



## City of Hopewell

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# Municipal Separate Storm Sewer System Program Plan

For

General Permit No. VAR040015

November 1, 2018 through October 31, 2023

This MS4 Program Plan is in DRAFT form and is available for public comment. This Program Plan has been developed consistent with General Permit No. VAR040015, effective November 1, 2018, as part of the registration statement for permit coverage to discharge stormwater to surface waters of the Commonwealth of Virginia.

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## 1.0 Introduction

Stormwater runoff plays a critical role in the quality of water resources within the Commonwealth and regulatory language requires that Phase II municipalities develop a plan describing best management practices to be implemented in order to minimize their impact on the environment.

The City of Hopewell is authorized to discharge stormwater from its *municipal separate storm sewer system (MS4)* under the *Virginia Pollutant Discharge Elimination System (VPDES)* General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (**MS4s**). This permit is commonly referred to as the City's **MS4 Permit** (VAR040015), and this plan that outlines the City's activities required by the permit is referred to as the City's **MS4 Program Plan (Program Plan)**.

The City's MS4 is defined as a conveyance or system of conveyances, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains owned or operated by the City of Hopewell. The boundaries of the regulated MS4 area is shown in Figure 1.

This Program Plan has been designed to reduce the discharge of pollutants from the City's MS4 to the '*maximum extent practicable*' (**MEP**) consistent with General Permit No.: VAR040015, to protect water quality, and to satisfy the appropriate water quality requirements of the State Water Control Law and its attendant regulations. All legal authority provided by the laws and regulations of the Commonwealth of Virginia have been utilized to control discharges to and from the MS4.

Companion documents include the City's *Total Maximum Daily Load (TMDL) Action Plans (TMDL Action Plans)*. Development and implementation of these TMDL Action Plans are required by the MS4 Permit and include TMDL Action Plans for local streams and/or Rivers, i.e., Cattail Creek and the Appomattox River, and the multi-state Chesapeake Bay TMDL.

Implementation of this Program Plan and the City's Chesapeake Bay and local TMDL Action Plans in an iterative and adaptive manner as required by the MS4 Permit meets the following objectives:

1. Compliance with the standard of reducing pollutants to the MEP,
2. Provides adequate progress in meeting water quality standards, and
3. Satisfies the appropriate water quality requirements of the State Water Control Law and its attendant regulations.

This Program Plan includes the minimum control measures (MCMs) described in Part I E of the MS4 Permit:

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 stormwater management for new development and development on prior developed lands
6. Pollution prevention and good housekeeping for facilities owned or operated by the city within the MS4 service area

Revisions to the MS4 Program Plan are expected throughout the 5 year life of this permit (effective start date: November 1, 2018 through expiration date: October 31, 2023) as part of the process to reduce pollutant loading and protect water quality to the MEP. As such, revisions made in accordance with the MS4 Permit as a result of this process do not require formal modification of the Program Plan. However, the MS4 Program Plan Annual Reports will summarize all revisions and the basis for the revisions.

