	Illicit discharge eliminated
IDDE00801		
Concrete truck discharging to stream	<p>07/02/2021 - POSSE complaint entered 07/01 regarding a concrete truck dumping in the stream.</p> <p>07/02/2021 - Forwarded to DEQ as a state waters issue and contacted the complainant to let him know that DEQ would reach out to him for more information.</p>	Illicit discharge eliminated
IDDE00802		
Transformer leak on private property	<p>07/06/2021 - Homeowner called to say a power transformer had a leak at the back of his property and that he was not happy with the cleanup measures done by the power company's staff and cleanup contractor.</p> <p>07/06/2021 - Forwarded to DEQ.</p>	Illicit discharge eliminated
IDDE00803		
Flow in storm drain	07/12/2021 - Steady flow smelled of chlorine in drain.	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN

	07/12/2021 - Forwarded to DPU.	
IDDE00804		
Power steering fluid on roadway	<p>07/12/2021 - Homeowner complained that his roommate's car is leaking power steering fluid on the roadway.</p> <p>07/12/2021 - Confirmed the car I saw parked in front of the house is the car that is leaking. Sent a letter to the homeowner on 07/13 requesting the responsible party contact me to discuss cleanup.</p> <p>07/21/2021 - Homeowner called to say he had received the letter and asked several times about getting the road repaved. I referred him to the emails where the contact information to Road Maintenance had been provided. He said that his roommate had her car repaired, so I told him I could come by and use oil dry to remove any free product.</p> <p>07/27/2021 - Used oil dry to remove free product. Noticed the car had an oil pad held in place with bricks, so I let the complainant know that if the car has not been repaired as he previously stated, he needs to make sure they are continuing to use oil pads to capture the material as they currently are.</p>	Illicit discharge eliminated
IDDE00805		
Oil stain in roadway	<p>07/16/2021 - Road Maintenance received a complaint about oil on the road.</p> <p>07/17/2021 - Road Maintenance sent out a foreman to check, and he reported that the stain is old. I confirmed this on 07/22.</p>	Illicit discharge eliminated
IDDE00806		
Dead fish in pond	<p>07/18/2021 - Received an after-hours email stating that 9-10 dead fish were floating in a pond and residents were concerned about a toxicity issue.</p> <p>07/19/2021 - Walked around the pond with a DEQ</p>	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN

	rep and noted 4 dead fish. Spoke with the complainant and let her know that it was likely due to the long stretch of high temperatures that caused an increase in the water temperature and low dissolved oxygen. The fish were found in shallow areas with detritus.	
IDDE00807		
Iron oxide	07/19/2021 - Two DPW employees contacted me regarding an odor and orange discharge from a pipe. 07/19/2021 - The material was iron oxide.	Illicit discharge eliminated
IDDE00808		
Grease dumping in storm drain	07/22/2021 - Road Maintenance received a complaint stating a restaurant is dumping grease in the storm drain behind them on a daily basis. 07/22/2021 - Inspected the area and determined the private system eventually connects to the MS4. Spoke with an employee, who called the manager for me. The manager suggested that maybe the grease bin overflowed due to rain, but I told him that is unlikely because we did not see any evidence of grease in the lot and that the grease is on top of the drain, indicating that someone is taking it and intentionally dumping it. He said he would check with staff to see what is going on. I reiterated that the dumping needs to stop.	Illicit discharge eliminated
IDDE00809		
Dead turtles in pond	07/22/2021 - Resident called to say she has seen many dead turtles around the ponds in this area. 07/22/2021 - Spoke with DEQ-- they spoke with the homeowner and said they would be willing to investigate it and let me know if there were any impacts to the MS4.	Illicit discharge eliminated
IDDE00810		
Oil in	07/26/2021 - Complaint received regarding an oil	Illicit

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.e
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

roadway	change in the roadway that left oil on the road. 07/27/2021 - Used oil dri to remove free product from roadway.	discharge eliminated
IDDE00811		
Dumped compost remnants and rainwater	<p>07/27/2021 - A concerned worker in the building next door stated that a small, private trash company dumps the liquid and trash remnants out in the grassy area behind their building and that it smells horrible all summer.</p> <p>07/27/2021 - I confirmed there are no storm structures in the area, and I explained that my group could not enforce private property. I contacted Community Maintenance on his behalf and asked them to investigate the issue.</p> <p>08/18/2021 - Met with Community Maintenance at the building, and we realized there was an unmapped, private BMP that drains to the curb inlet on Mayland Ct. Contacted the company, and the person who answered put me in touch with the owner, who agreed to stop discharging rainwater from their compost trucks to the BMP.</p>	Illicit discharge eliminated
IDDE00812		
<i>E. coli</i> in stream	<p>07/26/2021 - Refer to IDDE00350 in the old database. Supporting documents are in that file, as well. Jordan's Branch was found to have high <i>E. coli</i> levels again, so we planned to test further upstream at the same locations as we did in 2019.</p> <p>08/02/2021 - Sampled the same and additional areas as in 2019. The inlet next to the dog daycare had elevated <i>E. coli</i> levels, indicating the same issues were happening again.</p> <p>08/10/2021 - Emailed the owner to let him know that this issue is happening again and to see what they plan to do to resolve it.</p>	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.e
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

	08/20/2021 - The owner stated that it was a training and product availability issue. He has since retrained his staff, and he said that the more effective cleaning product is now back in stock and in use on his site.	
IDDE00813		
Chemical in roadway	<p>08/10/2021 - Citizen complaint sent to DPU stating there is a chemical in the road.</p> <p>08/10/2021 - DPU reached out to our group, but they later determined that the product was foam from a can that was from one of their trash trucks. DPU said they will clean the area.</p>	Illicit discharge eliminated
IDDE00814		
Sediment-laden water from construction	<p>08/07/2021 - DEQ reached out on the weekend to relay complaints regarding excessive sediment-laden water possibly coming from a construction site within the county.</p> <p>08/07/2021 - Put DEQ in touch with appropriate staff.</p> <p>08/12/2021 - The issue was traced to a VDOT project on Patterson Ave. They were contacted, and they had the contractor clean the area and replace E&S measures that were ineffective after the heavy rains that caused the blowout. I inspected the area and it had been cleaned to our satisfaction. Some areas had old sediment--forwarded to Road Maintenance.</p> <p>08/16/2021 - Reached out to VDOT to see if they would again clean the area after more heavy rains and citizen complaints of sediment-laden water in the area. They said the contractor was cleaning the area again.</p>	Illicit discharge eliminated
IDDE00815		
Asphalt	08/19/2021 - Complaint sent to DPW staff stating	Illicit

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.e
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

debris in ditch	that there was asphalt debris that had been pushed in the ditch from the paving work in the area. 08/19/2021 - Contacted Road Maintenance, and they let me know that the contractor will be back through to get the material after their work on Larkwood Rd is complete. Contacted the complainant and left a voicemail relaying this information.	discharge eliminated
IDDE00816		
Sediment discharge from ball field at a park	08/24/2021 - DPW inspector forwarded concern about ongoing sediment discharge from baseball fields at a Parks facility. 09/02/2021 - Met onsite with Rec & Parks representatives to discuss measures to prevent further sediment discharge. Temporary measures will be put in place until the baseball fields are no longer in use and can be regraded.	Illicit discharge eliminated
IDDE00817		
Hydraulic oil spill	08/26/2021 - Homeowner called to report a potential hydraulic spill in front of her house that was not cleaned effectively and now eating the asphalt. 08/26/2021 - Forwarded to Road Maintenance	Illicit discharge eliminated
IDDE00818		
Pesticide misuse concern	08/30/2021 - Homeowner called to complain about her neighbor's use of pesticide. 09/03/2021 - Left a voicemail for the homeowner to educate them on using the pesticide away from the storm drain. Referred the complainant to VDACS for misuse of product.	Illicit discharge eliminated
IDDE00819		
Home heating oil discharge	09/03/2021 - Complaint received in POSSE about a strong diesel odor in the neighborhood. 09/03/2021 - Discovered a home with evidence of a	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN

	discharge from the heating oil tank. Referred the case to DEQ and followed up with the complainant.	
IDDE00820		
Odor in concrete channel	<p>08/30/2021 - Road Dept forwarded an odor concern in the concrete channel on Lammrich Rd.</p> <p>08/31/2021 – Noted an organic odor due to vegetation in standing water at the end of the cul-de-sac. No other odors noted. Water Quality Analyst also went and reached out to the complainant.</p>	Illicit discharge eliminated
IDDE00821		
Full oil pan under tractor trailer	<p>08/31/2021 - Fire forwarded a complaint from the NRC detailing a full oil pan under a tractor trailer.</p> <p>08/31/2021 - Inspected the site with DEQ and contacted the trucking company to make them aware of the issue and that the material needed to be properly disposed of prior to the impending rainstorm.</p>	Illicit discharge eliminated
IDDE00822		
Dumped materials in stream	<p>09/08/2021 - Received an anonymous complaint about a food manufacturer dumping flour out the windows and washing chemicals into the storm drains/stream.</p> <p>09/08/2021 - Forwarded to DEQ since this is a state-permitted facility and no county MS4 impacted.</p>	Illicit discharge eliminated
IDDE00823		
Bleach discharge	<p>09/03/2021 - Complaint forwarded regarding a neighboring business that uses a lot of bleach to clean their outdoor wall.</p> <p>09/03/2021 - Complaint was received but more information was needed to determine appropriate response. The complainant was asked if any state waters/wetlands were impacted or if the storm</p>	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN
 PART I.B.2.e
 ANNUAL REPORT SUPPLEMENT
 JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

	<p>system was impacted.</p> <p>09/10/2021 - Reached out to ask her if the ditch has been impacted by the bleach use. Have not heard back as of 09/27/2021.</p>	
IDDE00824		
Red spots from insects	<p>09/15/2021 - A complaint detailing odd, red splotches on a house was received.</p> <p>09/16/2021 - Contacted the SWI group to see if they had seen this before. The material is excreted sugars from cicadas and other insects. Met with the homeowner to explain this and saw it happen as we were there.</p>	Illicit discharge eliminated
IDDE00825		
Dumped trees	<p>09/17/2021 - Homeowner called to state that many unmarked dump trucks were bringing in trees and possibly hazardous waste to dump in the wooded area at the end of the road.</p> <p>09/27/2021 - After determining that no permitted construction activities were occurring, this was forwarded to DEQ.</p>	Illicit discharge eliminated
IDDE00826		
Unknown material	<p>09/24/2021 - Received notification of unknown substance at the Police Memorial.</p> <p>09/24/2021 - Forwarded to General Services.</p>	Illicit discharge eliminated
IDDE00827		
Dumped home heating oil	<p>10/04/2021 - Neighbor complained that the homeowner possibly dumped their heating oil tank contents into their own yard.</p> <p>10/05/2021 - Forwarded to DEQ.</p>	Illicit discharge eliminated
IDDE00828		
Trash truck oil spill in private	10/08/2021 - HOA president of a private community reached out about a private trash truck company that had an oil spill in their community that needed	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN

community	further cleanup action. 10/08/2021 - Forwarded to DEQ.	
IDDE00829		
Dip in roadway	10/11/2021 - Received a request to contact a HOA president regarding a possible illicit discharge. 10/11/2021 - Contacted the homeowner, and he stated that he has a dip in the road in front of his home that holds water when it rains. Forwarded to Road Maintenance.	Illicit discharge eliminated
IDDE00830		
Discoloration in stream	10/13/2021 - DEQ sent notification of gray, cloudy water in Jordan's Branch next to Libbie Mill. 10/13/2021 - Met DEQ onsite and went upstream to find a source. There was no obvious source, and only a slight brackish odor was detected. 10/13/2021 - DEQ was notified of a fish kill at Bryan Park, where the material had moved. 10/15/2021 - Met with several DEQ representatives upstream on Jordan's Branch to look for other possible sources. No sources identified.	Illicit discharge eliminated
IDDE00831		
Sediment-laden water in stream	10/13/2021 - Received a report of sediment-laden water in the stream through Cheswick Park. 10/13/2021 - Followed up with DPU, and they confirmed they had a line break in this area. Their contractor was called when they were unable to make the repair.	Illicit discharge eliminated
IDDE00832		
Sediment-laden water in stream	10/13/2021 - Received a complaint stating that the stream behind Maremont Ct had sediment-laden water.	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN

	10/13/2021 - Visited the site with DEQ and tracked the source to a sidewalk project. Spoke with one of the county inspectors onsite, and he explained that there had been a failure of a valve during a hydrant install. DEQ & I told him to have the contractor use a sediment bad for any remaining pumping to reduce impacts to the creek and MS4.	
IDDE00833		
Concrete in gutter	<p>10/12/2021 - Environmental inspector called to notify me about concrete running in the gutter in a development.</p> <p>10/12/2021 - The material did not reach the MS4, and he agreed to have the contractor clean up any material that could be recovered.</p>	Illicit discharge eliminated
IDDE00834		
Discharge from pool construction	<p>11/16/2021 - Environmental Inspector notified me of an illicit discharge from pool construction at a hotel she was inspecting.</p> <p>11/16/2021 - The inspector worked with me to determine that the private storm system eventually connects into the county system. I told her the material had to be removed from the private system to eliminate the potential impact to the county MS4. The contractor agreed to have a cleanup contractor come out that day to jet and vac the pipes.</p>	Illicit discharge eliminated
IDDE00835		
Diesel odor	<p>11/18/2021 - CM sent a complaint their group received about an oversized vehicle parked in a residential area that smelled like it was leaking diesel.</p> <p>11/19/2021 - The vehicle was not present, and the roadway showed no evidence of a leaky vehicle parked prior to the inspection.</p>	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN

IDDE00836		
Dark creek water	<p>11/19/2021 - Contractor working on box culvert extension notified environmental inspector of black water in creek.</p> <p>11/19/2021 - Met DEQ onsite and followed the water upstream. The stream could not be accessed through an easement, and we could not obtain permission to go on private property. There is an impoundment in the woods that could have contributed to the oxygen turnover, causing the water to turn black.</p>	Illicit discharge eliminated
IDDE00837		
Sewer overflow	<p>12/02/2021 - Complaint regarding strong waste odor at homeowner's property, and she suspects the neighbor is dumping pet waste onto her property.</p> <p>12/02/2021 – Sent to DPU for inspection.</p> <p>12/02/2021 - The sanitary manhole at 515 Belser Ln had some substance around it, and the lid was slightly ajar, indicating a possible overflow. The manhole also appeared to be sinking.</p>	Illicit discharge eliminated
IDDE00838		
Dark stream water	<p>12/06/2021 - Discoloration reported in creek behind homeowner's property.</p> <p>12/06/2021 - Met onsite with DEQ and determined that the discoloration in the creek is due to tannins. The homeowner had concerns about ditch maintenance, so I directed him to Road Maintenance.</p>	Illicit discharge eliminated
IDDE00839		
Chlorine discharge	<p>12/06/2021 - DPW inspection group discovered a chlorine discharge in IN016954. Forwarded to DPU.</p> <p>12/06/2021 - Forwarded to DPU.</p>	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN

IDDE00840		
Trash truck hydraulic release on roadway	<p>12/07/2021 - Homeowner called to say a trash or recycling truck had an issue the week prior that resulted in large puddles of hydraulic oil that had been tracked through their neighborhood.</p> <p>12/08/2021 - Contacted the recycling company that was out on the day of the reported issue, but I did not hear back from them. Sent out First Call to clean the roadway.</p>	Illicit discharge eliminated
IDDE00841		
Hydraulic oil in road	<p>12/16/2021 - Homeowner called to report a county trash truck or street sweeper possibly left hydraulic oil on the roadway with no impacts to the storm system.</p> <p>12/16/2021 - Forwarded to Road Maintenance.</p>	Illicit discharge eliminated
IDDE00842		
Styrofoam in private BMP	<p>12/16/2021 - Complaint received about the renovation at a hotel causing styrofoam to enter the storm drain.</p> <p>12/17/2021 - Met onsite with DEQ and the ESC inspector for the area. The styrofoam was being cut in the lot, which broke into smaller pieces that were blown into a private storm drain in front of the hotel. The material was also blown across the parking lot and into the BMP, as well into the outfall from the BMP that hits a roadside channel. Road Maintenance could not confirm ownership of this channel. DEQ spoke with the manager of the hotel, who was unwilling to assist. I contacted the Fire Marshal's office to ask for assistance. The FMO who works that area told the manager that work must cease for the day, the material has to be cleaned up, and any further styrofoam work requires a daily clean-up.</p>	Illicit discharge eliminated

HENRICO COUNTY MS4 PROGRAM PLAN

IDDE00843		
Sewer overflow	<p>12/28/2021 – The Fire Marshal's office reached out about a complaint they received regarding a strong waste odor.</p> <p>12/28/2021 – Forwarded to DPU. The issue was a sewer overflow.</p>	Illicit discharge eliminated
IDDE00844		
Dumped cooking oil	<p>12/28/2021 - Homeowner stated there is a roll of carpet that has been dumped in the road, and he would like it removed.</p> <p>12/28/2021 - Forwarded to Road Maintenance.</p>	Illicit discharge eliminated
IDDE00845		
Chlorine discharge	<p>12/30/2021 - Chlorine discharge detected in IN011631 and IN011633.</p> <p>01/04/2022 - Forwarded to DPU.</p>	Illicit discharge eliminated

Sewer Discharges between January 1, 2021 and December 31, 2021		
01/03/2021	A sewage overflow occurred at Gillies Creek SPS. The overflow was due to heavy rain. Sewage overflowed from one sanitary sewer manhole at the station. Approximately 225,100 gallons of sewage spilled.	A cleanup of the area was performed, and lime applied.
01/11/2021	A bypass pumping caused a sewage spill located in the easement on the property of 2300 Gordons Lane. Approximately 8,400 gallons of sewage spilled.	The bypass pumping failure was corrected, and cleanup of the area was performed and lime applied.

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.e
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

01/19/2021	A stoppage in the sanitary sewer main caused a sewage spill from MH #023NE046 and MH #023NE047, located in the easement on the property of 2300 Gordons Lane. Approximately 1,470 gallons of sewage spilled.	A cleanup of the area was performed and lime applied. Line will be televised
01/26/2021	A broken sanitary sewer main caused a sewage spill from MH #334SE001 - MH #334SE002, located in the easement on the property of 514 Ironington Road. Approximately 24,500 gallons of sewage spilled.	A point repair was completed on the mainline on 3/3/2020.
01/29/2021	A sewage overflow was identified by DEQ staff. There was a missing manhole cover (MH#203SW015), located in an easement on the property of 1600 Hilliard Road. Approximately 10,000 gallons of sewage spilled.	A cleanup of the area was performed.
02/02/2021	A stoppage in the sanitary sewer main caused a sewage spill from MH #331NW003 and MH #331NW004, located in front of 2413 Fruehauf Road. Approximately 450 gallons of sewage spilled.	A cleanup of the area was performed and lime applied. Line will be televised
03/24/2021	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 32,230 gallons of sewage spilled.	A cleanup of the area was performed, and lime applied.
06/11/2021	A sewage overflow occurred at Gillies Creek SPS. The overflow was due to heavy rain.	A cleanup of the area was

HENRICO COUNTY MS4 PROGRAM PLAN
 PART I.B.2.e
 ANNUAL REPORT SUPPLEMENT
 JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

	Sewage overflowed from one sanitary sewer manhole at the station. Approximately 156,620 gallons of sewage spilled.	performed, and lime applied.
07/08/2021	A stoppage in the sanitary sewer main caused a sewage spill from MH #047SW023 and MH #047SW021, located in front of 5000 East Richmond Road. Approximately 1,300 gallons of sewage spilled.	A cleanup of the area was performed and lime applied. Line will be televised
08/03/2021	A sewage overflow occurred at Gillies Creek SPS. The overflow was due to heavy rain. Sewage overflowed from two sanitary sewer manholes at the station. Approximately 161,100 gallons of sewage spilled.	A cleanup of the area was performed, and lime applied.
08/15/2021	A sewage overflow occurred at Gillies Creek SPS. The overflow was due to heavy rain. Sewage overflowed from two sanitary sewer manholes at the station. Approximately 101,200 gallons of sewage spilled.	A cleanup of the area was performed, and lime applied.
08/16/2021	A sewage overflow occurred at Swanson Mill SPS. The overflow was due to temporary equipment failure in the station. Sewage overflowed from one sanitary sewer manhole at the station. Approximately 4,600 gallons of sewage spilled.	A cleanup of the area was performed, and lime applied.
09/16/2021	A sewage overflow occurred at Gillies Creek SPS. The overflow was due to heavy rain. Sewage overflowed from two sanitary sewer manholes at the station. Approximately 103,500 gallons of sewage spilled.	A cleanup of the area was performed, and lime applied.
09/16/2021	A sewage overflow occurred at Almond Creek SPS. The overflow was due to heavy rain. Sewage overflowed from one sanitary	A cleanup of the area was performed, and

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.e
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

	sewer manhole at the station. Approximately 29,900 gallons of sewage spilled.	lime applied.
10/24/2021	A sewage overflow occurred at Broadwater I SPS. The overflow was due to heavy rain. Sewage overflowed from one sanitary sewer manhole at the station. Approximately 19,330 gallons of sewage spilled.	A cleanup of the area was performed, and lime applied.
10/29/2021	A sewage overflow occurred at New Market SPS. The overflow was due to heavy rain. Sewage overflowed from one sanitary sewer manhole at the station. Approximately 13,900 gallons of sewage spilled.	A cleanup of the area was performed, and lime applied.
11/02/2021	A stoppage in the sanitary sewer main caused a sewage spill from MH #197SE058 and MH #197SE071, located beside 8413 Bronwood Road. Approximately 150 gallons of sewage spilled.	A cleanup of the area was performed and lime applied. Line will be televised
11/07/2021	A sewage spill from the sanitary sewer collection system from MH #196NE018 and MH #196NE019, located beside 1806 Windsordale Drive. Approximately 1,10 gallons of sewage spilled.	A cleanup of the area was performed and lime applied. Line will be televised
11/12/2021	A sewage overflow occurred at Gillies Creek SPS. The overflow was due to heavy rain. Sewage overflowed from two sanitary sewer manholes at the station. Approximately 28,120 gallons of sewage spilled.	A cleanup of the area was performed, and lime applied.
12/02/2021	A sewage overflow occurred at Gillies Creek SPS. The overflow was due to heavy rain. Sewage overflowed from two sanitary sewer manholes at the station. Approximately	A cleanup of the area was performed, and lime applied

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.e
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

	415,915 gallons of sewage spilled.	
12/07/2021	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.
12/28/2021	A sewage overflow occurred at Broadwater I SPS. The overflow was due to heavy rain. Sewage overflowed from one sanitary sewer manhole at the station. Approximately 44,900 gallons of sewage spilled.	A cleanup of the area was performed, and lime applied.
12/29/2021	A stoppage in the sanitary sewer main caused a sewage spill from MH #164NE613 and MH #164NE612, located in front of 401 Sherilyn Drive. Approximately 910 gallons of sewage spilled.	A cleanup of the area was performed and lime applied. Line will be televised

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, 2021 and December 31, 2021	348,745 feet
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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 facilities where significant trash, debris and other contaminants may be generated. Due to flooding and safety issues, trash racks are not permitted

HENRICO COUNTY MS4 PROGRAM PLAN

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 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 1/01/2021 and 12/31/2021, 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.

