



# The City of Harrisonburg, Virginia

Office of the Public Works Department  
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Harrisonburg, Virginia 22801

STREET MAINTENANCE  
TRAFFIC ENGINEERING  
TRANSPORTATION PLANNING  
REFUSE/ RECYCLING  
RESOURCE RECOVERY  
CENTRAL STORES

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April 5, 2019

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 Program Plan for November 1, 2018 through October 31, 2023.

Please do not hesitate to contact me should you have any questions at (540)434-5928 or [Rebecca.Stimson@HarrisonburgVA.gov](mailto:Rebecca.Stimson@HarrisonburgVA.gov)

Sincerely,

Rebecca Stimson  
Stormwater Compliance Specialist

**The City With The Planned Future**



**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.

*Eric D. Campbell*

*4/3/2019*

Responsible Official Signature

Date

VAR040075

City of Harrisonburg, VA

Permit Number

MS4 Name





# MS4 Program Plan

November 1, 2018 - October 31, 2023

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)

# Table of Contents

Introduction.....	4
Watersheds .....	5
Roles and Responsibilities .....	8
Contact Information .....	9
MS4 Program Plan.....	10
Minimum Control Measure #1: Public Education & Outreach .....	11
BMP 1.1: Develop and Implement a Public Education and Outreach Program.....	11
Minimum Control Measure #2: Public Involvement and Participation .....	13
BMP 2.1: Plan for, Respond to, and Document Public Input and Reports.....	13
BMP 2.2: Develop and Maintain a Stormwater Webpage .....	14
BMP 2.3: Implement Four Public Involvement Opportunities.....	15
Minimum Control Measure #3: Illicit Discharge Detection and Elimination .....	16
BMP 3.1: Develop and Maintain a Storm Drain System, Outfalls, and Information Map.....	16
BMP 3.2: Prohibit Illicit Discharges and Connections through Ordinance Language.....	17
BMP 3.3: Maintain and Implement Illicit Discharge Detection and Elimination Written Procedures	18
Minimum Control Measure #4: Construction Site Stormwater Runoff Control .....	19
BMP 4.1: Use Legal Authority to Address Discharges Entering the MS4 .....	19
Minimum Control Measure #5: Post-Construction Stormwater Management for New Development and Development on Prior Developed Lands .....	21
BMP 5.1: Implement the VSMP.....	21
BMP 5.2: Inspection and Maintenance Program for City Owned Stormwater Management Facilities .....	23
BMP 5.3: Inspection and Maintenance Program for Privately Owned Stormwater Management Facilities.....	24
BMP 5.4: Track and Report Stormwater Management Facilities.....	24
Minimum Control Measure #6: Pollution Prevention and Good Housekeeping for Facilities Owned or Operated by the Permittee .....	26
BMP 6.1: Maintain and Implement Written Procedures for Pollution Prevention and Good Housekeeping.....	26
BMP 6.2: Stormwater Pollution Prevention Plans .....	27

BMP 6.3: Pollution Prevention by Contractors .....	28
BMP 6.4: Stormwater Pollution Prevention Training Plan .....	29
BMP 6.5: Turf and Landscape Nutrient Management Plans .....	30
TMDL Special Conditions.....	31
Chesapeake Bay TMDL Special Condition .....	31
Local TMDL Special Conditions.....	32
Appendix A: Public Education and Outreach Plan.....	33
1. City Schools.....	33
2. Downtown Restaurants.....	33
3. Litter/Trash.....	33
Appendix B: Public Input Reporting and Standard Operating Procedures .....	35
Appendix C: Physical Interconnection Notice Letters .....	36
Appendix D: Dry Screening and Outfall Inspection Methodologies.....	38
General Overview.....	38
Pre-Inspection Procedure.....	38
Inspection Procedure .....	39
Appendix E: IDDE Investigation Process.....	41
Investigation and Documentation Process .....	41
Appendix F: VSMP Approval Letter .....	46
Appendix G: Written Procedures for Operations and Maintenance Activities on City-Owned Stormwater Management Facilities .....	47
General Overview.....	47
Stormwater Post Construction Inspection Procedure .....	47
Appendix H: Written Procedures for Inspection of Privately Owned Stormwater Management Facilities	49
Appendix I: Written Procedures for Compliance and Enforcement of Inspection and Maintenance Requirements for Privately Owned Stormwater Management Facilities .....	50
Appendix J: Good Housekeeping Standard Operating Procedures.....	56
Appendix K: Stormwater Pollution Prevention Training Plan .....	71
Training Procedure .....	71
Training and Tracking .....	71

## 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 and MS4 Program Plan (this document), and to submit Annual Reports 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, <http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/MS4Permits.aspx>

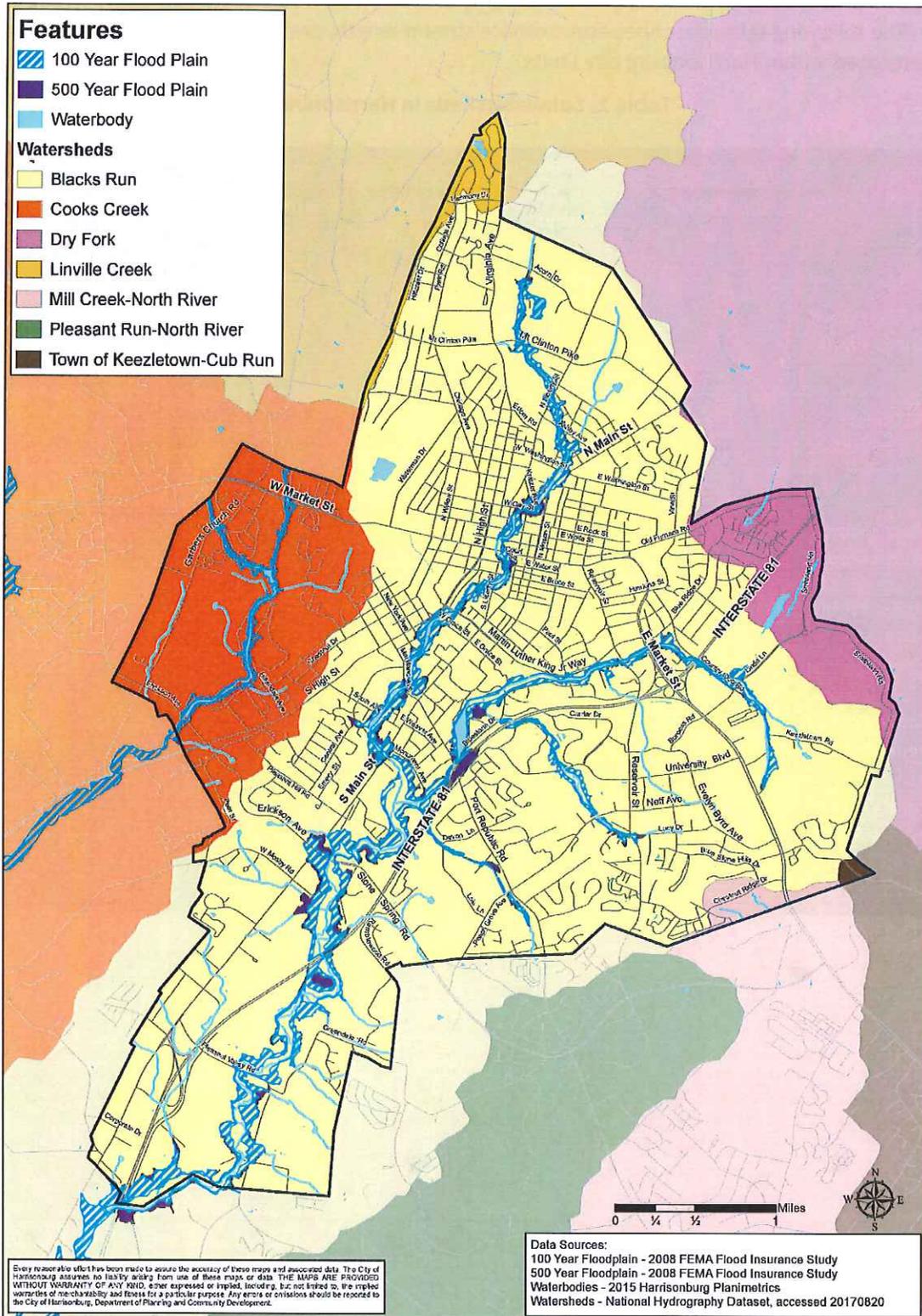
## Watersheds

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**

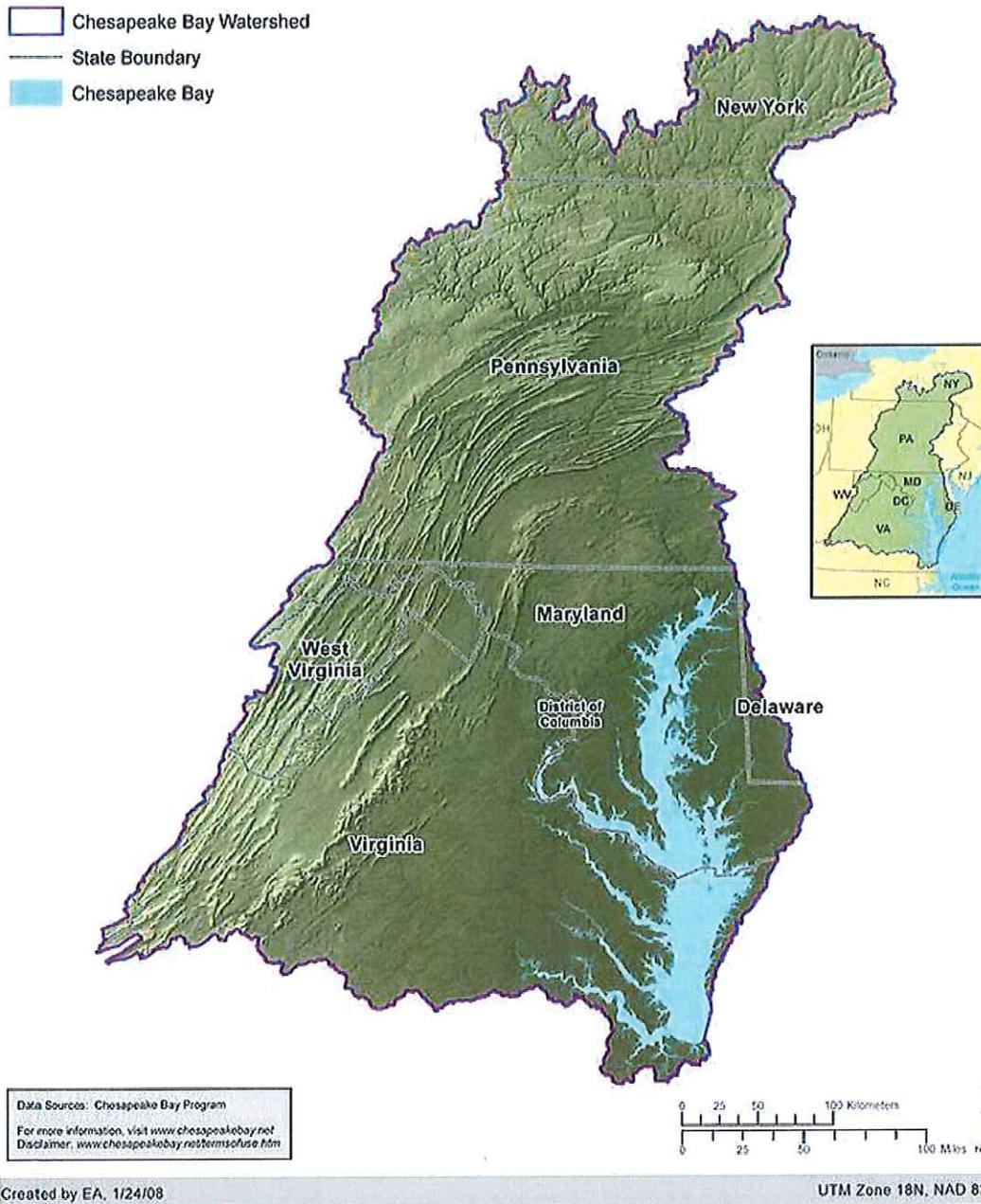
Subwatershed Name	Hydrologic Unit Code (HUC)	Approximate Length (miles) within Harrisonburg	Approximate Drainage Area (acres)	Impairments	TMDL WLA?
Blacks Run ( <i>flows into Cooks Creek</i> )	PS22	8.67	9067	Fecal Coliform, Sediment, Total Phosphorus	No
Sunset Heights Branch of Cooks Creek	PS23	2.09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

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 Environmental Compliance 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: City Manager  
Name: Eric Campbell  
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Harrisonburg, Virginia 22801  
Phone: (540) 432-7701  
Email: [Eric.Campbell@harrisonburgva.gov](mailto:Eric.Campbell@harrisonburgva.gov)

### *Duly Authorized Representatives*

Title: Director of Public Works  
Name: Tom Hartman  
Address: 320 East Mosby Road  
Harrisonburg, Virginia 22801  
Phone: (540) 434-5928  
Email: [Tom.Hartman@Harrisonburgva.gov](mailto:Tom.Hartman@Harrisonburgva.gov)

Title: Stormwater Compliance Specialist  
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Harrisonburg, Virginia 22801  
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Email: [Rebecca.Stimson@harrisonburgva.gov](mailto:Rebecca.Stimson@harrisonburgva.gov)

## MS4 Program Plan

The MS4 Program Plan details the City of Harrisonburg's comprehensive program to manage the quality of stormwater runoff discharged from the MS4. This section of the MS4 Program plan is categorized into the following six minimum control measures and special conditions for TMDLs:

1. Public education and outreach
2. Public involvement and participation
3. Illicit discharge detection and elimination
4. Construction site stormwater runoff control
5. Post-construction runoff control for development and redevelopment
6. Pollution prevention and good housekeeping for facilities owned or operated by the permittee
7. TMDL Special Conditions: Chesapeake Bay TMDL
8. TMDL Special Conditions: Local TMDL

This MS4 Program Plan will be reviewed annually. Due to the iterative nature of the program and the potential for changes to BMPs over the permit term, the MS4 Program Plan will be updated as necessary. This MS4 Program Plan will remain on file in the Public Works Department and on Harrisonburg's stormwater webpage: [www.harrisonburgva.gov/stormwater-management-program](http://www.harrisonburgva.gov/stormwater-management-program).