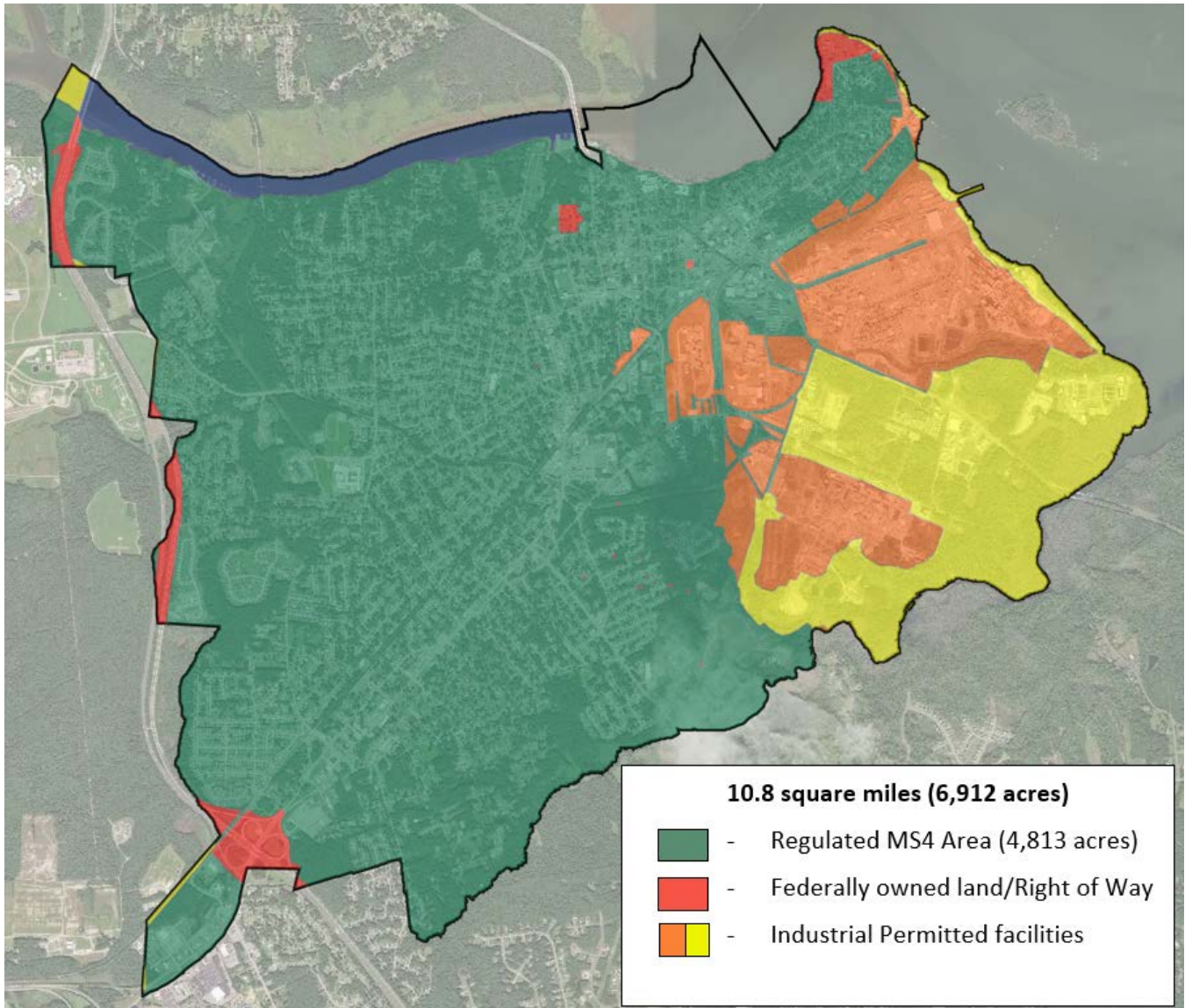


FIGURE 1. City MS4 Area Map

## 2.0 Administration

The City's Stormwater Program within the Department of Public Works holds the primary responsibility for developing, coordinating implementation, and reporting on compliance with this Program Plan. Individuals within other programs and departments as shown in the organizational structure chart below carry out some of the activities within the procedural *Best Management Practices (BMPs)* provided in Section 3. Unless otherwise noted, the Stormwater Program is responsible for implementing the BMPs described herein, and/or providing information for reporting purposes. The City does not rely on an outside entity to implement any of the program MCMs or BMPs.

City of Hopewell 2018 – 2023 Municipal Separate Storm Sewer System Program Plan  
 Permit No. VAR040015  
 May 2019