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:
 - 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.

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.B.2.e

ANNUAL REPORT SUPPLEMENT

JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

- 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.

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

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.e
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

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 319,273.80 pounds or 10,642.46 bags of litter from the County ROW using ARC.

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 62 tons of tires.
- Solid Waste division has collected 25,727 gallons of used oil/antifreeze at our public use areas.
- Solid Waste division has collected 6,490 gallons of oil-based paint & solvents at our public use areas.
- Keep Henrico Beautiful has collected 237 bags of trash from our roadsides, communities, schools and parks with their programs.

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.B.2.f

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, 2021 and December 31, 2021	
01/14/2021	Loader 701 leaked 1/4 a gallon of oil onto asphalt area outside of the west end shop. The spill was a result of normal use of the equipment. Oil dry was used to collect the spilled material and placed in Clean Harbors barrels.
01/20/2021	~500 lbs of NPW & filter media spilled north of FB#3. The contractor's hopper failed. The contractor immediately cleaned up and recovered most of the filter media. No filter media made it to the storm water system
02/08/2021	Approximately 5 gallons of MLSS spilled at the Plant Drain Pump Station due to failed pump packing. Free liquids on cement pad returned to the plant drain. Lime was applied to the affected grass area.
04/14/2021	Approximately 1,000 gallons of NPW leaked underground from a NPW hydrant adjacent to SC #8. The valve was closed and the hydrant stopped leaking. NPW did not make it to the stormwater outfall.
04/30/2021	Loader leaked an unknown amount of hydraulic fluid onto gravel area on yard. Contaminated gravel was removed and placed on pad for disposal at landfill.
05/11/2021	Less than 1 gallon of sodium hypochlorite leaked from a fill panel connection at the hypo fill panel. The liquid quickly dried and the crystals were swept up.
07/08/2021	Approximately 1 cup of latex paint was released by a contractor on road by PTF next to the sludge blend facility. The contractor cleaned up with soap, water, and a brush.

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.B.2.f

ANNUAL REPORT SUPPLEMENT

JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

07/13/2021	An unknown quantity of NPW leaked north of ERAS due to contractor work. The NPW did not reach Roundabout Creek.
07/19/2021	Less than 25 gallons of NPW leaked on the road North of Filter #1 from contractor jet blast equipment. The NPW was contained in Outfall 001.
07/20/2021	Backhoe 656 leaked ¼ a gallon of antifreeze onto the area underneath the equipment, in the covered parking bay. The spill resulted from a broken antifreeze line. Oil dry and pads were used to collect loose material. Used material disposed of in Clean Harbors barrels.
07/22/2021	Grass tractor 662 leaked less than ¼ a gallon of oil onto the asphalt parking lot outside of the west end shop. The spill was a result of wear and tear from normal use of the equipment. The spill was cleaned with oil dry and disposed of in Clean Harbors barrels.
07/23/2021	The front loader had an oil leak of less than ¼ a gallon coming from the underside of the equipment. The spill was contained to the asphalt parking area beside the west end shop. Oil dry was used and disposed of in Clean Harbors barrels.
07/23/2021	Gradall 20033 had a hydraulic line leaking. The equipment leaked less than ¼ a gallon before being treated. The spill was contained within the parking bay under cover. Oil dry was used and disposed of in Clean Harbors barrels.
07/27/2021	Traffic paint spill on county road. Wet paint was covered with Oil-Dri material and allowed to remain in place for one (1) hour. Material was picked up and disposed of in waste barrels. Remaining dry paint on the road was eradicated and properly disposed of.
08/02/2021	An unknown quantity of NPW leaked from a 2" NPW yard hydrant on the NW side of SC#6. The valve was closed, and the leak stopped. Contract repaired.
08/05/2021	Less than 10 gallons of RAS-NPW mixture (80% NPW) spilled due to contractor work on the North side of WRAS pump station. The area was cleaned.
08/17/2021	Hydraulic line on fire ladder truck busted. Dry absorbent

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.f
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

	worked in three times to remove all free product and boom used at storm drain. No impacts to soil or surface waters.
08/19/2021	Less than 50 gallons of NPW leaked from Primary 1-4 flow distribution box due to contractor work.
08/27/2021	A fuel oil spill was noticed at the Courthouse parking lot. Total amount of product was estimated to be 3 gallons. County staff put down absorbent pads and sta-dri and swept up the product once the fluid was absorbed. Everything was contained to the immediate area. All materials were properly disposed of and there was no impact to the storm water
09/08/2021	The tack truck spilled 5 gallons of tack onto the side of Genacre Ln. The spill impacted a property owner's yard and parking area. Stone dust was applied to prevent free material from moving elsewhere. No waste material was created.
09/24/2021	Truck 605 spilled ¼ a gallon of antifreeze following a break in its antifreeze line. Oil dry was used to clean up the material and disposed of in Clean Harbors barrels.
09/24/2021	Approximately 5-10 gallons of hydraulic oil leaked from a backhoe on the PTF pad / road near the dumpster. The spill was contained and cleaned up. The area is sloped and drains back to plant sewer.
10/01/2021	A transmission fluid spill was noticed in the Recreation & Parks building parking lot. Total amount of product was estimated to be 0.5 gallons. County staff put down absorbent pads and sta-dri and swept up the product once the fluid was absorbed. Everything was contained to the immediate area. All materials were properly disposed of and there was no impact to the storm water
10/04/2021	Diesel fuel leak coming from the salt conveyor at the entrance of the right salt dome, on the Woodman yard. Spill contained on asphalt area. Cleaned using oil dry and disposed of in Clean Harbors barrels.

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.f
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

10/13/2021	Less than 2 gallons of sodium hypochlorite leaked from the backside of the fill panel. The liquid dried quickly, and the crystals were swept up.
10/15/2021	A motor oil spill was noticed in the Administration building parking deck. Total amount of product was estimated to be 0.5 gallons. County staff put down absorbent pads and sta-dri and swept up the product once the fluid was absorbed. Everything was contained to the immediate area. All materials were properly disposed of and there was no impact to the storm water.
10/19/2021	Conveyor 623 leaked approximately 2 gallons of hydraulic oil onto the asphalt area outside of the salt dome on the east end yard. Spill contained to the asphalt area. Cleaned with oil dry and oil only pillows. Discarded waste in Clean Harbors barrels.
11/02/2021	Miscellaneous equipment leaked onto asphalt parking lot by the west end shop during routine maintenance. Spill was cleaned with universal pads and oil dry. Booms were used to block inlets. Disposed of waste in Clean Harbors barrels.
11/08/2021	An antifreeze fluid spill was noticed in the Mental Health East Clinic building parking lot. Total amount of product was estimated to be 0.5 gallons. County staff put down absorbent pads and sta-dri and swept up the product once the fluid was absorbed. Everything was contained to the immediate area. All materials were properly disposed of and there was no impact to the storm water.
11/16/2021	5-10 gallons of NPW leaked in front of the bulk storage tanks due to a leaky hose connection. No NPW made it to the storm water.
11/18/2021	Equipment 701 had an antifreeze leak of less than ¼ a gallon. Equipment spilled material due to a loose antifreeze plug. Material cleaned up with oil dry and disposed of in Clean Harbors barrels.
11/24/2021	Roller 612 leaked less than ¼ a gallon of diesel fuel onto the

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.f
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

	asphalt area outside of bay 4 on the east end yard. The diesel was leaking out of the tank's intake. The leak was cleaned using oil dry and oil only pads. A boom was used to prevent fuel from entering a nearby inlet. All materials were disposed of in Clean Harbors barrels.
11/29/2021	An unknown amount of NPW leaked on the South side of ENR 10 when a NPW hose came detached from the railing. NPW made it to the storm water inlet. CL2 readings were taken confirming NPW did not make it to the outfall.
12/15/2021	An unknown trash truck leaked an 1/8 of a gallon of hydraulic fluid into the roadway at 1718 Stevens St. The spill was contained and cleaned up with oil dry. Waste materials were disposed of in Clean Harbors Barrels.

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.B.2.g 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, 2021 and December 31, 2021		
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.

HENRICO COUNTY MS4 PROGRAM PLAN

Inspections of Outfalls from Industrial and High Risk Dischargers conducted between January 1, 2021 and December 31, 2021			
Industrial and High Risk Discharger	Outfall Location	Inspection Date	Determined to be Contributing Significant Pollutant Load to the MS4?
IC001	IN000000024676	04/13/2021	No
IC001	MH000000003732	04/13/2021	No
IC005	IN000000025371	04/15/2021	No
IC006	IN000000024880	04/15/2021	No
IC006	MH000000003753	04/15/2021	No
IC007	IN000000016228	04/14/2021	No
IC008	EN000000003334	04/15/2021	No
IC008	MN000000038755	04/15/2021	No
IC008	MN000000038759	04/15/2021	No
IC0013	MH000000008957	04/15/2021	No
IC0013	MH000000008958	04/15/2021	No
IC0036	IN000000023806	04/13/2021	No
IC0347	MH000000004429	04/26/2021	No
IC0850	MH000000003740	04/15/2021	No
IC1908	IN000000023799	04/13/2021	No
IC1908	IN000000023802	04/13/2021	No
IC2015	IN000000024873	04/15/2021	No
IC2015	MH000000003754	04/15/2021	No
IC2461	IN000000051945	04/21/2021	No
IC1187	IN000000011643	04/26/2021	No
IC1380	IN000000015185	04/14/2021	No
IC1165	IN000000042539	04/26/2021	No
IC1130	IN000000016875	04/23/2021	No
IC1011	MN000000018978	04/20/2021	No
IC0926	MN000000124808	04/21/2021	No
IC0592	IN000000026568	04/15/2021	No
IC0303	IN000000025487	04/15/2021	No
IC0907	IN000000009209	04/20/2021	No

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.g
ANNUAL REPORTING REQUIREMENTS
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

IC1006	IN000000046920	04/26/2021	No
IC1102	IN000000032807	11/18/2021	No
IC1213	IN000000015900	04/14/2021	No
IC1179	MN000000037299	04/21/2021	No
IC1928	MN000000096316	04/21/2021	No
IC1928	MN000000096317	04/21/2021	No
IC1373	MN000000091621	04/21/2021	No
IC1149	MN000000035002	04/26/2021	No
IC0072	IN000000005559	12/13/2021	No
IC0072	MN000000075371	12/13/2021	No
IC0036	MH000000008764	04/13/2021	No
IC2446	MN0000000134681	03/17/2021	No
IC0329	IN000000023798	04/13/2021	No
IC0857	IN000000022198	03/09/2021	No
IC0884	MN000000038645	03/09/2021	No
IC0319	IN000000024883	04/13/2021	No
IC1347	MN000000088357	06/10/2021	No
IC0238	IN000000025345	03/09/2021	No
IC1176	IN000000025365	03/09/2021	No
IC1915	MN0000000145982	03/17/2021	No
IC0303	IN000000025487	04/15/2021	No
IC0700	MH000000007647	03/08/2021	No

Inspections of Industrial and High Risk Dischargers determined to be contributing significant pollutant load to the MS4
conducted between January 1, 2021 and December 31, 2021

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.

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.g
ANNUAL REPORTING REQUIREMENTS
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

Industrial and High Risk Dischargers referred to the Virginia Department of Environmental Quality between January 1, 2021 and December 31, 2021

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, 2021

Permitted Facility	VPDES Permit #	DMR Date Received
Alfa Laval Incorporated	VAR051131	No DMRs Received
AMF Bakery Systems	VAR050885	No DMRs Received
BFI Waste Services LLC	VAR052236	No DMRs Received
BFI Waste Systems of Virginia LLC	VAR052236	No DMRs Received
Bunge Oils Incorporated	VAR050595	No DMRs Received
CHEP Recycled Pallet Solutions LLC	VAR052375	No DMRs Received

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.g
ANNUAL REPORTING REQUIREMENTS
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

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	No DMRs Received
Lee Hy Paving Corporation	VAR051024	No DMRs Received
Mondelez Global LLC	VAR051209	No DMRs Received
Polykon Manufacturing LLC	VAR052405	No DMRs Received

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.g
ANNUAL REPORTING REQUIREMENTS
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

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 24, 2022 from VDEQ staff.

HENRICO COUNTY MS4 PROGRAM PLAN

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
EN000000006336	4/1/2021	SCREENING INSPECTION	REPAIR
EN000000000397	1/14/2021	MAINTENANCE ACTIVITY	REMOVE DEBRIS
EN0000000003089	1/13/2021	MAINTENANCE ACTIVITY	REMOVE DEBRIS
EN0000000003090	1/14/2021	MAINTENANCE ACTIVITY	REMOVE DEBRIS
EN0000000001446	4/26/2021	SCREENING INSPECTION	REMOVE DEBRIS
EN0000000011523	4/26/2021	SCREENING INSPECTION	REMOVE DEBRIS
EN0000000013098	3/2/2021	MAINTENANCE ACTIVITY	REGRADE
EN0000000002096	4/8/2021	MAINTENANCE ACTIVITY	MOW
EN0000000004975	4/27/2021	MAINTENANCE ACTIVITY	REPAIR
EN0000000000148	5/27/2021	MAINTENANCE ACTIVITY	REPAIR
EN0000000000236	6/5/2021	MAINTENANCE ACTIVITY	REGRADE
EN0000000000744	6/19/2021	MAINTENANCE ACTIVITY	REMOVE DEBRIS
EN0000000005044	6/9/2021	MAINTENANCE ACTIVITY	REMOVE DEBRIS
EN0000000008474	12/28/2021	MAINTENANCE ACTIVITY	REMOVE DEBRIS

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.

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.B.2.h

ANNUAL REPORT SUPPLEMENT

JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

MS4 Infrastructure Inspected* between January 1, 2021 and December 31, 2021		
MS4 Infrastructure Type	Unit	Inspected
Inlets	each	5,824
Manholes	each	1,005
Junction Boxes	each	53
End Treatments	each	1,055
Mains	linear feet	1,882,501

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

During this permit year (January 1, 2021 and December 31, 2021), 21.29% of the MS4 infrastructure was inspected.

Since the effective date of the MS4 Permit (April 1, 2015 thru December 31, 2021), 91.11% of the MS4 infrastructure has been inspected.

Inspection, Maintenance, and Repair Actions conducted on MS4 Infrastructure between January 1, 2021 and December 31, 2021			
MS4 Infrastructure Type	Inspections	Maintenance	Repair
Inlets	5,907	256	164
Manholes	1,008	2	2
Junction Boxes	53	1	0
End Treatments	1,061	23	2
Mains	22,164	1,727	40

HENRICO COUNTY MS4 PROGRAM PLAN

On-Line* County-Operated SWM Facilities Inspected and/or Maintained between January 1, 2021 and December 31, 2021			
Type	Total	Inspected	Maintained
50/10 BASIN (5)	11	10	3
50/10 UNDERGROUND (6)	12	12	2
BAYFILTER (200)	1	1	1
BAYSEPARATOR (205)	1	1	1
BIORETENTION 1 (145)	3	2	3
BIORETENTION BASIN/TRENCH (10)	9	9	2
DRY DETENTION - UNDERGROUND (178)	7	0	1
DRY SWALE 2 (151)	2	2	0
EXTENDED DETENTION BASIN (15)	31	31	5
EXTENDED DETENTION BASIN W/A SHALLOW MARSH (16)	2	2	1
EXTENDED DETENTION POND 1 (175)	1	0	1
FILTERRA (215)	27	24	15
GRASS CHANNEL (110)	1	1	0
GRASSED SWALE (20)	11	11	1
IMBRIUM JELLYFISH (250)	1	1	1
INFILTRATION BASIN/TRENCH (25)	7	7	1
PERMEABLE PAVEMENT 1 (135)	5	4	0
RETENTION BASIN (WET POND) (30)	8	8	4
SHEETFLOW TO VEGETATED FILTER OR CONSERVED OPEN SPACE 1 (105)	6	4	0
SHEETFLOW TO VEGETATED FILTER OR CONSERVED OPEN SPACE 2 (106)	3	2	0
STORMCEPTOR (225)	1	1	1
STORMFILTER (220)	4	4	0

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

STORMTREAT (230)	1	1	1
STORMWATER360 (235)	5	5	1
VEGETATED FILTER STRIP (40)	2	0	0
Total	162	143	45

* Facilities with either an Active or Accepted status as of December 31, 2021

On-Line Privately-Operated SWM Facilities Discharging to the MS4 that were Inspected and/or Maintained between January 1, 2021 and December 31, 2021			
Type	Total	Inspected	Maintained
50/10 BASIN (5)	56	6	1
50/10 UNDERGROUND (6)	80	12	0
BAYSAVER (210)	1	0	0
BIORETENTION 1 (145)	1	0	0
BIORETENTION 2 (146)	1	0	0
BIORETENTION BASIN/TRENCH (10)	22	4	2
DRY DETENTION - POND (177)	3	1	0
DRY DETENTION - UNDERGROUND (178)	10	0	0
DRY SWALE 1 (150)	1	0	0
EXTENDED DETENTION BASIN (15)	197	66	10
EXTENDED DETENTION BASIN W/A SHALLOW MARSH (16)	46	28	4
FILTERRA (215)	200	59	57
GRASSED SWALE (20)	6	1	0
IMBRIUM JELLYFISH (250)	2	0	2
INFILTRATION BASIN/TRENCH (25)	8	4	0
RETENTION BASIN (WET POND) (30)	61	13	4
SAND FILTER (35)	64	10	2
STORMCEPTOR (225)	1	0	0
STORMTREAT (230)	4	3	0
STORMWATER360 (235)	21	4	0
VEGETATED FILTER STRIP (40)	1	1	1
VORTEXSEPARATOR (245)	2	1	0

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

Total	788	213	83
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* Facilities with either an Active or Accepted status

County-Owned/Operated Culverts and Pipes Inventoried as of December 31, 2021 and Inspected between January 1, 2021 and December 31, 2021	
Culverts and Pipes Inventoried (miles)	Culverts and Pipes Inspected between January 1, 2021 and December 31, 2021 (miles)
1,078.4	205.0