The MS4 Program Plan outlines the details of procedures in place to comply with the MS4 General Permit. The MS4 Program Plan is not an enforceable document.

## 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.

#### *Specific Program Plan Requirements*

The MS4 Program Plan will include:

- A list of the high-priority stormwater issues the City will communicate to the public as a part of the public education and outreach program.
- The rationale for selection of each high-priority stormwater issue and an explanation of how each education or outreach strategy is intended to have a positive impact on stormwater discharges.
- Identification of the public audience to receive each high-priority stormwater message.
- The strategies from the permit used to communicate each high-priority stormwater message.
- The anticipated time periods the messages will be communicated or made available to the public.

#### *Anticipated BMPs or Strategies*

The following are the anticipated high-priority stormwater issues that will be communicated to the public as a part of the public education and outreach program. These issues will be reviewed every year and updated as necessary.

##### City Schools

- *Selection Rationale & Positive Impact of Outreach:* Most students in the City of Harrisonburg school system are also residents of the City of Harrisonburg. For this reason, students provide a positive avenue to educating families in the area about stormwater management and pollution prevention. It is also an opportunity to educate young people about environmental pollution and the impact the individual has on overall health of the environment.
- *Public Audience:* Students at Skyline Middle School and Thomas Harrison Middle School

- *Communication Strategies:* Programs are in place that pair stormwater/watershed health education with STEM programs and the Trout in the Classroom program. Two field trips called Drink, Flush, Play and Plant-A-Seed includes all 7<sup>th</sup> graders the City school system. Relevant educational posters will be posted in the schools and other lessons led by City staff will be conducted where possible.
- *Messaging Time Periods:* Educational field trips take place in the spring and fall. Additional lessons will take place intermittently throughout the year.

#### Downtown Restaurants:

- *Selection Rationale & Positive Impact of Outreach:* Due to the high number of restaurants located in our Downtown Historic District and their close proximity to Blacks Run, this issue was chosen as high-priority. Our focus is centered on clean-up activities (cleaning of hood vents, grease traps, bar mats, etc.), proper disposal of waste and recycling, and proper disposal of wash water.
- *Public Audience:* 30 restaurants located in the Downtown Historic District
- *Communication Strategies:* A presentation to the Downtown Dining Alliance regarding stormwater pollution prevention techniques will take place at regularly scheduled meetings and distribution of laminated informational posters to be posted in restaurant kitchen space will be mandatory for kitchen spaces. Harrisonburg Fire Marshals will ensure posters are present during their regularly scheduled inspections. A refuse and recycling survey will help gauge business owners preferred model moving forward with refuse and recycling. Recycling and pollution prevention will be linked by encouraging recycling is emptied, rinsed, cleaned, and kept indoors or undercover to prevent cross-contamination and trash juice.
- *Messaging Time Periods:* The presentation to the Downtown Dining Alliance is planned to take place in the summer of 2018. Hard copy educational materials (refreshers from past years) will be provided at this time to be posted in kitchen spaces year -round. Digital copies of education materials will be disseminated after the meeting. Harrisonburg Downtown Renaissance and the Public Works Sanitation team will assist with survey and education about refuse and recycling.

#### Litter/Trash

- *Selection Rationale & Positive Impact of Outreach:* Many city departments coordinate trash clean-up activities, such as the Adopt-A-Street program, Blacks Run Clean Up Day, and cleanup of City streets and medians during mowing and storm drain cleaning operations. These efforts have historically been distinct programs run by different individuals to target the litter problem in Harrisonburg. However, all trash and litter on city streets winds up in the same place - the storm sewer system and local waterways. The MS4 Program will take the lead in coordinating internal trash cleanups and will additionally coordinate with the public to inform them about litter removal and why this links with local water quality. If necessary, Sec 7-6-5 of Harrisonburg City Code and Sec 6-2-6 of Harrisonburg City Code will be utilized in outreach efforts. A marketing campaign paired with the refuse and recycling program will heavily promote 'reduce

and reuse' of waste items prior to recycling. This campaign may change behaviors and decrease the use of plastic items in the waste stream.

- *Communication Strategies:* Coordination of city departments and city employee clean-up programs, Adopt-A-Street program, Adopt-A-Stream program, non-profit and volunteer groups, and Blacks Run Clean-Up Day. Brochures, public presentations, and advertisements throughout the city are included as part of the reduce, reuse, recycle marketing campaign.
- *Public Audience:* Educational outreach and violations will be targeted towards those property owners, renters, businesses, etc. that are sourcing trash and waste items from their specific properties.
- *Messaging Time Periods:* Street and stream clean-up programs will run throughout the year. Blacks Run Clean Up Day occurs on an annual basis on the second weekend of April. Marketing campaign will be ongoing.

#### *Standard Operating Procedures or Policies Necessary to Implement this BMP*

Public Education and Outreach Plan, Appendix A.

#### *The Measurable Goal by Which this BMP will be Evaluated*

This BMP will be considered successful if the high-priority stormwater issues are communicated to the audiences identified in the Public Education and Outreach Plan.

#### *Persons, Positions, or Departments Responsible for Implementing this BMP*

- Public Works Department
  - Environmental Compliance Manager
  - Stormwater Compliance Specialist
  - Environmental Specialist
  - Business Services Manager
- City Manager's Office
  - Public Information Officer

#### *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.

### 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.

*Specific Program Plan Requirements:*

None.

*Anticipated BMPs or Strategies*

Standard operating procedures and policies necessary to implement this BMP are listed in Appendix B.

*Standard Operating Procedures or Policies Necessary to Implement this BMP*

Standard operating procedures and policies necessary to implement this BMP are listed in Appendix B.

*The Measurable Goal by which this BMP will be evaluated*

This BMP will be considered successful if the public is able to report concerns and provide input about the city's stormwater program.

*Persons, Positions, or Departments Responsible for Implementing this BMP*

- Public Works Department
  - Environmental Compliance Manager
  - Stormwater Compliance Specialist
- Harrisonburg Fire Department
- Planning and Community Development Department
- Public Utilities Department

*Annual Reporting Requirements*

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

**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.

*Program Plan Requirements*

- The webpage address where mechanisms for the public to report:

- Potential illicit discharges, improper disposal, or spills to the MS4
- Complaints regarding land disturbing activities
- Other potential stormwater pollution concerns
- The webpage address that contains the methods for how the public can provide input on the city's MS4 program.

*Anticipated BMPs or Strategies*

- Mechanisms for the public to report stormwater pollution concerns can be found at: <http://www.harrisonburgva.gov/stormwater-management-program>
- Mechanisms for the public to provide input on the city's MS4 program can be found at: <https://www.harrisonburgva.gov/MS4-permit-program>

*Standard Operating Procedures or Policies Necessary to Implement this BMP*

None

*The Measurable Goal by which this BMP will be evaluated*

This BMP will be considered successful if the stormwater webpage includes the information required in the MS4 permit.

*Persons, Positions, or Departments Responsible for Implementing this BMP*

- Public Works Department
  - Environmental Compliance Manager
  - Stormwater Compliance Specialist
- Information Technology Department
  - Webmaster

*Annual Reporting Requirements*

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

**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.

*Program Plan Requirements*

- A description of the public involvement activities to be implemented by the City.
- The anticipated time period the activities will occur
- A metric for each activity to determine if the activity is beneficial to water quality.

*Anticipated BMPs or Strategies*

- Blacks Run Clean Up Day: Blacks Run Clean Up Day is the annual community stream clean up organized by the City of Harrisonburg. It is anticipated the clean up will take place on the second

Saturday in April of each year. The metric for determining if the activity is beneficial to water quality will be tonnage of trash picked up.

- **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. It is anticipated there will be two days scheduled per year – one in the spring and one in the fall. 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.
- **6th and/or 7th Grade River Field Trips:** City of Harrisonburg middle school students participate in hands-on watershed based field trips as a part of their curriculum. City of Harrisonburg staff help to teach lessons during these trips. It is anticipated that four field trip days will be held every year, in the fall and in the spring. The metric for determining if the activity is beneficial to water quality will be the number of students reached through staff taught lessons.
- **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. It is anticipated that one rain barrel workshop will be held every year, in early spring. 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.

#### *Standard Operating Procedures or Policies Necessary to Implement this BMP*

None

#### *The Measurable Goal by which this BMP will be evaluated*

This BMP will be considered successful if four or more activities as described by the MS4 permit are implemented during the permit year.

#### *Persons, Positions, or Departments Responsible for Implementing this BMP*

- Public Works Department
  - Environmental Compliance Manager
  - Stormwater Compliance Specialist
  - Environmental Specialist
- City Manager's Office
- Public Information Officer

#### *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.

### 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.

#### *Program Plan Requirements*

- The MS4 map and information table. The map and information table may be incorporated into the MS4 Program Plan by reference. The map shall be made available to the department within 14 days upon request.
- Copies of written notifications of new physical interconnections given by the City to other MS4s

#### *Anticipated BMPs or Strategies*

- The City maintains an MS4 map and information table, the map will be made available to the department within 14 days upon request.
- Copies of written notifications of new physical interconnections are attached in Appendix C.

#### *Standard Operating Procedures or Policies Necessary to Implement this BMP*

None

#### *The Measurable Goal by which this BMP will be Evaluated*

This BMP will be considered successful if the MS4 map and information table are developed and submitted per the permit specifications.

#### *Persons, Positions, or Departments Responsible for Implementing this BMP*

- Public Works Department
  - Environmental Compliance Manager
  - Stormwater Compliance Specialist
  - Environmental Specialist
  - Systems Analyst
- Planning and Community Development Department
  - GIS Coordinator
  - GIS Technician

#### *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.

### **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.

#### *Program Plan Requirements*

No requirements

#### *Anticipated BMPs or Strategies*

The ordinance can be found in City Code Title 7, Chapter 6 at: <http://www.harrisonburgva.gov/code>.

*Standard Operating Procedures or Policies Necessary to Implement this BMP*

Standard operating procedures and policies necessary to implement this BMP are listed in the Anticipated BMPS or Strategies section above.

*The Measurable Goal by which this BMP will be Evaluated*

This BMP will be considered successful if there are ordinances, policies, standard operating procedures, or other legal mechanisms that prohibit non-stormwater discharges into the storm sewer system.

*Persons, Positions, or Departments Responsible for Implementing this BMP*

- Public Works Department
  - Environmental Compliance Manager

*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, identify, 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.

*Program Plan Requirements*

Procedures including:

- Illicit Discharge Investigation Procedures
- Dry Weather Field Screening Methodologies (Outfall Reconnaissance)

*Anticipated BMPs or Strategies*

- See Appendix D for the IDDE Procedures. The Departments of Public Utilities and Fire Department have their own processes and procedures for managing sanitary sewer overflows and hazardous chemicals/ materials, respectively, and for reporting information to the VA DEQ. In the event that there is a discharge that enters the city's storm sewer system, Public Utilities and Fire Department will inform the Environmental Compliance Manager.
- See Appendix E for Dry Weather Field Screening Methodologies.

*Standard Operating Procedures or Policies Necessary to Implement this BMP*

Standard operating procedures and policies necessary to implement this BMP are listed in the Anticipated BMPS or Strategies section above.

*The Measurable Goal by which this BMP will be Evaluated*

This BMP will be considered successful if IDDE procedures are maintained and implemented, and 50 outfalls are inspected annually.

*Persons, Positions, or Departments Responsible for Implementing this BMP:*

- Public Works Department
  - Environmental Compliance Manager
  - Stormwater Compliance Specialist
  - Environmental Specialist

- Planning and Community Development Department
  - GIS Coordinator
  - GIS Technician
- Public Utilities
  - Public Utilities Engineer
- Fire Department
  - Deputy Fire Marshall
  - Fire Inspector

#### *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.

#### 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).

#### *Program Plan Requirements*

- The local ordinance citations for the VESCP program.
- A description of the legal authorities utilized to ensure compliance with Part I E 4 a to control construction site stormwater runoff control such as ordinances, permits, orders, specific contract language, policies, and interjurisdictional agreements.
- Written inspection procedures to ensure the erosion and sediment controls are properly implemented and all associated documents utilized during inspection including the inspection schedule
- Written procedures for requiring compliance through corrective action or enforcement action to the extend allowable under federal, state, or local law, regulation, ordinance, or other legal mechanisms

The roles and responsibilities of each of the city's departments, divisions, or subdivisions in implementing the construction site stormwater runoff control requirements in Part I E 4.