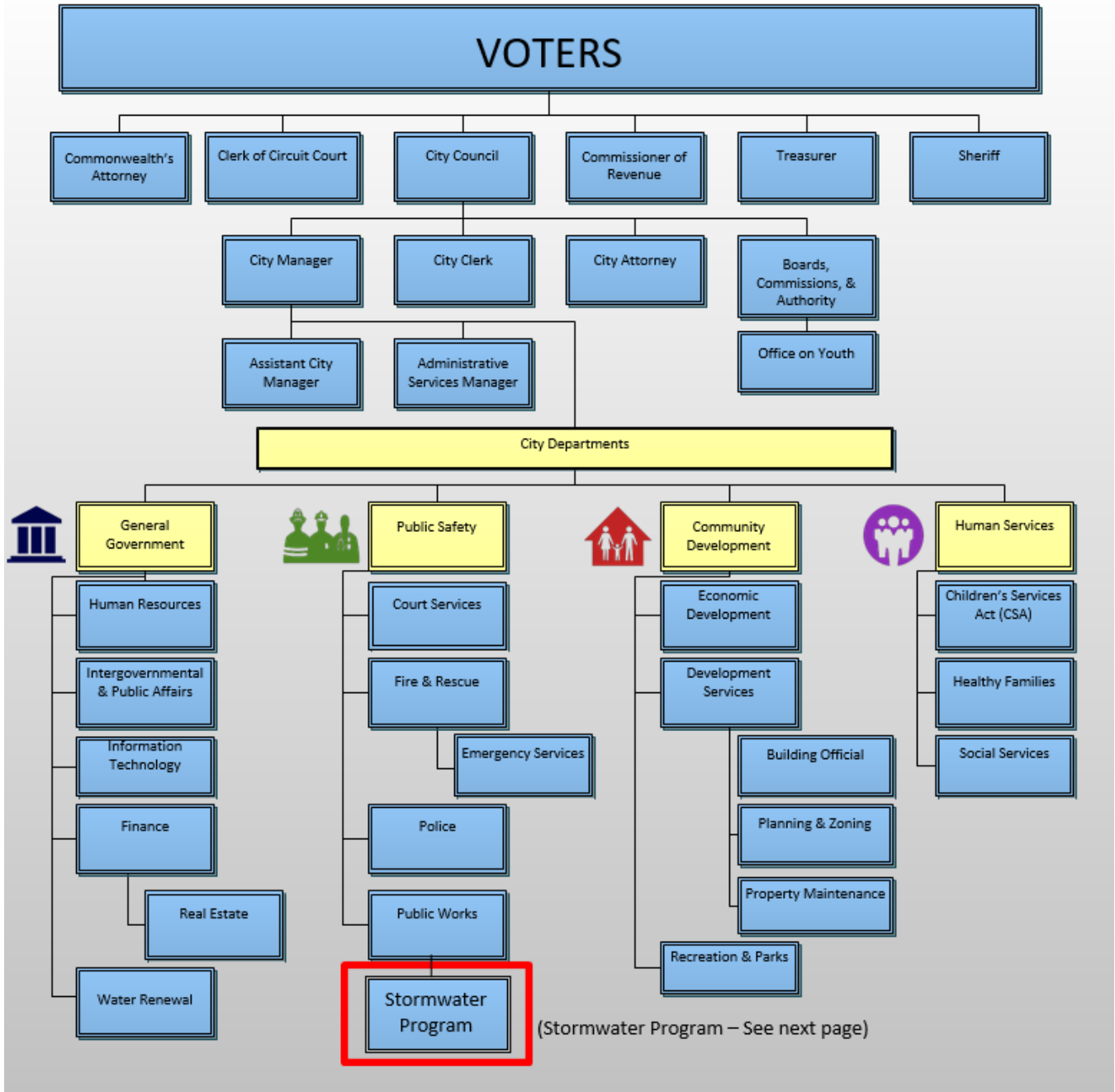
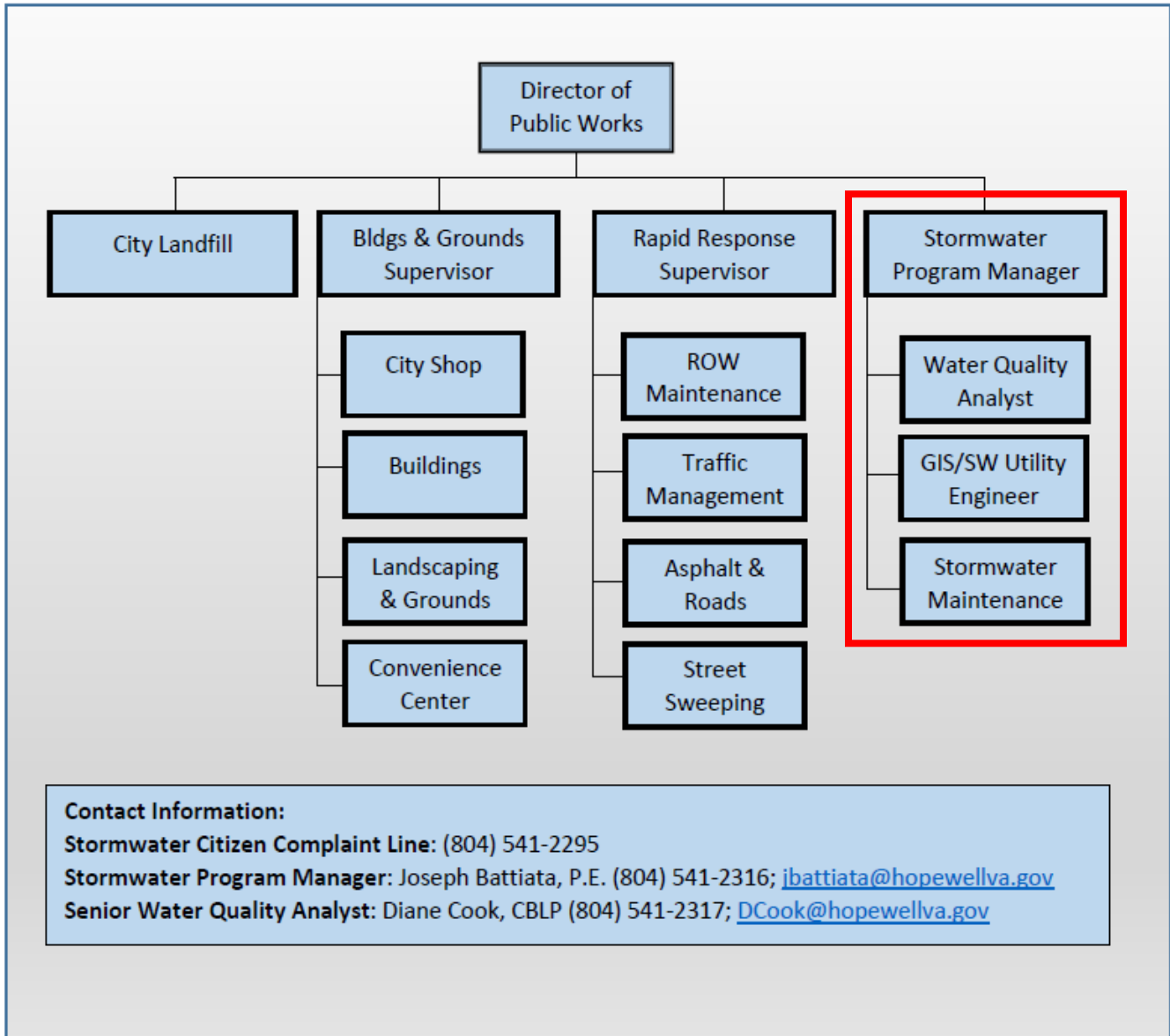