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>	37
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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

HENRICO COUNTY MS4 PROGRAM PLAN

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
BMP00479	1/1/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01989	1/5/2021	EDUCATION
BMP01414	1/7/2021	MAINTENANCE INSPECTION
BMP01405	1/7/2021	MAINTENANCE INSPECTION
BMP01415	1/7/2021	MAINTENANCE INSPECTION
BMP01406	1/7/2021	MAINTENANCE INSPECTION
BMP00807	1/7/2021	MAINTENANCE INSPECTION
BMP00214	1/7/2021	MAINTENANCE INSPECTION
BMP00215	1/7/2021	MAINTENANCE INSPECTION
BMP01402	1/7/2021	MAINTENANCE INSPECTION
BMP01401	1/7/2021	MAINTENANCE INSPECTION
BMP01409	1/7/2021	MAINTENANCE INSPECTION
BMP01413	1/7/2021	MAINTENANCE INSPECTION
BMP01725	1/7/2021	MAINTENANCE INSPECTION
BMP01407	1/7/2021	MAINTENANCE INSPECTION
BMP01411	1/7/2021	MAINTENANCE INSPECTION
BMP01412	1/7/2021	MAINTENANCE INSPECTION
BMP01403	1/7/2021	MAINTENANCE INSPECTION
BMP01400	1/7/2021	MAINTENANCE INSPECTION
BMP01410	1/7/2021	MAINTENANCE INSPECTION
BMP01404	1/7/2021	MAINTENANCE INSPECTION
BMP01408	1/7/2021	MAINTENANCE INSPECTION
BMP01380	1/12/2021	OWNER INSPECTION
BMP01390	1/12/2021	OWNER INSPECTION
BMP01385	1/12/2021	OWNER INSPECTION

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP01379	1/12/2021	OWNER INSPECTION
BMP01388	1/12/2021	OWNER INSPECTION
BMP01386	1/12/2021	OWNER INSPECTION
BMP01387	1/12/2021	OWNER INSPECTION
BMP01389	1/12/2021	OWNER INSPECTION
BMP01764	1/12/2021	OWNER INSPECTION
BMP01382	1/12/2021	OWNER INSPECTION
BMP01383	1/12/2021	OWNER INSPECTION
BMP01381	1/12/2021	OWNER INSPECTION
BMP01384	1/12/2021	OWNER INSPECTION
BMP01690	1/12/2021	OWNER INSPECTION
BMP01765	1/12/2021	OWNER INSPECTION
BMP01391	1/12/2021	OWNER INSPECTION
BMP00071	1/15/2021	ACCEPTANCE INSPECTION
BMP00071	1/15/2021	RECEIPT OF CERTIFICATION
BMP02039	1/15/2021	INVENTORIED
BMP02040	1/15/2021	INVENTORIED
BMP00750	1/18/2021	MAINTENANCE ACTIVITY
BMP01259	1/18/2021	OWNER INSPECTION
BMP01258	1/18/2021	OWNER INSPECTION
BMP01260	1/18/2021	OWNER INSPECTION
BMP01262	1/18/2021	OWNER INSPECTION
BMP00612	1/18/2021	MAINTENANCE ACTIVITY
BMP01261	1/18/2021	OWNER INSPECTION
BMP01405	1/19/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01403	1/19/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01986	1/19/2021	ACCEPTANCE INSPECTION
BMP00214	1/19/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01413	1/19/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01986	1/19/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01986	1/19/2021	RECEIPT OF CERTIFICATION
BMP01407	1/19/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01408	1/19/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01401	1/19/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP01414	1/19/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01400	1/19/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01409	1/19/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01411	1/19/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01404	1/19/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01410	1/19/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01415	1/19/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01406	1/19/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01402	1/19/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01412	1/19/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01513	1/20/2021	MAINTENANCE INSPECTION
BMP01512	1/20/2021	MAINTENANCE INSPECTION
BMP01724	1/20/2021	ACCEPTANCE INSPECTION
BMP00331	1/27/2021	RETIREMENT
BMP00329	1/27/2021	RETIREMENT
BMP00330	1/27/2021	RETIREMENT
BMP00328	1/27/2021	RETIREMENT
BMP00332	1/27/2021	RETIREMENT
BMP00333	1/27/2021	RETIREMENT
BMP02041	1/27/2021	INVENTORIED
BMP02042	1/27/2021	INVENTORIED
BMP02045	1/27/2021	INVENTORIED
BMP02046	1/27/2021	INVENTORIED
BMP02047	1/27/2021	INVENTORIED
BMP02048	1/27/2021	INVENTORIED
BMP02049	1/27/2021	INVENTORIED
BMP02050	1/27/2021	INVENTORIED
BMP02051	1/27/2021	INVENTORIED
BMP02052	1/27/2021	INVENTORIED
BMP02053	1/27/2021	INVENTORIED
BMP02054	1/27/2021	INVENTORIED
BMP02055	1/27/2021	INVENTORIED
BMP01717	1/28/2021	RETIREMENT
BMP01377	1/28/2021	RETIREMENT

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP01376	1/28/2021	RETIREMENT
BMP02056	1/28/2021	INVENTORIED
BMP02057	1/28/2021	INVENTORIED
BMP02058	1/28/2021	INVENTORIED
BMP01396	1/29/2021	MAINTENANCE INSPECTION
BMP00118	1/29/2021	MAINTENANCE INSPECTION
BMP01673	1/29/2021	MAINTENANCE INSPECTION
BMP02061	1/29/2021	MAINTENANCE INSPECTION
BMP00737	1/29/2021	MAINTENANCE INSPECTION
BMP00117	1/29/2021	MAINTENANCE INSPECTION
BMP00479	1/29/2021	SCREENING INSPECTION
BMP00118	1/29/2021	MAINTENANCE ACTIVITY
BMP00612	1/29/2021	MAINTENANCE INSPECTION
BMP01509	1/29/2021	MAINTENANCE INSPECTION
BMP01692	1/29/2021	MAINTENANCE INSPECTION
BMP00750	1/29/2021	MAINTENANCE INSPECTION
BMP01547	1/29/2021	MAINTENANCE INSPECTION
BMP00735	1/29/2021	MAINTENANCE INSPECTION
BMP00736	1/29/2021	MAINTENANCE INSPECTION
BMP02061	1/29/2021	INVENTORIED
BMP01989	2/1/2021	EDUCATION
BMP02061	2/2/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01537	2/4/2021	MAINTENANCE INSPECTION
BMP01658	2/4/2021	MAINTENANCE INSPECTION
BMP01199	2/4/2021	MAINTENANCE INSPECTION
BMP01570	2/4/2021	MAINTENANCE INSPECTION
BMP01802	2/4/2021	MAINTENANCE INSPECTION
BMP01425	2/4/2021	MAINTENANCE INSPECTION
BMP01125	2/4/2021	MAINTENANCE INSPECTION
BMP01570	2/9/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00735	2/11/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00736	2/11/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00737	2/11/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01570	2/23/2021	EDUCATION

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP01801	2/24/2021	MAINTENANCE INSPECTION
BMP00938	2/24/2021	EDUCATION
BMP00936	2/24/2021	EDUCATION
BMP00937	2/24/2021	EDUCATION
BMP00741	2/24/2021	MAINTENANCE INSPECTION
BMP00738	2/24/2021	MAINTENANCE INSPECTION
BMP00938	2/24/2021	SCREENING INSPECTION
BMP00937	2/24/2021	SCREENING INSPECTION
BMP00740	2/24/2021	MAINTENANCE INSPECTION
BMP00739	2/24/2021	MAINTENANCE INSPECTION
BMP00936	2/24/2021	SCREENING INSPECTION
BMP01993	2/24/2021	SCREENING INSPECTION
BMP00742	2/24/2021	MAINTENANCE INSPECTION
BMP00326	2/26/2021	MAINTENANCE ACTIVITY
BMP00326	2/26/2021	EDUCATION
BMP00941	3/2/2021	OWNER INSPECTION
BMP00933	3/2/2021	OWNER INSPECTION
BMP00931	3/2/2021	OWNER INSPECTION
BMP00987	3/2/2021	OWNER INSPECTION
BMP00940	3/2/2021	OWNER INSPECTION
BMP00939	3/2/2021	OWNER INSPECTION
BMP00988	3/2/2021	OWNER INSPECTION
BMP01678	3/3/2021	MAINTENANCE ACTIVITY
BMP01679	3/3/2021	MAINTENANCE ACTIVITY
BMP01015	3/3/2021	ACCEPTANCE INSPECTION
BMP00452	3/3/2021	MAINTENANCE INSPECTION
BMP00476	3/3/2021	MAINTENANCE INSPECTION
BMP01677	3/3/2021	MAINTENANCE ACTIVITY
BMP00098	3/3/2021	MAINTENANCE INSPECTION
BMP00099	3/3/2021	MAINTENANCE INSPECTION
BMP00041	3/4/2021	ACCEPTANCE INSPECTION
BMP01677	3/4/2021	OWNER INSPECTION
BMP00358	3/4/2021	MAINTENANCE INSPECTION
BMP00614	3/4/2021	MAINTENANCE INSPECTION

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP01527	3/4/2021	ACCEPTANCE INSPECTION
BMP01678	3/4/2021	OWNER INSPECTION
BMP00041	3/4/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01033	3/4/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01570	3/4/2021	EDUCATION
BMP00613	3/4/2021	MAINTENANCE INSPECTION
BMP01679	3/4/2021	OWNER INSPECTION
BMP00019	3/4/2021	MAINTENANCE INSPECTION
BMP01033	3/4/2021	MAINTENANCE INSPECTION
BMP01525	3/4/2021	MAINTENANCE INSPECTION
BMP01053	3/8/2021	MAINTENANCE INSPECTION
BMP00104	3/9/2021	OWNER INSPECTION
BMP00124	3/9/2021	OWNER INSPECTION
BMP00787	3/9/2021	OWNER INSPECTION
BMP00906	3/9/2021	OWNER INSPECTION
BMP00916	3/9/2021	OWNER INSPECTION
BMP00409	3/9/2021	OWNER INSPECTION
BMP00553	3/9/2021	OWNER INSPECTION
BMP01083	3/9/2021	OWNER INSPECTION
BMP01140	3/9/2021	OWNER INSPECTION
BMP00177	3/9/2021	OWNER INSPECTION
BMP00044	3/9/2021	OWNER INSPECTION
BMP00255	3/9/2021	OWNER INSPECTION
BMP00364	3/9/2021	OWNER INSPECTION
BMP00288	3/9/2021	OWNER INSPECTION
BMP00391	3/9/2021	OWNER INSPECTION
BMP00597	3/9/2021	OWNER INSPECTION
BMP00652	3/9/2021	OWNER INSPECTION
BMP00655	3/9/2021	OWNER INSPECTION
BMP00924	3/9/2021	OWNER INSPECTION
BMP00943	3/9/2021	OWNER INSPECTION
BMP01378	3/9/2021	OWNER INSPECTION
BMP01318	3/9/2021	OWNER INSPECTION
BMP01067	3/9/2021	OWNER INSPECTION

HENRICO COUNTY MS4 PROGRAM PLAN
 PART I.B.2.h
 ANNUAL REPORT SUPPLEMENT
 JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP01740	3/9/2021	OWNER INSPECTION
BMP01741	3/9/2021	OWNER INSPECTION
BMP01742	3/9/2021	OWNER INSPECTION
BMP00868	3/9/2021	OWNER INSPECTION
BMP00460	3/9/2021	OWNER INSPECTION
BMP00550	3/9/2021	OWNER INSPECTION
BMP00594	3/9/2021	OWNER INSPECTION
BMP00651	3/9/2021	OWNER INSPECTION
BMP00654	3/9/2021	OWNER INSPECTION
BMP00925	3/9/2021	OWNER INSPECTION
BMP01719	3/9/2021	OWNER INSPECTION
BMP01082	3/9/2021	OWNER INSPECTION
BMP01326	3/9/2021	OWNER INSPECTION
BMP01047	3/9/2021	OWNER INSPECTION
BMP01799	3/9/2021	OWNER INSPECTION
BMP01942	3/9/2021	OWNER INSPECTION
BMP01045	3/9/2021	OWNER INSPECTION
BMP00171	3/9/2021	OWNER INSPECTION
BMP00268	3/9/2021	OWNER INSPECTION
BMP00169	3/9/2021	OWNER INSPECTION
BMP00743	3/9/2021	OWNER INSPECTION
BMP00455	3/9/2021	OWNER INSPECTION
BMP00390	3/9/2021	OWNER INSPECTION
BMP00554	3/9/2021	OWNER INSPECTION
BMP01046	3/9/2021	OWNER INSPECTION
BMP01374	3/9/2021	OWNER INSPECTION
BMP00029	3/9/2021	OWNER INSPECTION
BMP00207	3/9/2021	OWNER INSPECTION
BMP00253	3/9/2021	OWNER INSPECTION
BMP00256	3/9/2021	OWNER INSPECTION
BMP00085	3/9/2021	OWNER INSPECTION
BMP00123	3/9/2021	OWNER INSPECTION
BMP00319	3/9/2021	OWNER INSPECTION
BMP00744	3/9/2021	OWNER INSPECTION

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP00552	3/9/2021	OWNER INSPECTION
BMP00593	3/9/2021	OWNER INSPECTION
BMP01040	3/9/2021	OWNER INSPECTION
BMP01721	3/9/2021	OWNER INSPECTION
BMP01325	3/9/2021	OWNER INSPECTION
BMP01944	3/9/2021	OWNER INSPECTION
BMP01080	3/9/2021	OWNER INSPECTION
BMP00170	3/9/2021	OWNER INSPECTION
BMP00301	3/9/2021	OWNER INSPECTION
BMP00804	3/9/2021	OWNER INSPECTION
BMP00444	3/9/2021	OWNER INSPECTION
BMP00465	3/9/2021	OWNER INSPECTION
BMP00608	3/9/2021	OWNER INSPECTION
BMP01081	3/9/2021	OWNER INSPECTION
BMP01344	3/9/2021	OWNER INSPECTION
BMP01356	3/9/2021	OWNER INSPECTION
BMP01798	3/9/2021	OWNER INSPECTION
BMP01841	3/9/2021	OWNER INSPECTION
BMP00034	3/9/2021	OWNER INSPECTION
BMP00056	3/9/2021	OWNER INSPECTION
BMP00179	3/9/2021	OWNER INSPECTION
BMP00783	3/9/2021	OWNER INSPECTION
BMP00915	3/9/2021	OWNER INSPECTION
BMP00479	3/9/2021	OWNER INSPECTION
BMP00366	3/9/2021	OWNER INSPECTION
BMP00555	3/9/2021	OWNER INSPECTION
BMP00632	3/9/2021	OWNER INSPECTION
BMP00653	3/9/2021	OWNER INSPECTION
BMP00675	3/9/2021	OWNER INSPECTION
BMP01227	3/9/2021	OWNER INSPECTION
BMP01802	3/9/2021	OWNER INSPECTION
BMP00300	3/9/2021	OWNER INSPECTION
BMP00748	3/9/2021	OWNER INSPECTION
BMP00551	3/9/2021	OWNER INSPECTION

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP00392	3/9/2021	OWNER INSPECTION
BMP00725	3/9/2021	OWNER INSPECTION
BMP00922	3/9/2021	OWNER INSPECTION
BMP00989	3/9/2021	OWNER INSPECTION
BMP01703	3/9/2021	OWNER INSPECTION
BMP01357	3/9/2021	OWNER INSPECTION
BMP00322	3/9/2021	OWNER INSPECTION
BMP00365	3/9/2021	OWNER INSPECTION
BMP00739	3/10/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00742	3/10/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00741	3/10/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01989	3/10/2021	EDUCATION
BMP00740	3/10/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00738	3/10/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00119	3/11/2021	EDUCATION
BMP00673	3/12/2021	MAINTENANCE ACTIVITY
BMP00672	3/12/2021	MAINTENANCE ACTIVITY
BMP00670	3/12/2021	MAINTENANCE ACTIVITY
BMP00666	3/12/2021	MAINTENANCE ACTIVITY
BMP00665	3/12/2021	MAINTENANCE ACTIVITY
BMP00671	3/12/2021	MAINTENANCE ACTIVITY
BMP00667	3/12/2021	MAINTENANCE ACTIVITY
BMP00663	3/12/2021	MAINTENANCE ACTIVITY
BMP00671	3/13/2021	OWNER INSPECTION
BMP00670	3/13/2021	OWNER INSPECTION
BMP00667	3/13/2021	OWNER INSPECTION
BMP00673	3/13/2021	OWNER INSPECTION
BMP00666	3/13/2021	OWNER INSPECTION
BMP00663	3/13/2021	OWNER INSPECTION
BMP00665	3/13/2021	OWNER INSPECTION
BMP00669	3/13/2021	MAINTENANCE ACTIVITY
BMP00672	3/13/2021	OWNER INSPECTION
BMP01236	3/15/2021	MAINTENANCE ACTIVITY
BMP00251	3/16/2021	OWNER INSPECTION

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP00250	3/16/2021	OWNER INSPECTION
BMP00249	3/16/2021	OWNER INSPECTION
BMP01236	3/16/2021	OWNER INSPECTION
BMP01338	3/19/2021	MAINTENANCE INSPECTION
BMP01311	3/19/2021	MAINTENANCE INSPECTION
BMP00909	3/19/2021	MAINTENANCE INSPECTION
BMP00137	3/19/2021	MAINTENANCE INSPECTION
BMP00393	3/19/2021	SCREENING INSPECTION
BMP00722	3/23/2021	OWNER INSPECTION
BMP01308	3/25/2021	MAINTENANCE ACTIVITY
BMP01307	3/25/2021	MAINTENANCE ACTIVITY
BMP01527	3/29/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01946	3/30/2021	MAINTENANCE INSPECTION
BMP01402	4/1/2021	MAINTENANCE ACTIVITY
BMP01401	4/1/2021	MAINTENANCE ACTIVITY
BMP01408	4/1/2021	MAINTENANCE ACTIVITY
BMP01411	4/1/2021	MAINTENANCE ACTIVITY
BMP01407	4/1/2021	MAINTENANCE ACTIVITY
BMP01405	4/1/2021	MAINTENANCE ACTIVITY
BMP01400	4/1/2021	MAINTENANCE ACTIVITY
BMP01404	4/1/2021	MAINTENANCE ACTIVITY
BMP01410	4/1/2021	MAINTENANCE ACTIVITY
BMP01406	4/1/2021	MAINTENANCE ACTIVITY
BMP01409	4/1/2021	MAINTENANCE ACTIVITY
BMP00214	4/1/2021	MAINTENANCE ACTIVITY
BMP01403	4/1/2021	MAINTENANCE ACTIVITY
BMP01793	4/2/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01793	4/2/2021	ACCEPTANCE INSPECTION
BMP01793	4/2/2021	RECEIPT OF CERTIFICATION
BMP01205	4/5/2021	MAINTENANCE ACTIVITY
BMP01207	4/5/2021	MAINTENANCE ACTIVITY
BMP01206	4/5/2021	MAINTENANCE ACTIVITY
BMP01202	4/5/2021	MAINTENANCE ACTIVITY
BMP01200	4/5/2021	MAINTENANCE ACTIVITY

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP01201	4/5/2021	MAINTENANCE ACTIVITY
BMP01204	4/5/2021	MAINTENANCE ACTIVITY
BMP01946	4/5/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01203	4/5/2021	MAINTENANCE ACTIVITY
BMP01203	4/6/2021	OWNER INSPECTION
BMP01205	4/6/2021	OWNER INSPECTION
BMP01200	4/6/2021	OWNER INSPECTION
BMP01206	4/6/2021	OWNER INSPECTION
BMP01202	4/6/2021	OWNER INSPECTION
BMP01201	4/6/2021	OWNER INSPECTION
BMP01207	4/6/2021	OWNER INSPECTION
BMP01204	4/6/2021	OWNER INSPECTION
BMP00909	4/7/2021	MAINTENANCE INSPECTION
BMP00035	4/8/2021	MAINTENANCE ACTIVITY
BMP00035	4/8/2021	MAINTENANCE INSPECTION
BMP01146	4/12/2021	CONSTRUCTION INSPECTION
BMP01473	4/12/2021	MAINTENANCE INSPECTION
BMP01210	4/12/2021	MAINTENANCE INSPECTION
BMP00737	4/13/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00909	4/13/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00735	4/13/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00736	4/13/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00367	4/13/2021	RETIREMENT
BMP00660	4/14/2021	MAINTENANCE INSPECTION
BMP01305	4/14/2021	MAINTENANCE ACTIVITY
BMP00921	4/14/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00326	4/14/2021	MAINTENANCE INSPECTION
BMP00564	4/14/2021	MAINTENANCE INSPECTION
BMP01304	4/14/2021	MAINTENANCE ACTIVITY
BMP00006	4/15/2021	RETIREMENT
BMP02062	4/19/2021	INVENTORIED
BMP00660	4/20/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00057	4/20/2021	MAINTENANCE INSPECTION
BMP01708	4/20/2021	MAINTENANCE INSPECTION