#### *Anticipated BMPs or Strategies*

- Section 10-4 of the City Code describes the Erosion and Sediment Control Ordinance
- Legal Authorities include:
  - Section 10-4 of the City Code
  - City's Subdivision and Zoning Ordinance
  - Design & Construction Standards Manual

- References from above ordinances and documents to the “Virginia Erosion and Sediment Control Regulations” and the Virginia Erosion & Sediment Control Handbook
- Additional information about the City’s erosion and sediment control program can be found at: <http://www.harrisonburgva.gov/site-development>. (Note: The City of Harrisonburg utilizes an agreement in lieu of a plan for the construction of single-family residences as provided in §62.1-44.15:55.) The City requires that land disturbance not begin until and erosion and sediment control plan or an agreement in lieu of a plan is approved by the City.
- Written procedures and all associated documents for:
  - Plan Review
    - Procedures for Site Plan Review: <http://www.harrisonburgva.gov/site-development>
    - Site Plan Review Checklist: <http://www.harrisonburgva.gov/dscsm> (Appendix B)
    - Design and Construction Standards Manual: <http://www.harrisonburgva.gov/dscsm> (Chapter 2)
    - City Code: Title 10; Chapter 4: Erosion and Sediment Control
    - Virginia Erosion and Sediment Control Law
    - State Water Control Board; Erosion and Sediment Control Regulations; Chapter 840
    - City Code Sections:
      - 10-4-5. Submission and approval of plans; contents of plans
      - 10-4-6. Permits; fees; security for performance
  - Inspections
    - City Code Section: 10-4-7. Monitoring, reports and inspections
    - Erosion & Sediment Control Report, Appendix A
    - Erosion & Sediment Control Site Checklist, Appendix **Error! Reference source not found.**
    - ESC & Stormwater Final Inspection Checklist, Appendix **Error! Reference source not found.**
    - VSMP Inspection Checklist, Appendix **Error! Reference source not found.**
- For compliance procedures, see City Code Sections:
  - 10-4-8. Penalties, injunctions, and other legal actions
  - 10-4-9. Civil violations, summons, generally
- Responsible departments and employees include:
  - Planning & Community Development Department
    - *City Engineer (Erosion & Sediment Control Program Administrator)*
    - *Site Development Technician*
  - Public Works Department
    - *Public Works Engineer*
    - *Chief Construction Inspector*
    - *City Inspectors*
    - *Engineer*

*Standard Operating Procedures or Policies Necessary to Implement this BMP*

Standard operating procedures and policies necessary to implement this BMP are listed in the Anticipated BMPS or Strategies section above.

*The Measurable Goal by which this BMP will be Evaluated*

This BMP will be considered successful if the City controls construction site stormwater runoff through its Virginia Erosion and Sediment Control Program.

*Persons, Positions, or Departments Responsible for Implementing this BMP*

- Planning and Community Development Department
  - City Engineer (Erosion & Sediment Control Program Administrator)
  - Civil Engineers
  - Site Development Technician
- Public Works Department
  - *Public Works Engineer*
  - *Chief Construction Inspector*
  - *City Inspectors*
  - *Engineer*

*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 of 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.

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).

*Program Plan Requirements*

- A copy of the VSMP approval letter issued by the department

- A description of the legal authorities utilized to ensure compliance with the permit requirements for post-construction stormwater runoff control such as ordinances, permits, orders, specific contract language, and interjurisdictional agreements.

#### *Anticipated BMPs or Strategies*

- A copy of the VSMP approval letter is attached in Appendix F.
- See documents listed in the Program Plan Response section for BMP 4.1.
- During construction, the Chief Construction Inspector and Construction Inspectors are responsible for inspecting stormwater management facilities that are being constructed on both privately-owned and city-owned properties. The Site Development Technician is responsible for tracking enforcement. After construction is completed, the City Engineer and Planning & Community Development Department staff (listed above) are responsible for ensuring that privately-owned stormwater management facilities are in good working order. The Stormwater Compliance Specialist and Environmental Specialist are responsible for ensuring that city-owned facilities are inspected and that the facilities are in good working order.

#### *Standard Operating Procedures or Policies Necessary to Implement this BMP*

Standard operating procedures and policies necessary to implement this BMP are listed in the Anticipated BMPs or Strategies section above.

#### *The Measurable Goal by which this BMP will be Evaluated*

This BMP will be considered successful if the VSMP is implemented with applicable state regulations.

#### *Persons, Positions, or Departments Responsible for Implementing this BMP*

- Planning and Community Development Department
  - City Engineer (Stormwater Program Administrator)
  - Site Development Technician
- Public Works Department
  - Environmental Compliance Manager
  - Stormwater Compliance Specialist
  - Environmental Specialist
  - Chief Construction Inspector
  - Construction Inspectors
- The roles and responsibilities of each of the permittee's departments, divisions, or subdivisions in implementing the post-construction stormwater runoff control program.

#### *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.

### *Program Plan Requirements*

Written inspection procedures and all associated documents utilized during inspection of stormwater management facilities owned or operated by the City.

### *Anticipated BMPs or Strategies*

Written inspection procedures for operations and maintenance activities are attached in Appendix G.

### *Standard Operating Procedures or Policies Necessary to Implement this BMP*

Standard operating procedures and policies necessary to implement this BMP are listed in the Anticipated BMPs or Strategies section above.

### *The Measurable Goal by which this BMP will be evaluated*

This BMP will be considered successful if:

- Written inspection and maintenance procedures for city-owned stormwater management facilities are developed and maintained.
- City owned or operated stormwater management facilities are inspected once per year.
- Maintenance is conducted as necessary.

### *Persons, Positions, or Departments Responsible for Implementing this BMP*

- Public Works Department
  - Environmental Compliance Manager
  - Stormwater Compliance Specialist
  - Environmental Specialist

### *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.

### 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.

#### *Program Plan Requirements*

- Written inspection procedures and all associated documents utilized in the inspection of privately owned stormwater management facilities
- Written procedures for compliance and enforcement of inspection and maintenance requirements for privately owned BMPs

#### *Anticipated BMPs or Strategies*

- Written procedures for inspection of privately owned stormwater management facilities are attached in Appendix H.
- Written procedures for compliance and enforcement of inspection and maintenance requirements for privately owned BMPs are attached in Appendix I.

#### *Standard Operating Procedures or Policies Necessary to Implement this BMP*

Standard operating procedures and policies necessary to implement this BMP are listed in the Anticipated BMPs or Strategies section above.

#### *The Measurable Goal by which this BMP will be Evaluated*

This BMP will be considered successful if privately owned BMPs are inspected once every five years and have a recorded inspection schedule and maintenance agreement.

#### *Persons, Positions, or Departments Responsible for Implementing this BMP*

- Planning and Community Development Department
  - City Engineer
  - Civil Engineer
  - Site Development Technician

#### *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.

### 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.

#### *Program Plan Requirements*

The stormwater management facility spreadsheet or database incorporated by reference and the location or link where the spreadsheet or database can be reviewed.

#### *Anticipated BMPs or Strategies*

The stormwater management facility database is housed as a Microsoft Access file and can be reviewed on request.

#### *Standard Operating Procedures or Policies Necessary to Implement this BMP*

None.

#### *The Measurable Goal by which this BMP will be Evaluated*

This BMP will be considered successful if all stormwater management facilities are reported using the correct method in a timely manner.

#### *Persons, Positions, or Departments Responsible for Implementing this BMP*

- Planning and Community Development Department
  - Site Development Technician
  - City Engineer
- Public Works Department
  - Stormwater Compliance Specialist

#### *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.

## 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 manufacturers recommendations

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

#### *Program Plan Requirements*

Written procedures for the operations and maintenance activities.

#### *Anticipated BMPs or Strategies*

Written procedures for operations and maintenance activities are attached in Appendix J.

#### *Standard Operating Procedures or Policies Necessary to Implement this BMP*

Standard operating procedures and policies necessary to implement this BMP are listed in the Anticipated BMPS or Strategies section above.

#### *The Measurable Goal by which this BMP will be Evaluated*

This BMP will be considered successful if written procedures for pollution prevention and good housekeeping are maintained and implemented by the City.

#### *Persons, Positions, or Departments Responsible for Implementing this BMP*

- Public Works Department
  - Environmental Compliance Manager
  - Stormwater Compliance Specialist

### *Annual Reporting Requirements*

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

### **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.

#### *Program Plan Requirements*

- A list of all high priority facilities owned or operated by the permittee and if the facility has a high potential to discharge.

#### *Anticipated BMPs or Strategies*

Stormwater Pollution Prevention Plans for each High-Priority, High-Potential facility.

Municipal High Priority Facilities:

- Fire Station 1-Maryland Ave, 80 Maryland Ave
- Fire Department Training Center, 320 East Mosby Road
- Fire Station 2-380, Pleasant Valley Road
- Fire Station 3-Lucy Drive, 299 Lucy Drive

- Fire Station 4-Rock St, 210 East Rock Street
- Heritage Oaks Golf Course, 680 Garbers Church Road
- Heritage Oaks Maintenance, 680 Garbers Church Road
- City School Maintenance 680 Garbers Church Road
- Parks and Recreation Facility (Park View Shops), 901 Chicago Ave
- Ramblewood Conservation Area/Greendale Training Grounds, 868 North Liberty Street
- Harrisonburg Electric Commission Facility, 2129 Ramblewood Drive
- Public Utilities Facility, 2155 Beery Road
- Public Works Facility, 320 East Mosby Road
- Central Stores Warehouse, 2111 Beery Road
- Ramblewood Stockpiles, 2311 Ramblewood Road
- West Market Street Transfer Facility, West Market Street
- Transit Facility, 474 East Washington Street
- Recycling Convenience Center, 2055 Beery Road

#### Municipal High Priority Facilities with a High Potential to Discharge

- Park View Shops, 901 Chicago Avenue
- Public Utilities Facility, 2155 Beery Road
- Public Works Facility, 320 East Mosby Road
- Recycling Convenience Center, 2055 Beery Road

#### *Standard Operating Procedures or Policies Necessary to Implement this BMP*

Stormwater Pollution Prevention Plans for each High-Priority, High-Potential facility are necessary to implement this BMP. These plans are available by request.

#### *The Measurable Goal by which this BMP will be Evaluated*

This BMP will be considered successful if high-priority, high-potential sites have Stormwater Pollution Prevention Plans and the review and documentation requirements listed in the permit are met.

#### *Persons, Positions, or Departments Responsible for Implementing this BMP*

- Public Works Department
  - Environmental Compliance Manager
  - Stormwater Compliance Specialist
  - Environmental Specialist
  - Stormwater Crew Supervisor

#### *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.

### 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.

#### *Program Plan Requirements*

A summary of the mechanisms the permittee uses to ensure contractors working on behalf of the city implement the necessary good housekeeping and pollution prevention plans as appropriate.

#### *Anticipated BMPs or Strategies*

Language in the General Terms and Conditions for the City of Harrisonburg, VA states: "The contractor shall comply with all applicable federal, state and local laws, rules and regulations." This statement is included in all city contract documents and would include all stormwater-related ordinances. This language will be emphasized during stormwater training so internal staff understands that contractors are held to the same standards as municipal staff.

This BMP will be implemented in coordination with all city departments that manage contracted work and will be included as a part of training for appropriate city staff.

#### *Standard Operating Procedures or Policies Necessary to Implement this BMP*

Standard operating procedures and policies necessary to implement this BMP are listed in the Anticipated BMPS or Strategies section above.

#### *The Measurable Goal by which this BMP will be Evaluated*

This BMP will be considered successful if there is language, training, or standard operating procedures in place that require contractors employed by the City to use appropriate control measures to minimize the discharge of pollutants.

#### *Persons, Positions, or Departments Responsible for Implementing this BMP*

- Public Works Department
  - Environmental Compliance Manager
- Purchasing Department
  - Procurement Manager

#### *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.

#### *Program Plan Requirements*

The written Stormwater Pollution Prevention Training Plan as outlined by permit requirements.

#### *Anticipated BMPs or Strategies*

The Stormwater Pollution Prevention Training Plan is attached in Appendix E.

#### *Standard Operating Procedures or Policies Necessary to Implement this BMP*

Standard operating procedures and policies necessary to implement this BMP are listed in the Anticipated BMPS or Strategies section above.

#### *The Measurable Goal by which this BMP will be Evaluated*

This BMP will be considered successful if the Stormwater Pollution Prevention Training Plan is followed as best as possible.

*Persons, Positions, or Departments Responsible for Implementing this BMP*

- Public Works Department
  - Stormwater Compliance Specialist

*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.

**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.

*Program Plan Requirements*

A list of lands for which turf and landscape nutrient management plans are required in accordance with the permit requirements, including the following information:

- The total acreage on which nutrients are applied.
- The date of the most recently approved nutrient management plan for the property.
- The location in which the individual turf and landscape nutrient management plan is located.

*Anticipated BMPs or Strategies*

Turf and landscape nutrient management plans are required for the following lands:

1. Heritage Oaks Golf Course; 38°26'49.97"N, 78°54'15.82"W; 66.42 acres; 11/1/2017
1. Smithland Park; 38°26'55"N, 78°50'02"W; 5 acres, 2.5 acres, 10 acres; 11/1/2018
2. Purcell Park; 38°25'33"N, 78°52'53"W; 1 acre, 5.0 acres; 11/1/2018
3. Simms Field; 38°27'15"N, 78°51'30"W; 1.6 acres; 11/1/2018
4. Ramblewood Fields; 38°24'44"N, 78°53'13"W; 3.6 acres; 11/1/2018
5. Harrisonburg High School; 38°26'30"N, 78°54'37"W; 11.14 acres; 3/1/2018

*Standard Operating Procedures or Policies Necessary to Implement this BMP*

Standard operating procedure will be to implement turf and landscape management plans on all lands owned or operated by the city where nutrients are applied to a contiguous area greater than one acre.

*The Measurable Goal by which this BMP will be Evaluated*

This BMP will be considered successful if all lands owned or operated by the City where nutrients are applied to a contiguous area greater than one acre have nutrient management plans.

*Persons, Positions, or Departments Responsible for Implementing this BMP*

- Public Works Department
  - Environmental Compliance Manager
- Parks and Recreation Department

- Director of Parks and Recreation
- Athletic Turf Manager
- Harrisonburg City Public Schools
  - Executive Director of Special Projects and School Safety
  - Harrisonburg High School Athletics Director

#### *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.

### 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 required,
- 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.

