CITY OF HARRISONBURG
PUBLIC WORKS
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September 9, 2022

Megan O'Gorek
Department of Environmental Quality
4411 Early Road
Harrisonburg, VA

Subject: City of Harrisonburg General VPDES Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (VAR040075)

Ms. O'Gorek

Please find attached the City of Harrisonburg's MS4 Annual Report for the July 1, 2021-June 30, 2022 General VPDES Permit for Small Municipal Separate Storm Sewer Systems.

Please do not hesitate to contact Public Works should you have any questions at (540) 434-5928 or stormwater@harrisonburgva.gov

Sincerely,

Keith Thomas
Public Works Sustainability and Environmental Manager

CERTIFICATION

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.

Alexander Parks III 9/8/2022

Responsible Official Signature Date

VAR040075 City of Harrisonburg, VA

Permit Number MS4 Name

MS4 Annual Report

July 1, 2021 – June 30, 2022
Permit Number: VAR040075
In compliance with the Virginia Stormwater Management Program (VSMP) General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4)

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Introduction

The City of Harrisonburg is an independent city located in the Shenandoah Valley of the Commonwealth of Virginia and is surrounded by Rockingham County. The City is an operator of a Small Municipal Separate Storm Sewer System (MS4). A *municipal separate storm sewer* means "a conveyance or system of conveyances otherwise known as a municipal separate storm sewer system, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains:

1. Owned or operated by a federal, state, city, town, county, district, association, or other public body, created by or pursuant to state law, having jurisdiction or delegated authority for erosion and sediment control and stormwater management, or a designated and approved management agency under § 208 of the CWA that discharges to surface waters;
2. Designed or used for collecting or conveying stormwater;
3. That is not a combined sewer; and
4. That is not part of a publicly owned treatment works."

The US Census in 2010 determined the City's population to be 48,914, that the City is within an Urbanized Area, and thus subject to the amended and reissued General VPDES Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems, which became effective November 1, 2018 and will expire on October 31, 2023 when a new permit cycle is expected to become effective.

The MS4 Permit requires the City to develop an MS4 Program Plan and to submit Annual Reports (this document), for each period between July 1 through June 30. Modifications to the MS4 Program Plan are expected throughout the life of the permit as part of the iterative process to reduce pollutant loadings and to protect water quality. The City's MS4 Program Plan and Annual Reports available on the City's Stormwater webpages: http://www.harrisonburgva.gov/stormwater-management-program.

Additional information on the laws and regulations affecting the City and its operation of an MS4 can be found in:

- Virginia Stormwater Management Act, Article 2.3 (§62.1-44.15-24 et seq.) of Chapter 3.1 of Title 62.1 of the Code of Virginia
- Virginia Administrative Code, 9VAC25-870, Virginia Stormwater Management Program (VSMP) Regulations
- Virginia Administrative Code, 9VAC25-890-40, General VPDES Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems
- Virginia Department of Environmental Quality, Municipal Separate Storm Sewer Systems, https://www.deq.virginia.gov/permits-regulations/permits/water/municipal-separate-storm-sewer-system-permit-ms4s-stormwater

Watersheds

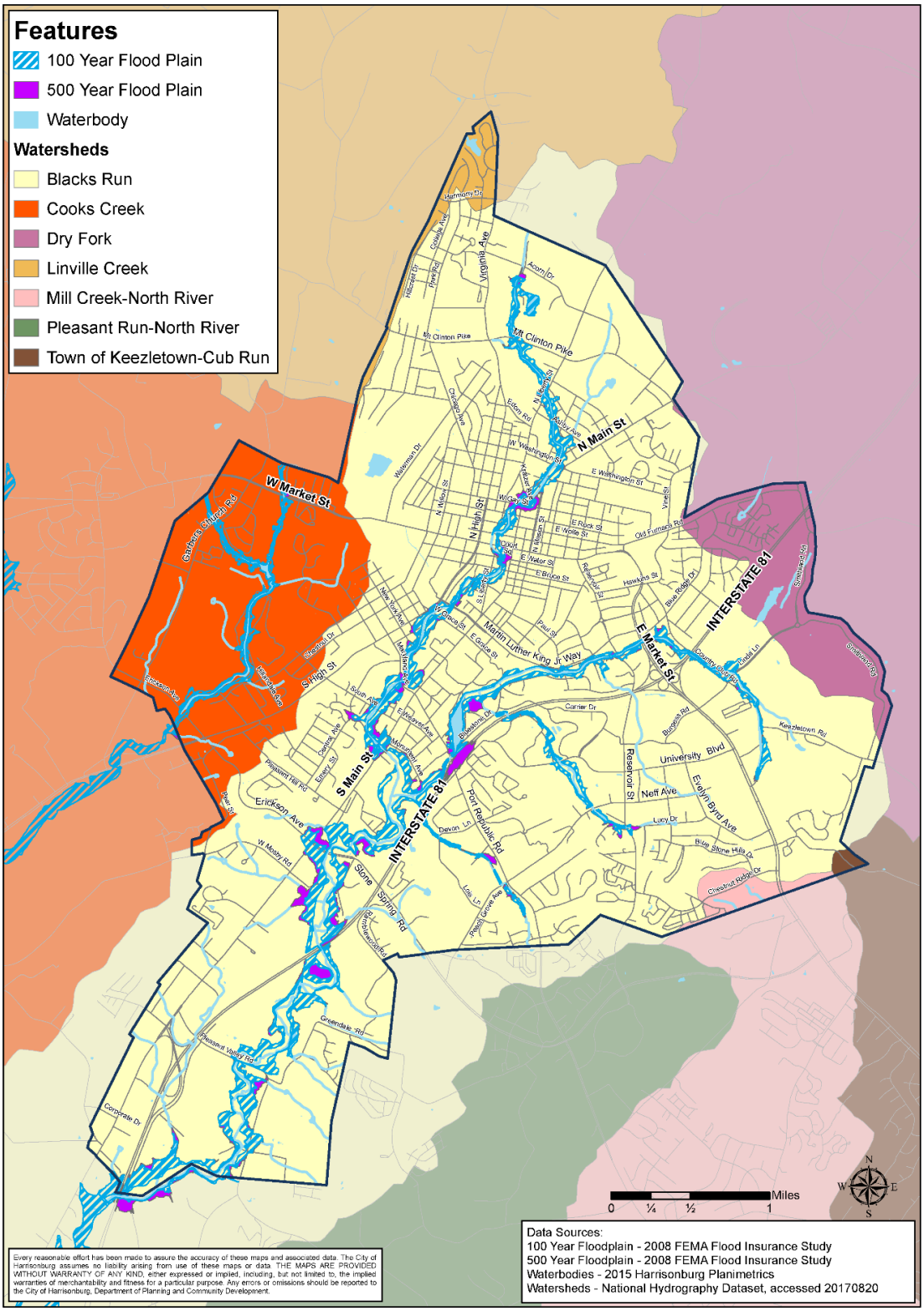
The City of Harrisonburg's 17.4 square miles is highly urbanized with substantial amounts of impervious surface. The following table describes approximate stream length, drainage areas, and impairments for each watershed within Harrisonburg city limits.

Table 1. Subwatersheds in Harrisonburg

Subwatershed Name	Hydrologic Unit Code (HUC)	Approximate Length (miles) within Harrisonburg	Approximate Drainage Area (acres)	Impairments	TMDL WLA?
Blacks Run ***(flows into Cooks Creek)***	PS22	8.67	9067	Fecal Coliform, Sediment, Total Phosphorus	*Yes, 2019*[1]
Sunset Heights Branch of Cooks Creek	PS23	2.09	1347.58	Fecal Coliform, Sediment, Total Phosphorus	*Yes, 2019*[2]
Dry Fork ***(flows into Smith Creek)***	PS59	0.206	493	E. Coli, Sediment	*Yes, 2004*
North River-Mill Creek	PS26	No stream	87.44	E. Coli	No
Cub Run ***(flows into South Fork of Shenandoah River)***	PS33	No stream	14.75	E. Coli	No
Linville Creek ***(flows into North Fork of Shenandoah River)***	PS56	0.08	117.8	E. Coli, Sediment	No

[1, 2] The revision of the Blacks Run and Cooks Creek Watershed TMDL includes a WLA. This TMDL was approved by the EPA on July 10, 2019 and so a local TMDL Action Plan will not be developed for this permit cycle.

Figure 1. Subwatersheds in Harrisonburg



The City of Harrisonburg also drains into the Chesapeake Bay Watershed. The Chesapeake Bay Watershed is 64,000 square miles and includes portions of New York, Pennsylvania, Delaware, Maryland, West Virginia, and Virginia. Altogether, more than 100,000 streams, creeks and rivers make up the Chesapeake Bay Watershed. As part of the Special Conditions for the Chesapeake Bay TMDL, the MS4 Permit requires the City of Harrisonburg to address impairments for phosphorus, nitrogen, and sediment that enter the Chesapeake Bay.