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP00058	4/20/2021	MAINTENANCE INSPECTION
BMP00917	4/28/2021	MAINTENANCE ACTIVITY
BMP00918	4/28/2021	MAINTENANCE ACTIVITY
BMP00460	4/28/2021	MAINTENANCE ACTIVITY
BMP01708	4/30/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01053	4/30/2021	MAINTENANCE INSPECTION
BMP00057	4/30/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00058	4/30/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01673	5/4/2021	OWNER INSPECTION
BMP00660	5/6/2021	EDUCATION
BMP01053	5/6/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01311	5/11/2021	MAINTENANCE INSPECTION
BMP00938	5/13/2021	MAINTENANCE INSPECTION
BMP00937	5/13/2021	MAINTENANCE INSPECTION
BMP01311	5/13/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01779	5/15/2021	MAINTENANCE ACTIVITY
BMP01779	5/17/2021	OWNER INSPECTION
BMP00734	5/17/2021	MAINTENANCE INSPECTION
BMP00743	5/17/2021	MAINTENANCE INSPECTION
BMP01311	5/18/2021	EDUCATION
BMP00737	5/19/2021	EDUCATION
BMP00736	5/19/2021	EDUCATION
BMP00735	5/19/2021	EDUCATION
BMP01726	5/21/2021	CONSTRUCTION INSPECTION
BMP01542	5/24/2021	CONSTRUCTION INSPECTION
BMP00734	5/24/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01311	5/24/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00743	5/24/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00320	5/25/2021	EDUCATION
BMP00909	5/26/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00831	5/26/2021	MAINTENANCE INSPECTION
BMP00830	5/26/2021	MAINTENANCE INSPECTION
BMP01946	5/26/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP02064	5/26/2021	INVENTORIED

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP02065	5/26/2021	INVENTORIED
BMP02066	5/26/2021	INVENTORIED
BMP02067	5/26/2021	INVENTORIED
BMP02070	5/26/2021	INVENTORIED
BMP00423	5/28/2021	MAINTENANCE INSPECTION
BMP00338	5/28/2021	MAINTENANCE INSPECTION
BMP01277	6/2/2021	MAINTENANCE ACTIVITY
BMP01278	6/2/2021	MAINTENANCE ACTIVITY
BMP01279	6/2/2021	MAINTENANCE ACTIVITY
BMP01277	6/3/2021	OWNER INSPECTION
BMP01278	6/3/2021	OWNER INSPECTION
BMP01279	6/3/2021	OWNER INSPECTION
BMP02071	6/7/2021	INVENTORIED
BMP00320	6/8/2021	MAINTENANCE ACTIVITY
BMP02072	6/8/2021	INVENTORIED
BMP02075	6/9/2021	INVENTORIED
BMP01306	6/10/2021	MAINTENANCE ACTIVITY
BMP01704	6/11/2021	RETIREMENT
BMP00742	6/14/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00740	6/14/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00738	6/14/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00739	6/14/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00741	6/14/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00575	6/15/2021	MAINTENANCE ACTIVITY
BMP00338	6/15/2021	EDUCATION
BMP00576	6/15/2021	MAINTENANCE ACTIVITY
BMP01953	6/15/2021	ACCEPTANCE INSPECTION
BMP00575	6/16/2021	OWNER INSPECTION
BMP00576	6/16/2021	OWNER INSPECTION
BMP00197	6/17/2021	MAINTENANCE INSPECTION
BMP00338	6/17/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00621	6/17/2021	MAINTENANCE INSPECTION
BMP00593	6/17/2021	EDUCATION
BMP00623	6/17/2021	MAINTENANCE INSPECTION

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP00622	6/17/2021	MAINTENANCE INSPECTION
BMP00860	6/17/2021	MAINTENANCE INSPECTION
BMP00859	6/17/2021	MAINTENANCE INSPECTION
BMP00860	6/22/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00197	6/22/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01542	6/23/2021	RECEIPT OF CERTIFICATION
BMP00621	6/28/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00622	6/28/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01208	6/28/2021	RETIREMENT
BMP01543	6/30/2021	RECEIPT OF CERTIFICATION
BMP01187	7/1/2021	MAINTENANCE ACTIVITY
BMP01188	7/1/2021	MAINTENANCE ACTIVITY
BMP01189	7/1/2021	MAINTENANCE ACTIVITY
BMP01544	7/1/2021	CONSTRUCTION INSPECTION
BMP01186	7/1/2021	MAINTENANCE ACTIVITY
BMP01187	7/2/2021	OWNER INSPECTION
BMP01189	7/2/2021	OWNER INSPECTION
BMP01188	7/2/2021	OWNER INSPECTION
BMP01186	7/2/2021	OWNER INSPECTION
BMP00738	7/7/2021	MAINTENANCE ACTIVITY
BMP00740	7/7/2021	MAINTENANCE ACTIVITY
BMP00742	7/7/2021	MAINTENANCE ACTIVITY
BMP00741	7/7/2021	MAINTENANCE ACTIVITY
BMP00621	7/7/2021	EDUCATION
BMP00739	7/7/2021	MAINTENANCE ACTIVITY
BMP00622	7/7/2021	EDUCATION
BMP00094	7/8/2021	MAINTENANCE INSPECTION
BMP00857	7/8/2021	MAINTENANCE INSPECTION
BMP00095	7/8/2021	MAINTENANCE INSPECTION
BMP00858	7/8/2021	MAINTENANCE INSPECTION
BMP00096	7/8/2021	MAINTENANCE INSPECTION
BMP00856	7/8/2021	MAINTENANCE INSPECTION
BMP00097	7/8/2021	MAINTENANCE INSPECTION
BMP01543	7/12/2021	CONSTRUCTION INSPECTION

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP00860	7/14/2021	MAINTENANCE ACTIVITY
BMP01258	7/15/2021	MAINTENANCE ACTIVITY
BMP00858	7/15/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00857	7/15/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01262	7/15/2021	MAINTENANCE ACTIVITY
BMP01261	7/15/2021	MAINTENANCE ACTIVITY
BMP00856	7/15/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01260	7/15/2021	MAINTENANCE ACTIVITY
BMP01260	7/16/2021	OWNER INSPECTION
BMP01258	7/16/2021	OWNER INSPECTION
BMP02030	7/16/2021	CONSTRUCTION INSPECTION
BMP01262	7/16/2021	OWNER INSPECTION
BMP02031	7/16/2021	CONSTRUCTION INSPECTION
BMP01261	7/16/2021	OWNER INSPECTION
BMP01259	7/16/2021	OWNER INSPECTION
BMP00096	7/19/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00097	7/19/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01382	7/20/2021	MAINTENANCE ACTIVITY
BMP01387	7/20/2021	OWNER INSPECTION
BMP01388	7/20/2021	MAINTENANCE ACTIVITY
BMP01380	7/20/2021	OWNER INSPECTION
BMP01385	7/20/2021	OWNER INSPECTION
BMP01379	7/20/2021	MAINTENANCE ACTIVITY
BMP01389	7/20/2021	MAINTENANCE ACTIVITY
BMP01391	7/20/2021	OWNER INSPECTION
BMP01390	7/20/2021	MAINTENANCE ACTIVITY
BMP01383	7/20/2021	OWNER INSPECTION
BMP01389	7/20/2021	OWNER INSPECTION
BMP01391	7/20/2021	MAINTENANCE ACTIVITY
BMP00338	7/20/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01382	7/20/2021	OWNER INSPECTION
BMP01390	7/20/2021	OWNER INSPECTION
BMP01388	7/20/2021	OWNER INSPECTION
BMP01379	7/20/2021	OWNER INSPECTION

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP01386	7/20/2021	MAINTENANCE ACTIVITY
BMP01387	7/20/2021	MAINTENANCE ACTIVITY
BMP01381	7/20/2021	OWNER INSPECTION
BMP01386	7/20/2021	OWNER INSPECTION
BMP01380	7/20/2021	MAINTENANCE ACTIVITY
BMP01384	7/20/2021	MAINTENANCE ACTIVITY
BMP00734	7/20/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01384	7/20/2021	OWNER INSPECTION
BMP01381	7/20/2021	MAINTENANCE ACTIVITY
BMP01383	7/20/2021	MAINTENANCE ACTIVITY
BMP00743	7/20/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01385	7/20/2021	MAINTENANCE ACTIVITY
BMP00615	7/21/2021	MAINTENANCE INSPECTION
BMP00042	7/21/2021	MAINTENANCE INSPECTION
BMP01986	7/22/2021	ACCEPTANCE INSPECTION
BMP02083	7/22/2021	CONSTRUCTION INSPECTION
BMP02082	7/22/2021	INVENTORIED
BMP02083	7/22/2021	INVENTORIED
BMP01865	7/26/2021	CONSTRUCTION INSPECTION
BMP00621	7/26/2021	MAINTENANCE ACTIVITY
BMP00622	7/26/2021	MAINTENANCE ACTIVITY
BMP00615	7/26/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00373	7/27/2021	EDUCATION
BMP02054	7/28/2021	RECEIPT OF CERTIFICATION
BMP02055	7/28/2021	RECEIPT OF CERTIFICATION
BMP01053	7/28/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP02084	7/28/2021	INVENTORIED
BMP01256	7/29/2021	MAINTENANCE INSPECTION
BMP00050	7/29/2021	MAINTENANCE INSPECTION
BMP00163	7/29/2021	MAINTENANCE INSPECTION
BMP01461	8/2/2021	MAINTENANCE INSPECTION
BMP01182	8/2/2021	MAINTENANCE INSPECTION
BMP00754	8/2/2021	MAINTENANCE INSPECTION
BMP01462	8/2/2021	MAINTENANCE INSPECTION

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP01464	8/2/2021	MAINTENANCE INSPECTION
BMP00050	8/3/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00057	8/3/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP02054	8/3/2021	ACCEPTANCE INSPECTION
BMP01708	8/3/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00058	8/3/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01544	8/5/2021	CONSTRUCTION INSPECTION
BMP01542	8/5/2021	ACCEPTANCE INSPECTION
BMP02082	8/5/2021	CONSTRUCTION INSPECTION
BMP01370	8/6/2021	MAINTENANCE INSPECTION
BMP00641	8/6/2021	MAINTENANCE INSPECTION
BMP02039	8/11/2021	ACCEPTANCE INSPECTION
BMP01462	8/11/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00641	8/11/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01182	8/11/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01461	8/11/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00754	8/11/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01464	8/11/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP02085	8/16/2021	RECEIPT OF CERTIFICATION
BMP02085	8/16/2021	ACCEPTANCE INSPECTION
BMP02056	8/17/2021	RECEIPT OF CERTIFICATION
BMP02031	8/17/2021	RECEIPT OF CERTIFICATION
BMP02085	8/17/2021	INVENTORIED
BMP02030	8/18/2021	RECEIPT OF CERTIFICATION
BMP01865	8/18/2021	CONSTRUCTION INSPECTION
BMP00754	8/18/2021	MAINTENANCE ACTIVITY
BMP02075	8/19/2021	CONSTRUCTION INSPECTION
BMP02086	8/19/2021	INVENTORIED
BMP02082	8/20/2021	RECEIPT OF CERTIFICATION
BMP02083	8/20/2021	RECEIPT OF CERTIFICATION
BMP02087	8/20/2021	INVENTORIED
BMP02088	8/20/2021	INVENTORIED
BMP02082	8/23/2021	CONSTRUCTION INSPECTION
BMP02083	8/23/2021	CONSTRUCTION INSPECTION

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP00846	8/24/2021	RETIREMENT
BMP02086	8/25/2021	CONSTRUCTION INSPECTION
BMP02075	8/25/2021	CONSTRUCTION INSPECTION
BMP02091	8/25/2021	INVENTORIED
BMP00979	8/26/2021	MAINTENANCE INSPECTION
BMP00703	8/26/2021	MAINTENANCE INSPECTION
BMP00978	8/26/2021	MAINTENANCE INSPECTION
BMP02093	8/26/2021	INVENTORIED
BMP00858	8/27/2021	EDUCATION
BMP00856	8/27/2021	EDUCATION
BMP00857	8/27/2021	EDUCATION
BMP00163	8/30/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00660	8/30/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00097	8/30/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00096	8/30/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00110	8/31/2021	MAINTENANCE INSPECTION
BMP00978	8/31/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00979	8/31/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00213	8/31/2021	MAINTENANCE INSPECTION
BMP00109	8/31/2021	MAINTENANCE INSPECTION
BMP01791	9/1/2021	CONSTRUCTION INSPECTION
BMP01870	9/1/2021	CONSTRUCTION INSPECTION
BMP01878	9/1/2021	CONSTRUCTION INSPECTION
BMP01793	9/1/2021	CONSTRUCTION INSPECTION
BMP02050	9/2/2021	RECEIPT OF CERTIFICATION
BMP01518	9/2/2021	RECEIPT OF CERTIFICATION
BMP02048	9/2/2021	RECEIPT OF CERTIFICATION
BMP01726	9/2/2021	RECEIPT OF CERTIFICATION
BMP02071	9/2/2021	RECEIPT OF CERTIFICATION
BMP02047	9/2/2021	RECEIPT OF CERTIFICATION
BMP02049	9/2/2021	RECEIPT OF CERTIFICATION
BMP02046	9/2/2021	RECEIPT OF CERTIFICATION
BMP02049	9/8/2021	ACCEPTANCE INSPECTION
BMP02046	9/8/2021	ACCEPTANCE INSPECTION

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP02050	9/8/2021	ACCEPTANCE INSPECTION
BMP02048	9/8/2021	ACCEPTANCE INSPECTION
BMP02086	9/8/2021	CONSTRUCTION INSPECTION
BMP00735	9/8/2021	EDUCATION
BMP02047	9/8/2021	ACCEPTANCE INSPECTION
BMP00736	9/8/2021	EDUCATION
BMP00737	9/8/2021	EDUCATION
BMP00660	9/9/2021	EDUCATION
BMP00058	9/13/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01708	9/13/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00213	9/13/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00734	9/13/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01236	9/13/2021	MAINTENANCE ACTIVITY
BMP00743	9/13/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00057	9/13/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP02071	9/14/2021	ACCEPTANCE INSPECTION
BMP01236	9/14/2021	OWNER INSPECTION
BMP01726	9/14/2021	ACCEPTANCE INSPECTION
BMP02053	9/15/2021	CONSTRUCTION INSPECTION
BMP02051	9/15/2021	CONSTRUCTION INSPECTION
BMP00373	9/15/2021	MAINTENANCE ACTIVITY
BMP02094	9/16/2021	INVENTORIED
BMP02095	9/16/2021	INVENTORIED
BMP02097	9/16/2021	INVENTORIED
BMP02055	9/17/2021	ACCEPTANCE INSPECTION
BMP02054	9/17/2021	ACCEPTANCE INSPECTION
BMP00909	9/21/2021	EDUCATION
BMP00050	9/21/2021	MAINTENANCE ACTIVITY
BMP00138	9/22/2021	MAINTENANCE INSPECTION
BMP00140	9/22/2021	MAINTENANCE INSPECTION
BMP01182	9/23/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00641	9/23/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01311	9/23/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00669	9/24/2021	MAINTENANCE ACTIVITY

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP00373	9/24/2021	MAINTENANCE INSPECTION
BMP00665	9/24/2021	MAINTENANCE ACTIVITY
BMP00670	9/24/2021	MAINTENANCE ACTIVITY
BMP00666	9/24/2021	MAINTENANCE ACTIVITY
BMP00745	9/24/2021	MAINTENANCE INSPECTION
BMP00746	9/24/2021	MAINTENANCE INSPECTION
BMP00373	9/24/2021	MAINTENANCE ACTIVITY
BMP00671	9/24/2021	MAINTENANCE ACTIVITY
BMP00667	9/24/2021	MAINTENANCE ACTIVITY
BMP00672	9/24/2021	MAINTENANCE ACTIVITY
BMP00673	9/24/2021	MAINTENANCE ACTIVITY
BMP00670	9/27/2021	OWNER INSPECTION
BMP00667	9/27/2021	OWNER INSPECTION
BMP00669	9/27/2021	OWNER INSPECTION
BMP00671	9/27/2021	OWNER INSPECTION
BMP00666	9/27/2021	OWNER INSPECTION
BMP00665	9/27/2021	OWNER INSPECTION
BMP00663	9/27/2021	OWNER INSPECTION
BMP00672	9/27/2021	OWNER INSPECTION
BMP00673	9/27/2021	OWNER INSPECTION
BMP00660	9/28/2021	MAINTENANCE ACTIVITY
BMP01923	9/29/2021	CONSTRUCTION INSPECTION
BMP01924	9/29/2021	CONSTRUCTION INSPECTION
BMP01865	9/29/2021	RECEIPT OF CERTIFICATION
BMP01021	9/30/2021	MAINTENANCE INSPECTION
BMP02091	9/30/2021	CONSTRUCTION INSPECTION
BMP00514	9/30/2021	MAINTENANCE INSPECTION
BMP01022	9/30/2021	MAINTENANCE INSPECTION
BMP00515	9/30/2021	MAINTENANCE INSPECTION
BMP01859	9/30/2021	CONSTRUCTION INSPECTION
BMP01020	9/30/2021	MAINTENANCE INSPECTION
BMP01858	9/30/2021	CONSTRUCTION INSPECTION
BMP01023	9/30/2021	MAINTENANCE INSPECTION
BMP02100	9/30/2021	INVENTORIED

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP00162	10/1/2021	MAINTENANCE INSPECTION
BMP00100	10/1/2021	MAINTENANCE INSPECTION
BMP00213	10/4/2021	MAINTENANCE ACTIVITY
BMP00213	10/4/2021	EDUCATION
BMP01924	10/5/2021	RECEIPT OF CERTIFICATION
BMP02048	10/5/2021	ACCEPTANCE INSPECTION
BMP02086	10/5/2021	RECEIPT OF CERTIFICATION
BMP01923	10/5/2021	RECEIPT OF CERTIFICATION
BMP02050	10/5/2021	ACCEPTANCE INSPECTION
BMP02049	10/5/2021	ACCEPTANCE INSPECTION
BMP00178	10/6/2021	OWNER INSPECTION
BMP01367	10/6/2021	OWNER INSPECTION
BMP00592	10/6/2021	OWNER INSPECTION
BMP00109	10/6/2021	OWNER INSPECTION
BMP00110	10/6/2021	OWNER INSPECTION
BMP00855	10/6/2021	OWNER INSPECTION
BMP00353	10/6/2021	OWNER INSPECTION
BMP00658	10/6/2021	OWNER INSPECTION
BMP00046	10/6/2021	OWNER INSPECTION
BMP02046	10/7/2021	ACCEPTANCE INSPECTION
BMP02047	10/7/2021	ACCEPTANCE INSPECTION
BMP02086	10/7/2021	CONSTRUCTION INSPECTION
BMP02046	10/8/2021	RECEIPT OF CERTIFICATION
BMP02047	10/8/2021	RECEIPT OF CERTIFICATION
BMP02083	10/12/2021	CONSTRUCTION INSPECTION
BMP02091	10/12/2021	CONSTRUCTION INSPECTION
BMP02082	10/12/2021	CONSTRUCTION INSPECTION
BMP00140	10/13/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01021	10/13/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01020	10/13/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00100	10/13/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01023	10/13/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00515	10/13/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00745	10/13/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP00162	10/13/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01022	10/13/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP02091	10/14/2021	CONSTRUCTION INSPECTION
BMP01852	10/15/2021	RECEIPT OF CERTIFICATION
BMP02082	10/19/2021	CONSTRUCTION INSPECTION
BMP02083	10/19/2021	CONSTRUCTION INSPECTION
BMP02061	10/20/2021	RECEIPT OF CERTIFICATION
BMP00606	10/22/2021	MAINTENANCE INSPECTION
BMP02051	10/25/2021	RECEIPT OF CERTIFICATION
BMP02053	10/25/2021	RECEIPT OF CERTIFICATION
BMP00745	10/25/2021	MAINTENANCE ACTIVITY
BMP02052	10/27/2021	RECEIPT OF CERTIFICATION
BMP02103	10/27/2021	INVENTORIED
BMP00390	10/28/2021	EDUCATION
BMP00606	10/28/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00515	10/29/2021	EDUCATION
BMP01425	10/29/2021	EDUCATION
BMP00514	10/29/2021	EDUCATION
BMP02105	10/29/2021	INVENTORIED
BMP02106	10/29/2021	INVENTORIED
BMP02108	10/29/2021	INVENTORIED
BMP01201	10/30/2021	MAINTENANCE ACTIVITY
BMP01204	10/30/2021	MAINTENANCE ACTIVITY
BMP01206	10/30/2021	MAINTENANCE ACTIVITY
BMP01203	10/30/2021	MAINTENANCE ACTIVITY
BMP01200	10/30/2021	MAINTENANCE ACTIVITY
BMP01205	10/30/2021	MAINTENANCE ACTIVITY
BMP01207	10/30/2021	MAINTENANCE ACTIVITY
BMP01205	10/30/2021	OWNER INSPECTION
BMP01202	10/30/2021	MAINTENANCE ACTIVITY
BMP01206	11/1/2021	OWNER INSPECTION
BMP01207	11/1/2021	OWNER INSPECTION
BMP01202	11/1/2021	OWNER INSPECTION
BMP01200	11/1/2021	OWNER INSPECTION