Figure 2A. City Organizational Chart



**Figure 2B. Public Works & Stormwater Program Organizational Chart**

### 2.1 City of Hopewell Stormwater Program

In June of 2015, the Hopewell City Council found that an adequate, sustainable source of revenue for stormwater management activities was necessary to protect the general health, safety, and welfare of residents of the City. They also found that the establishment of a Stormwater Program was needed to manage the City’s Virginia Stormwater Management Program (VSMP) consisting of Erosion & Sediment Control (Minimum Control Measure 4; BMP 4.1) and Stormwater Management for new and redevelopment projects) and meet requirements of the City’s Virginia Pollution Discharge Elimination System (VPDES) Municipal separate storm sewer system (MS4) permit and federal and state regulations to address identified water quality and quantity needs. Therefore, the City formally adopted a Stormwater Utility Fee ordinance to support these efforts.



The Stormwater Program is organizationally located within the Department of Public Works and is responsible for the implementation of the City VSMP program, the MS4 Permit Program and this Program Plan, and meeting the obligations as required by approved TMDLs for the Chesapeake Bay, its tributaries, and local streams.

### 3.0 Minimum Control Measures

This Program Plan utilizes the implementation of separate statutory or regulatory programs to demonstrate compliance with some of the required BMPs within the six Minimum Control Measures (**MCMs**). These separate programs are identified and fully described where appropriate. In all cases where the separate program requires the approval of a third party, i.e., MCM 4: *Construction Site Stormwater Control* is reviewed and approved by the *Virginia Department of Environmental Quality (DEQ)*, documentation of the program's approval status, or the progress toward achieving full approval, is provided in the Program Plan.

#### MCM 1: Public Education & Outreach

This section describes the best management practices that will be implemented in order to meet regulatory requirements for public education and outreach as set forth in the General Permit found at 9VAC25-890-40 Part I E 1. (Part I of the General Permit is provided in Appendix A)

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##### BMP 1.1 Identification of High Priority Stormwater Issues

The identification of high priority stormwater issues is derived from an assessment of citizen complaints over a period of approximately three years. Many complaints are related to nuisance flooding or standing water. The age of the local infrastructure and the relatively flat topography combine to leave small pockets of stormwater for 2 to 3 days after a rain event.

Another focus of complaints are those following short but high intensity rain events that overwhelm the city's outdated drainage infrastructure. In many cases, the only overland flood relief is through residential lots causing or potentially causing property damage.

By far the most common citizen complaint is clogged storm drain inlets, culverts, and ditches. The causes range from leaves and lawn clippings dumped into roadside ditches, excessive sediment from road shoulders and parking areas, and trash and debris picked up by stormwater flooding. Continued engagement with citizens at community events provides the basis of the high priority stormwater issues for this Program Plan. The high priority issues include teaching citizens to not use the city's drainage infrastructure for disposal of yard waste, pollution prevention practices to minimize the volume of trash and debris collected by sudden heavy storms, and the overarching concept that the City's street gutter and drainage system is connected to local streams, the Appomattox River, and the Chesapeake Bay.