Figure 2. Chesapeake Bay Watershed Map

Roles and Responsibilities

The City of Harrisonburg's Public Works Department coordinates the City's municipal separate storm sewer system (MS4) program. The Public Works Department's Sustainability and Environmental Manager is responsible for developing and updating the MS4 Program Plan and submitting Annual Reports. The City Manager is responsible for providing the appropriate certification for documents. The Department of Community Development, Department of Public Utilities, the Department of Parks and Recreation, Police Department and Fire Department are the major contributors to Harrisonburg's MS4 Program although it is recognized that this is a citywide and community-wide program.

For MS4 Permit coverage, Harrisonburg City Public Schools (HCPS) and Harrisonburg Electric Commission (HEC) are covered by the City of Harrisonburg's MS4 Permit and their responsibilities are referenced throughout the MS4 Program Plan and associated Annual Reports.

Contact Information

Principal Executive Officer

Title:	Interim City Manager
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	Harrisonburg, Virginia 22801
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Duly Authorized Representatives

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	Harrisonburg, Virginia 22801
Phone:	(540) 434-5928
Email:	Tom.Hartman@Harrisonburgva.gov

Title:	Sustainability and Environmental Manager
Name:	Keith Thomas
Address:	320 East Mosby Road
	Harrisonburg, Virginia 22801
Phone:	(540) 434-5928
Email:	Keith.Thomas@harrisonburgva.gov

Title:	Stormwater Compliance Specialist
Name:	Shayna Carter
Address:	320 East Mosby Road
	Harrisonburg, Virginia 22801
Phone:	(540) 434-5928
Email:	Shayna.Carter@harrisonburgva.gov

MS4 Annual Report

The MS4 Annual Report details the City of Harrisonburg's stormwater program to manage the quality of stormwater runoff discharged from the MS4.

Evaluations gathered while developing the 2021-2022 MS4 Annual Report will be considered during the minimum control measure evaluations throughout the document as well as in the MS4 Program Plan. This report and subsequent annual reports from the five year permit cycle will remain on file in the Public Works Department and on Harrisonburg's stormwater webpage: www.harrisonburgva.gov/stormwater-management-program.

Minimum Control Measure #1: Public Education & Outreach

BMP 1.1: Develop and Implement a Public Education and Outreach Program

Description

The City will implement a public education and outreach program designed to:

- Increase the public's knowledge of how to reduce stormwater pollution, placing priority on reducing impacts to impaired waters and other local water pollution concerns.
- Increase the public's knowledge of hazards associated with illegal discharges and improper disposal of waste, including pertinent legal implications.
- Implement a diverse program with strategies that are targeted toward individuals or groups most likely to have significant stormwater impacts.

The City will identify no less than three high-priority stormwater issues to meet the goal of educating the public. The high-priority public education and outreach program will:

- Clearly identify the high-priority stormwater issues.
- Explain the importance of the high-priority stormwater issues.
- Include measures or actions the public can take to minimize the impact of the high-priority stormwater issues.
- Provide a contact name and telephone number or location where the public can find out more information.

Annual Reporting Requirements

- A list of the high-priority stormwater issues the City addressed in the public education and outreach program.
- A list of the strategies used to communicate each high-priority stormwater issue.

List of High Priority Stormwater Issues

High Priority Stormwater Issue 1: Chesapeake Bay Nutrients

Strategy 1: Traditional Written Materials

- Stormwater and Environmental Newsletters: This email newsletter has a subscription list of around 863 contacts and each newsletter is opened by around 50% of the subscription list.
  - Soil- The Building Block of All Good Things – December 2021
  - *Reaching for the Sky*. April 2022
- Press Release: City press releases are posted on the City's webpage and are often picked up by local news outlets who share or report on the contents.
  - *Blacks Run Clean-up & Arbor Day events coming in April*. March 14, 2022
- Harrisonburg Public Works Facebook Page: The Harrisonburg Public Works Facebook page promotes high-quality receiving waters, education about the Chesapeake Bay and local TMDLs, and information about local events and projects. During this permit year Harrisonburg Stormwater Facebook Page became Harrisonburg Public Works. This switch was made to capture more of the activities that occur at Public Works as well as to increase the number of people following our page. During this permit year, 101 posts

were made to the Harrisonburg Stormwater Facebook page. Each post reached an average of 577 people.

Strategy 2: Media Materials

- WHSV TV-3 Reports
  - WHSV TV-3 Article,: *Blacks Run Clean-Up and Arbor Day events coming in April*. March 14, 2022.
  - https://www.whsv.com/2022/03/14/blacks-run-clean-up-arbor-day-events-uruyecoming-april//
- Daily News Record Articles
  - Daily News Record Article, by Kellen Stepler: City Hosting Blacks Run Clean-Up Day April 9. March 16, 2022. https://www.dnronline.com/dnronline/city-hosting-blacks-run-clean-up-day-april-9/article_e8c689ec-44c6-5000-9fcd-a3dfdbc13ab5.html

Strategy 3: Speaking Engagements

- All speaking engagements attended by stormwater staff are focused on explaining water quality, including TMDLs, as well as Harrisonburg's role in meeting the Chesapeake Bay TMDL. Staff attended 7 educational events and reached an audience of 107 participants. These speaking engagements do not include Blacks Run Clean Up Day, Middle School Watershed Field Trips, or the annual rain barrel workshop as these events are counted as Public Involvement Activities. Our traditional reach through speaking engagements was partially reduced this permit year due to school bus driver shortage that limited school events.
- HCAP Site Visits: The City partners with the Shenandoah Valley Soil and Water Conservation District (SVSWCD) to implement the Harrisonburg Conservation Assistance Program which includes speaking to landowners about stormwater issues during site visits. The SVSWCD conducted 7 site visits this past year.

High Priority Stormwater Issue 2: High Quality Receiving Waters

Strategy 1: Traditional Written Materials

- Stormwater and Environmental Newsletters: This email newsletter has a subscription list of around 863 contacts and each newsletter is opened by around 50% of the subscription list.
  - *Reaching for the Sky*. April 2022
- Press Release: City press releases are posted on the City's webpage and are often picked up by local news outlets who share or report on the contents.
  - *Blacks Run Clean-up and Arbor Day Events Coming in April*. March 14, 2022
  - *Public Works honored with Gold Medal for Urban Forestry & Wood Program*. April 5, 2022

- Harrisonburg Stormwater Facebook Page: The Harrisonburg Stormwater Facebook page promotes high-quality receiving waters, education about the Chesapeake Bay and local TMDLs, and information about local events and projects. During this permit year, Harrisonburg Stormwater Facebook Page became Harrisonburg Public Works. This switch was made to capture more of the activities that occur at Public Works as well as to increase the number of people following our page. During this permit year, 101 posts were made to the Harrisonburg Stormwater Facebook page. Each post reached an average of 577 people.

Strategy 2: Media Materials

- WHSV TV-3 Reports
  - WHSV TV-3 Article: *Blacks Run Clean-up and Arbor Day events coming in April*. March 14, 2022. https://www.whsv.com/2022/03/14/blacks-run-clean-up-arbor-day-events-u ruyecoming-april/
- Daily News Record Articles
  - Daily News Record Article, by Kellen Stepler: City's Public Works Department Receives Award For Urban Forestry and Wood Program. April 7, 2022. https://www.dnronline.com/dnronline/citys-public-works-department-receives-award-for-urban-forestry-and-wood-program/article_2de73196-feb9-51bb-8295-8c301743c393.html

Strategy 3: Speaking Engagements

- o All speaking engagements attended by stormwater staff are focused on explaining water quality, including TMDLs, as well as Harrisonburg's role in meeting the Chesapeake Bay TMDL. Staff attended 7 educational events and reached an audience of 107 participants. Additionally, staff gave a virtual presentation at the 2021 Governor's Environmental Excellence Awards Ceremony that reached an unknown number of people. These speaking engagements do not include Blacks Run Clean Up Day, Middle School Watershed Field Trips, or the annual rain barrel workshop as these events are counted as Public Involvement Activities. Our traditional reach through speaking engagements was partially reduced this permit year due to school bus driver shortage that limited school events.
- HCAP Site Visits: The City partners with the Shenandoah Valley Soil and Water Conservation District (SVSWCD) to implement the Harrisonburg Conservation Assistance Program which includes speaking to landowners about stormwater issues during site visits. The SVSWCD conducted 7 site visits this past year.

High Priority Stormwater Issue 3: Litter and Trash

Strategy 1: Traditional Written Materials

- Stormwater and Environmental Newsletters: This email newsletter has a subscription list of around 863 contacts and each newsletter is opened by around 50% of the subscription list.
  - *Turning Trash into Treasure* May 2022
  - *A Little Recycling Can Make a Big Difference* June 2022

- Harrisonburg Stormwater Facebook Page: The Harrisonburg Stormwater Facebook page promotes high-quality receiving waters, education about the Chesapeake Bay and local TMDLs, and information about local events and projects. During this permit year, Harrisonburg Stormwater Facebook Page became Harrisonburg Public Works. This switch was made to capture more of the activities that occur at Public Works as well as to increase the number of people following our page. During this permit year, 101 posts were made to the Harrisonburg Stormwater Facebook page. Each post reached an average of 577 people.