HENRICO COUNTY MS4 PROGRAM PLAN
 PART I.B.2.h
 ANNUAL REPORT SUPPLEMENT
 JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP01201	11/1/2021	OWNER INSPECTION
BMP00924	11/2/2021	EDUCATION
BMP02106	11/5/2021	CONSTRUCTION INSPECTION
BMP01989	11/5/2021	EDUCATION
BMP02103	11/5/2021	CONSTRUCTION INSPECTION
BMP01596	11/5/2021	RECEIPT OF CERTIFICATION
BMP00530	11/9/2021	MAINTENANCE INSPECTION
BMP02093	11/9/2021	CONSTRUCTION INSPECTION
BMP01724	11/9/2021	MAINTENANCE INSPECTION
BMP02109	11/10/2021	INVENTORIED
BMP02106	11/12/2021	CONSTRUCTION INSPECTION
BMP02086	11/12/2021	CONSTRUCTION INSPECTION
BMP02103	11/12/2021	CONSTRUCTION INSPECTION
BMP02110	11/12/2021	INVENTORIED
BMP02111	11/12/2021	INVENTORIED
BMP02112	11/12/2021	INVENTORIED
BMP02113	11/12/2021	INVENTORIED
BMP00174	11/15/2021	MAINTENANCE ACTIVITY
BMP00175	11/15/2021	SCREENING INSPECTION
BMP00174	11/15/2021	SCREENING INSPECTION
BMP00176	11/15/2021	MAINTENANCE ACTIVITY
BMP00175	11/15/2021	MAINTENANCE ACTIVITY
BMP00176	11/15/2021	SCREENING INSPECTION
BMP02103	11/15/2021	CONSTRUCTION INSPECTION
BMP02103	11/17/2021	CONSTRUCTION INSPECTION
BMP01986	11/17/2021	ACCEPTANCE INSPECTION
BMP01989	11/17/2021	EDUCATION
BMP02086	11/17/2021	CONSTRUCTION INSPECTION
BMP02106	11/17/2021	CONSTRUCTION INSPECTION
BMP00530	11/18/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP01724	11/18/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP02115	11/18/2021	INVENTORIED
BMP02116	11/18/2021	INVENTORIED
BMP02117	11/18/2021	INVENTORIED

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP01779	11/19/2021	MAINTENANCE ACTIVITY
BMP01779	11/22/2021	OWNER INSPECTION
BMP01724	11/23/2021	EDUCATION
BMP00162	11/29/2021	MAINTENANCE ACTIVITY
BMP02031	11/29/2021	ACCEPTANCE INSPECTION
BMP02030	11/29/2021	ACCEPTANCE INSPECTION
BMP00606	11/30/2021	EDUCATION
BMP01718	12/1/2021	CONSTRUCTION INSPECTION
BMP01989	12/2/2021	MAINTENANCE ACTIVITY
BMP00515	12/2/2021	MAINTENANCE ACTIVITY
BMP00736	12/3/2021	MAINTENANCE INSPECTION
BMP01227	12/3/2021	PUNCHLIST DEVELOPMENT AND DISTRIBUTION
BMP00737	12/3/2021	MAINTENANCE INSPECTION
BMP00736	12/3/2021	MAINTENANCE ACTIVITY
BMP00735	12/3/2021	MAINTENANCE INSPECTION
BMP00737	12/3/2021	MAINTENANCE ACTIVITY
BMP00735	12/3/2021	MAINTENANCE ACTIVITY
BMP01278	12/4/2021	MAINTENANCE ACTIVITY
BMP01279	12/4/2021	MAINTENANCE ACTIVITY
BMP01277	12/4/2021	MAINTENANCE ACTIVITY
BMP01278	12/6/2021	OWNER INSPECTION
BMP01277	12/6/2021	OWNER INSPECTION
BMP01279	12/6/2021	OWNER INSPECTION
BMP02091	12/6/2021	RECEIPT OF CERTIFICATION
BMP02082	12/6/2021	ACCEPTANCE INSPECTION
BMP02119	12/9/2021	INVENTORIED
BMP02120	12/10/2021	INVENTORIED
BMP02121	12/10/2021	INVENTORIED
BMP02122	12/10/2021	INVENTORIED
BMP02123	12/10/2021	INVENTORIED
BMP00110	12/15/2021	OWNER INSPECTION
BMP00046	12/15/2021	OWNER INSPECTION
BMP00353	12/15/2021	OWNER INSPECTION
BMP01718	12/15/2021	CONSTRUCTION INSPECTION

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.h
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

BMP01023	12/15/2021	MAINTENANCE ACTIVITY
BMP01022	12/15/2021	MAINTENANCE ACTIVITY
BMP00178	12/15/2021	OWNER INSPECTION
BMP01021	12/15/2021	MAINTENANCE ACTIVITY
BMP00658	12/15/2021	OWNER INSPECTION
BMP01367	12/15/2021	OWNER INSPECTION
BMP00592	12/15/2021	OWNER INSPECTION
BMP00109	12/15/2021	OWNER INSPECTION
BMP00855	12/15/2021	OWNER INSPECTION
BMP01020	12/15/2021	MAINTENANCE ACTIVITY
BMP02115	12/17/2021	CONSTRUCTION INSPECTION
BMP01186	12/27/2021	MAINTENANCE ACTIVITY
BMP01188	12/27/2021	MAINTENANCE ACTIVITY
BMP01718	12/27/2021	CONSTRUCTION INSPECTION
BMP01187	12/27/2021	MAINTENANCE ACTIVITY
BMP01189	12/27/2021	MAINTENANCE ACTIVITY
BMP00454	12/31/2021	MAINTENANCE ACTIVITY
BMP00453	12/31/2021	MAINTENANCE ACTIVITY

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.

HENRICO COUNTY MS4 PROGRAM PLAN

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

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.I
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

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	01/01/2021 - 12/31/2021	96
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.	01/31/2021 05/30/2021	812
DPW – EESD	The Department of Public Works contributed educational items to the Henrico County Spring Energy Fair. A booth was hosted for the Fall Energy Fair Attendees were educated on proper pet waste and litter disposal. They were also educated on the new Blue Tubes™, which provide opportunities for the	04/24/2021 & 10/06/2021	266

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.B.2.J

ANNUAL REPORT SUPPLEMENT

JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

	community to participate in pollution prevention.		
DPW-EESD	Two inlet stenciling volunteer events were held in Henrico County at the Tuckahoe and Fairfield libraries. Six stencils were painted at each library location. These events were made possible through funding from the Middle James Roundtable and collaboration with the James River Association.	08/30/2021	8
DPW-EESD	Henrico County Schools Life Ready Career Expo – items promoting spill reporting and proper pet waste disposal were distributed at this event.	10/20/2021	100
DPW-Maintenance & DPU	Leaf insert sent in DPU utility bill	Multiple	100,000
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 and the environment.	Multiple	3646
Fire	MS4 Education Posters in stations in view of public	Always	Unknown
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			
DPW-EESD	Bacterial Outreach Presentation Lunch & Learn – VA Water	01/21/2021	39 Registrants

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.J
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

	Environment Association		
Henricopolis	Rain Barrel Outreach	January 1, 2021 – December 31, 2021	39
Henricopolis	Soil Test Voucher Program	January 1, 2021 – December 31, 2021	559
DPU/KHB	Litter Pickup	3/27/2021	18
DPU/ADMIN	Look for Leaks Video – Twitter, Facebook	4/7/2021	Twitter – 1,390
DPW – EESD	Middle James Roundtable Annual Meeting	10/14/2021	55 Registrants
DPU/KHB	Native Plants	Various	67
DPU – KHB	Jordan's Branch Cleanup	Various	16
DPU – KHB	James River Cleanup	Various	23
DPU – KHB	Horse Creek Cleanup	10/08/2021	3
DPW - EESD	Septic Educational Mailings Sent in 2020	Multiple	1,759
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			
Rec & Parks	MS4 Outreach for Private Golf Course Owners / Operators	Multiple	5
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	04/07/2021	Twitter – 850 Facebook - 223
Fire	MS4 educational posters in all stations	Always	Unknown
Goal: Promote and publicize the proper disposal of pet waste and household yard			

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.J
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

waste			
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.	01/31/2021 05/30/2021	812
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.	03/08/2021	15
		11/16/2021	12
DPW – EESD	The Department of Public Works contributed educational items to the Henrico County Spring Energy Fair. A booth was hosted for the Fall Energy Fair Attendees were educated on proper pet waste and litter disposal. They were also educated on the new Blue Tubes™, which provide opportunities for the community to participate in pollution prevention.	04/24/2021 & 10/06/2021	266
DPW-EESD	4 Pet Waste Stations installed in neighborhoods and parks	05/20/2021	Unknown
		07/01/2021	
		09/14/2021	
		09/14/2021	
DPU – KHB	KHB Leaves Video – Twitter	8/23/2021	627
DPU/ADMIN	Only Rain Down Drain Video – Twitter, Facebook	8/26/2021	Twitter – 1,281 Facebook - 391
DPW-EESD	Two inlet stenciling volunteer events	08/30/2021	8

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.J
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

	were held in Henrico County at the Tuckahoe and Fairfield libraries. Six stencils were painted at each library location. These events were made possible through funding from the Middle James Roundtable and collaboration with the James River Association.		
DPW – EESD	Middle James Roundtable Annual Meeting	10/14/2021	55 Registrants
DPW - EESD & Animal Control	Public Works partnered with the Animal Protection Police Unit for distribution of pet waste bag dispensers at the time of adoption.	10/14/2021	60
DPW-EESD	Henrico County Schools Life Ready Career Expo – items promoting spill reporting and proper pet waste disposal were distributed at this event.	10/20/2021	100
DPU – KHB	Educational booth at events – recycling education, litter prevention, pet waste disposal, waste disposal	Various	657
DPW – EESD	Middle James Roundtable Pet Waste Coalition Social Media – Facebook Education on the environmental impacts of pet waste and the importance of picking up after pets.	Multiple	Lifetime Post Total Impressions: 908
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)	Multiple	3646

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.J
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

	negatively impacting communities and the environment.		
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	7
Goal: Promote and publicize the use of the permittee's litter prevention program			
Henricopolis	K-12 Classroom Programs- environmental education sessions with a focus on non-point source pollution, litter, and pet waste management.	January 1, 2021 – December 31, 2021	Approx. 1,251 Henrico County Students
DPU - KHB	Litter Pickup	03/27/2021	18
DPU/ADMIN	Only Rain Down Drain Video – Twitter, Facebook	8/26/2021	Twitter – 1,281 Facebook - 391
DPW – EESD	Middle James Roundtable Annual Meeting	10/14/2021	55 Registrants
DPU – KHB	Jordan's Branch Cleanup	Various	16
DPU – KHB	James River Cleanup	Various	23
DPU – KHB	Horse Creek Cleanup	10/08/2021	3
DPU – KHB	Educational booth at events – recycling education, litter prevention, pet waste disposal, waste disposal	Various	657
DPU – KHB	School presentations to classes on litter prevention/recycling	Various	1,003
DPU – KHB	BWISE Teacher Training	Various	11
DPU – KHB	Social Media Video – Various Topics	Various	Instagram – 621

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.J
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

			Facebook – 18,735 Twitter – 25,785
Goal: Promote and publicize methods for residential car washing that minimize water quality impacts			
DPW-EESD	Car Wash Brochures	August - October 2021	100,000
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	Pesticide Recertification Program (Virtual) <i>VTC M.A.T.E. Program</i>	1/22/2021	110
Extension Service	Pesticide Recertification Program (Virtual) <i>Virginia Greenhouse Growers Association</i>	1/27/2021	13
Extension Service	Sediment and Erosion Video <i>Watershed Wonder Wednesday YouTube Series</i>	2/3/2021	85 views
Extension Service	Commercial Pesticide Applicator Recertification Program (Virtual) <i>CVNLA Short Course</i>	2/12/2021	68
Extension Service	Making a Personal Water Meter Video <i>Watershed Wonder Wednesday YouTube Series</i>	2/14/2021	52 views
Extension Service	Category 6 Prep Course <i>Satfford VCE Office</i>	2/18/2021	6
Extension Service	Pesticide Safety and the PMG <i>Henrico Master Gardener Interns</i>	2/25/2021	15
Extension Service	Fall Armyworm Awareness Video <i>Henrico Government YouTube</i>	9/3/2021	435 views
Extension Service	Environmentally Friendly Lawns <i>Spotsylvania Extension MG Intern Training</i>	9/28/2021	24
Extension	Urban Pest Update & Pesticide	12/1/2021	24

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.J
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

Service	Safety Presentations <i>Hanover Private Pesticide Applicator Recertification</i>		
Extension Service	Urban Pest Update & Pesticide Safety Presentations <i>New Kent Private Pesticide Applicator Recertification</i>	12/14/2021	30
Goal: Encourage private property owners to implement voluntary stormwater management techniques and/or retrofits			
Henricopolis	Virginia Conservation Assistance Program	Jan 1, 2021 – December 31, 2021	42 site visits

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.

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.B.2.J

ANNUAL REPORT SUPPLEMENT

JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

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.

Extension Service

Pesticide Applicator Recertification Sessions

During 2021, 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.

HENRICO COUNTY MS4 PROGRAM PLAN

Additionally, during 2021, 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.

Initial Pesticide Applicator Certification Sessions

During 2021, 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.

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 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.

HENRICO COUNTY MS4 PROGRAM PLAN

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 2021.

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 01/01/2021 and 12/31/2021, 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 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.

HENRICO COUNTY MS4 PROGRAM PLAN

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, 2021 – December 31, 2021	37 inquiries; 2 practices completed

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.B.2.k 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.

Training Topics and Events Attended Between January 1, 2021 and December 31, 2021		
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	Multiple	253
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	580
Hazmat update: Many Division of Fire personnel participate in additional hazardous materials training programs, such as Hazmat Technician and Hazmat Specialist. Initial training for these programs includes 80 and 240 hours of tested content, respectfully. These higher levels of certification mandate 24 hours of additional recertification training annually. Personnel at the Hazmat Technician and	Multiple	57 Hazmat Technicians & 39 Hazmat Specialists

HENRICO COUNTY MS4 PROGRAM PLAN

Hazmat Specialist level provide additionally on-duty resources to respond to spills and emergencies throughout the community.		
Stormwater Directive 2021 (Fire)	Varies	450
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)	01/27/2021	3
	05/11/2021	3
	08/17/2021	2
	11/09/2021	4
DPU SWPPP Training - NEO	05/13/2021	1
	06/11/2021	1
	06/22/2021	3
	08/05/2021	5
SOP 16.0 – Vehicle & Equipment Storage (Rec & Parks)	06/01/2021	102
SOP 2.0 Chemical Storage, Handling, Transporting (Rec & Parks)	06/01/2021	102
SOP 7.0 – Grass Mowing (Rec & Parks)	06/01/2021	102
SOP 8.0 – Pet Waste Removal (Rec & Parks)	07/01/2021	102
SOP 3.0 & 4.0 – Detention Pond Cleaning & Ditch and Culvert Maintenance (Rec & Parks)	07/01/2021	102
SOP 15.0 Vehicles – Fueling (Rec & Parks)	08/01/2021	102
SOP 12.0 – Transporting Equipment (Rec & Parks)	08/01/2021	102
SOP 6.0 – Equipment Cleaning (Rec & Parks)	08/01/2021	102
Stormwater Pollution Prevention (Rec & Parks)	10/01/2021	105

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.k
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

SWPPP/MS4 Oral presentation and Q&A session (Schools)	11/11/2021	50
SOP 11.0 – Snow Removal (Rec & Parks)	12/01/2021	107
SPCC Training – DPU Operations Staff	12/16/2021	29
Universal Waste Training – DPU Operations staff	12/16/2021	29
Municipal Site Good Housekeeping Webnet Training	Multiple	230
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		
Opportunities related to this component were limited due to COVID.		
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		
DEQ Inspector for Erosion & Sediment Control	01/05/2021 & 07/21/2021	1
	03/02/2021 & 03/04/2021	1
	10/05/2021 & 10/07/2021	1
	12/07/2021 & 12/09/2021	1
Forest Open Space Part I: Soil Restoration	02/01/2021	1
Is Soil Compaction Really That Bad	02/01/2021	1
Forest Open Space Part II: Vegetation Restoration	02/02/2021	1
Program Administrator for Erosion and Sediment Control Certification Course (DPW – EESD)	03/04/2021	1
	10/13/2021	1
DEQ Refresher for ESC Inspectors (DPW)	05/20/2021	2

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.k
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

– EESD)		
Plan Reviewer for Erosion and Sediment Control Certification (DPW – EESD)	05/26/2021	1
Introduction to Soils and Aggregates	06/09/2021	5
DEQ Construction General Permit Update (DPW – EESD)	12/15/2021 - 12/16/2021	1
Dealing with Difficult Site Dilemmas	06/30/2021	1
Five Easy Rules for ESC	12/22/2021	1
Erodibility, Sedimentation, and Sediment Basin Design (DPW – EESD)	12/22/2021	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)	03/30/2021 & 04/01/2021	1
	11/30/2021 & 12/02/2021	2
Where the Water Goes	04/06/2021	1
Stormwater BMP - Extended Detention (ED) Pond (DPW – EESD)	09/15/2021	1
Stormwater BMP - Wet Ponds (DPW – EESD)	09/16/2021	1
Stormwater BMP – Permeable Pavement (DPW – EESD)	09/16/2021	1
Stormwater BMP - Soil Compost Amendments (DPW – EESD)	09/16/2021	2
Stormwater BMP - Constructed Wetlands (DPW – EESD)	09/16/2021	1
Stormwater BMP – Bioretention (DPW – EESD)	09/16/2021	1
Stormwater BMP - Dry Swale (DPW – EESD)	09/16/2021	1
DEQ Regulatory SWPPP Inspections for Localities (DPW-EESD)	03/23/2021-03/24/2021	1
Topic: The appropriate emergency response employees shall have training in spill response.		