### 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.

#### *Program Plan Requirements*

The program plan will incorporate each local TMDL action plan. Local TMDL action plans may be incorporated by reference into the MS4 program plan provided that the program plan includes the date of the most recent local TMDL action plan and identification of the location where a copy of the local TMDL action plan may be obtained.

#### *Anticipated BMPs or Strategies*

The Smith Creek TMDL was completed in 2004 (implementation plan completed in 2009) and specifies a 95% reduction in E. coli and 22% reduction in sediment through a waste load allocation to the city. The Smith Creek TMDL Action plan may be found at: <https://www.harrisonburgva.gov/MS4-permit-program>

The following outlines the watersheds with TMDLs and the dates the TMDLs were approved. There were no wasteloads allocated to the city in these TMDLs:

1. Blacks Run and Cooks Creek TMDL (2004) and Implementation Plan (2006)
2. North River-Mill Creek TMDL (2004)
3. Linville Creek TMDL (2004)
4. Cub Run TMDL (2004)

#### *Annual Reporting Requirements*

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

## Appendix A: Public Education and Outreach Plan

### 1. City Schools

*Selection Rationale & Positive Impact of Outreach:* Most students in the City of Harrisonburg school system are also residents of the City of Harrisonburg. For this reason, students provide a positive avenue to educating families in the area about stormwater management and pollution prevention. It is also an opportunity to educate young people about environmental pollution and the impact the individual has on overall health of the environment.

*Public Audience:* Students at Skyline Middle School and Thomas Harrison Middle School

*Communication Strategies:* Programs are in place that pair stormwater/watershed health education with STEM programs and the Trout in the Classroom program. Two field trips called Drink, Flush, Play and Plant-A-Seed includes all 7<sup>th</sup> graders the City school system. Relevant educational posters will be posted in the schools and other lessons led by City staff will be conducted where possible.

*Messaging Time Periods:* Educational field trips take place in the spring and fall. Additional lessons will take place intermittently throughout the year.

### 2. Downtown Restaurants

*Selection Rationale & Positive Impact of Outreach:* Due to the high number of restaurants located in our Downtown Historic District and their close proximity to Blacks Run, this issue was chosen as high-priority. Our focus is centered on clean-up activities (cleaning of hood vents, grease traps, bar mats, etc.), proper disposal of waste and recycling, and proper disposal of wash water.

*Public Audience:* 30 restaurants located in the Downtown Historic District

*Communication Strategies:* A presentation to the Downtown Dining Alliance regarding stormwater pollution prevention techniques will take place at regularly scheduled meetings and distribution of laminated informational posters to be posted in restaurant kitchen space will be mandatory for kitchen spaces. Harrisonburg Fire Marshals will ensure posters are present during their regularly scheduled inspections. A refuse and recycling survey will help gauge business owners preferred model moving forward with refuse and recycling. Recycling and pollution prevention will be linked by encouraging recycling is emptied, rinsed, cleaned, and kept indoors or undercover to prevent cross-contamination and trash juice.

*Messaging Time Periods:* The presentation to the Downtown Dining Alliance is planned to take place in the summer of 2018. Hard copy educational materials (refreshers from past years) will be provided at this time to be posted in kitchen spaces year -round. Digital copies of education materials will be disseminated after the meeting. Harrisonburg Downtown Renaissance and the Public Works Sanitation team will assist with survey and education about refuse and recycling.

### 3. Litter/Trash

*Selection Rationale & Positive Impact of Outreach:* Many city departments coordinate trash clean-up activities, such as the Adopt-A-Street program, Blacks Run Clean Up Day, and cleanup of City streets and medians during mowing and storm drain cleaning operations. These efforts have historically been

distinct programs run by different individuals to target the litter problem in Harrisonburg. However, all trash and litter on city streets winds up in the same place - the storm sewer system and local waterways. The MS4 Program will take the lead in coordinating internal trash cleanups and will additionally coordinate with the public to inform them about litter removal and why this links with local water quality. If necessary, Sec 7-6-5 of Harrisonburg City Code and Sec 6-2-6 of Harrisonburg City Code will be utilized in outreach efforts. A marketing campaign paired with the refuse and recycling program will heavily promote 'reduce and reuse' of waste items prior to recycling. This campaign may change behaviors and decrease the use of plastic items in the waste stream.

*Communication Strategies:* Coordination of city departments and city employee clean-up programs, Adopt-A-Street program, Adopt-A-Stream program, non-profit and volunteer groups, and Blacks Run Clean-Up Day. Brochures, public presentations, and advertisements throughout the city are included as part of the reduce, reuse, recycle marketing campaign.

*Public Audience:* Educational outreach and violations will be targeted towards those property owners, renters, businesses, etc. that are sourcing trash and waste items from their specific properties.

*Messaging Time Periods:* Street and stream clean-up programs will run throughout the year. Blacks Run Clean Up Day occurs on an annual basis on the second weekend of April. Marketing campaign will be ongoing.

## Appendix B: Public Input Reporting and Standard Operating Procedures

### **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 can find information about how to report various types of pollution or concerns at [www.harrisonburgva.gov/report-pollution](http://www.harrisonburgva.gov/report-pollution). This webpage includes contact information for: large spills or emergencies; water pollution or illicit discharges; construction issues or erosion and sediment control problems; sanitary sewer issues; solid waste problems; as well as a general information contact.

### **The public to provide input on the city's MS4 Program Plan.**

The MS4 Program Plan, Annual Reports, Chesapeake Bay TMDL Action Plan, and Smith Creek TMDL Action Plan are posted online at: [www.harrisonburgva.gov/MS4-permit-program](http://www.harrisonburgva.gov/MS4-permit-program). This webpage includes information for how the public can provide input on these documents.

### **Receiving public input or complaints.**

Public input or complaints can be: emailed to [stormwater@harrisonburgva.gov](mailto:stormwater@harrisonburgva.gov), mailed to Harrisonburg Public Works, 320 East Mosby Road, Harrisonburg, VA 22801, made in person at the Public Works Office, or called in to Public Works at (540) 434-5928. If public input or complaints are received at other city departments or on City of Harrisonburg social media, staff will make every effort to direct those complaints to the correct department.

### **Responding to public input received on the MS4 Program Plan or complaints.**

City staff respond to public input or complaints by phone, email, or in-person discussion. The manner in which the input or complaint is received, as well as the nature of the issue, will determine how city staff responds.

### **Maintaining documentation of public input received on the MS4 program and associated MS4 Program Plan and the city's response.**

City staff maintains a physical folder where written input is stored. Emailed input is saved electronically. Each annual report will include a summary of any public input on the MS4 program and how the City responded.

## Appendix C: Physical Interconnection Notice Letters



### **City of Harrisonburg, Virginia** Office of the City Manager

345 South Main Street  
Post Office Box 20031  
Harrisonburg, VA 22802  
(540) 432-7701 / FAX (540) 432-7778

Kurt D. Hodgen  
City Manager

June 24, 2014

Mr. Charles W. King, Jr., Senior Vice President  
James Madison University  
MSC 7606  
Harrisonburg, VA 22807

Mr. Dale Chestnut, Stormwater Coordinator  
James Madison University  
MSC 7004  
Harrisonburg, VA 22807

RE: MS4 Interconnections and JMU Foundation Properties

Dear Mr. King and Mr. Chestnut,

The City of Harrisonburg is a Phase II (small) MS4 and is regulated under the General VPDES Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems. The purpose of this letter is to notify you, an operator of a downstream MS4, that there are physical interconnections between our storm sewer systems.

We are also writing to acknowledge our understanding from conversations with Mr. Chestnut that James Madison University will not cover JMU Foundation Properties under its own MS4 permit. Therefore, the City will include JMU Foundation Properties as part of the City's regulated land under the MS4 permit, and will include JMU Foundation Properties in our calculation of pollutant loads and required reductions for the Chesapeake Bay TMDL special conditions. Please be advised that the City is considering a stormwater utility fee to fund the cost of operating its stormwater program and that JMU Foundation Properties under the current arrangement would *not* be exempt from the fee.

We ask that James Madison University confirm in writing by July 31, 2014 that the JMU Foundation Properties are to be included as part of the City's regulated land for the purposes of the MS4 permit.

If you have any questions, please do not hesitate to contact Thanh Dang, Public Works Planner, at 540-434-5928 or [Thanh.Dang@HarrisonburgVA.gov](mailto:Thanh.Dang@HarrisonburgVA.gov).

Sincerely,

Kurt D. Hodgen  
City Manager



**City of Harrisonburg, Virginia**  
**Office of the City Manager**

345 South Main Street  
Post Office Box 20031  
Harrisonburg, VA 22802  
(540) 432-7701 / FAX (540) 432-7778

Kurt D. Hodgen  
City Manager

June 24, 2014

Mr. Charles A. Kilpatrick, PE, Commissioner  
Virginia Department of Transportation  
1401 East Broad Street  
Richmond, VA 23219

Roy T. Mills, State Stormwater Program Administrator  
Virginia Department of Transportation  
1401 East Broad Street  
Richmond, VA 23219

RE: MS4 Interconnections

Dear Mr. Kilpatrick and Mr. Mills,

The City of Harrisonburg is a Phase II (small) MS4 and is regulated under the General VPDES Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems. The purpose of this letter is to notify you, an operator of a downstream MS4, that there are physical interconnections between our storm sewer systems.

If you have any questions, please do not hesitate to contact Thanh Dang, Public Works Planner, at 540-434-5928 or [Thanh.Dang@HarrisonburgVA.gov](mailto:Thanh.Dang@HarrisonburgVA.gov).

Sincerely,

Kurt D. Hodgen  
City Manager

## Appendix D: Dry Screening and Outfall Inspection Methodologies

### General Overview

- Dry screening of outfalls from Harrisonburg's MS4 will be done annually to include a minimum number of 50 outfalls to be inspected, as required by the MS4 permit. If time and resources permit, more than 50 outfall inspections may be inspected annually.
- Dry screening inspections will be defined as inspections performed when precipitation is less than .5 inches within 48 hour period, per MS4 permit.
- The Environmental Specialist will perform outfall inspections in coordination with the Stormwater Compliance Specialist.
- Number of outfalls inspected will be reported to DEQ annually with the MS4 Annual Report including:
  - The screenings results, and
  - Detail of any follow-up actions necessitated by screening results

### Pre-Inspection Procedure

- Materials needed:
  - Waders
  - Smartphone
  - Collector for ArcGIS application
  - Outfall Inspection Form
  - Illicit Discharge Reporting Form
  - City of Harrisonburg Outfall Inspection Policy
  - Clipboard
  - Pen/Pencil
  - Safety Vest
  - Measuring Tape
  - Battery Pack
- Using ArcGIS online, create a web map containing the Drop Inlets, Storm Sewer Pipes, MS4 Old Outfalls Draper Aden, MS4 Old Outfalls, City Limits, and MS4 Outfalls app layer. Save this map to the web platform, and download the map on the Collector for ArcGIS phone application.
- Print out the newest version of the City of Harrisonburg Outfall Inspection Policy.
- Print out newest version of the Outfall Inspection Form.
  - Outfall Inspection Forms are updated based on GIS and inspection needs. Those that have been developed can be found at: <U:\Stormwater\Illicit Discharge Detection & Elimination\Outfall Inspections>

- Records of existing outfalls should be in either the MS4 Old Outfalls or MS4 Old Outfalls Draper Aden GIS layers. Outfalls inspected started in 2016-2017 are loaded into the MS4 Outfalls app layer. Future outfall inspections will be recorded in the Collector app and then loaded into GIS.
- GIS Coordinator adds new outfalls and storm sewer system information into the GIS as new construction information is processed through the Community Development Department.

### Inspection Procedure

- Inspection instructions shall be as follows:
  1. Walk from downstream to upstream (if in the stream, as to not disturb water or sediments which could alter assumptions of an outfall, inspect outfalls one at a time).
  2. Use the Collector for ArgGIS app to fill out information about each outfall. Then, fill out the Cityworks Inspection for the outfall. Load a geographic image, a condition image, and an image of the Cityworks inspection form into the app.
  3. Note Cityworks Priority Ranking Field. This field is to determine priority areas to refine future inspections.
    - a. 1: Outfall is in “good” condition. There are no structural issues to the outfall, no erosion around the outfall, and there is no trash or debris surrounding the outfall.
    - b. 2: Outfall is in “okay” condition. There are no major structural issues, only minor erosion around the outfall, and/or only some trash or debris surrounding the outfall.
    - c. 3: Outfall is in “poor” condition. There are major structural issues, erosion around the outfall, and/or large amounts of trash or debris surrounding the outfall.
  4. In the event that an outfall is suspected to have an illicit discharge, document the outfall/illicit discharge on the Field Screening Inspection Report and fill out an Illicit Discharge Reporting Form. The suspected illicit discharge shall be handled with illicit discharge procedures set forth at <U:\Stormwater\Illicit Discharge Detection & Elimination\Illicit Discharge Administrative>
    - Investigation will be done with support from IDDE Field Backpack for data collection and the *Illicit Discharge Detection and Elimination Field Guide: How to Identify and Quickly Report Pollution Problems*.
    - Illicit Discharge Reporting Form should be completed and saved to the proper tax map ID folder at <U:\Stormwater\Illicit Discharge Detection & Elimination\Illicit Discharge> as outlined in the illicit discharge procedures.
      - If the illicit discharge is potential, pursue investigation through the illicit discharge procedures.
      - If the illicit discharge is occurring, pursue investigation through the illicit discharge procedures
      - If the illicit discharge is historical (staining, dried material, etc.) take note on the Field Screening Inspection Report and note if follow-up/education activities are necessary.
- When back in the office, load the data collected using the Collector app into the GIS layer.

- Outfall inspection data will be archived by the GIS Coordinator.
- Dry weather field screening to detect illicit discharges in specific areas may also be defined based on criteria such as infrastructure, land use, historical illegal discharges, dumping or cross connections. These areas will be prioritized by the Stream Health Coordinator and MS4 Program Coordinator.