Strategy 2: Media Materials

- WHSV TV-3 Reports
  - WHSV TV-3 Article, by WHSV Newsroom: *Blacks Run Clean-Up and Arbor Day events coming in April* March 14, 2022. https://www.whsv.com/2022/03/14/blacks-run-clean-up-arbor-day-events-uruyecoming-april/
- Daily News Record Articles
  - Daily News Record Article, by Kellen Stepler: City's Public Works Department Receives Award For Urban Forestry and Wood Program. April 7, 2022. https://www.dnronline.com/dnronline/citys-public-works-department-receives-award-for-urban-forestry-and-wood-program/article_2de73196-feb9-51bb-8295-8c301743c393.html
- Other News Articles
  - *Volunteer-Driven Projects* The Volunteer Management Report. April 2022

Strategy 3: Alternative Materials

- Clean Up Supplies: Apart from the Blacks Run Clean Up Day event, 21 smaller clean ups were organized throughout the year with community groups, university students, and local businesses. These groups removed 2,130 pounds of trash. Trash bags and trash grabbers were provided for these events.
- Water Bottles/Re-usable Bags/Car Magnets: Re-usable water bottles were given out to Blacks Run Clean Up Day participants. These bottles have the Blacks Run Clean Up Day logo on them. 278 people volunteered at this year's cleanup event.

BMP Effectiveness

Review of BMP: A wide variety of audiences was reached through this BMP and educated about the high-priority stormwater issues. Due to ongoing COVID 19 concerns and staff shortages, some events were cancelled and some opportunities to engage with the community were limited. Staff met with several smaller groups throughout the year to promote stormwater messaging.

Program Plan Revisions: Program Plan revisions were not necessary. To increase our ability to educate our community, we will begin creating educational written messages in Spanish and Arabic.

Minimum Control Measure #2: Public Involvement and Participation

BMP 2.1: Plan for, Respond to, and Document Public Input and Reports

Description

The City will develop and implement procedures for the following:

- The public to report potential illicit discharges, improper disposal, or spills to the MS4, complaints regarding land disturbing activities, or other potential stormwater pollution concerns.
- The public to provide input on the city's MS4 Program Plan.
- Receiving public input or complaints.
- Responding to public input received on the MS4 Program Plan or complaints.
- Maintaining documentation of public input received on the MS4 program and associated MS4 Program Plan and the city's response.

Annual Reporting Requirements

A summary of any public input on the MS4 program received and how the City responded.

Summary of Public Input

No public input on the MS4 program was received.

BMP Effectiveness

Review of BMP: The public can provide comments about the MS4 program and associated Program Plan as needed. Information about how to provide comments is listed on the stormwater webpages. A survey link (https://arcg.is/0CjKnX) was added to our webpage (https://www.harrisonburgva.gov/MS4-permit-program) to allow the public to give comments throughout the year. The public can also attend the quarterly Stormwater Advisory Committee meetings to provide comment during the public comment period of the meeting.

Program Plan Revisions: Program Plan revisions were not necessary.

BMP 2.2: Develop and Maintain a Stormwater Webpage

Description

No later than three months after this permit's effective date, the City will develop and maintain a webpage dedicated to the MS4 program and stormwater pollution prevention. The following information will be posted on this webpage:

- The effective MS4 permit and coverage letter.
- The most current MS4 Program Plan or location where the MS4 Program Plan can be obtained.
- The annual report for each year of the term covered by this permit.
- A mechanism for the public to report potential illicit discharges, improper disposal, or spills to the MS4, complaints regarding land disturbing activities, or other potential stormwater pollution concerns.
- Methods for how the public can provide input on the city's MS4 program.

Annual Reporting Requirements

A webpage link to the city's MS4 program and stormwater website.

Website Information

The City's MS4 Program Plan and Annual Reports are available on the City's Stormwater webpages: http://www.harrisonburgva.gov/stormwater-management-program.

The City of Harrisonburg promotes reporting of construction site issues through its website at: http://www.harrisonburgva.gov/site-development.

The City of Harrisonburg operates an online pollution reporting form for citizens to report illicit discharges at: http://www.harrisonburgva.gov/report-pollution.

BMP Effectiveness

Review of BMP: The metric for determining if the BMP is effective is if the websites are maintained and available for use. All of the websites are available for citizens to use and the City promotes the use of the websites periodically throughout the year.

Program Plan Revisions: Program Plan revisions were not necessary.

BMP 2.3: Implement Four Public Involvement Opportunities

Description

The City will implement no less than four activities per year from two or more of the categories described in the permit to provide an opportunity for public involvement to improve water quality and support local restoration and clean-up projects.

Annual Reporting Requirements

- A description of the public involvement activities implemented by the City.
- A report of the metric as defined for each activity and an evaluation as to if the activity is beneficial to improving water quality.
- The name of other MS4 permittees who participated in the public involvement opportunities.

Public Involvement Activities

- Blacks Run Clean Up Day: Blacks Run Clean Up Day is the annual community stream clean up organized by the City of Harrisonburg. The Event is usually held in April and includes educational exhibits from participating organization. In the past, these have included the Shenandoah Valley Soil and Water Conservation District, Climate Action Alliance of the Valley, Wild Virginia, James Madison University, Virginia Master Naturalists, Potomac Appalachian Trail Club, Chesapeake Bay Foundation, Virginia Department of Forestry, Virginia Clean Cities, Harrisonburg Parks and Recreation, Harrisonburg-Rockingham Regional Sewer Authority, Bring Your Own, Virginia

Department of Environmental Quality, and The Natural Garden. The website www.cleanstream.org has information on past and upcoming clean up day events. Further documentation is available upon request.

- Household Hazardous Waste Collection Days: Household Hazardous Waste Collection Days are organized by the City of Harrisonburg and Rockingham County and are offered to residents so they can properly dispose of their household hazardous waste. The collection days were held on October 9, 2021 and May 7, 2022.
- Middle School Watershed Field Trips: City of Harrisonburg middle school students participate in hands-on watershed field trips as a part of their curriculum. The program introduces middle schoolers to their local watershed. 6th graders participate in "Plant-a-Seed" where they learn about river hydrology, macroinvertebrates, and water chemistry. 7th graders participate in a river field trip where they go rafting, learn about mapping watersheds, and identify trees. City of Harrisonburg staff help to teach lessons during these trips. The events are usually held on multiple days.
- Rain Barrel Workshops: Rain Barrel workshops are organized by the Shenandoah Valley Soil and Water Conservation District and the City of Harrisonburg. Participants are taught about water conservation and watershed health and make rain barrels out of pickle barrels. Two Rain Barrel Workshops will be planned for the fall and spring pending enough participants signup to hold both events.

BMP Effectiveness

Review of BMP:

- Blacks Run Clean Up Day: The metric for determining if the activity is beneficial to water quality will be tonnage of trash picked up. The average range of pounds of trash removed from 2001 – 2018 is 3,900 pounds – 8,100 pounds. This year, 278 volunteers helped to clean stream sections (removing 2 tons of trash) and 50 volunteers helped to plant trees along the Friendly City Trail. In addition, 21 volunteer groups assisted with stream clean events throughout the year. The volunteers assisted in collection 2,130 pounds of trash. Additionally, these volunteers removed several tires, and other large miscellaneous items. These small group events are reported as part of the MCM #1, but due to ongoing COVID-19 concerns impacting this event, we wanted to note work completed here as well.
- Household Hazardous Waste Collection Days: The metric for determining if the activity is beneficial to water quality will be the type and amounts of items dropped off during the collection days. Collection days were run jointly for Harrisonburg City and Rockingham County residents. Over 11,814 items were collected at the October event across 20 different item categories. 27,708 items were collected at the May event across 24 different item categories. More information is available upon request.
- Middle School Watershed Field Trips: The metric for determining if the activity is beneficial to water quality will be the number of students reached through staff taught lessons. Due to ongoing COVID-19 concerns and the bus driver shortage, the planned events were canceled, limiting the scope this permit year. However, staff still held an educational event for individual classes outside at an elementary school during the permit year and were able to still reach 345 attendees.
- Rain Barrel Workshops: The metric for determining if the activity is beneficial to water quality will be the number of participants in the workshop and the amount of rain barrels built. At our September workshop, 13 people attended and 17 rain barrels were made. At our May workshop,

17 people attended and 19 rain barrels were made. An additional 9 barrels were sold throughout the year to City residents.

Program Plan Revisions: In the event that COVID-19 concerns or staffing shortages continue to limit our ability to do the Middle School Watershed Field Trips, alternative, smaller events will be utilized. Additionally, public workshop/information booths at other City events may be utilized to get more engagement. Traditionally, our Rain Barrel Workshop has been an annual event held in the fall. In order to increase participation, a second Special Topics Workshops will be planned for the fall pending enough participants signup to hold both events.

Minimum Control Measure #3: Illicit Discharge Detection and Elimination

BMP 3.1: Develop and Maintain a Storm Drain System, Outfalls, and Information Map

Description

The City will develop and maintain an accurate MS4 map and information table, which will be submitted to the DEQ no later than July 1, 2019 and updated no later than October 1 of each year. If any physical interconnections to other MS4s are established or discovered, written notification will be provided to those MS4s.

Annual Reporting Requirements

A confirmation statement that the MS4 map and information table are up-to-date as of June 30 of the reporting year.

Confirmation Statement

The MS4 map and information table are up-to-date.