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.k
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

ESMS Training – Oral presentation and Q&A session (Schools)	05/12/2021	10
SWPPP/MS4 Oral presentation and Q&A session (Schools)	11/11/2021	50
SPCC Training – DPU Operations Staff	12/16/2021	29
Fire: 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	580
Hazmat update: Many Division of Fire personnel participate in additional hazardous materials training programs, such as Hazmat Technician and Hazmat Specialist. Initial training for these programs includes 80 and 240 hours of tested content, respectfully. These higher levels of certification mandate 24 hours of additional recertification training annually. Personnel at the Hazmat Technician and Hazmat Specialist level provide additionally on-duty resources to respond to spills and emergencies throughout the community.	Multiple	57 Hazmat Technicians & 39 Hazmat Specialists
Topic: Other		
DEQ Inspecting Non-Standard Practices (DPW – EESD)	05/06/2021	1
AST/UST Operator Training (DGS)	12/2021	25
Limits of Analysis Part 1	12/22/2021	1
Two training sessions were conducted by MMA to educate inspection staff on MS4	08/18/2021	12

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.k
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

Program obligations and the permit itself (Community Revitalization)	11/10/2021	12
Quarterly meetings with MMA covering the implementation of the MS4 support & proposal for intra-County reporting (Community Revitalization)	Multiple	1

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.B.2.I

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 1/1/2021 and 12/31/2021*	940
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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 1/1/2021 and 12/31/2021		
MS4 Outfall	Findings	Follow-Up Action
EN0000000000001	No Issues Identified	None Required
EN0000000000002	No Issues Identified	None Required
EN0000000000003	No Issues Identified	None Required
EN0000000000057	No Issues Identified	None Required
EN0000000000148	No Issues Identified	None Required
EN0000000000149	No Issues Identified	None Required
EN0000000000150	No Issues Identified	None Required
EN0000000000162	No Issues Identified	None Required
EN0000000000167	No Issues Identified	None Required
EN0000000000168	No Issues Identified	None Required
EN0000000000169	No Issues Identified	None Required
EN0000000000197	No Issues Identified	None Required
EN0000000000199	No Issues Identified	None Required

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.B.2.I

ANNUAL REPORT SUPPLEMENT

JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

EN000000000219	No Issues Identified	None Required
EN000000000265	No Issues Identified	None Required
EN000000000314	No Issues Identified	None Required
EN000000000315	No Issues Identified	None Required
EN000000000317	No Issues Identified	None Required
EN000000000342	No Issues Identified	None Required
EN000000000342	No Issues Identified	None Required
EN000000000343	No Issues Identified	None Required
EN000000000343	No Issues Identified	None Required
EN000000000356	No Issues Identified	None Required
EN000000000357	No Issues Identified	None Required
EN000000000382	No Issues Identified	None Required
EN000000000383	No Issues Identified	None Required
EN000000000397	No Issues Identified	None Required
EN000000000446	No Issues Identified	None Required
EN000000000447	No Issues Identified	None Required
EN000000000453	No Issues Identified	None Required
EN000000000475	No Issues Identified	None Required
EN000000000500	No Issues Identified	None Required
EN000000000509	No Issues Identified	None Required
EN000000000515	No Issues Identified	None Required
EN000000000518	No Issues Identified	None Required
EN000000000524	No Issues Identified	None Required
EN000000000526	No Issues Identified	None Required
EN000000000572	No Issues Identified	None Required
EN000000000631	No Issues Identified	None Required
EN000000000632	No Issues Identified	None Required
EN000000000883	No Issues Identified	None Required
EN000000000885	No Issues Identified	None Required
EN000000000933	No Issues Identified	None Required
EN000000000934	No Issues Identified	None Required
EN000000001378	No Issues Identified	None Required
EN000000001420	No Issues Identified	None Required
EN000000001421	No Issues Identified	None Required

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.I
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

EN000000001422	No Issues Identified	None Required
EN000000001423	No Issues Identified	None Required
EN000000001427	No Issues Identified	None Required
EN000000001428	No Issues Identified	None Required
EN000000001430	No Issues Identified	None Required
EN000000001443	No Issues Identified	None Required
EN000000001480	No Issues Identified	None Required
EN000000001487	No Issues Identified	None Required
EN000000001488	No Issues Identified	None Required
EN000000001499	No Issues Identified	None Required
EN000000001603	No Issues Identified	None Required
EN000000001605	No Issues Identified	None Required
EN000000001670	No Issues Identified	None Required
EN000000001863	No Issues Identified	None Required
EN000000001904	No Issues Identified	None Required
EN000000001951	No Issues Identified	None Required
EN000000001952	No Issues Identified	None Required
EN000000001953	No Issues Identified	None Required
EN000000001956	No Issues Identified	None Required
EN000000001958	No Issues Identified	None Required
EN000000002316	No Issues Identified	None Required
EN000000002426	No Issues Identified	None Required
EN000000002442	No Issues Identified	None Required
EN000000002444	No Issues Identified	None Required
EN000000002475	No Issues Identified	None Required
EN000000002525	No Issues Identified	None Required
EN000000002526	No Issues Identified	None Required
EN000000002598	No Issues Identified	None Required
EN000000002599	No Issues Identified	None Required
EN000000002764	No Issues Identified	None Required
EN000000002767	No Issues Identified	None Required
EN000000003155	No Issues Identified	None Required
EN000000003777	No Issues Identified	None Required
EN000000003822	No Issues Identified	None Required

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.I
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

EN000000003920	No Issues Identified	None Required
EN000000004644	No Issues Identified	None Required
EN000000004872	No Issues Identified	None Required
EN000000005492	No Issues Identified	None Required
EN000000005507	No Issues Identified	None Required
EN000000005706	No Issues Identified	None Required
EN000000006960	No Issues Identified	None Required
EN000000007056	No Issues Identified	None Required
EN000000007405	No Issues Identified	None Required
EN000000007824	No Issues Identified	None Required
EN000000008576	No Issues Identified	None Required
EN000000012141	No Issues Identified	None Required
EN000000012184	No Issues Identified	None Required
EN000000012185	No Issues Identified	None Required
EN000000012305	No Issues Identified	None Required
EN000000012645	No Issues Identified	None Required
EN000000013017	No Issues Identified	None Required
EN000000013019	No Issues Identified	None Required
EN000000013066	No Issues Identified	None Required

Follow-Up Actions Performed as a Result of the Dry Weather Screening Conducted between 1/1/2021 and 12/31/2021	
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,

HENRICO COUNTY MS4 PROGRAM PLAN

- (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.

Wet Weather Screening Conducted between 1/1/2021 and 12/31/2021				
MS4 Structure	Last Significant Rainfall	Findings	Sample Collected	Weather Conditions at the time of Sample
IN000000009995	< 2 days	No Issues	No	N/A
MN000000015817	< 2 days	No Issues	No	N/A

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.B.2.I
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

IN000000051192	< 2 days	No Issues	No	N/A
IN000000011710	< 2 days	No Issues	No	N/A
MN000000090848	< 2 days	No Issues	No	N/A
MN000000002057	< 2 days	No Issues	No	N/A
MN000000002056	< 2 days	No Issues	No	N/A
IN000000000992	< 2 days	No Issues	No	N/A
MN000000002053	< 2 days	No issues	No	N/A
IN000000000987	< 2 days	No Issues	No	N/A
MN000000002048	< 2 days	No Issues	No	N/A
EN000000000220	< 2 days	No Issues	No	N/A
EN000000002901	< 2 days	No Issues	No	N/A
IN000000021459	< 2 days	No Issues	No	N/A
MN000000088123	< 2 days	No Issues	No	N/A
IN000000021458	< 2 days	No issues	No	N/A
MN000000088122	< 2 days	No Issues	No	N/A
IN000000021457	< 2 days	No Issues	No	N/A
MN000000090904	< 2 days	No Issues	No	N/A
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MN000000090942	< 2 days	No Issues	No	N/A
IN000000021435	< 2 days	No Issues	No	N/A
MN000000087958	< 2 days	No Issues	No	N/A

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

HENRICO COUNTY MS4 PROGRAM PLAN

Follow-Up Actions Performed as a Result of the Wet Weather Screening Conducted between 1/1/2021 and 12/31/2021

MS4 Structure	Follow-Up Action
There are no follow-up actions as a result of wet weather screening as no issues were identified.	

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.B.2.m

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 virtually on December 1, 2021. In addition to representatives from VDOT and Henrico County, Chesterfield County staff were also present. The following participated:

Chris Swanson	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
Keith White	Henrico County
Deana Williams	Henrico County
Scott Flanigan	Chesterfield County
Alex McMahon	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 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.

HENRICO COUNTY MS4 PROGRAM PLAN

VDOT, Chesterfield, and Henrico discussed their mapping efforts, including current and upcoming projects. All agreed to make their mapping available as 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.

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

HENRICO COUNTY MS4 PROGRAM PLAN

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.I) 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 all sites, Taxa Richness for the 2021 sampling year was slightly lower than that of 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 fall sampling event at three 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 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

HENRICO COUNTY MS4 PROGRAM PLAN

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 decreased 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 three of the five sites from the spring to the fall sampling event and remained consistent at all other monitoring sites. 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 increased at three of the five sites between the spring sampling event and the fall sampling event while substantially decreasing at Cornelius Creek. 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 Upham Brook and Broadwater Creek increasing by approximately fifteen percent, 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 Creek was recently restored and is actively maturing which should result in more habitat stability over time.

Habitat Suitability Index

Habitat Suitability Index assesses the relative quality of each sites' habitat based on a local reference reach. Broadwater Creek and Cornelius Creek had downward trends between the spring and fall sampling event, but no significant change when comparing 2021 habitat data with prior years' habitat data.

HENRICO COUNTY MS4 PROGRAM PLAN

Henrico County 2021 Bioassessment Metrics

Spring 2021 Bioassessment	Cornelius Creek	Stony Run	Broadwater Creek	Hungary Creek	Upham Brook	Reference Reach
Taxa Richness	22	24	25	24	22	49
EPT Index	5	3	4	3	2	8
% Dominant Taxon	27.97	29.50	16.86	23.81	25.32	14.47
HBI	5.53	5.59	5.97	6.06	5.68	5.52
% Gatherers	37.06	47.79	39.80	55.24	52.15	37.82
% Predators	9.79	3.24	12.14	6.19	1.27	10.77
% Scrapers	11.89	7.96	30.52	5.24	2.28	14.38

Fall 2021 Bioassessment	Cornelius Creek	Stony Run	Broadwater Creek	Hungary Creek	Upham Brook	Reference Reach
Taxa Richness	21	15	26	15	21	49
EPT Index	10	3	6	2	5	8
% Dominant Taxon	25.25	43.18	34.9	64.1	21.95	14.47
HBI	4.86	5.63	6.05	6.13	5.21	5.52
% Gatherers	10.77	9.09	24.1	72.44	36.59	37.82
% Predators	9.43	19.32	25.48	10.26	7.67	10.77
% Scrapers	2.02	21.59	36.57	4.49	4.53	14.38

HENRICO COUNTY MS4 PROGRAM PLAN

Henrico County 2021 Bioassessment Metric Scores

Spring Bioassessments	Cornelius Creek	Stony Run	Broadwater Creek	Hungary Creek	Upham Brook	Reference Reach
Taxa Richness	51	56	58	56	51	114
EPT Index	45	27	36	27	18	73
% Dominant Taxon	85	83	98	90	88	101
HBI	66	65	59	58	64	66
% Gatherers	98	126	105	145	137	100
% Predators	82	27	101	52	11	90
% Scrapers	24	16	62	11	5	29
Total:	64	57	74	63	53	82
% Comparability w/ Reference Reach:	79	70	91	77	65	
Biological Condition:	Non-impaired	Slightly Impaired	Non-impaired	Slightly Impaired	Slightly Impaired	

Fall Bioassessments	Cornelius Creek	Stony Run	Broadwater Creek	Hungary Creek	Upham Brook	Reference Reach
Taxa Richness	49	35	60	35	49	114
EPT Index	91	27	55	18	45	73
% Dominant Taxon	88	67	77	42	92	101
HBI	76	64	58	57	70	66
% Gatherers	28	24	63	191	96	100
% Predators	79	161	212	86	64	90
% Scrapers	4	44	74	9	9	29
Total	59	60	86	62	61	82
% Comparability w/ Reference Reach:	72	74	105	77	75	
Biological Condition:	Slightly Impaired	Slightly Impaired	Non-impaired	Slightly Impaired	Slightly Impaired	

Biological Condition Criteria

0-22% - Severely Impaired

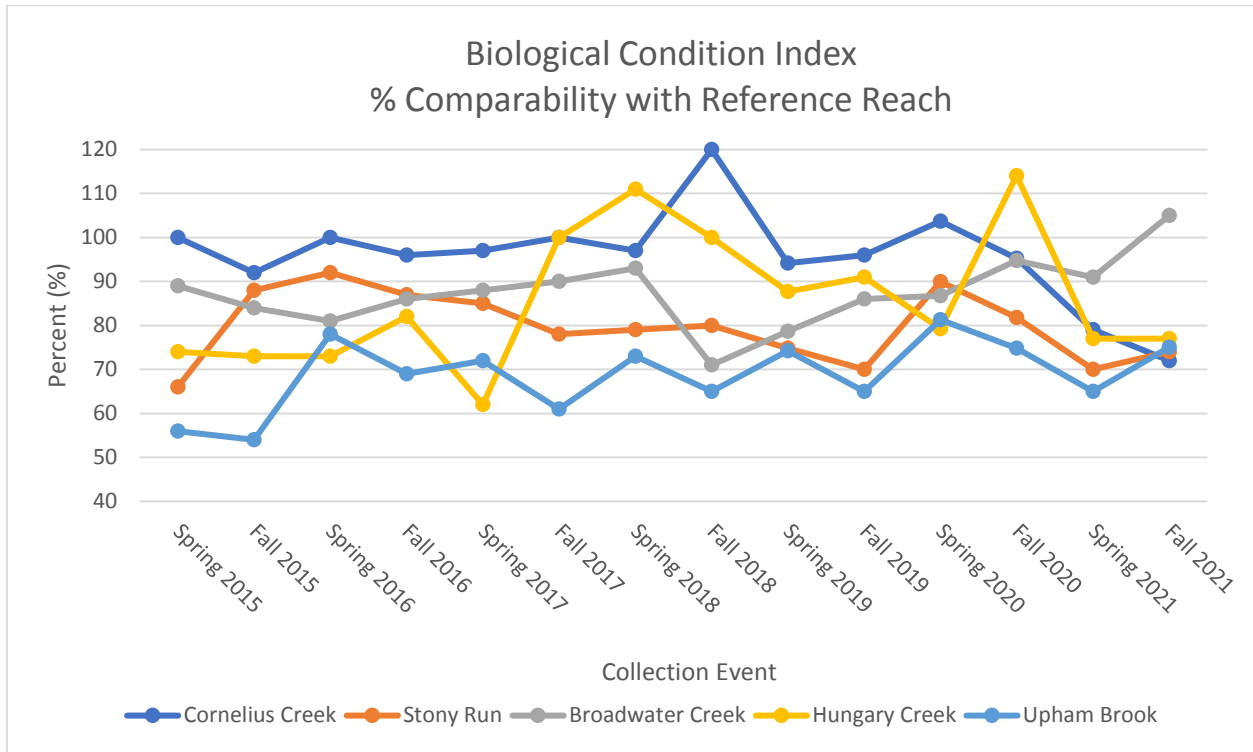
23-50% - Moderately Impaired

51-78% - Slightly Impaired

79-100% - Non-impaired

HENRICO COUNTY MS4 PROGRAM PLAN PART I.C.1 ANNUAL REPORT SUPPLEMENT JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN



HENRICO COUNTY MS4 PROGRAM PLAN

Table Spring 2021

Henrico County Stream Bioassessment Program

Reference

Habitat Criteria

**HENRICO COUNTY MS4 PROGRAM PLAN
PART I.C.1
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021**

HENRICO COUNTY MS4 PROGRAM PLAN

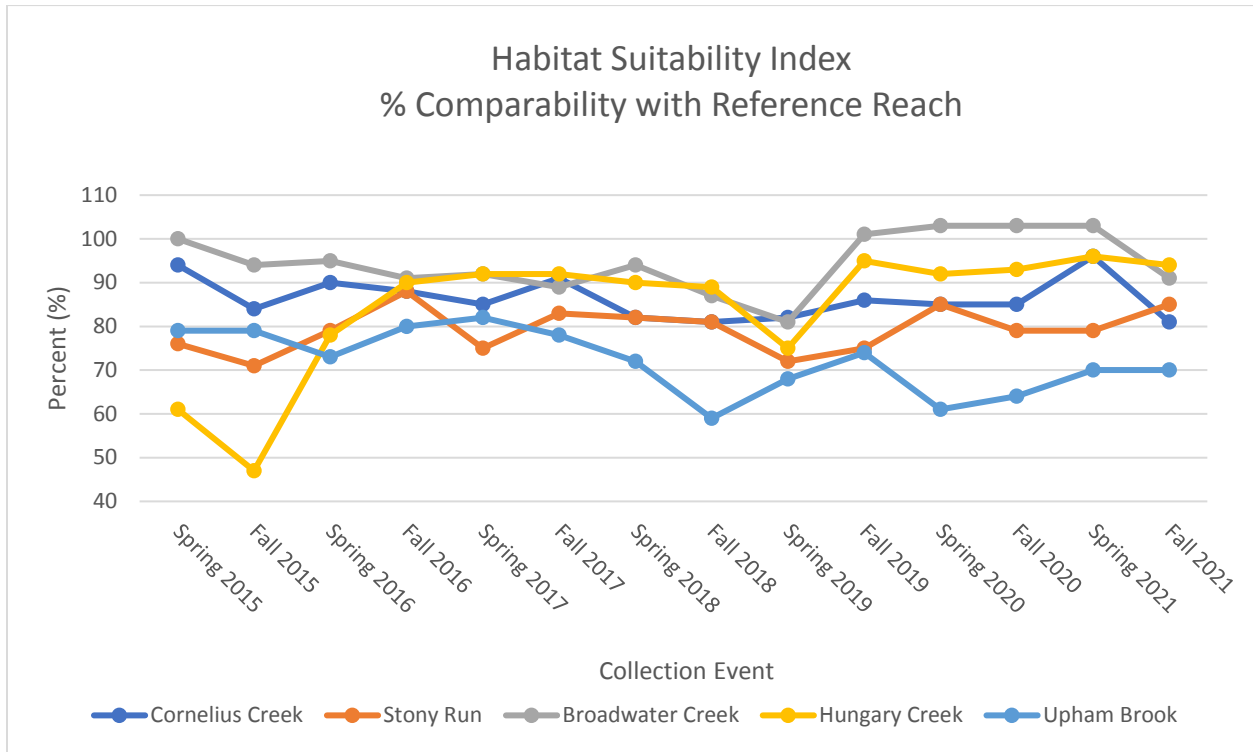
Table Fall 2021
Summary of Stream Habitat Assessment Results
Henrico County Stream Bioassessment Program
11/04/2021 through 11/18/2021

	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	17	13	16	10	14	14			
Pool substrate characterization	0-20	16	15	15	16	14	15	15			
Pool variability	0-20	17	11	10	10	11	10	10			
<u>Channel Morphology</u>											
Sediment deposition	0-20	14	13	17	13	9	11	11			
Channel flow status	0-20	16	9	14	15	20	10	10			
Channel alteration	0-20	18	16	17	16	19	11	11			
Channel sinuosity	0-20	15.5	15	14	11	16	10	10			
<u>Riparian and Bank Structure</u>											
Bank stability	0-10	8	2	6	8	9	7	7			
Right Bank	0-10	8.5	3	7	7	9	7	7			
Left Bank	0-10	7	7	8	9	9	4	4			
Bank vegetation protection	0-10	8	8	7	9	9	6	6			
Left Bank	0-10	10	9	4	10	10	2	2			
Riparian vegetative zone width	0-10	10	8	8	10	10	9	9			
Right Bank	0-10	10	8	8	10	10	9	9			
Total Score		165	133	140	150	155	116	116			
Percent of Reference Site			81	85	91	94	70	70			
Resulting Habitat Suitability			Supporting	Supporting	Comparable	Comparable	Partially S.	Partially S.			

Habitat Criteria

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

HENRICO COUNTY MS4 PROGRAM PLAN



HENRICO COUNTY MS4 PROGRAM PLAN

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 2021 reporting year.