Last updated: 7/6/2018

## Appendix E: IDDE Investigation Process

*Illicit Discharge Detection Inspection Team:* Public Works Environmental Compliance Manager, Environmental Specialist - Stormwater Field, Business Services Manager, Stormwater Compliance Specialist

*Lead Investigator:* Stormwater Compliance Specialist and Environmental Specialist - Stormwater Field are the lead investigators for Illicit Discharges.

*Other Responsible Parties:* Hazardous spill response is the responsibility of the Fire Department, storm sewer overflows are the responsibility of Public Utilities, other spill response or pollution complaints may be routed through another agency such as the Virginia Department of Environmental Quality.

- Informational business cards have been distributed to City staff and citizens to direct illicit discharge detection efforts. The card information is as follows:
  - Stream or Storm Sewer: (540) 434-5928 (Public Works)
  - Construction Issues: (540) 432-7700 (Community Development)
  - Sanitary Sewer Overflows: (540) 434-9959 (Public Utilities)
  - Trash & Solid Waste: (540) 434-5928 (Public Works)
  - Large Spill or Emergency: 911

*Other Entities:* If a source is traced to jurisdictional boundaries, the following individuals will be notified to take up the investigation.

- Morris Z Walton, Louis Berger (804) 317-8720 (VDOT IDDE Contact)  
[mwalton@louisberger.com](mailto:mwalton@louisberger.com) or [IDDEReports@vdot.virginia.gov](mailto:IDDEReports@vdot.virginia.gov)
- Dale Chestnut, James Madison University (540) 586-7606 or [chestndl@jmu.edu](mailto:chestndl@jmu.edu)

*Potential Illicit Discharge:* A pollutant having entered the storm sewer system but there is no evidence that the pollutant entered a live waterway.

*Actual Illicit Discharge:* A pollutant having entered the storm sewer system and there is evidence that the pollutant entered a live waterway.

*Suspect Illicit Discharge:* A dumping activity or spill that has not entered the storm sewer system or a live waterway.

### Investigation and Documentation Process

1. Report of illicit discharge events are received by city staff (report may have been received by phone, in person, email, online form, etc., <http://www.harrisonburgva.gov/report-pollution>). Reporting information is routed to lead investigators. If the lead investigators are unavailable, they will notify the rest of the team and another member will respond.

- a. Calls received at Public Works (540) 434-5928 are routed via Cityworks to the Public Works Environmental Compliance Manager. Emails received via [report.pollution@harrisonburgva.gov](mailto:report.pollution@harrisonburgva.gov) are sent to Public Works Environmental Compliance Manager, Stormwater Compliance Specialist, Business Services Manager, and Environmental Specialist - Stormwater Field. Response to emails is routed to the lead investigator first and other IDDE Team members as needed.
  - b. Deputy Fire Marshall – Fire Marshall will route information to the IDDE Team during routine inspections as needed. They will email pictures to the generic pollution reporting email address or directly contact Public Works Environmental Compliance Manager.
  - c. The Fire Department will notify Public Works Environmental Compliance Manager of an incident that may affect the storm sewer system. If the incident occurs outside of business hours, they will notify the Public Works Environmental Compliance Manager during the next business hours.
  - d. Spills during municipal operations will be responded according to the procedures set forth by that department. Significant spills that require interdepartmental coordination should be routed to Public Works and the IDDE Team.
  - e. Scans occur daily for potential illicit discharges through sanitation staff. If a potential discharge is observed, they will contact the Business Services Manager (who will contact the IDDE Team as needed). Environmental Specialist - Stormwater Field conducts city scans during daily field operations.
2. Lead investigators will travel out to the site to inspect the potential illicit discharge. Both lead investigators have an IDDE backpack full of supplies (First Aid Kit, Gloves, Flashlight, Notepad, Pens, Measuring Tape, Hand Gel, Duct Tape, Water Collection Bottles, Bags, Dye) that help them test and identify substances safely.
    - a. Lead investigators will trace back manholes or the stream to find the source of the pollution.
      - i. If an illicit discharge is found, but within six months of the beginning of the investigation neither the source nor the same non-stormwater discharge has been identified, then this shall be documented.
      - ii. If the observed discharge is intermittent, then Lead Investigator must document that a minimum of three separate investigations were made in attempt to observe the discharge when it was flowing. If these attempts are unsuccessful, the investigator must document.
    - b. An unknown substance can be tested with the materials in the IDDE backpack, the incubator located at the Public Works Department, through a third-party consultant,



4. The completed IDDE form will be filed in the U:\ drive folder location (U:\Stormwater\Illicit Discharge Detection & Elimination) where associated documentation will be saved based on property tax map number as well.
5. Public Works Environmental Compliance Manager will fill out fields in ArcGIS layer illicit discharge tracking and link that event to a file folder on U:\ drive.
6. Illicit discharge team will update U:\ drive folder with documentation, photos, letters, emails, etc. associated with the illicit discharge event.
  - a. Files saved in the folder will be saved by [tax map number] [date investigation initiated year – month -day] [other additional title]. Examples:
    - i. 010-C-8 2014-02-06 IDDE Report Form.pdf
    - ii. 010-C-8 2014-02-06 Investigation Notes.docx
  - b. A time frame upon which to conduct an investigation or investigations to identify and locate the source of any observed continuous or intermittent non-stormwater discharge to be prioritized as follows per the MS4 permit: *(i) illicit discharges suspected of being sanitary sewage or significantly contaminated must be discharged first, (ii) investigations of illicit discharges suspected of being less hazardous to human health and safety such as noncontact cooling water or wash water may be delayed until after all suspected sanitary or significantly contaminated discharges have been investigated, eliminated, or identified. Discharges authorized under a separate VPDES or state permit require no further action under this permit.*
  - c. Notice of Violation: City Code Section Title 7, Chapter 6
    - *Notice of violation. Whenever the city manager or his designee finds that a person or entity has violated a prohibition or failed to meet a requirement of this chapter, the city manager or his designee may order compliance by written notice of violation to the responsible party.*
    - Business Services Manager - Harsit Patel (Department of Sanitation) is our designated IDDE Team member that assists with enforcement provisions according to the aforementioned City Code.
7. Investigators may use the Center for Watershed Protection's publications as guides, [http://www.cwp.org/online-watershed-library/cat\\_view/64-manuals-and-plans/79-illicit-discharge-detection-and-elimination](http://www.cwp.org/online-watershed-library/cat_view/64-manuals-and-plans/79-illicit-discharge-detection-and-elimination):
  - i. *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*
  - ii. *Illicit Discharge Detection and Elimination: Technical Appendices*
  - iii. *Illicit Discharge Detection and Tracking Guide*

iv. *Illicit Discharge Detection and Elimination Field Guide: How to Identify and Quickly Report Pollution Problems:*

[http://www.cspdc.org/programs/environment/documents/IDDEFieldGuideShenandoah\\_121914\\_002.pdf](http://www.cspdc.org/programs/environment/documents/IDDEFieldGuideShenandoah_121914_002.pdf)

8. When IDDE event is closed, the Lead Investigator will complete the Illicit Discharge Reporting Form and will contact Public Works Environmental Compliance Manager to update the ArcGIS layer accordingly.
9. A summary of the illicit discharge inspection reports will be included with the MS4 Annual Report and will include required information: *(i) date that suspected discharge was observed, reported, or both; (ii) how the investigation was resolved, including any follow-up, and (iii) resolution of the investigation and the date the investigation was closed.*

Last updated: 7/2018

## Appendix F: VSMP Approval Letter



### COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY  
Street address: 629 East Main Street, Richmond, Virginia 23219  
Mailing address: P.O. Box 1105, Richmond, Virginia 23218  
Fax: 804-698-4019 - TDD (804) 698-4021  
www.deq.virginia.gov

Molly Joseph Wand  
Secretary of Natural Resources

David K. Poyner  
Director

(804) 698-4120  
1-800-552-5433

July 1, 2014

Kurt Hogden, City Manager  
City of Harrisonburg  
345 S. Main Street  
Harrisonburg, VA 22801

Dear Mr. Hogden:

In accordance with §62.1-44.15:27 G of the Virginia Stormwater Management Act (Act), the Department of Environmental (DEQ) has completed its review of the City of Harrisonburg's final Virginia Stormwater Management Program (VSMP) application package submitted on June 12, 2014. Based on this review, DEQ has determined that the City of Harrisonburg's VSMP is consistent with the requirements of the Act and the VSMP regulation in place prior to the 2014 session of the General Assembly. As you know, the General Assembly made changes to the Act during this past session that were signed into law on March 24, 2014.

Because these amendments to the Act were made late in the VSMP development process, DEQ recognizes that you were unable to include these revisions in your VSMP application package and grants provisional approval of City of Harrisonburg's VSMP. This provisional approval is conditioned upon your locality making the required revisions operational by July 1, 2014, and authorizes the City to operate a VSMP on July 1, 2014. When the required revisions are made, DEQ will provide the final approval of the City's VSMP.

Thank you for your cooperation in developing a VSMP. We look forward to continuing to assist the City with the implementation of its VSMP.

Sincerely,

A handwritten signature in black ink that reads "Melanie D. Davenport".

Melanie D. Davenport  
Director, Water Division DEQ

C: Melanie Davenport, Director, Water Division  
Frederick Cunningham, Director, Office of Water Permits  
Joan Salvati, Manager, Local Government Stormwater Programs

## Appendix G: Written Procedures for Operations and Maintenance Activities on City-Owned Stormwater Management Facilities

### General Overview

The City shall require adequate long-term operation and maintenance of stormwater management facilities owned by the City. Public Works personnel inspect stormwater management facilities annually, generally in the Fall, and inform city departments responsible for the stormwater management facilities of any deficiencies found.

City departments are responsible for maintaining stormwater management facilities on properties they manage unless an alternative agreement with another city department has been established.

### Stormwater Post Construction Inspection Procedure

#### *Equipment Needed:*

- Clipboard
- Pens/Pencil/highlighter
- Blank Inspection Sheet (Word document)
- Previous Inspection Report (Found in U:\)
- Record drawings of Facility (if available)/Facility information
- Manhole Hook (for underground facilities)
  - Flusher Truck may be necessary for inspection and maintenance of underground facilities – Coordinate with Gene Sly
- Sludge Judge (for underground facilities)
  - Flusher Truck may be necessary for inspection and maintenance of underground facilities – Coordinate with Gene Sly
- Camera

#### *Pre-Inspection Procedure*

Note: Inspections take place annually in October/November by Stormwater Compliance Specialist and Environmental Specialist.

Reports are labeled for maintenance needs that are as follows:

- High Priority: Maintenance to take place 1-6 months
- Medium Priority: Maintenance to take place in 6-9 months
- Low Priority: Maintenance to take place in 1 year

Reports can be done in Cityworks using the Annual Inspection Form or hardcopy as follows:

1. Print a blank inspection report from the last folder (ZZ\_Inspection Forms) in <U:\Stormwater\Construction-Post Construction BMPs-E&S-VSMP\Project - Facilities - City Owned> according to the type of BMP you intend to inspect.
2. Print the previous inspection report (if applicable) found in the U:\ link provided above in the specific facility's folder. Use the previous inspection report to determine reoccurring issues in the facility upon the inspection.
3. Check the Facility Tracking Excel sheet to determine the owner of your facility.

4. Notify the Department lead (outlined below) of your planned inspections. Invite the lead to join in the field, although it is not required to complete the inspection.
  - a. Parks and Recreation –Lee Foerster (540) 433-9168 [Lee.Foerster@harrisonburgva.gov](mailto:Lee.Foerster@harrisonburgva.gov)
  - b. Public Works –Gene Sly (540) 434-5928 [Gene.Sly@harrisonburgva.gov](mailto:Gene.Sly@harrisonburgva.gov)
  - c. HEC—Scott Dillard (540) 801-0903 [scott@hbgelec.com](mailto:scott@hbgelec.com)
  - d. City Schools – Roy Kite (540) 810-5098 [rkite@harrisonburg.k12.va.us](mailto:rkite@harrisonburg.k12.va.us)
5. Note the rainfall data information on the inspection report. Rainfall data can be gathered from [weather.gov](http://weather.gov) (this information will later be transferred to the electronic inspection form).
  - a. Type in Harrisonburg, VA into the search engine
  - b. Click ‘Get more detailed information’ under the weather graphic on the left.
  - c. On the far right of the site click on ‘3 Day History’ to gather precipitation data.
  - d. Precipitation (in.) is on the far right of the table. Record the sum of the rainfall in the last 3 days.

#### *During Inspection Procedure*

1. Take an overall photo of the facility.
2. Inspect the facility according to the guidelines provided in the inspection report. Cross-check with passed inspection reports to ensure that passed issues have been fixed.
3. Take notes on the hardcopy inspection report in order to sufficiently complete the electronic inspection report in the office.
4. Take photos of all areas that need maintenance, areas of concern that need to be monitored, or areas where you have follow-up questions.
5. Document maintenance actions needed in each relevant section of the report in order to sufficiently complete the electronic inspection in the office.

#### *Post-Inspection Procedure*

1. Upload all photos and label them with the inspection date. (Ex: BMPInspections\_2014.10.31)
2. All photos should be uploaded to <U:\Stormwater\Construction-Post Construction BMPs-E&S-VSMP\Project - Facilities - City Owned> in the folder specified for each BMP.

Last updated: 3/2019

# Appendix H: Written Procedures for Inspection of Privately Owned Stormwater Management Facilities

**City of Harrisonburg, VA**

**Design & Construction Standards Manual**

**Appendix J**

## **Stormwater BMP Post-Construction Inspection Policy**

Property owners are expected to maintain all stormwater BMPs in good working condition, functional per original design intent. Owners should seek out the assistance of landscape, engineering and biology professionals as appropriate to assess the condition and function of BMPs. Owners are encouraged to establish a regular program for such maintenance, based on specific needs for specific facilities. This may help to avoid costly repairs that could have been avoided by consistent, regular maintenance.