BMP Effectiveness

Review of BMP: The MS4 map and information table are up-to-date and were submitted to the Department of Environmental Quality.

Program Plan Revisions: No Program Plan changes are needed at this time.

BMP 3.2: Prohibit Illicit Discharges and Connections through Ordinance Language

Description

The City shall prohibit, through ordinance, policy, standard operating procedures, or other legal mechanism, to the extent allowable under federal, state, or local law, regulations, or ordinances, unauthorized non-stormwater discharges into the storm sewer system.

Annual Reporting Requirements

No requirements

BMP 3.3: Maintain and Implement Illicit Discharge Detection and Elimination Written Procedures

Description

The City will maintain and implement illicit discharge detection and elimination (IDDE) written procedures designed to detect, identity, and address unauthorized non-stormwater discharges, including illegal

dumping, to the MS4 with the goal of eliminating the unauthorized discharge. Procedures will include dry weather field screening of at least 50 outfalls per year.

Annual Reporting Requirements

- The total number of outfalls screened during the reporting period as part of the dry weather screening program.
- A list of illicit discharges to the MS4 including spills reaching the MS4.

Number of Outfalls Screened

During the 2021-2022 reporting period, 50 MS4 outfalls were inspected, and 0 active illicit discharges were observed or required follow-up.

Illicit Discharges

The incidents listed in the Illicit Discharge Summary 2021-2022 report include potential (having entered the storm sewer system but not having entered the live waterway) and actual illicit discharges (having entered the storm sewer system and the live waterway). Other suspect illicit discharges (dumping activity or spills away from the storm sewer system) are tracked and enforced as needed. Unfounded illicit discharges are incidents reported as an illicit discharge that are inspected by City Staff and determined to be an unfounded compliant. These unfounded reports are also entered into Cityworks. A summary of incident details is provided below. Further information is available by request.

InspectionId	Date Inspected	Incident Discovered By	Finish Date	Status	Narrative	Resolution
57061	7/8/2021	Citizen Call	7/8/2021	CLOSED	Received call about resident pumping pool water into street. Spoke with supervisor who advised pool had been sitting since last September and had no chlorine in it anymore. Staff could not detect and smell of chlorine. Staff asked the employees to test the water for chlorine and they advised they did not have any test strips. I informed them I was giving them the benefit of the doubt this time, but next time they needed to have a test kit to prove it wasn't chlorinated or I would issue a NOV	Unfounded compliant-pool water not chlorinated

57330	7/9/2021	DEQ	8/2/2021	CLOSED	City staff responded to the site and observed oil and oily residue in a storm drain/ditch adjacent to this property. US Cold personnel were already on site applying absorbent material to the spill. City staff placed absorbent socks around the outfall and applied more absorbent material to the ground. City staff then dug up all grit/soil/vegetation that was along the curb and in the ditch around the outlet since it had oil on it. The flusher truck was brought on site to vacuum up this material as well as flush the storm drain (DI#11506) to clean up all remaining oil in the drain. Staff spoke to the supervisor on site and over the phone and explained that illicit discharges are not allowed into the city's Municipal Separate Storm Sewer System (MS4), including the street, curb and gutter, drop inlets, ditches, streams, etc. Jim informed city staff that the oil came from a truck	City staff and US Cold personnel cleaned site with absorbent material, absorbent socks, and flusher truck.

58869	8/4/2021	Citizen Email	8/17/2021	CLOSED	There was oil leaking out of the dumpster and it was obviously some piece of equipment had been thrown away and leaked. Staff spoke with two supervisors at the site, and they told me that the piece of equipment was thrown out on Saturday and they didn't discover the leak until Monday. They advised that the tank in the equipment could hold 3 gallons, but that it wasn't full when they threw it away and estimated it to be around one gallon. I told them to put more stay dry down (and to rub it into the ground with their boots to help soak up some more material) then sweep it up and dispose of the material. Staff also showed them where the material ran down the sidewalk, staining some dirt and advised they would need to scoop out all the stained dirt.	Absorbent material used. Stained soil was removed and replaced. NOV warning letter sent
58922	8/5/2021	HFD	8/30/2021	CLOSED	HFD responded to spill and started to place absorbent material down.	PW crews were called out to dump sand along spill route. Street sweeper used to sweep material up

59249	8/9/2021	Citizen Call	3/31/2022	CLOSED	There were multiple plastic bags filled with dog poop thrown into drop inlet.	PW staff are periodically watching the drop inlets to see if we can find who is throwing the bags in. One of the neighborhood residents also mentioned they would be keeping an eye out. Staff attempted multiple times to find the violator and inspected the site. No violator was found.
59260	8/12/2021	PW	8/12/2021	CLOSED	Dump truck parked too close to snowplow which broke the hydraulic line on the truck and an estimated 5 gallons of fluid leaked out of dump truck	Issue resolved: City Mitigated
59544	8/17/2021	PW	8/18/2021	CLOSED	Leaking trash container in parking lot near parking lot south part of parcel/next to 459 N Liberty.	Georges were onsite putting down absorbent material. The leaking trash container was removed from the site. Absorbent material was swept up and disposed of while city staff was onsite
59918	8/30/2021	PW	9/13/2021	CLOSED	White streak across parking lot leading back to roof drain outlet area. Spoke with worker at the site who acknowledged they had dumped their drywall materials on the ground there at the end of the day.	Spoke with worker at the site about the need to keep the materials off of impervious surfaces leading to the city street. He advised he would stop the dumping.
63150	11/3/2021	HFD	7/15/2022	CLOSED	Leaking FOGs and trash around dumpsters	Dumpsters still had some staining around it but was cleaned up.

63151	8/24/2021	Citizen	3/31/2022	CLOSED	Citizen called in stating that the landscape company was dumping their grass into storm gutters. City staff went out to investigate and found that the company had some grass that had blown out into the road but was in the process of blowing it back off the road when staff showed up.	grass was cleaned up out of the roadway by the landscaping company
63152	9/2/2021	PW	9/2/2021	CLOSED	PW staff noticed large oil sheen on the water in Blacks Run near 981 N Liberty St. HFD Hazmat team was deployed to contain the spill using absorbent socks. DEQ came out to investigate. It was determined that the release was likely linked to an ongoing situation at a nearby business. DEQ were monitoring from a previous leak in one of their pipes.	Determined to be part of an ongoing clean-up effort already managed by DEQ
63153	9/2/2021	Citizen Call		CLOSED	Citizen called in to complain that the rain washed oil from the stained dirt and pavement at the next door auto shop onto their property.	Auto shop replace the concrete around the property and show some evidence of putting stay dry down on spills, but not fully cleaning it up
63154	9/2/2021	Citizen Call	3/31/2022	CLOSED	Business called to state their was sewage (from an SSO the day before) on the sidewalk near a local business. PW staff went out and used the flusher truck and	Flusher truck and street sweeper cleaned site.

					street sweeper to clean up.	
63158	7/30/2021	PW	7/19/2022	CLOSED	Sewage smell from sump pump pipe on W Water St. Staff noticed a sewage smell coming from a pipe outletting into the road at W Water Street back in July. Stand took a few water samples from the water as it sputtered out of the pipe and plated them. He discovered that the water coming out had high counts of E. coli. Wes noticed a continued smell on 9/15.	Unknown source. Staff made multiple visits to site.
63279	10/19/2021	HFD	3/31/2022	CLOSED	Leaking hydraulic fluid from wheels on forklift. Had similar issue earlier in the year and the lift had to be repair. No absorbent material was placed on ground.	Spoke with the worker who put some material below the wheel and called the maintenance guy to come out to repair the vehicle. When city staff went back for a follow up investigation on 11/2/21 the forklift had been repaired.
63295	10/19/2021	HFD	4/1/2022	CLOSED	Spoke with shop crew and advised about the need to protect water quality which means we can't have open containers. Told them to move any open containers inside the shop underroof. Also mentioned the Fire Department needed the old oil drums to be labeled with what materials were being stored in them in case they	Spoke with shop crew and advised about the need to protect water quality which means we can't have open containers. Told them to move any open containers inside the shop underroof.

					needed to respond to a fire.	
63835	11/19/2021	Citizen Call	3/31/2022	CLOSED	Resident at 176 Ashby Avenue has buried a pipe which is pumping water onto private property at 170 Ashby Avenue and standing stagnant. The basements in this area all fill with water when there are heavy rains but should be using sump pumps into the city sewer. When the area receives heavy rains, water flows through the back yard at 170 Ashby Avenue into the culvert which runs into Blacks Run	Contact never noticed any type of odors or discolorations associated with the water and mentioned that the water only flowed in the pipe after it rained. They hypothesized that it's a sump pump pumping water out of a basement.
63836	11/19/2021	Self-Reported	3/31/2022	CLOSED	Truck with chicken offal/blood spilled material onto the road when leaving on Thursday night at around 9pm. George's safety staff discovered the spill on the morning of 11/19 and began to clean up.	Georges staff placed absorbent material down this morning. We advised to have them get a vac-truck/flusher truck out to the site to further clean up the material.
63837	11/19/2021	PW	3/31/2022	CLOSED	City staff met with project manager at 157 N Main St (also known as the Kavanaugh Building) after observing evidence of staining in the curb and gutter adjacent to the	Owner advised he would have a crew clean up the area. Acceptable methods were described in the Corrective Action Plan.