Cornelius Creek	1/20/2021	3/24/2021	5/27/2021	7/21/2021	9/22/2021	11/23/2021
pH	6.42	6.88	Malfunction	6.25	6.4	7.97
Dissolved Oxygen (mg/l)	12.41	9.95	5.21	8.02	8.14	10.65
Temperature (°C)	5	12.4	21.9	23.1	21.9	7.8
Total Suspended Solids (mg/l)	2	6.5	3.2	<1	3.8	1.8
Ammonia as Nitrogen (mg/l)	BQL	BQL	BQL	BQL	BQL	BQL
Nitrate plus Nitrite Nitrogen (mg/l)	1.88	1.58	1.78	1.75	1.79	1.58
Total Kjeldahl Nitrogen (mg/l)	0.12	0.19	0.36	0.23	0.21	0.11
Total Nitrogen (calculated) (mg/l)	2	1.77	2.14	1.52	1.58	1.69
Dissolved Phosphorus (mg/l)	BQL	BQL	BQL	0.02	BQL	BQL
Total Phosphorus (mg/l)	0.02	0.03	0.02	0.04	0.02	0.02
Escherichia coli (CFU/100ml)	20	170	130	180	340	35
Air Temperature (°F)	50	59	90	92	84	46

BQL: Below Quantitation Level

HENRICO COUNTY MS4 PROGRAM PLAN

Broadwater Creek	1/20/2021	3/24/2021	5/27/2021	7/21/2021	9/22/2021	11/23/2021
pH	5.98	6.43	Malfunction	6.25	5.21	6.69
Dissolved Oxygen (mg/l)	9.93	8.98	5.57	7.33	6.95	7.59
Temperature (°C)	8.4	12.4	17.9	25.8	19.8	10.8
Total Suspended Solids (mg/l)	2.2	62.5	1.9	2.4	2.8	2.4
Ammonia as Nitrogen (mg/l)	BQL	BQL	BQL	BQL	BQL	BQL
Nitrate plus Nitrite Nitrogen (mg/l)	0.79	0.46	1.13	1.43	1.21	0.89
Total Kjeldahl Nitrogen (mg/l)	0.22	0.41	0.41	0.29	0.14	0.11
Total Nitrogen (calculated) (mg/l)	1.01	0.87	1.54	1.14	1.07	1
Dissolved Phosphorus (mg/l)	0.01	BQL	BQL	0.02	0.01	0.02
Total Phosphorus (mg/l)	0.03	0.14	0.02	0.04	0.04	0.04
Escherichia coli (CFU/100ml)	22	2400	33	56	58	3
Air Temperature (°F)	50	59	90	92	84	46

BQL: Below Quantitation Level

Upham Brook	1/20/2021	3/24/2021	5/27/2021	7/21/2021	9/22/2021	11/23/2021
pH	7.24	7.25	Malfunction	7.02	6.68	7.92
Dissolved Oxygen (mg/l)	12.15	10.47	4.25	5.16	6.01	9.27
Temperature (°C)	7.8	12.6	23.4	25.3	19.9	8.2
Total Suspended Solids (mg/l)	1.9	23.8	4.3	2.6	16.2	1.6
Ammonia as Nitrogen (mg/l)	BQL	BQL	0.18	BQL	BQL	BQL
Nitrate plus Nitrite Nitrogen (mg/l)	0.6	0.43	0.31	0.78	0.55	0.21
Total Kjeldahl Nitrogen (mg/l)	0.16	0.31	0.42	0.51	0.26	0.32
Total Nitrogen (calculated) (mg/l)	0.76	0.74	0.73	0.27	0.29	0.33
Dissolved Phosphorus (mg/l)	0.02	BQL	0.05	0.06	0.03	0.02
Total Phosphorus (mg/l)	0.04	0.08	0.1	0.08	0.09	0.05
Escherichia coli (CFU/100ml)	18	1500	62	110	1400	34
Air Temperature (°F)	50	59	90	92	84	46

BQL: Below Quantitation Level

HENRICO COUNTY MS4 PROGRAM PLAN

Stony Run	1/20/2021	3/24/2021	5/27/2021	7/21/2021	9/22/2021	11/23/2021
pH	7.38	7.32	Malfunction	7.1	7.12	7.95
Dissolved Oxygen (mg/l)	13.42	10.19	4.48	7.67	7.67	9.78
Temperature (°C)	6.7	12.7	23.2	25.1	24	8.7
Total Suspended Solids (mg/l)	1.5	165	18.3	4.7	18.4	<1.0
Ammonia as Nitrogen (mg/l)	BQL	BQL	0.42	BQL	BQL	BQL
Nitrate plus Nitrite Nitrogen (mg/l)	0.46	0.27	0.44	0.87	0.74	BQL
Total Kjeldahl Nitrogen (mg/l)	0.19	0.33	1.03	0.58	0.46	0.13
Total Nitrogen (calculated) (mg/l)	0.65	0.6	1.47	0.29	0.27	0.13
Dissolved Phosphorus (mg/l)	BQL	BQL	0.04	0.07	0.03	BQL
Total Phosphorus (mg/l)	0.05	0.19	0.1	0.09	0.08	0.02
Escherichia coli (CFU/100ml)	25	3400	47	720	3200	20
Air Temperature (°F)	50	59	90	92	84	46

BQL: Below Quantitation Level

Hungary Creek	1/20/2021	3/24/2021	5/27/2021	7/21/2021	9/22/2021	11/23/2021
pH	7.2	7.26	Malfunction	6.48	6.12	7.84
Dissolved Oxygen (mg/l)	12.17	9.91	4.78	6.63	6.25	8.46
Temperature (°C)	8.2	13	28.3	26.1	24.2	8.7
Total Suspended Solids (mg/l)	3	72.5	4.8	6.7	11.6	3.5
Ammonia as Nitrogen (mg/l)	BQL	BQL	0.1	BQL	BQL	BQL
Nitrate plus Nitrite Nitrogen (mg/l)	0.48	0.27	0.02	0.87	0.54	0.01
Total Kjeldahl Nitrogen (mg/l)	0.21	0.28	0.91	0.58	0.33	0.16
Total Nitrogen (calculated) (mg/l)	0.69	0.55	0.93	0.29	0.22	0.17
Dissolved Phosphorus (mg/l)	0.01	BQL	0.04	0.07	0.04	0.04
Total Phosphorus (mg/l)	0.03	0.07	0.07	0.09	0.08	0.07
Escherichia coli (CFU/100ml)	110	3800	410	720	5400	96
Air Temperature (°F)	50	59	90	92	84	46

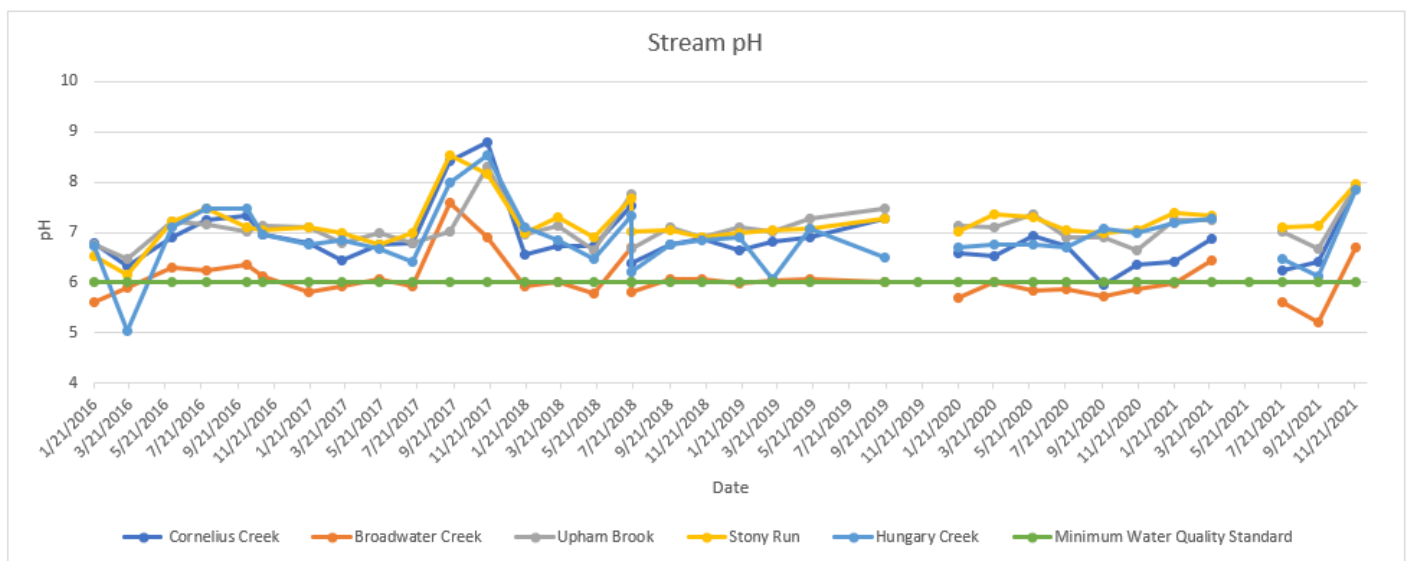
BQL: Below Quantitation Level

HENRICO COUNTY MS4 PROGRAM PLAN

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 where a spike in pH was observed across all sites.

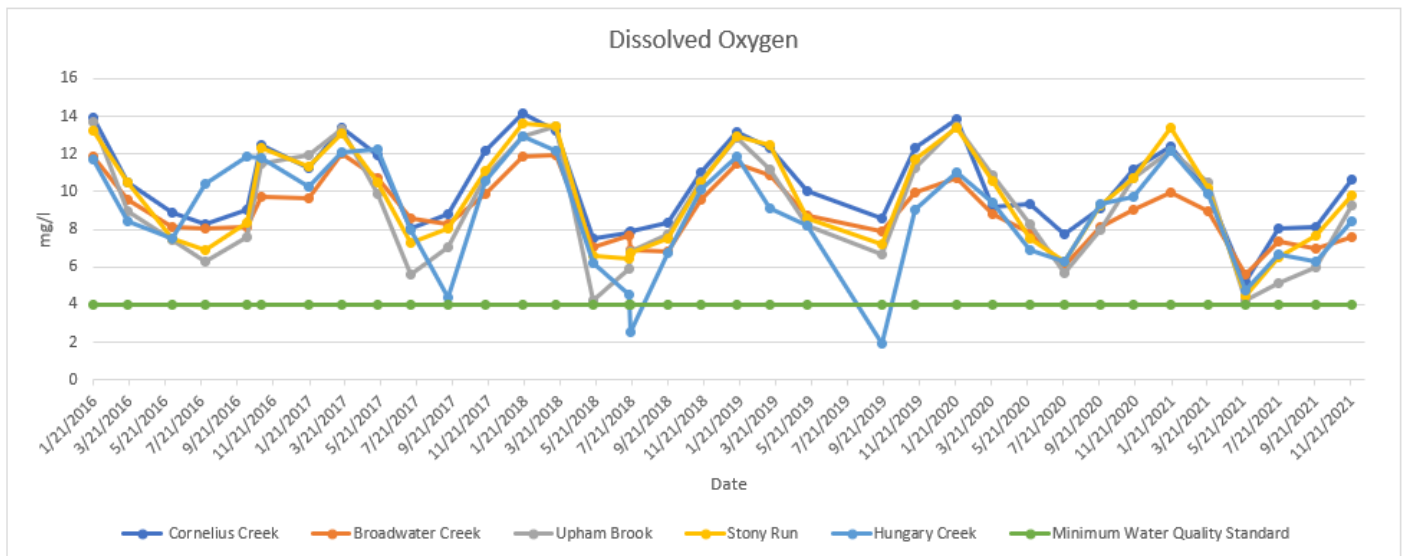


Note: Data unavailable for November 2019 and May 2021 sampling event.

HENRICO COUNTY MS4 PROGRAM PLAN

Dissolved Oxygen

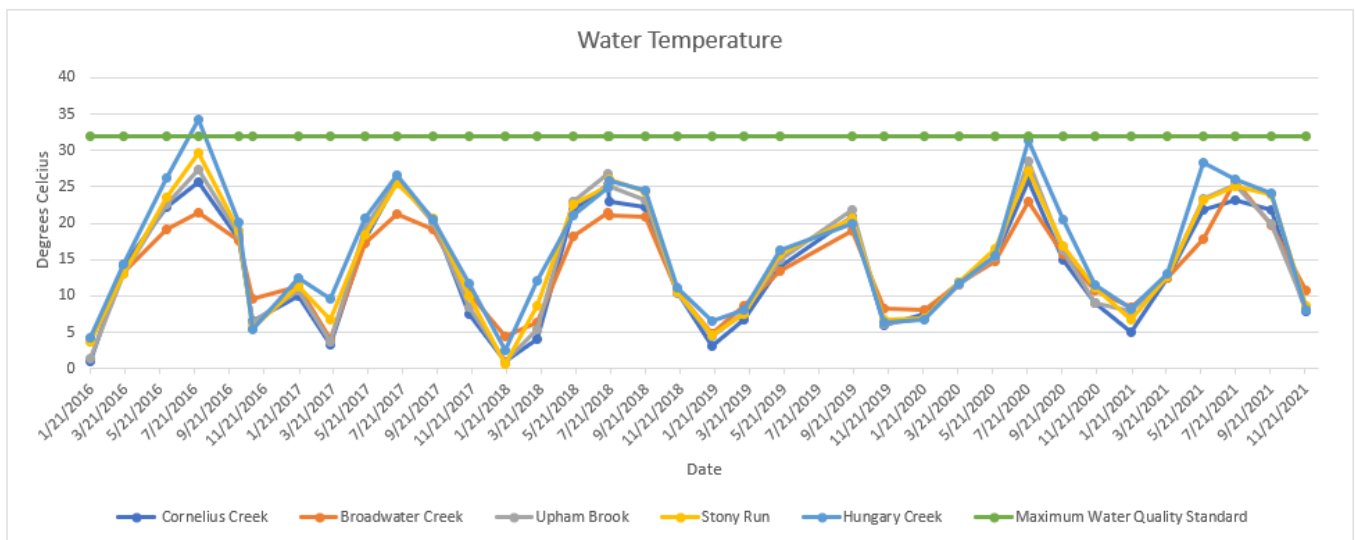
Aside from season variability noted across all sites, no discernable trend has been observed.



HENRICO COUNTY MS4 PROGRAM PLAN

Water Temperature

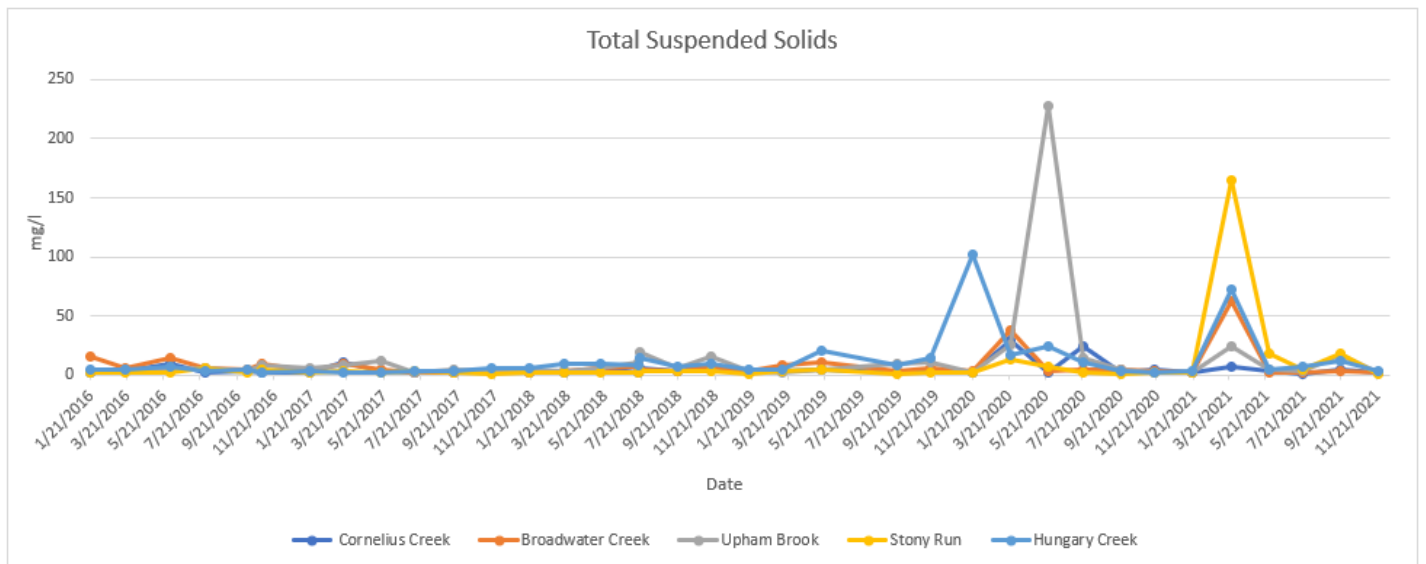
Aside from season variability noted across all sites, no discernable trend has been observed.



HENRICO COUNTY MS4 PROGRAM PLAN

Total Suspended Solids (TSS)

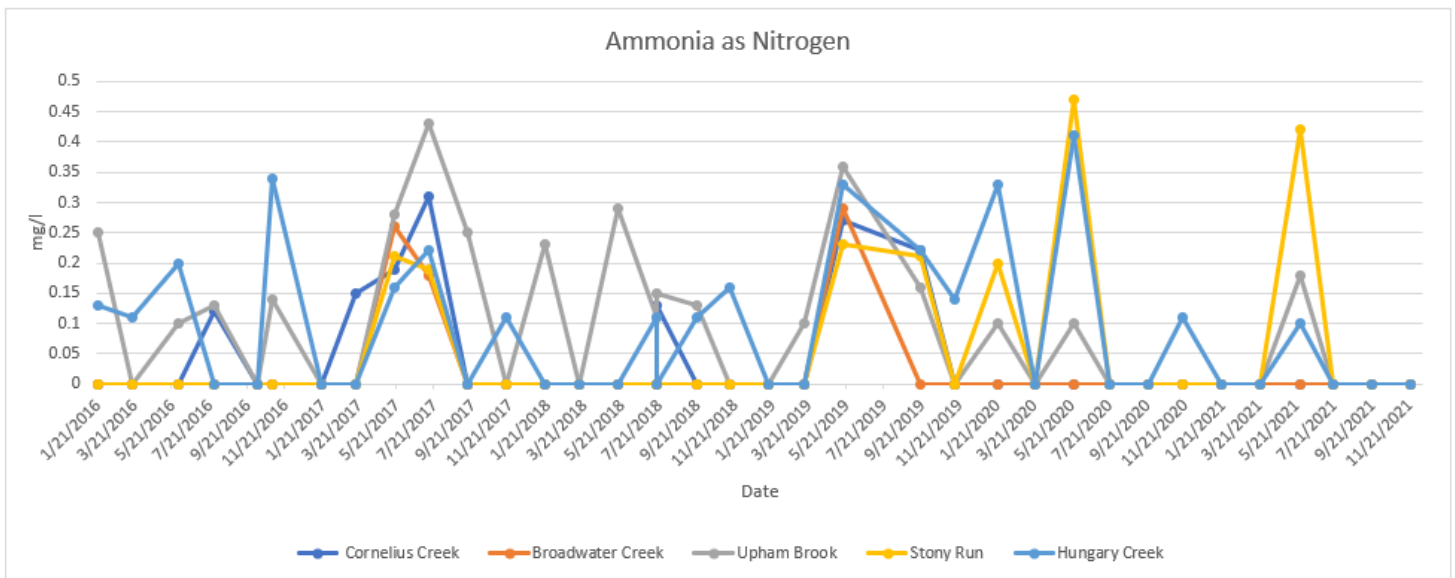
TSS has fluctuated between 0-50 mg/l across all sites throughout the duration of the monitoring, with the exception of a spike occurring at Hungary Creek and Upham Brook during the 2020 monitoring year and a spike during the March 2021 sampling event. These spikes appear to be correlated with significant 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.



HENRICO COUNTY MS4 PROGRAM PLAN

Ammonia as Nitrogen

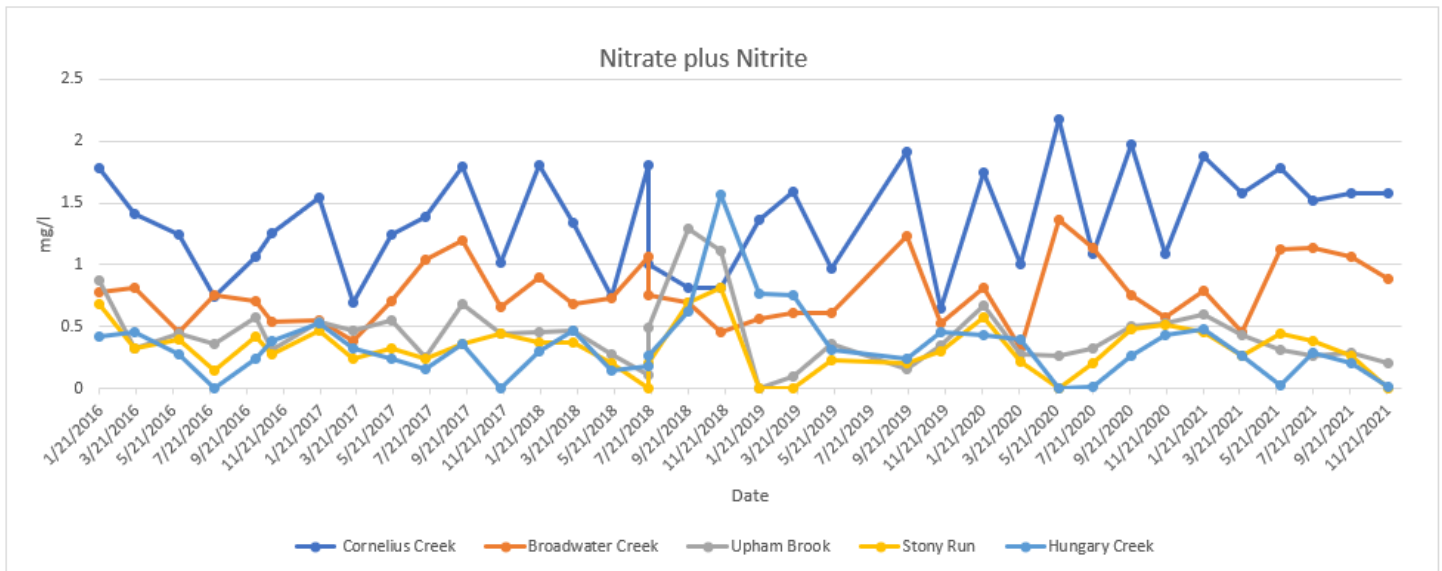
Ammonia as nitrogen has been variable across sites, but remaining within a range from 0 to 0.5 mg/l. This parameter has shown spikes through the summer months of some years. Seasonal spikes in ammonia could result from lower flow conditions experienced in the summer.