Owner is cautioned that the function of certain BMPs may be dependent upon other features of the original site design. For example, changes to ground character from re-grading, added impervious areas, redirection of roof runoff, etc. may change the effectiveness of the original stormwater facilities.

As outlined in the Stormwater Management BMP Facilities Maintenance Agreement, the property owner is responsible for conducting regular inspections of their BMP(s) every five years and submitting a report to the Department of Community Development. Inspection forms to be used are those in Appendix 9C of the VA Stormwater Management Handbook.

The reports shall be submitted to the Department of Community Development by July 1 of the inspection year, no earlier than 60 days prior. A separate report is required for each BMP covered under the project's approved Stormwater Management Plan.

Every five years, the property owner will be required to have a professional engineer certify that the BMP is functioning properly and as designed. The professional engineer shall submit the Inspection Form and use it as guidance, but it is expected that a complete inspection of the stormwater BMPs' condition be conducted. This should include assessment of underground systems, filter media, infiltration capabilities, vegetation condition and coverage, etc. A supplemental narrative may be necessary to complete a full assessment.

Should either the owner's or engineer's inspection find that maintenance is needed, the property owner will have 60 days from the date of inspection to complete maintenance and inform the Department of Community Development that work is complete and a re-inspection may be needed. Additional time may be granted by the Director of Community Development or designee on a case-by-case basis per the terms of the BMP Maintenance Agreement.

City staff may conduct "spot" checks of stormwater BMPs to ensure compliance. Should a BMP be found by to require maintenance, a letter will be sent to the property owner and follow up will be requested. The letter will detail the deficiencies found. Should the property owner fail to maintain the Stormwater BMP, enforcement actions may be taken by the City of Harrisonburg per the terms of the BMP Maintenance Agreement.

# Appendix I: Written Procedures for Compliance and Enforcement of Inspection and Maintenance Requirements for Privately Owned Stormwater Management Facilities

## **CITY OF HARRISONBURG, VA DESIGN & CONSTRUCTION STANDARDS MANUAL**

### **APPENDIX I STORMWATER MANAGEMENT/ BMP FACILITIES MAINTENANCE AGREEMENTS**

#### **Procedures for Submitting Agreements**

- Agreements are submitted to the City of Harrisonburg, Department of Planning & Community Development, 409 S. Main Street, Harrisonburg, Virginia 22801.
- Obtain **original** agreement from the Department of Planning & Community Development or from the City's Design Construction Standards Manual (DCSM).
- **Type** all information on form.
- **Submit** draft agreement with exhibit(s) for City review **prior to signature**.

#### **Following approval:**

- Sign form in **black ink**.
- Signature must be properly notarized (black ink).
- If the Landowner is a corporation, partnership, trust, limited liability company, etc., provide official/legal documentation that the person signing is authorized to sign legal/contractual documents for the organization.
- Record agreement in County Clerk's office and provide copy of stamped document to City.

CITY OF HARRISONBURG, VA

STORMWATER MANAGEMENT/BMP FACILITIES MAINTENANCE AGREEMENT

THIS AGREEMENT, made and entered into this \_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, by and between \_\_\_\_\_ hereinafter called the  
(Insert Full Name of Owner)  
"Landowner", and the City of Harrisonburg, a Virginia municipal corporation, hereinafter called the "City".

WITNESSETH:

WHEREAS, the Landowner is the owner of certain real property described as City of Harrisonburg Tax Map/Parcel \_\_\_\_\_ as recorded by deed in the land records of Rockingham County, Virginia, Deed Book/Page \_\_\_\_\_, hereinafter called the "Property".

WHEREAS, the Landowner is proceeding to build on and develop the property; and  
WHEREAS, the Site Plan/Subdivision Plan known as, \_\_\_\_\_, prepared by \_\_\_\_\_ and dated \_\_\_\_\_, hereinafter called the "Plan", which is expressly made a part hereof, as approved or to be approved by the City, provides for Best Management Practices (BMPs) for detention and/or treatment of stormwater within the confines of the property; and

WHEREAS, approximate locations of specific BMP facilities included on the Plan are shown on the attached (indicate by x):

\_\_\_ Copy of City-approved final subdivision plat, or

\_\_\_ City-approved scaled exhibit drawing of property; and

WHEREAS, the City and the Landowner, its successors and assigns, including any homeowners association, agree that the health, safety, and welfare of the residents of City of Harrisonburg, Virginia, require that on-site stormwater management/BMP facilities be constructed and maintained on the Property; and

WHEREAS, the City requires that on-site stormwater management/BMP facilities as shown on the Plan be constructed and adequately maintained by the Landowner, its successors and assigns, including any homeowners association.

NOW, THEREFORE, in consideration of the foregoing premises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The on-site stormwater management/BMP facilities shall be constructed by the Landowner, its successors and assigns, in accordance with the plans and specifications identified in the Plan.

2. The Landowner, its successors and assigns, including any homeowners association, shall adequately maintain the stormwater management/BMP facilities. This includes all pipes and channels built to convey stormwater to the facility, as well as all structures, improvements, and vegetation provided to control the quantity and quality of the stormwater. Adequate

Project Name: \_\_\_\_\_

maintenance is herein defined as good working condition so that these facilities are performing their design functions. The required Inspection Report form(s) is(are) to be used to establish what good working condition is acceptable to the City.

3. The Landowner, its successors and assigns, shall inspect the stormwater management/BMP facility and submit an inspection report every five years by the method and date prescribed in the latest City's Design and Construction Standards Manual. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the entire facilities, berms, outlet structure, pond areas, access roads, etc. Deficiencies shall be noted in the inspection report.

4. The Landowner, its successors and assigns, hereby grant permission to the City, its authorized agents and employees, to enter upon the Property and to inspect the stormwater management/BMP facilities whenever the City deems necessary. The purpose of inspection is to follow-up on reported deficiencies and/or to respond to citizen complaints. The City shall provide the Landowner, its successors and assigns, copies of the inspection findings and a directive to commence with the repairs if necessary.

5. In the event the Landowner, its successors and assigns, fails to maintain the stormwater management/BMP facilities in good working condition acceptable to the City, the City may, after proper notice, enter upon the Property and take whatever steps necessary to correct deficiencies identified in the inspection report and to charge the costs of such repairs to the Landowner, its successors and assigns. The City shall allow Landowner 90 days to make necessary repairs before taking this action; however, for large scale repair work the City may, on a case-by-case basis, allow the Landowner to present for consideration an Action Plan and schedule for repairs. In such cases the City may require a bond, letter of credit, cash escrow or other acceptable surety to guarantee the work. This provision shall not be construed to allow the City to erect any structure of permanent nature on the land of the Landowner. It is expressly understood and agreed that the City is under no obligation to routinely maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation on the City.

6. The Landowner, its successors and assigns, will perform the work necessary to keep these facilities in good working order as appropriate. A maintenance schedule should follow those prescribed in the Plan, along with any recommendations included in the City's Design and Construction Standards Manual, manufacturers' guidelines, etc. This schedule shall be followed by the landowner, its successors and assigns.

7. In the event the City pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials, and the like, the Landowner, its successors and assigns, shall reimburse the City upon demand, within thirty (30) days of receipt thereof for all actual costs incurred by the City hereunder. This shall include costs which exceed those obtained through a surety provided in association with an Action Plan as described in Item 5 above.

8. Landowner, by execution of this Agreement, acknowledges that he/she has reviewed with the Engineer the specifics of the Plan and understands the function and maintenance requirements of all BMPs provided for on the Plan. Landowner agrees to maintain a copy of the Plan through the duration of ownership, and to transfer that plan to the new owner upon relinquishing the property.

Project Name: \_\_\_\_\_

9. This Agreement imposes no liability of any kind whatsoever on the City and the Landowner agrees to hold the City harmless from any liability in the event the stormwater management/BMP facilities fail to operate properly.

10. This Agreement shall be recorded among the land records in the Clerk's Office of the Circuit Court of Rockingham County, Virginia, and shall constitute a covenant running with the land, and shall be binding on the Landowner, its administrators, executors, heirs and any other successors and assigns in interests, including any homeowners association.

11. This agreement shall be governed by the laws of the Commonwealth of Virginia.

12. Any disputes arising from or as a result of this Agreement shall be resolved in the Circuit Court of Rockingham County, Virginia.

13. If any provision of this Agreement is found to be illegal, invalid, or unenforceable, that shall not affect the validity or enforceability of any other provision of this agreement.

Project Name: \_\_\_\_\_

WITNESS the following signatures and seals:

\_\_\_\_\_

\_\_\_\_\_

Company/Corporation/Partnership Name

By: \_\_\_\_\_

\_\_\_\_\_  
(Type Name)

\_\_\_\_\_  
(Type Title)

STATE OF \_\_\_\_\_

CITY/COUNTY OF \_\_\_\_\_

The foregoing Agreement was acknowledged before me this day \_\_\_\_\_ of \_\_\_\_\_,  
\_\_\_\_\_ by \_\_\_\_\_.

\_\_\_\_\_  
NOTARY PUBLIC

My Commission Expires: \_\_\_\_\_

My Commission No. is: \_\_\_\_\_

Project Name: \_\_\_\_\_



Appendix J: Good Housekeeping Standard Operating Procedures



City of Harrisonburg – Public Works  
320 East Masby Road  
Harrisonburg, VA 22801  
(540) 434-5928

## Stormwater Pollution Prevention SOP: *Minimizing Polluted Runoff from Bulk Storage Areas*

An overabundance of sediment, mulch, salt, etc. entering the storm sewer system can harm local waterways.

Stockpile locations include Public Works, Public Utilities, Park View Shops, and Ramblewood Road. Most of these stockpiles are temporarily stored for construction and maintenance needs. Stockpile materials include mulch, aggregate, leaf litter, soil, gravel, and sand. Salt is currently stored undercover in four-sided structures at Park View Shops and Public Works. See *Image 1*. Unlike salt, Inert waste, asphalt, green waste, construction and demolition waste (inert), and untreated wood waste may be stored outside if the proper controls are in place. Other stockpile materials should be considered for undercover storage. Stockpile management should consider this document and pollution prevention practices including dust management and stormwater controls. If materials are not intended for reuse, see *Disposal of Waste Materials SOP* for more information and for proper disposal locations.

### Basic Guidelines:

- Slopes of stockpiles should not exceed 2:1 to prevent erosion.
- Stockpiles should be located a sufficient distance from storm drains and watercourses or areas with concentrated flow. The specific distance should be determined by taking ground slope and ground cover into consideration.
- Inlet protection and other control measures should be installed to prevent runoff into storm drains and watercourses.
- Do not place stockpiles in streets or paved areas, if possible.
- When stockpiles are no longer needed, properly dispose or utilize the excess materials and re-vegetate or otherwise stabilize the ground surface where the stockpile was located.
- Bagged material should be placed on pallets or an elevated surface to avoid potential for direct contact with runoff.

### Short Term Storage:

These tips are recommended for fine aggregate materials such as masonry sand, crushed limestone, and fine gravel, etc.

- Consider placing material on top of an impermeable membrane for quick clean-up.
- Consider placing an impermeable membrane on top of the stockpile and secure with cinder blocks/weight.
  - When utilizing a portion of the stockpile, remove only a section of the protective covering to prevent moisture absorption and to minimize exposure to precipitation and wind.

### Long Term Storage:

- Soil stockpiles should be covered or protected with soil stabilization measures and perimeter sediment barriers such as sediment control logs, rock socks, silt fence, straw bales, and/or sand bags.
- Temporary seeding should be considered for storage over 30 days. See *Image 2*.





City of Harrisonburg – Public Works  
320 East Mosby Road  
Harrisonburg, VA 22801  
(540) 434-5928

## Stormwater Pollution Prevention SOP: *Discharging Water Pumped from Utility Construction & Maintenance*

Virginia Erosion and Sediment Control regulatory language states: *Effluent from dewatering operations shall be filtered or passed through an approved sediment trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property.* Select employees at Community Development and Public Works are trained in erosion and sediment control practices and are available to municipal employees that may need guidance in dewatering operations.

### **Public Works:**

320 East Mosby Road  
Phone: 540-434-5928  
Monday – Friday 7:30am - 4:00pm

### **Community Development:**

409 South Main Street  
Phone: 540-432-7700  
Monday - Friday 8:00am - 5:00p

### **General Dewatering:**

Dewatering is the practice of removing water from a work area through portable water pumps. This water is considered effluent. Effluent water is typically pumped out of the work area and into a filtering device before being discharged from the site. Filtering devices and best management erosion control practices should be used to manage water from the work area.

- The discharge areas should be chosen with careful consideration to the downstream receiving watercourses and the landscape's ability to filter effluent from the dewatering process.
  - A wooded buffer (with sufficient underbrush) or turf are preferred areas to discharge.
- Minimize dewatering discharge velocity in order to avoid scouring the receiving area. Structural controls can be used to handle the anticipated flow/discharge.
- A visual inspection of the effluent should be regularly performed at the discharge point of the dewatering practice to determine if additional filtering may be needed and that the discharge is adequately controlled.
- Inspect filtering bags for clogging and replace as necessary.

### **Emergency Response:**

- For a waterline break, or similar time-sensitive incident, pumped water can be routed to a street.
  - A temporary berm should then be placed in front of the nearest storm drain to prevent water from entering the storm sewer system and a vacuum truck should be used to collect the pumped water gathered at the berm for proper disposal. Consider adding additional inlet control to prevent sediment-laden water from entering the storm drain.