					property. There was evidence of what appeared to be some drywall waste thrown into the street. City staff spoke with the owner of the building at the site. Upon further investigation it was determined that an employee dumped was dirty grout water.	
66262	2/17/2022	Citizen Call	4/1/2022	CLOSED	Received a complaint that owner was leaving food oil all over the ground and that they witnessed a worker dump a bucket down into the storm drain.	Spoke with the owner. He admitted to dumping a bucket of soapy water into the storm drain. The owner indicated he has used it to clean the floor of his food truck. All food oil containers had lids on them. The owner indicated he was taking them to the landfill later that day. I advised that in the future, water used to clean his floor should be disposed of into sanitary sewer or stored in the empty food oil containers and taken to the landfill. Since one small bucket of soapy water was less than a resident washing their car, no NOV was issued.
67571	3/4/2022	Citizen	7/14/2022	CLOSED	Citizen called in to complain that their neighbor idles their truck in the mornings, and it has been leaking oil.	Harsit talked to owner of the truck. The discharge amount was small enough that it did not warrant a violation letter. Harsit mentioned some practices to help alleviate the issue such as idling less, placing pig mats under the truck, and fixing the leak.
69658	4/27/2022	HDR	4/27/2022	CLOSED	HFD witnessed a business dumping oil from a scrap lawnmower onto	HFD resolved.

					the ground behind the building.	
69928	5/17/2022	DEQ		OPEN	An auto shop had an AST behind their building they accidentally knocked over. Reportedly it only had a couple gallons of waste oil in the tank that spilled out. There were a few stained areas around were the tank used to sit. They were working on cleaning up stains in the gravel area beside the building and in the back.	auto shop required to follow DEQ Corrective Action Plan and Fire Code. They hauled away tires and cleaned up the soil around the spill. There are still some cars that need to be removed and they need to fill in where they removed the soil.
70290	5/23/2022	HPD	7/15/2022	CLOSED	HFD advised that they received a call about a leaking compactor behind a grocery store.	Mr. Holton called in to advice that the store is having a replacement compactor be delivered and that they plan to clean up the site around the compactor.
70302	5/24/2022	Self-Reported	5/24/2022	CLOSED	A third-party hauler for a mill left a trail of corn as he drove from the mill until downtown Harrisonburg.	Street sweepers were sent out to clean up the corn.
70741	6/2/2022	DEQ	7/14/2022	CLOSED	A jogger on the bike path observed violator dumping the material on the ground the evening of 6/1/22 and called DEQ. Voicemail was forwarded to Public Works Staff on the morning of 6/2/22 and HFD and HPW went out to investigate. Violator had dumped 30-50 gallons of fuel/solvents on	An environmental cleanup company began working on the site on 6/2/22. Degreaser was used on the bike trail. Soiled gravel material and dirt was excavated and hauled away.

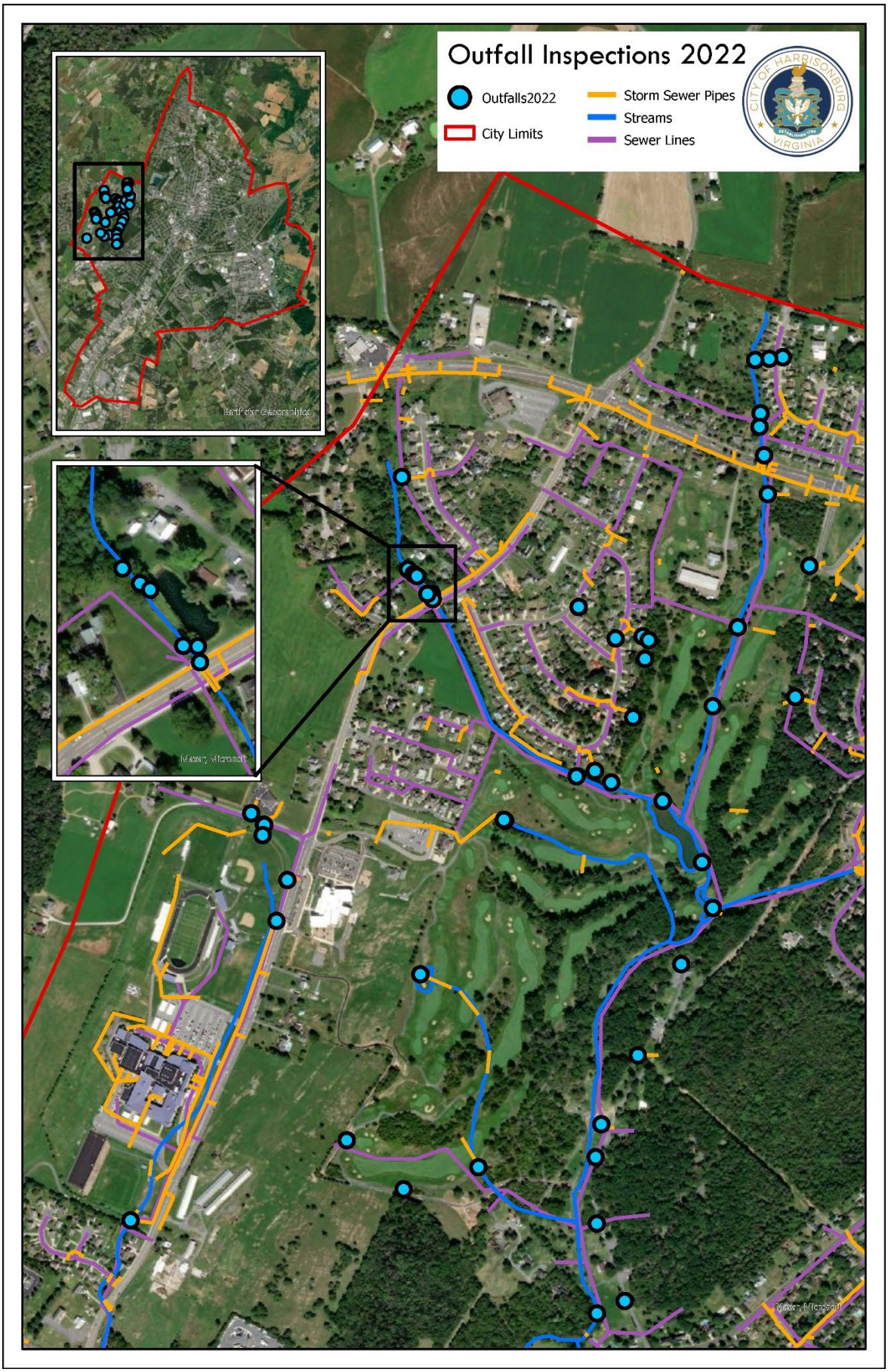
					the ground after the Assistant Fire Marshal had visited the site on 6/1/22. The fluids spilled across the gravel lot, across the bike path, and into a grass ditch. Due to imminent rain on the afternoon of 6/2/22, booms were placed to contain the spill.	
70874	6/7/2022	Self-Reported	6/7/2022	CLOSED	Valley Proteins had a truck spill offal along Acorn Drive and Virginia Ave.	They cleaned up the spill themselves.
71098	6/13/2022	Citizen	7/21/2022	CLOSED	There is a small pipe that is coming out of the bottom of the back door. There is evidence of dumping out into the back lot that flows into the street.	Pipe was removed, owner mentioned that he would have staff clean the back area during their shift.
71111	6/14/2022	HPW	6/14/2022	CLOSED	PW grounds crew was working with a contractor on determining where a terra cotta pipe on their property was coming from. Following the pipe, the contractor showed the field crew the BMP at a Feed Mill and the black algae surrounding it and going onto the lot next door. The field crew immediately believed it to be oil coming from the BMP. Upon arriving staff determined it to be a very dark algae coming from highly concentrated nutrients.	The Feed Mill manager told us that they have already called the BMP engineer and plan to clean up the algae and get the excess water drained out.

71364	6/21/2022	DEQ	6/21/2022	CLOSED	The father of one of the occupants of the apartment went to Station 4 to report that there was an oil tank leaking at his daughter's apartment. HFD went to the location and noticed a puddle under the tank and on the sidewalk where it soaked in. They placed pig pads under the tank and notified DEQ.	Environmental cleaning crew came to the scene the next day to clean up the site.

BMP Effectiveness

Review of BMP: Outfalls were screened, and illicit discharges were followed up on per the permit requirements.

Program Plan Revisions: Program Plan changes are not needed at this time.


Outfall Inspections 2022
Outfalls2022
City Limits
Storm Sewer Pipes
Streams
Sewer Lines
CITY OF HARRISONBURG
VIRGINIA

Minimum Control Measure #4: Construction Site Stormwater Runoff Control

BMP 4.1: Use Legal Authority to Address Discharges Entering the MS4

Description

The City will utilize its legal authority, such as ordinances, permits, orders, specific contract language, and interjurisdictional agreements, to address discharges entering the MS4. The City will control construction site stormwater runoff by implementing its Virginia Erosion and Sediment Control Program (VESCP) consistent with the Virginia Erosion and Sediment Control Law (Sec. 62.1-44.15:51 et seq. of the Code of Virginia) and Virginia Erosion and Sediment Control Regulations (9VAC25-840).