HENRICO COUNTY MS4 PROGRAM PLAN

Nitrate plus Nitrite

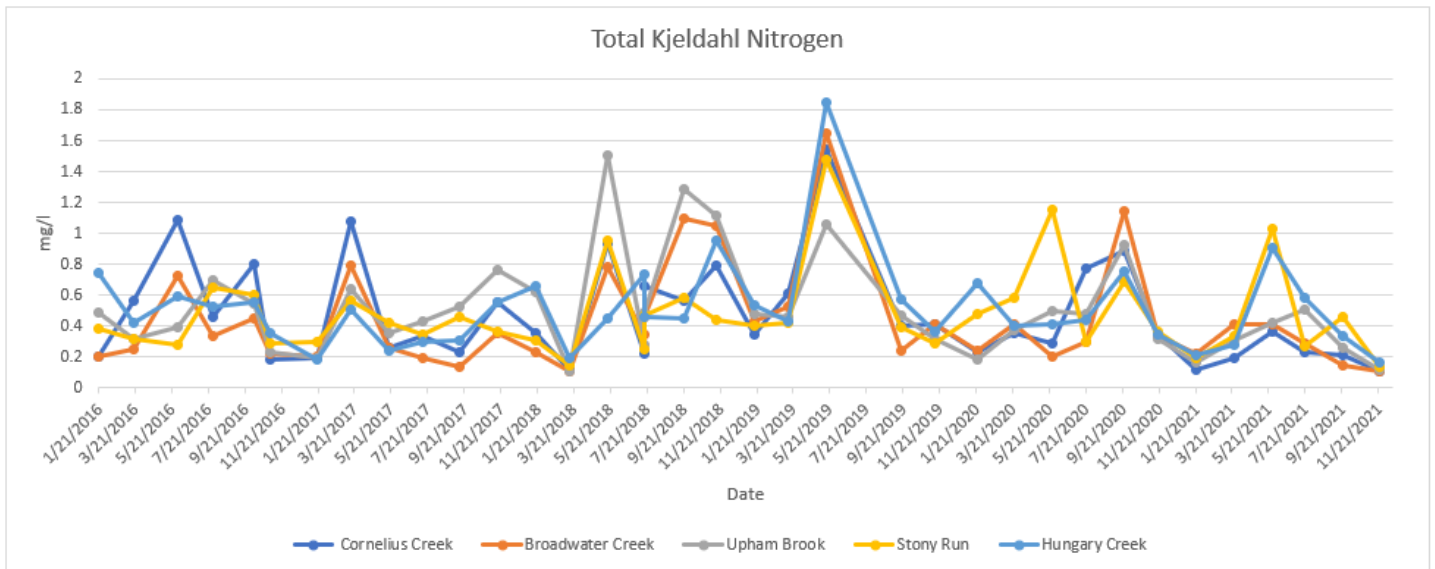
This parameter appears to fluctuate over time; however, it remains within a consistent range at each site. Cornelius Creek has notably higher values of Nitrate plus Nitrite. The watershed surrounding this reach of Cornelius Creek is dominated by agricultural lands, likely contributing a higher source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



HENRICO COUNTY MS4 PROGRAM PLAN

Total Kjeldahl Nitrogen

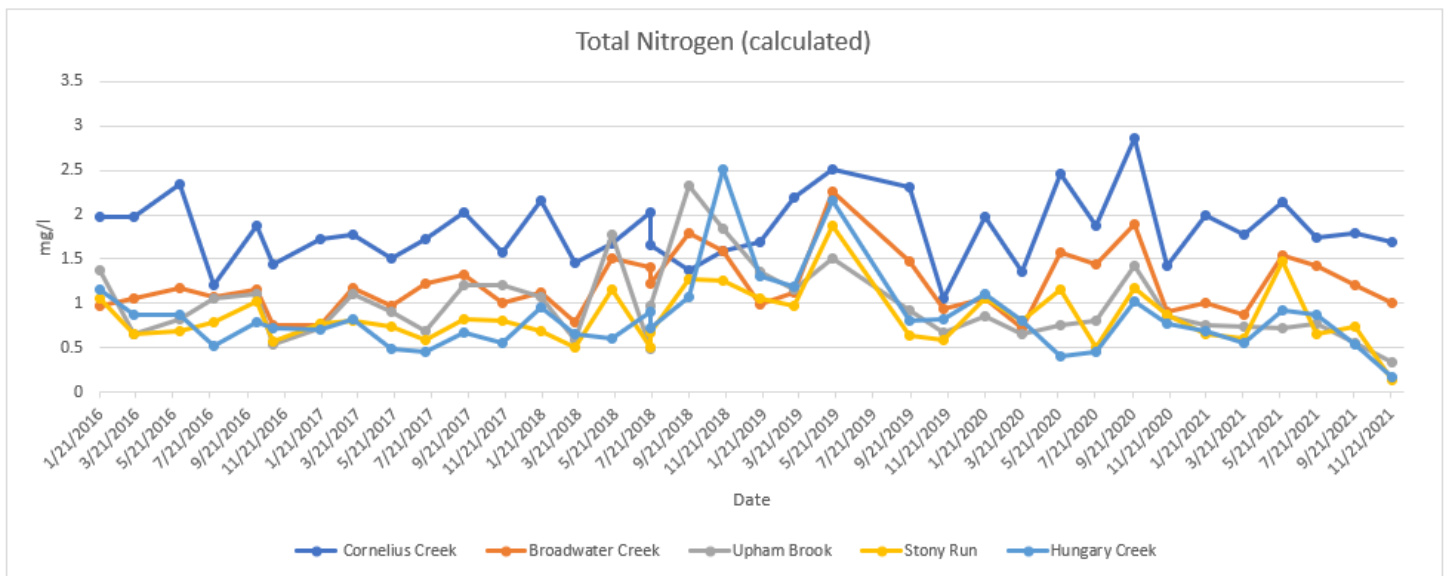
Total Kjeldahl Nitrogen appears to spike in the spring. This spike could result from the post-winter breakdown of organic material. This trend remained consistent during the 2021 sampling year.



HENRICO COUNTY MS4 PROGRAM PLAN

Total Nitrogen

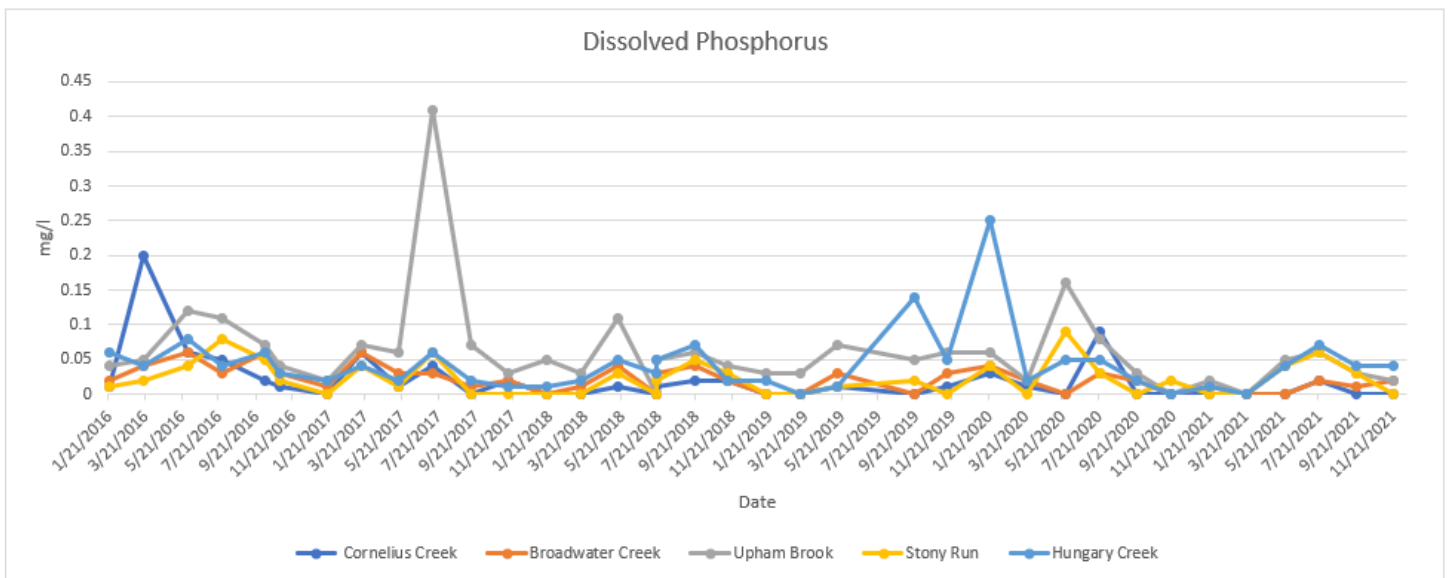
This parameter appears to fluctuate over time; however, it remains within a consistent range at each site. Cornelius Creek has recorded notably higher values of Total Nitrogen over the duration of the monitoring. The watershed surrounding this reach of Cornelius Creek is dominated by agricultural lands,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



HENRICO COUNTY MS4 PROGRAM PLAN

Dissolved Phosphorus

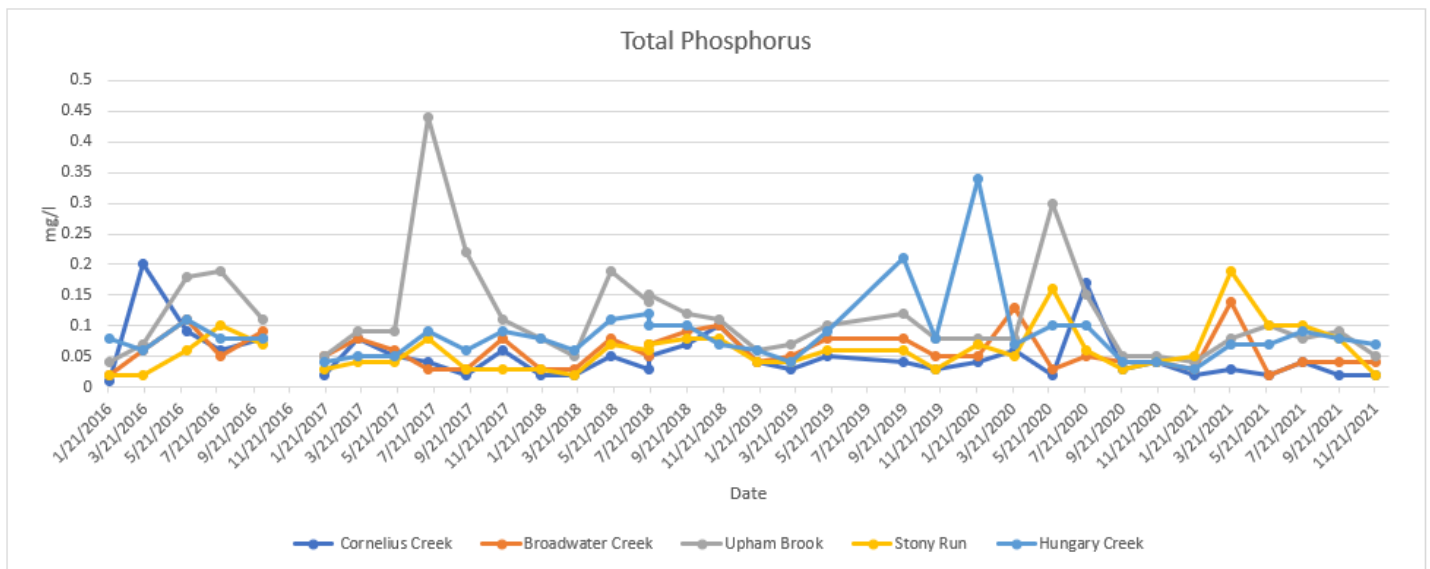
With the exception of a few spikes observed throughout the monitoring period, Dissolved Phosphorus has been consistent across time and sites. No discernable long-term trends have been identified.



HENRICO COUNTY MS4 PROGRAM PLAN

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.

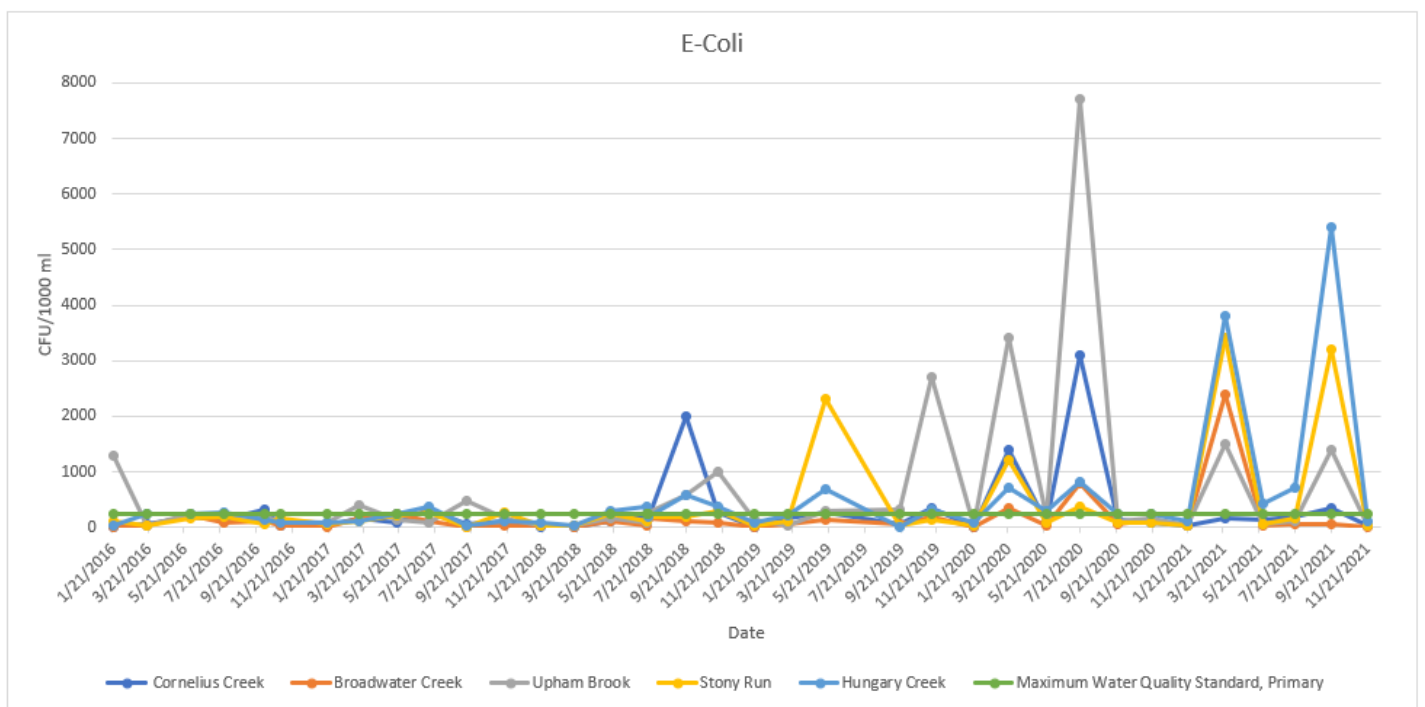


Note: Data unavailable for November 2016 sampling event.

HENRICO COUNTY MS4 PROGRAM PLAN

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, though e-Coli did exhibit two spikes at all monitoring locations except Cornelius Creek during the 2021 monitoring year. More data will be needed to identify any emerging long-term trends.



HENRICO COUNTY MS4 PROGRAM PLAN

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, 2021 and December 31, 2021.

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.

HENRICO COUNTY MS4 PROGRAM PLAN

On-Line* County-Operated SWM Facilities Inspected and/or Maintained between January 1, 2021 and December 31, 2021			
Type	Total	Inspected	Maintained
50/10 BASIN (5)	11	10	3
50/10 UNDERGROUND (6)	12	12	2
BAYFILTER (200)	1	1	1
BAYSEPARATOR (205)	1	1	1
BIORETENTION 1 (145)	3	2	3
BIORETENTION BASIN/TRENCH (10)	9	9	2
DRY DETENTION - UNDERGROUND (178)	7	0	1
DRY SWALE 2 (151)	2	2	0
EXTENDED DETENTION BASIN (15)	31	31	5
EXTENDED DETENTION BASIN W/A SHALLOW MARSH (16)	2	2	1
EXTENDED DETENTION POND 1 (175)	1	0	1
FILTERRA (215)	27	24	15
GRASS CHANNEL (110)	1	1	0
GRASSED SWALE (20)	11	11	1
IMBRIUM JELLYFISH (250)	1	1	1
INFILTRATION BASIN/TRENCH (25)	7	7	1
PERMEABLE PAVEMENT 1 (135)	5	4	0
RETENTION BASIN (WET POND) (30)	8	8	4
SHEETFLOW TO VEGETATED FILTER OR CONSERVED OPEN SPACE 1 (105)	6	4	0
SHEETFLOW TO VEGETATED FILTER OR CONSERVED OPEN SPACE 2 (106)	3	2	0
STORMCEPTOR (225)	1	1	1
STORMFILTER (220)	4	4	0
STORMTREAT (230)	1	1	1
STORMWATER360 (235)	5	5	1
VEGETATED FILTER STRIP (40)	2	0	0
Total	162	143	45

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.C.3
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

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.

HENRICO COUNTY MS4 PROGRAM PLAN

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 18 septic-to-sewer connections were made during the reporting period for a total of 318 (300 have been reported previously). These additional connections result in a reduction of 161.35 pounds of TN reduction.

$$\text{TN Reduction} = 3.6 \text{ lbs/year/person} \times 2.49 \text{ persons/household} \times 18 \text{ households}$$

$$\text{TN reduction} = 161.35 \text{ lbs/year}$$

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	
Water Reclamation Facility Stream Restoration	2,162.10	499.70	57,182.20	11/10/2021

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.D.1

ANNUAL REPORT SUPPLEMENT

JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

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	9,670.25
Phosphorus	176.93	1,823.31
Total Suspended Solids	102,340.90	604,862.43

No other control measures were implemented between January 1, 2021 and December 31, 2021. 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 18 septic-to-sewer connections were made during the reporting period for a total of 318 (300 have been reported previously). These additional connections result in a reduction of 161.35 pounds of TN reduction.

$$\text{TN Reduction} = 3.6 \text{ lbs/year/person} \times 2.49 \text{ persons/household} \times 18 \text{ households}$$

$$\text{TN reduction} = 161.35 \text{ lbs/year}$$

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

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.D.1

ANNUAL REPORT SUPPLEMENT

JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

Project	Pollutant Reductions (lbs/year)			Completion Date
	Nitrogen	Phosphorous	Total Suspended Solids	
Water Reclamation Facility Stream Restoration	2162.10	499.70	57,182.20	11/10/2021

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	9,670.25
Phosphorus	176.93	1,823.31
Total Suspended Solids	102,340.90	604,862.43

No other control measures were implemented between January 1, 2021 and December 31, 2021. 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.

The Henrico County Tuckahoe Park Stream Restoration project is expected to be implemented during the reporting period of January 1, 2022 and December 31, 2022. The estimated completion date for this project is August 2022. This project will result in reductions of approximately:

- 797.81 pounds of total nitrogen,

HENRICO COUNTY MS4 PROGRAM PLAN

- 226.51 pounds of total phosphorus, and
- 76,926.31 pounds of total suspended solids.

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.

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.D.2

ANNUAL REPORT SUPPLEMENT

JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

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 Colli 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.

HENRICO COUNTY MS4 PROGRAM PLAN

PART I.D.2

ANNUAL REPORT SUPPLEMENT

JANUARY 1, 2021 THROUGH DECEMBER 31, 2021

HENRICO COUNTY MS4 PROGRAM PLAN

HENRICO COUNTY MS4 PROGRAM PLAN
PART I.D.2
ANNUAL REPORT SUPPLEMENT
JANUARY 1, 2021 THROUGH DECEMBER 31, 2021