### **General Erosion and Sediment Control Practices:**

- **Protect Existing Features:** Minimize the amount of exposed soil at the discharge point.
- **Stabilize the area receiving discharge:** Techniques such as sodding, seeding/ mulching, and stone cover can be used to reduce the erosion of exposed soils and steep grades.
- **Storm Drain Inlet Protection:** Use and maintain inlet protection.
- **Filter Bag:** Use a manufactured filtering device to reduce the amount of sediment from dewatering activities.
- **Rock Check Dam:** Use a temporary or permanent erosion and sediment control measure that is constructed to filter sediment from runoff and can be used for filtering effluent from dewatering activities.
- **Temporary Diversion Dike:** Use a temporary erosion and sediment control measure to direct sediment-laden stormwater to a sediment trapping facility or stormwater management facility.
- **Temporary Sediment Traps/Basins:** Sediment trapping facilities are designed to detain sediment-laden runoff from disturbed areas long enough for sediment to settle out and control the release of stormwater. Dewatering effluent can be directed to these facilities to allow the sediment time to settle out.

### **Dewatering Bag Disposal:**

- The silt bag and its contents can be disposed of as construction waste.



City of Harrisonburg – Public Works  
320 East Mosby Road  
Harrisonburg, VA 22801  
(540) 434-5928

## Stormwater Pollution Prevention SOP: *Discharge of Wastewater*

**Public Utilities**  
2155 Beery Road  
**Phone:** 540-434-9959  
Monday – Friday

**Public Works:**  
320 East Mosby Road  
**Phone:** 540-434-5928  
Monday – Friday 7:30am - 4:00pm

For the purposes of this SOP, wastewater is considered a raw sewage spill or surcharge from the sanitary sewer system.

### **Public Utilities – Disposal of Wastewater:**

The City of Harrisonburg Public Utilities department utilizes a vacuum truck to collect wastewater from sewer overflows or manhole surcharges. The wastewater collected in the truck is discharged onsite into the sanitary manhole that is being maintained, or into a depository station that is located behind Public Utilities. If needed, Public Utilities coordinates with the Fire Department (Hazardous Materials team) to provide additional berms, hazmat booms, and absorbent pads.

The Public Utilities operating procedure outlines pollution prevention strategies for the discharge of wastewater (see full documents for additional information):

- If an *insignificant* amount of wastewater enters the stormwater system do not flush water down storm drain. Allow dry conditions to possibly kill bacteria in storm drain or wet weather (rain event) will dilute contamination.
- If a *significant* amount of wastewater has entered the storm drain, responding personnel shall identify the best spot in the downstream storm drain system to contain flow. Decision may be based on time of the overflow, its route through the storm drain, time needed to erect a containment dam, accessibility for personnel, and proximity to sewer.
- Use sandbags, berms, or booms to build containment to trap overflow. Once under control, recover all impounded wastewater with a vacuum truck and return it to the sanitary sewer system. Remove debris and flush affected area with potable water then direct that water to sanitary sewer as well. Disinfectant (lime) may be used in storm drain, but only if contained and collected into the sanitary sewer.





City of Harrisonburg – Public Works  
 320 East Mosby Road  
 Harrisonburg, VA 22801  
 (540) 434-5928

## Stormwater Pollution Prevention SOP: *Disposal of Waste Materials*

The City of Harrisonburg operates its own solid waste collection system. Municipal operations have designated locations for the collection of waste materials. Any materials that are not intended for recycled use (Ex: tires) are transported to the Rockingham County Landfill <http://www.harrisonburgva.gov/rockingham-county-landfill>.

**Public Works:**  
 320 East Mosby Road  
 Phone: 540-434-5928  
 Monday – Friday 7:30am - 4:00pm

**Recycling Program:** Like City of Harrisonburg citizens, City departments participate in the regular recycling and sanitation program for cardboard, plastic, and paper. Glass is also collected and used as a daily cover and road base. Glass is initially collected at the Recycling Center (See *Image 1*) and then transferred to the current project location.

- <http://www.harrisonburgva.gov/recycle>

### Landscaping Waste

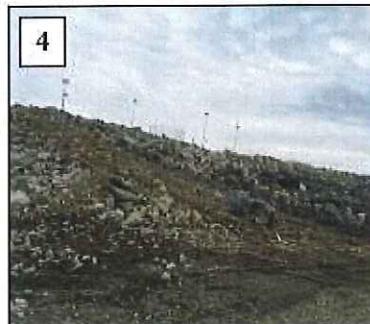
- **Leaf Collection:** All leaf collection is taken directly to the Rockingham County Landfill. See *Image 3*.
- **Excavation material (dirt, roots, trees):** Excavation material is taken directly to Rockingham County Landfill where it is mulched and used for erosion control on site. See *Image 2*.

**Construction Debris/Demolition Waste:** Debris resulting from the work of contractor services must be removed by the owner or contractor which includes brush, grass, and building materials. The City takes concrete and rock demolition waste to the crusher for use as a base layer in road construction. The crusher is mobile and can be moved to relevant project sites. When possible, the City uses the services available from third party contractors to recycle acceptable materials <http://www.greenearthco.com/>. See *Image 4* and *Image 5*.

**Hazardous Chemicals/Medical Waste Material:** The City of Harrisonburg uses an approved third party for hazardous waste removal. For large and small quantity guidance regarding the disposal of potentially hazardous liquids and materials, contact Public Works.

**HDPT Equipment Maintenance Waste Disposal:** See the *HDPT Equipment Maintenance SOP*.

**Municipal Operations – Street Sweeping and Flusher Truck:** The collected street sweeping and flusher truck solid materials disposal techniques are to be determined.





City of Harrisonburg – Public Works  
 320 East Mosby Road  
 Harrisonburg, VA 22801  
 (540) 434-5928

## Stormwater Pollution Prevention SOP: HDPT Equipment Maintenance

The following City of Harrisonburg departments utilize the Harrisonburg Department of Public Transit (HDPT) Facility for equipment maintenance on all buses, trucks, vehicles, and equipment: Public Works, Parks and Recreation, Public Utilities, Police Department, and City Schools. Public Works and Parks and Recreation will occasionally perform small scale maintenance indoors to a mower or smaller piece of equipment. Harrisonburg Electric Commission performs maintenance at other locations. All equipment maintenance at HDPT takes place indoors and undercover. *See image 1.*

**HDPT Address:**  
 475 E. Washington Street  
 Harrisonburg, VA 22802

**Contact Information:**  
 Phone: 540-432-0492  
 Fax: 540-432-0495  
 Monday - Friday 8:00am-5:00pm

**Facilities Manager:**  
 Adam Wright  
 Direct: (540) 217-4786  
 Cell: (540) 578-5182

**Spills & Leaks:** Any spills or leaks from within the maintenance garage that are not directly addressed by HDPT personnel are routed through an oil/water separator before entering the storm sewer system. Personnel response procedures are as follows:

Any minor leaks are cleaned up with shop rags and are placed in marked, metal containers and are picked up weekly by an outside contractor that launders the rags and returns them the following week. *See Image 4.*

- Any spills or more serious spills are cleaned up using absorbent pads (pig mats). Used pads are placed in a marked, metal container, stored in the lube room, and are picked up for disposal by an outside contractor. *See Image 3.*

**Waste Storage and Disposal:** None of the following materials are stored outside.

- **Used Shop Rags:** See "Responding to Spills and Leaks". *See Image 4.*
- **Used Batteries:** Used batteries are stored under cover with three walled protection before they are picked up for disposal by an outside contractor. *See Image 2.*
- **Used Oil Filters:** Used oil filters are crushed and stored in a marked, metal container in the lube room before being picked up for disposal by an outside contractor (same contractor that picks up the pigmats and antifreeze).
- **Used Antifreeze:** Used antifreeze is stored indoors in the lube room over spill grates. *See Image 3.*
- **Hydraulic Fluid:** Hydraulic fluid is stored indoors in the lube room over spill grates. *See Image 3.*
- **Used Motor Oil:** Used motor oil is stored indoors in the lube room contained in a lube cube which is also used for heating the maintenance building. *See Image 5.*







City of Harrisonburg – Public Works  
320 East Mosby Road  
Harrisonburg, VA 22801  
(540) 434-5928

## Stormwater Pollution Prevention SOP: *Fertilizer and Pesticide Application*

Parks and Recreation and Public Works both have employees certified as commercial applicators. A full list of certified applicators and their expiration dates can be found here: <http://www.vdacs.virginia.gov/pesticides/certification.shtml>.

**Parks and Recreation Address:**  
305 South Dogwood Drive  
Harrisonburg, VA 22801

**Contact Information:**  
Phone: 540-435-2442

**Certified Applicator:**  
Kevin A. Moore  
Athletic Field Turf Manager  
Direct: (540) 435-2442

### Application Guidelines:

- Use products only as directed. Follow all labels and instructions for use, storage, and disposal of rinsate and chemicals. Never apply chemicals directly to water.
- Provide cleanup supplies near designated maintenance areas to facilitate immediate cleanup. Use dry cleanup methods (e.g., rag, damp rags, and absorbent materials) and never hose down the area.
- Avoid application over impervious surfaces; sweep granular fertilizer back onto the grass to prevent it from washing into the storm sewer system.
- Do not apply herbicides, fertilizers, or pesticides to bare or eroding soil.
- Do not apply herbicides, fertilizers, or pesticides near open waters such as streams and creeks unless the product is specifically designed for use in shoreline or aquatic environments.
- Never apply chemicals before a rainfall event, during high wind speeds or within close proximity to surface water.
- Inspect, maintain, and calibrate equipment used for mixing and application. Parks and Recreation uses a Cushman sprayer.
- Ensure that all containers are watertight after each individual use.
- Do not prepare herbicides, pesticides, or fertilizers for application near storm drains.

### Storage Guidelines:

- Don't stockpile. Reduce storage needs by buying only the amount of pesticide that you will need in the near future or during the current season when the pest is active. This makes for less disposal issues as well.
- Store all pesticides in a locked cabinet in a well-ventilated utility area. Parks and Recreation stores chemicals inside a storage locker inside the garage at Ramblewood. Fertilizer is kept on pallets inside the garage.
- Never store pesticides in cabinets with or near food, animal feed, or medical supplies. Store flammable liquids far away from an ignition source such as a furnace, a car, etc.
- Always store pesticides in their original containers, which includes the label listing ingredients, directions for use, and first aid steps in case of accidental poisoning. *Never* transfer pesticides to other containers.
- Close the container tightly after using the product.
- Do not store pesticides in places where flooding is possible or in places where they might spill or leak into wells, storm sewer drains, ground water, or surface water.
- If you can't identify the contents of the container, or if you can't tell how old the contents are, follow the advice on [safe disposal](#).

**Pesticide Disposal:** <http://vdacs.virginia.gov/pesticides/pdffiles/disposalbrochure.pdf> The proper disposal of waste pesticides eliminates a potential threat to health and the environment. Contact the Virginia Department of Agricultural and Consumer Services – Office of Pesticide Services for a full list of disposal options through the Virginia Pesticide Disposal Program.

- If the container is empty, do not reuse it. Place it in the trash, unless the label specifies a different procedure.
- Do not pour leftover pesticides down the sink, into the toilet, or down a sewer or street drain. Pesticides may interfere with the operation of wastewater treatment systems or pollute waterways. Many municipal systems are not equipped to remove all pesticide residues. If pesticides reach waterways, they may harm fish, plants, and other living things.



City of Harrisonburg – Public Works  
 320 East Mosby Road  
 Harrisonburg, VA 22801  
 (540) 434-5928

## Stormwater Pollution Prevention SOP: *Leaking Municipal Automobiles & Equipment*

Leaking municipal automobiles and equipment should be taken to the City of Harrisonburg Department of Public Transportation (HDPT) for inspection and maintenance. Spill and leak response and prevention techniques are outlined in the *Equipment Maintenance SOP*.

**HDPT Address:**

475 E. Washington Street  
 Harrisonburg, VA 22802

**Contact Information:**

Phone: 540-432-0492  
 Fax: 540-432-0495  
 Monday - Friday 8:00am-5:00pm

**Facilities Manager:**

Adam Wright  
 Direct: (540) 217-4786  
 Cell: (540) 578-5182

All equipment maintenance at HDPT takes place indoors and undercover. See the *Equipment Maintenance SOP* for more information. This *Leaking Municipal Automobiles & Equipment SOP* addresses those smaller maintenance activities and daily pollution prevention techniques in place to observe and respond to leaking municipal automobiles and equipment.

**Basic Leak Prevention:**

- Store vehicles, equipment, and related fluids under covered areas to prevent exposure to precipitation.
- Provide cleanup supplies near designated maintenance areas to facilitate immediate cleanup (pig mats, absorbent socks, and clay cat litter) See *Image 2*.

**Potential Chemical Leaks from Automobiles & Equipment:**

- Coolant (Antifreeze) - green
- Oil –black
- Gasoline – determine by odor
- Brake Fluid – clear, oily, yellow
- Power Steering Fluid – yellow/brown (lighter hue when new, darker hue when older)
- Transmission Fluid – oily and reddish (lighter hue when new, darker hue when older)
- Windshield Washer Solvent - blue
- Water from Air Conditioner

**Pre-Trip Inspection Forms:** Fill out a pre-trip inspection form prior to performing regular operations with municipal automobiles and equipment. See attachment for an example form. *Note:* If the pre-trip inspection form does not have a line item regarding fluid leaks under the vehicle or on the ground, contact your supervisor and/or the MS4 Program Coordinator.

**If a Leak is present beneath the vehicle:**

1. Note the location of the leak and color of the fluid on the pre-trip inspection form.
2. Place a drip pan under the leak when the vehicle is not in use. Be sure to store the vehicle under cover if a leak is discovered. See *Image 1*.
3. Investigate the leak according to its odor and color. If the leak is already significant, use absorbent pads (pig mats). Dispose of used absorbent pads properly. See *Image 3*.
4. If the leak collects significant fluid (or the original fluid stain is larger than a silver dollar) take the vehicle to HDPT for maintenance.