Annual Reporting Requirements

- A confirmation statement that land disturbing projects that occurred during the reporting period have been conducted in accordance with the current department approved standards and specifications for erosion and sediment.
- If one or more or the land disturbing projects were not conducted with the department approved standards and specifications, an explanation as to why the projects did not conform to the approved standards and specifications.
- Total number of inspections conducted.
- The total number and type of enforcement actions implemented and the type of enforcement actions.

Confirmation Statement

All land disturbing projects that occurred during the 2021-2022 reporting period were conducted in accordance with the current department approved standards and specification for erosion and sediment control.

Explanation of Nonconformity

All land disturbing projects were conducted in accordance with the current department approved standards and specifications.

Total Number of Inspections conducted

- Total number of land disturbing activities: 23
- Total number of acres disturbed: 61.589
- Total number of inspections conducted: 642

Enforcement Actions

During the 2021-2022 reporting period 642 land disturbing activity inspections were conducted. Of the 642 inspections, 256 potential violations were noted. The findings and corrective measures were noted in the inspection files and either discussed on site, or emails or written letters were sent to the property owners or RLDs. Of the 256 potential violations, 101 Notice to Comply letters were sent to the property owners or RLDs. All potential violations were resolved in a timely manner without the need for further enforcement actions.

BMP Effectiveness

Review of BMP: All land disturbing projects that occurred during the 2021-2022 reporting period were conducted in accordance with the current department approved standards and specifications. Potential violations were noted and Notice to Comply letters were sent and all potential violations were resolved in a timely manner without the need for further enforcement actions.

Program Plan Revisions: Program Plan changes are not needed at this time.

Minimum Control Measure #5: Post-Construction Stormwater Management for New Development and Development on Prior Developed Lands

BMP 5.1: Implement the VSMP

Description

The city has an approved Virginia Stormwater Management Program (VSMP) and so shall implement the VSMP consistent with the Virginia Stormwater Management Act (Sec 62.1-44.15:24 et seq. of the Code of Virginia) and the VSMP Regulations (9VAC25-870).

Annual Reporting Requirements

None

BMP 5.2: Inspection and Maintenance Program for City Owned Stormwater Management Facilities

Description

The City will implement an inspection and maintenance program for those stormwater facilities owned or operated by the City that discharges to the MS4. The City will:

- Develop and maintain written inspection and maintenance procedures to ensure adequate long-term operation and maintenance of its stormwater management facilities.
- Inspect city owned or operated stormwater management facilities no less than once per year.
- Conduct maintenance as necessary.

Annual Reporting Requirements

- Total number of inspections conducted on stormwater management facilities owned or operated by the City.
- A description of the significant activities performed on the stormwater management facilities owned or operated by the City to ensure they continue to perform as designed. This does not include activities such as grass mowing or trash collection.

City Owned BMP Inspections

All city-owned BMPs were inspected once, for a total of 41 inspections.

Significant Activities performed

Trapping for nuisance animals occurred on an as-needed basis in BMPs and all rodent holes were repaired after their removal. A concrete invert was pours in the Erickson serpentine detention outlet structure. Invasive vegetation was chemically removed from the rain garden, meadow, and bioretention BMPs. All

the rain garden and bioretention BMPs had mulch added. Additional native vegetation was added to the City Hall bioretention.

BMP Effectiveness

Review of BMP: All BMPs were inspected at least once during the permit year.

Program Plan Revisions: Program Plan changes are not needed at this time

BMP 5.3: Inspection and Maintenance Program for Privately Owned Stormwater Management Facilities

Description

The City will implement an inspection and maintenance program for privately owned stormwater facilities that includes:

- An inspection frequency of no less than once per five years.
- Adequate long-term operation and maintenance by the owner by requiring the owner to develop a recorded inspection schedule and maintenance agreement.
- Enforcement of maintenance as needed.

Annual Reporting Requirements

- The number of privately owned stormwater management facility inspections conducted.
- The number of enforcement actions initiated by the permittee to ensure long-term maintenance of privately owned stormwater management facilities including the type of enforcement action.

Private Stormwater BMP Inspections and Enforcement Actions

During this reporting period, there were 10 inspections and there were 0 enforcement actions for privately owned stormwater management facilities.

BMP Effectiveness

Review of BMP: The inspection and maintenance program were implemented per permit requirements.

Program Plan Revisions: Program Plan changes are not needed at this time.

BMP 5.4: Track and Report Stormwater Management Facilities

Description

The City will maintain an electronic database or spreadsheet of all known city owned or city operated and privately owned stormwater management facilities that discharge into the MS4. The database shall also include all BMPs implemented by the city to meet the Chesapeake Bay TMDL load reduction required. The database will be updated when new stormwater management facilities are brought on-line, or existing stormwater management facilities are discovered.

The City will use the DEQ Construction Stormwater Database to report stormwater management facilities installed to address the control of post-construction runoff from land disturbing activities for which the city is required to obtain a General VPDES Permit for Discharges of Stormwater from Construction Activities.

Historical BMPs will be reported using the DEQ Construction Stormwater Database, and new BMPs will be added to the DEQ BMP Warehouse on a yearly basis.

Annual Reporting Requirements

- A confirmation statement that the City submitted stormwater management facility information through the Virginia Construction Stormwater General Permit Database for those land disturbing activities for which the city was required to obtain coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities or a statement that the city did not complete any projects requiring coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities.
- A confirmation statement that the City electronically reported BMPs using the DEQ BMP Warehouse in accordance with the permit and the date on which the information was submitted.

Confirmation of VPDES Project Submittal

The permittee submitted stormwater management facility information through the Virginia Construction Stormwater General Permit database for those land disturbing activities for which the permittee was required to obtain coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities in accordance with Part I E 5 f

Confirmation of BMP Project Reporting

The permittee submitted BMPs using the DEQ BMP Warehouse in accordance with the permit on 9/7/2022.

BMP Effectiveness

Review of BMP: The remaining BMPs were not able to be reported on the DEQ BMP Warehouse and include:

1. Homeowner BMPs
2. Land Conversion
3. Permanent Credit Purchases

Program Plan Revisions: Program Plan changes are not needed at this time.

Minimum Control Measure #6: Pollution Prevention and Good Housekeeping for Facilities Owned or Operated by the Permittee

BMP 6.1: Maintain and Implement Written Procedures for Pollution Prevention and Good Housekeeping

Description

The City shall maintain and implement written procedures for those activities at facilities owned or operated by the City, such as road, street, and parking lot maintenance; equipment maintenance; and the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers designed to:

1. Prevent illicit discharges
2. Ensure the proper disposal of waste materials, including landscape wastes.
3. Prevent the discharge of wastewater or city vehicle washwater into the MS4 without authorization under a separate VPDES permit

4. Require implementation of best management practices when discharging water pumped from utility construction and maintenance activities
5. Minimize the pollutants in stormwater runoff from bulk storage areas (e.g., salt storage, topsoil stockpiles) using best management practices
6. Prevent pollutant discharge into the MS4 from leaking municipal automobiles and
7. Ensure the application of materials, including fertilizers and pesticides, is conducted in accordance with the manufacturer's recommendations

Written pollution prevention and good housekeeping procedures shall be utilized as a part of the employee training program.

Annual Reporting Requirements

A summary of any daily operational procedures developed or modified in accordance with the permit requirements during the reporting period.

Summary of new or modified operational procedures

No operational procedures were created or modified during the permit cycle.

Existing Standard Operating Procedures

- Bulk Storage Areas (Stockpiles)
- Dewatering Operations
- Discharge of Wastewater
- Disposal of Waste Materials (Landscaping)
- Equipment Maintenance
- Fertilizer and Pesticide Applications
- Leaking Automobiles & Equipment
- Municipal Wash Water
- Prevent Illicit Discharges
- Road & Street Maintenance
- Spill Kits
- Sweeper Pad

BMP Effectiveness

Review of BMP: Operational procedures are available on the City intranet (C2) system accessible by all City of Harrisonburg employees and are distributed to site supervisors in hardcopy form to be stored in accessible location for employees to reference as needed.

Program Plan Revisions: Program Plan changes are not needed at this time.

BMP 6.2: Stormwater Pollution Prevention Plans

Description

Identify High-Priority, High-Potential Sites and Implement Stormwater Pollution Prevention Plans - The City will maintain and implement a site pollution prevention plan for each high-priority facility owned or operated by the permittee with a high potential to discharge pollutants that are not covered under a separate VPDES permit. SWPPP facilities will be inspected. Facilities without SWPPPs will be reviewed annually and added as necessary.

SWPPP Development for High-Priority, High-Potential Sites - Each SWPPP will contain information about the site and potential pollutants, written procedures designed to reduce and prevent pollutant discharge, procedures for training, an inspection and maintenance schedule, an inspection log, a log of unauthorized discharges, releases or spills.

Non-SWPPP Site Review - No later than June 30 of each year, the City will review any high-priority facility owned or operated by the City for which a SWPPP has not been developed to determine if the facility has a high potential to discharge pollutants. If the facility is determined to be a high-priority facility with a high potential to discharge pollutants, the City will develop a SWPPP no later than December 31 of that same year.

SWPPP Site Review - The City will review the contents of any site specific SWPPP no later than 30 days after any unauthorized discharge, release, or spill is reported to determine if additional measures are necessary to prevent future unauthorized discharges, releases, or spills. If necessary, the SWPPP will be updated no later than 90 days after the unauthorized discharge.

SWPPP Documentation - The SWPPP shall be kept at the high-priority facility with a high potential to discharge and utilized as part of staff training. The SWPPP and associated documents may be maintained as a hard copy or electronically if the documents are available to employees at the applicable site.

Facility Removal - If activities change at a facility such that the facility no longer meets the criteria of a high-priority facility with a high potential to discharge pollutants, the City may remove the facility from the high-priority, high-potential list.

Annual Reporting Requirements

- A summary of any new SWPPPs developed in accordance with the permit requirements during the reporting period
- A summary of any SWPPPs modified in accordance with the permit requirements during the reporting period.

Summary of new SWPPP Development

High-priority facilities were reviewed by June 30, 2022 to determine if there were any facilities meeting the high-priority, high-potential criteria requiring a SWPPP. Four facilities were identified:

1. Fire Station #1- Maryland Ave
2. Fire Station #2- Pleasant Valley Rd
3. Fire Station #3- Lucy Dr
4. Fire Station #4- Rock St

SWPPPS will be developed and implemented on these facilities by December 31, 2022.

No SWPPP facility were de-listed to a high priority facility in this permit cycle.

Summary of SWPPP Modifications

Ramblewood Athletic Complex SWPPP October 2021 Map Changes

1. Developed SWPPP map as this facility was classified as a High Priority, High Potential facility in previous permit year.

HEC SWPPP SWPPP May 2022 Changes

1. Storage of Equipment was moved to outside of building 4

Transfer Station SWPPP May 2022 Map Changes

1. Added gabion basket
2. Added trench drain to the Transfer Station building.

BMP Effectiveness

Review of BMP:

- New SWPPP Development: High-priority facilities were reviewed to determine if new SWPPP development would be necessary by December 31.
- SWPPP Modifications: SWPPP modifications were made as necessary.

Program Plan Revisions: Program Plan changes are not needed at this time.

BMP 6.3: Pollution Prevention by Contractors

Description

The City will require through the use of contract language, training, standard operating procedures, etc., that contractors employed by the city and engaging in activities with the potential to discharge pollutants use appropriate control measures to minimize the discharge of pollutants to the MS4.

Annual Reporting Requirements

None

BMP 6.4: Stormwater Pollution Prevention Training Plan

Description

The City will develop a training plan in writing for applicable staff. The City will maintain documentation of each training event conducted for a minimum of three years after the training event.

Annual Reporting Requirements

A list of the training events conducted in accordance with the permit requirements including the following information:

- The date of the training event.
- The number of employees who attended the training event.
- The objective of the training event.

Training Event Summaries

Trainings are posted on the City's online training platform, VectorSolutions (formally TargetSolutions). Trainings were assigned May/June to departments in this year's rotation per training plan. For departments not within the City's organization, but covered under the City's MS4, trainings are given either in person or through PowerPoint distribution. A record of employee completion and training sign-ins are available upon request. The Fire Department satisfied this training requirement per I E 6 m. (7).

Type of Training	Attendees	Objective
Online Training	69	Police Department Stormwater Pollution Prevention Training
Online Training	11	Community Development Stormwater Pollution Prevention Training
Online Training	14	HDPT Stormwater Pollution Prevention Training
Online Training	84	Department of Public Works Stormwater Pollution Prevention Training

BMP Effectiveness

Review of BMP: Online or in person training was given for this year's rotation per training plan.

Program Plan Revisions: Program Plan changes are not needed at this time.

BMP 6.5: Turf and Landscape Nutrient Management Plans

Description

The City will maintain and implement turf and landscape nutrient management plans on all lands owned or operated by the City where nutrients are applied to a contiguous area greater than one acre.

Annual Reporting Requirements

A summary of any new turf and landscape nutrient management plans developed that includes:

- Location and total acreage of each land area.
- The date of the approved nutrient management plan.

Summary of new nutrient management plans

No new plans were developed.

Existing Nutrient Management Plans

1. Heritage Oaks Golf Course; 38°26'49.97"N, 78°54'15.82"W; 66.42 acres; 11/1/2017
2. Smithland Park; 38°26'55"N, 78°50'02"W; 5 acres, 2.5 acres, 10 acres; 11/1/2018
3. Purcell Park; 38°25'33"N, 78°52'53"W; 1 acre, 5.0 acres; 11/1/2018
4. Simms Field; 38°27'15"N, 78°51'30"W; 1.6 acres; 11/1/2018
5. Ramblewood Fields; 38°24'44"N, 78°53'13"W; 3.6 acres; 11/1/2018

6. Harrisonburg High School; 38°26’30”N, 78°54’37”W; 11.14 acres; 3/1/2018

BMP Effectiveness

Review of BMP: Nutrient management plans are in place at the required facilities.

Program Plan Revisions: Program Plan changes are not needed at this time.

TMDL Special Conditions

Chesapeake Bay TMDL Special Condition

Description

In its Phase I and Phase II Chesapeake Bay TMDL Watershed Implementation Plans (WIP), the Commonwealth committed to a phased approach for MS4s to implement necessary pollutant reductions (phosphorus, nitrogen, and sediment). This permit (2018-2023) requires implementation of an additional 35% pollutant reductions as specified in the 2010 Phase I and II WIPs. In combination with the 5% pollutant reductions that have already been achieved, the total reduction at the end of this permit term is 40%.

The City developed the draft Chesapeake Bay TMDL Action Plan which was submitted to the Virginia Department of Environmental Quality with the Registration Statement.

The City will implement its Chesapeake Bay TMDL Action Plan and submit progress reports in its MS4 Annual Report in accordance with the permit requirements. Any updates to the Chesapeake Bay TMDL Action Plan will be submitted with each MS4 Annual Report.

Program Plan Requirements

The Chesapeake Bay TMDL Action Plan will be incorporated by reference into the program plan.

Anticipated BMPs or Strategies

The Chesapeake Bay TMDL Action Plan is available at: https://www.harrisonburgva.gov/MS4-permit-program

Annual Reporting Requirements

Once the Chesapeake Bay TMDL Action Plan is developed, each subsequent annual report shall include:

- A list of BMPs implemented during the reporting period but not reported to the DEQ Warehouse and the estimated reduction of pollutants of concern achieved by each and reported in pounds per year;
- If the permittee acquired credits during the reporting period to meet all or a portion of the required reductions, a statement that credits were acquired,
- The progress, using the final design efficiency of the BMPs, toward meeting the required cumulative reductions for total nitrogen, total phosphorous, and total suspended solids; and,
- A list of BMPs that are planned to be implemented during the next reporting period.

BMPs Implemented during the reporting period but not reported to the DEQ Warehouse

1. Homeowner BMPs

2. HCAP Program BMPs
3. Bioreactor (Pending DEQ Approval)

Acquired Credits

No credits were acquired during this permit year.

Progress towards Chesapeake Bay TMDL

TMDL Action Plan: The City of Harrisonburg has developed a Chesapeake Bay TMDL Action Plan and it is available at http://www.harrisonburgva.gov/MS4-permit-program.

List of Control Measures Implemented During the Reporting Period: Street Sweeping, Homeowner BMPs, HCAP Program BMPs, Septic to Sanitary Sewer Connections, Land Conversion, Bioreactor (Pending DEQ Approval)

Estimate Reduction Achieved by Each Control:

Summary of Completed BMPs					
Type of BMP	**Project Name**	**Location**	**Reductions (lbs/yr)**		
			TP	**TN**	**TSS**
Permanent Water Quality Trading Credits	As Needed	Nutrient Credit Market	8	59.44	571.44
North End Greenway – Permanent Water Quality Credits	North End Greenway Stream Restoration	North End Greenway	117.90	256.10	40,660.00
Street Sweeping	Street Sweeping (annual)	Harrisonburg, VA	15.52	64.78	23,575.35
Storm Drain Cleaning	Storm Drain Cleaning (annual)	Harrisonburg, VA	8.1732	36.7794	4,086.60
Septic to Sanitary Sewer Connections	Septic to Sanitary Sewer Connections (since 2006)	Harrisonburg, VA	0	509.22	0
Homeowner BMPs	Homeowner BMPs (annual)	Harrisonburg, VA	10.45	133.37	0
BMP Retrofits	HCAP Program	Harrisonburg, VA	0.093	0.697	140.379
Bioreactor	Bioreactor	Purcell Park	0	Pending	0
Urban Tree Canopy Expansion	New Tree Planting	Harrisonburg, VA	3.50	15.70	466.71
Land Conversion: Turf to Mixed Open	Pollinator Habitats (1.60 ac)	Harrisonburg, VA	1.85	8.47	0
		Total	**165.4862**	**1084.5564**	**69,500.479**
		Amount Needed by 2023	**354**	**2,684**	**303,897**

BMPS to be implemented during next reporting period

The anticipated BMPs to be implemented during the next reporting period include (but are not limited to): Storm Drain Cleaning Practice, Septic to Sanitary Sewer Connections, Tree Planting, Permanent Credit Purchases, Stream Restoration, Pollinator Habitat Conversion, Homeowner BMPs, BMP Retrofits, and Bioreactor projects.