1



2



3



# STREET / TRAFFIC INSPECTION CHECK OFF

WEEK OF : \_\_\_\_\_

EQUIP # \_\_\_\_\_

	MON	TUES	WEDS	THURS	FRI	SAT
ENGINE OIL LEVEL						
COOLING SYSTEM LEVEL						
HYDRAULIC OIL LEVEL						
SEAT BELT INSPECT						
TIRE WEAR AND INFLATION						
TRANSMISSION OIL LEVEL						
WINDOWS CLEAN AND FREE OF CRACKS						
BACK UP ALARM						
SAFETY LIGHTS						
WORK LIGHTS, TAIL, TURN, FLASHERS						
EMERGENCY BRAKE						
HORN						
CHECK GROUND UNDER EQUIP FOR LEAKS						
FIRE EXTINGUISHER						
CHECK FOR CLEANLINESS						
TRACKS (DOZERS, LOADERS, TRACKHOE						
EQUIPMENT GREASED						
EMPLOYEE # _____						

NOTES:

\_\_\_\_\_



City of Harrisonburg – Public Works  
320 East Mosby Road  
Harrisonburg, VA 22801  
(540) 434-5928

## Stormwater Pollution Prevention SOP: *Municipal Vehicle Washwater*

Chemicals, detergent, and dyes can pollute local waterways if allowed to enter the storm sewer system.

The following City of Harrisonburg departments utilize the Harrisonburg Department of Public Transit (HDPT) Facility for vehicle washing of all buses, trucks, vehicles, and equipment: Public Works, Parks and Recreation, Public Utilities, Police Department, Transit, Harrisonburg Electric Commission (HEC), and City Schools. The City of Harrisonburg Fire Department does not use the wash bays due to issues with the cleaning operations. The guided washing operations remove decals on the trucks and soap and water fill up the hose beds on the fire engines. Due to these complications, the Fire Department washes their trucks on-site. HEC cleans on-site with larger equipment for the same reason.

**HDPT Address:**

475 E. Washington Street  
Harrisonburg, VA 22802

**Contact Information:**

Phone: 540-432-0492  
Fax: 540-432-0495  
Monday - Friday 8:00am-5:00pm

**Facilities Manager:**

Adam Wright  
Direct: (540) 217-4786  
Cell: (540) 578-5182

**HDPT Washing:** Manual and guided washing bays are available at HDPT. See *Image 1* and *Image 2*.

- All vehicle washing at HDPT takes place indoors and undercover. See *Image 1*.
- All floor drains lead to the sanitary sewer system and are routed through an oil/water separator. An overabundance of detergents/solvents can emulsify the oils and lessen the efficiency of the oil/water separator. Any excess washwater that might exit the building is routed through an on-site sand filter before leading to the storm sewer system.
- Types of soaps and chemicals used in the wash bays: GilRoad Film Remover2 for the automatic car wash, Gil Purple Kleen for the shop floor, and Zep Formula 4358 for hand-washed vehicles.

**On-Site Washing Operations:** If a department cannot use the indoor wash bays provided at HDPT, the following are strategies to limit, to the maximum extent practicable, pollutants entering the storm sewer system.

- Wash the vehicle on flat areas like gravel, grass, containment pads, or other permeable surfaces.
- Block off nearby storm drains using a boom to divert washwater towards a permeable surface.
- Pump soapy water from car washes into a sanitary sewer drain. If pumping into a drain is not feasible, pump car wash water towards a permeable surface or use a vacuum truck to catch the wash water.
- Use a hose with nozzles that automatically turn off when left unattended. Conserve water as much as possible.
- Use only biodegradable soaps and avoid detergents/toxic chemicals. Consider power washing without the use of any detergents.
- Do not dump any toxic substances or liquid washwater onto the pavement or towards the storm drain. All excess washwater should be diluted and poured down a sanitary storm drain (faucet, floor drain, etc.)





City of Harrisonburg – Public Works  
320 East Mosby Road  
Harrisonburg, VA 22801  
(540) 434-5928

## Stormwater Pollution Prevention SOP: *Preventing Illicit Discharges*

An illicit discharge is defined as any discharge to the municipal separate storm sewer system that is not composed entirely of storm water, except for the few allowable occurrences, including firefighting operations. Illicit discharge detection and elimination programs are designed to prevent contamination of ground and surface water supplies by monitoring, inspecting and removing these illegal non-stormwater discharges.

**Background Information:** To report an observed or suspected pollution entering the storm sewer system or waterway use the link provided: <http://www.harrisonburgva.gov/report-pollution> or contact the City of Harrisonburg illicit discharge investigators (see contact information below). See the *City of Harrisonburg Illicit Discharge Inspection Procedures* for information regarding the internal processes for inspection, follow-up investigation, and incident documentation.

**Pollution Response Team:** Kelley Junco (Public Works), Trey Jarrels (Parks and Recreation), Thanh Dang (Public Works), Harsit Patel (Public Works), Sam Hottinger (Community Development)

**General Contact Information:**

Public Works Department  
320 East Mosby Rd  
Harrisonburg, VA 22801

**Lead Investigator 1:**

William B. Jarrels  
Phone: (540) 820-0089  
Email: [report-pollution@harrisonburgva.gov](mailto:report-pollution@harrisonburgva.gov)

**Lead Investigator 2:**

Kelley Junco  
Phone: (540) 434-5928  
Email: [report-pollution@harrisonburgva.gov](mailto:report-pollution@harrisonburgva.gov)

**Enforcement:** The City of Harrisonburg shall effectively prohibit non-stormwater discharges into the storm sewer system using its Illicit Discharges and Connections ordinance. The ordinance can be found in City Code Title 7, Chapter 6 at <http://www.harrisonburgva.gov/code>.

**Signs of an Illicit Discharge/Pollution:** Common pollutant sources include sanitary sewer discharges, illicit floor drain connections, illegal dumping of washwater/oil and gas, wash-down of loading dock areas, pressure washing activities, soil erosion or runoff from construction sites, failed septic systems, industrial discharges, agricultural runoff/fertilizer. Signs include:

- High sedimentation in waterways
- Colorful sheens
- Soap suds and foam
- Unusual cloudiness
- Strong odors
- Stains on embankments
- Pipe corrosion





City of Harrisonburg – Public Works  
320 East Mosby Road  
Harrisonburg, VA 22801  
(540) 434-5928

## Stormwater Pollution Prevention SOP: *Road & Street Maintenance*

The City of Harrisonburg Public Works Department performs paving operations, road repairs, pavement markings, etc. to City-owned roads, streets, and parking lots. The Public Works Department is also responsible for salting and plowing operations with assistance from Parks and Recreation and other outside contractors.

### **Public Works:**

320 East Mosby Road

Phone: 540-434-5928

publicworks@harrisonburgva.gov

Monday – Friday 7:30am - 4:00pm

Other information:

<http://www.harrisonburgva.gov/streets-and-sidewalks>

### **Street Sweeping**

The Public Works Department is responsible for clearing debris from public roadways. This includes litter, gravel, and accident debris. By removing this debris, the City is also actively reducing the sediment and pollutants that flow through the storm drain system and eventually into our streams. Using Market Street and Main Street as a divider, the Public Works Department routinely sweeps city streets in a counterclockwise rotation. Generally it takes two to three months to get all the way through the schedule.

- Storage of street sweeper material should be sized to handle the expected volume of material to be collected and allow for any testing or processing necessary for pollutant tracking. The storage area should be designed in a manner that will not result in the erosion of storage piles, the generation of excessive dust and debris and that will properly control stormwater runoff from the site.
- Dried street sweeper debris is disposed of at the Rockingham County Landfill.

### **Flusher Truck**

The City maintains an annual cleaning of storm drains and inlets. Ditch lines that are on city right-of-ways are monitored for build up and materials are removed as needed.

- Storage of flusher truck material should be sized to handle the expected volume of material to be collected and allow for any testing or processing necessary for pollutant tracking. The storage area should be designed in a manner that will not result in the erosion of storage piles, the generation of excessive dust and debris and that will properly control stormwater runoff from the site.
- Dried flusher truck debris is disposed of at the Rockingham County Landfill.

### **Roadway and Bridge Maintenance**

As part of the sidewalk maintenance program, city staff annually inspects and evaluates sidewalks and curb and gutter. Following evaluation, city crews may begin repairing sidewalks and curb and gutter in the most needed areas first and work their way through the schedule as weather and funding permits.

- Paving operations should be performed only in dry weather.
- Proper staging techniques should be used to reduce the spillage of paving materials during the repair of potholes and worn pavement
- Cover inlets and manholes
- Use erosion and sediment controls to decrease runoff from repair sites
- Use drip pans and absorbent materials to limit leaks of paving materials and fluids from paving machines
- Vegetation maintenance in city right-of-way: Follow pesticide application guidelines SOP

### **Salt Application**

- Routinely calibrate spreaders to prevent the over-application
- During storage, road salt should be covered to prevent salt from lumping together or being lost by stormwater runoff
- Sand and gravel should be considered in especially environmentally-sensitive areas
- Consider Coal-Tar Sealcoat information: <http://water.epa.gov/polwaste/npdes/swbmp/upload/coaltar.pdf>



City of Harrisonburg – Public Works  
 320 East Mosby Road  
 Harrisonburg, VA 22801  
 (540) 434-5928

## Stormwater Pollution Prevention SOP:

### *Spill Kit*

All fueling stations, equipment maintenance areas, transfer stations, and mobile fueling units should have a quickly accessible spill response kit. Materials in the spill kit should be labeled and an on-site employee should be made responsible for ensuring that the spill kit is kept up-to-date (inspect semi-annually). If a spill kit does not have the materials outlined in this SOP, the designated employee should notify their supervisor and/or the MS4 Program Coordinator. All employees should know where the spill kit is located and the basic spill response procedures to address smaller incidents/surcharges.

This document is meant to outline the materials needed to respond to a small fueling and/or maintenance spill. The Fire Department is trained and equipped to respond to hazardous material/unknown material spills and the Public Works Department is equipped to address other larger spill incidents, especially those located within a roadway.

**Public Utilities** (Sewer Spill)  
 2155 Beery Road  
 Phone: 540-434-9959  
 Monday – Friday

**Public Works** (Road, Street Spill)  
 320 East Mosby Road  
 Phone: 540-434-5928  
 Monday – Friday 7:30am - 4:00pm

**Fire Department** (Hazardous Spill)  
 101 North Main Street  
 Phone: 540-432-7703  
 Non-Emergency: 540-437-2600

A minimum spill kit should contain the following materials:

- (3) Oil Socks
- (20) Oil Pads (Pig Mats)
- (2) Pairs of Chemical-Resistant Long Rubber Gloves
- (2) pairs safety Goggles
- (1) Flat Shovel
- Sorbent Material / Solidifier Absorbent (clay kitty litter, saw dust, wood chips)
- (5) Disposable Bags
- (5) Zip Ties
- (1) 5-Gallon Bucket with lid to store all materials

Other Spill prevention materials suggested for maintenance shops (if work is done outside of HDPT):

- (5) Drip Pans
- Labeled bins to dispose of waste
- Duct Tape or Putty puncture holes
- (1) Rubber Drain Cover
- (1) Tarp
- (1) Oil Boom

**Step 1: Stop the spill.** The leak or spill should be stopped if it can be done safely. Determine whether personal protective equipment is needed before taking action. Turn off nozzles or valves from the leaking source. Plug the leak with duct tape or putty, if possible.

**Step 2: Contain and recover the spill.** If the spill or leak cannot be stopped, or significant liquid has already been released, catch the flowing liquid using oil pads, oil socks, or absorbent material. Spreading sorbent material such as clay kitty litter, sand, straw, sawdust, wood chips, or dirt from the roadside can stop the flow and soak up petroleum or other harmful chemicals on the pavement. Note that sorbent material does not make petroleum nonflammable. Solidifiers react with petroleum to turn it into a rubbery substance, immobilizing and lowering the vapor levels.

**Step 3: Collect & Dispose of the contaminated sorbent.** Sorbent material can be collected with a flat shovel and put into buckets, garbage cans, labeled bins, or on top of a tarp. For questions regarding the disposal of spilled material, contact Public Works.

## Appendix K: Stormwater Pollution Prevention Training Plan

### Training Procedure

SOPs have been developed that cover:

- 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 Kit
1. The City of Harrisonburg stormwater management team will distribute the aforementioned SOPs to each departmental supervisor in a designated 'Stormwater Binder'.
    - a. Other stormwater-relevant materials such as Spill Incident Report Forms, Oil/Water Separator Inspections, and Stormwater Site Inspections can be kept in this binder as well.
  2. Binders will be placed in an accessible location for all employees to reference.
  3. SOPs are also available on the City intranet (C2) system accessible by all City of Harrisonburg employees.

The training presentation includes an overview of stormwater management pollution prevention techniques and an overview of local waterway impairments. When possible, this presentation will be integrated into an online training program, Target Solutions. The training will include basic pollution prevention procedures and spill response. As needed, site/operation –specific issue will be discussed. Employees at sites with SWPPPs will take an additional training specific to the SWPPP.

### Training and Tracking

Departments with Target Solutions will view an online stormwater training and take a short quiz. Completion will be tracked through Target Solutions. Departments without Target Solutions will be given an in-person training. In-person stormwater training sessions will be held in accordance with regularly held safety trainings to ensure all employees are reached. Sign-in sheets will be used to track attendees.

Year 1 Training – Target Solutions	Year 2 Training – Target Solutions and In-person
Fire Department	City Schools
Community Development	Harrisonburg Electric Commission
Police Department	Public Utilities
Public Transit	Parks and Recreation
Public Works	

Last updated: 3/2019