Below is a table with the estimated projects and any estimated reduction values for the remainder of the permit period.

Summary of Planned BMPs for 2018-2023 Permit Cycle					
Planned Type of BMP	**Project Name**	**Planned Location**	**Estimated Reductions (lbs/yr)**		
			TP	**TN**	**TSS**
Permanent Water Quality Trading Credits	As Needed	Nutrient Credit Market	8	59.44	571.44
North End Greenway – Permanent Water Quality Credits	North End Greenway Stream Restoration	North End Greenway	117.90	256.10	40,660.00
Stream Restoration	Mountain View Drive Stream Restoration	Harrisonburg, VA	144.97	415.90	49,980.00
Stream Restoration	Blacks Run South Stream Restoration	Harrisonburg, VA	1,076.76	2,337.84	225,107.23
Street Sweeping	Street Sweeping (annual)	Harrisonburg, VA	15.52	64.78	23,575.35
Storm Drain Cleaning[3]	Storm Drain Cleaning (annual)	Harrisonburg, VA	8.17	36.78	4086.60
Septic to Sanitary Sewer Connections[4]	Septic to Sanitary Sewer Connections (since 2006)	Harrisonburg, VA	0	509.22	0
Homeowner BMPs[5]	Homeowner BMPs (annual)	Harrisonburg, VA	Varies	Varies	Varies
BMP Retrofits[6]	HCAP Program	Harrisonburg, VA	0.127	1.182	254.953
Bioreactor	Bioreactor	Purcell Park	0	Pending	0
Urban Tree Canopy Expansion[7]	New Tree Planting	Harrisonburg, VA	3.56	15.96	472.96
Land Conversion: Turf to Mixed Open[8]	Pollinator Habitats	Harrisonburg, VA	1.85	8.47	0
		Total	**1,376.86**	**3,705.67**	**344,708.53**
		Amount Needed by 2023	**354**	**2,684**	**303,897**

[3] Annual credit that varies

[4] Estimated that there are still 50 septic systems within Harrisonburg. TN value reflects reductions to-date, however this value may increase

[5] Homeowner BMPs represent annual credits that are variable depending on compliance rates and number of residents who signup or renew their credits

[6] Represents the reduction values to-date. This value may increase depending on the type and number of projects completed

[7] Estimated value by assuming 50 new trees per year. Between 2018 and 2020, the average number of trees added per year has been around 200 new trees per year. This value may increase.

[8] Represents the reduction values to-date. This value may increase depending on new land conversions.

Local TMDL Special Conditions

Description

The City will develop a local TMDL action plan designed to reduce loadings for pollutants of concern if the permittee discharges the pollutants of concern to an impaired water for which a TMDL has been approved by the U.S. Environmental Protection Agency (EPA) as described below:

1. For TMDLS approved by the EPA prior to July 1, 2013, and in which an individual or aggregate wasteload has been allocated to the permittee, the permittee shall update the previously approved local TMDL action plans to meet the conditions of the new permit as applicable, no later than 18 months after the permit effective date and continue implementation of the action plan; and
2. For TMDLs approved by EPA on or after July 1, 2013, and prior to June 30, 2018, and in which an individual or aggregate wasteload has been allocated to the permittee, the permittee shall develop and initiate implementation of action plans to meet the conditions of the new permit as applicable for each pollutant for which wasteloads have been allocated to the city's MS4 no later than 30 months after the permit effective date.

Annual Reporting Requirements

For each reporting period, each annual report shall include a summary of actions conducted to implement each local TMDL action plan.

Smith Creek TMDL

Smith Creek watershed has a TMDL that was approved by the EPA prior to July 1, 2013 and has an associated wasteload allocation. The Smith Creek Action Plan was updated and submitted to DEQ no later than 18 months after the permit effective date. The Action Plan was updated and submitted to DEQ on 4/29/2020. It is available at http://www.harrisonburgva.gov/MS4-permit-program.

Best Management Practices to Reduce Bacteria

BMP Strategy 1: Domestic Pets (Cats and Dogs)

- Provide signage to pick up dog waste, provide pet waste bags and disposal containers.
    - There are 20 pet waste stations with signage throughout city parks. Approximately 72,000 bags are used at the stations every year.
- Maintain dog parks by removing disposed of pet waste bags.
    - Smithland Road Dog Park was constructed in early 2015 and includes four pet waste stations. Park rules include that pet waste must be picked up and properly disposed of. City of Harrisonburg Parks and Recreation staff will continue maintaining these pet waste stations on a regular basis and additional stations will be installed on an as needed basis.

BMP Strategy 2: Urban Wildlife

- Clean out storm drains to remove wildlife waste.
    - The City provides maintenance and repair to the storm drain system that is located on the public street right-of-way or in easements specifically assigned to the City and designated

for drainage. One flusher truck cleans outfalls from approximately April – October, as weather allows.

- Implement rooftop disconnection programs or site designs that minimize connections to reduce bacteria from rooftops.
    - The Stormwater Utility Fee Credit Program provides incentives for homeowners who disconnect roof drains from the storm sewer system. The program provides best practice and site design specifications for this practice.

BMP Strategy 3: Illicit Connections or Illicit Discharges to the MS4

- Implement a program to identify potentially failing septic systems. Implement a septic tank inspection and maintenance program.
    - Sec. 7-3-1 to 7-3-80 of the sewer ordinance requires septic systems to be inspected and pumped out every five years. The sewer ordinance was updated to include this requirement in August 2018.

Best Management Practices to Reduce Sediment

- The street sweeping program annually removes an estimated 391.76 lbs of TSS from the Smith Creek Watershed per year.
- The storm drain cleaning program annually removes an estimated 94.81 lbs TSS from the Smith Creek Watershed per year.
- New Tree Planting program annually removes an estimated 21.00 lbs TSS from the Smith Creek Watershed per year.

Pollutants of Concern: Nutrients, Sediment, Bacteria

Strategy 1: Traditional Written Materials

- Stormwater and Environmental Newsletters: This email newsletter has a subscription list of around 863 contacts and each newsletter is opened by around 50% of the subscription list.
    - *Soil-The Building Block of All Good Things*. December 2021
    - *Reaching for the Sky.* April 2022
- Harrisonburg Public Works Facebook Page: The Harrisonburg Public Works Facebook page promotes high-quality receiving waters, education about the Chesapeake Bay and local TMDLs, and information about local events and projects. During this permit year Harrisonburg Stormwater Facebook Page became Harrisonburg Public Works. This switch was made to capture more of the activities that occur at Public Works as well as to increase the number of people following our page. During this permit year, 110 posts were made to the Harrisonburg Stormwater Facebook page. Each post reached an average of 577 people.

Strategy 2: Media Materials

- Daily News Record Articles
    - Daily News Record Article, by Kellen Stepler: City Hosting Blacks Run Clean-Up Day April 9. March 16, 2022. https://www.dnronline.com/dnronline/city-hosting-blacks-run-clean-up-day-april-9/article_e8c689ec-44c6-5000-9fcd-a3dfdbc13ab5

    - Daily News Record Article, by Kellen Stepler: City's Public Works Receives Award for Urban Forestry and Wood Program. April 7, 2022. https://www.dnronline.com/dnronline/citys-public-works-department-receives-award-for-urban-forestry-and-wood-program/article_2de73196-feb9-51bb-8295-8c301743c393.html
- Other News Articles
    - The Volunteer Management Report: What Goes into Organizing a Clean-Up Day? April 2022.
- Press Release
    - Blacks Run Clean-Up and Arbor Day Events Coming in April. March 14, 2022

Strategy 3: Speaking Engagements

- All speaking engagements attended by stormwater staff are focused on explaining water quality, including TMDLs, as well as Harrisonburg's role in meeting the Chesapeake Bay TMDL. These speaking engagements do not include Blacks Run Clean Up Day, Middle School Watershed Field Trips, or the annual rain barrel workshop as these events are counted as Public Involvement Activities. Our traditional reach through speaking engagements was partially reduced this permit year due to ongoing COVID-19 concerns that limited interest in in-person meetings as well as school gatherings.

Strategy 4: Workshops/City Programs

- As part of advertising city programs aimed at installing or promoting stormwater BMP installation (Harrisonburg Conservation Assistance Program, Stormwater Utility Fee Program), city staff communicate the reasons why nutrients are an issue in local water quality as well as ways for landowners to reduce impacts from their property.
- HCAP Site Visits: The City partners with the Shenandoah Valley Soil and Water Conservation District (SVSWCD) to implement the Harrisonburg Conservation Assistance Program which includes speaking to landowners about stormwater issues during site visits. The SVSWCD conducted 7 site visits this past year.

Strategy 5: Staff Training

- As part of the Good Housekeeping / Illicit Discharge training, city staff are trained bi-annually on stormwater issues. This training includes information about Harrisonburg's watersheds, water quality impairments, and TMDLs. The training is given to field staff through an online training platform called VectorSolutions (formerly TargetSolutions). Copies of the training material can be provided upon request.