These issues have been selected because they will provide the most direct path to draw the attention of the largest cross-section of Hopewellians. Additional targeted messages regarding watershed health and stewardship of the City's water resources can be inserted into the outreach effort over the course of the 5-year permit cycle.

#### 1. Yard Waste in Gutters & Ditches

- **Rationale:** This high visibility issue has public safety and property damage implications. In some cases citizens rake leaves and yard debris into the roadside ditch, while in other cases the debris collects in low spots due to wind. In both cases, leaves, grass clippings, and other yard waste can clog inlets, culverts, and drainage ditches causing stormwater to pond into roads and impact vehicular and

pedestrian traffic. Ponding water can also cause property damage when adjacent to houses, and can carry trash and debris into nearby streams.

- **Target audience:** General public

## 2. Household and Yard Pollution Prevention

- **Rationale:** Plastics and other lightweight disposable packaging comprise a significant portion of the trash and debris that ends up in the drainage system. When this material is not stored in a secure manner it is transported by wind or stormwater runoff. This problem is especially acute when storms coincide with placing household trash containers at the curbside for pickup.
- **Target audience:** General public

## 3. Urban Stormwater: Dirty Runoff = Dirty Creeks

- **Rationale:** The topography and land use patterns within the City prevent most citizens from having direct contact with the many streams and creeks that drain populated areas to the adjacent Appomattox and James Rivers. Residential areas are located on the upland coastal plain, while the drainage channels drop down steep wooded slopes into floodplain valleys that are difficult to access. Likewise, until recently, citizen access to the rivers has been limited to the City Marina and a few additional overlook locations. The result is that very few citizens see firsthand the impact of stormwater pollution on these aquatic resources.
- **Target audience:** General public

**Measureable Goals:** Methods or strategies used to educate the public (MCMs 1.2, 1.3, and 1.4 listed below) will be documented in the Annual Report and will include the following information:

1. The date and location of the event;
2. Approximate size of the target audience;
3. How the importance of the high-priority stormwater issue was conveyed to the Public;
4. Descriptions of the actions promoted to the target audience in order for them to minimize their impact on stormwater; and
5. Where the target audience was directed to get more information (contact and telephone number, website, etc.)

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### BMP 1.2: Traditional Written Materials

**BMP Description:** Informational Brochures, door hangers, billing inserts, and other materials related to the *High Priority Stormwater Issues* will be developed on a periodic basis and distributed to citizens through various means.

**Measureable Goals:** A list of the informational materials, the method of distribution, and the number of citizens reached will be provided in the annual reports.

**Responsible Individual for Implementation:** Stormwater Program Manager

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### **BMP 1.3: Educational Signage**

**BMP Description:** Several large-scale and high visibility stormwater projects are being implemented at various City Parks. Each location will be evaluated for the efficacy of educational signage regarding High Priority Stormwater Issue No. 3: Dirty Runoff = Dirty Creeks. Signage will educate citizens on the impacts of urban runoff and how the stormwater project mitigates those impacts.

**Measureable Goals:** A list of the educational signs and their message and locations will be provided in annual reports.

**Responsible Individual for Implementation:** Stormwater Program Manager

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### **BMP 1.4: Curriculum Materials**

**BMP Description:** A stream restoration project is proposed (fall/winter 2019) in a sub-watershed adjacent to Hopewell High School/Patrick Copeland Elementary School campus and Mathis Park, the most visited park in the City. The larger watershed includes a relatively pristine sub-watershed with a healthy stream channel and wetland system next to the eroded and incised urbanized channel targeted for restoration. This dual subwatershed located adjacent to the school offers an opportunity to create an earth science curriculum for students at both schools.

**Measureable Goals:** A description of the curriculum, grade levels, and other metrics provided by the participating teachers will be provided in Annual Reports.

**Responsible Individual for Implementation:** Stormwater Program Manager

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## MCM 2: Public Involvement & Participation

This section describes the best management practices that will be implemented in order to meet regulatory requirements for public involvement and participation as set forth in the General Permit found at 9VAC25-890-40 Part I E 2 (Part I of the General Permit is provided in Appendix A).

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### BMP 2.1: Stormwater Program Webpage

**BMP Description:** Stormwater Program staff in partnership with the City's IT Department will update the Stormwater Program webpage to include the following elements:

1. A process for the public to report
  - a. potential illicit discharges, improper disposal, or spills to the MS4,
  - b. complaints regarding land disturbing activities, or other potential stormwater pollution concerns, and
  - c. requests for maintenance or repair of drainage infrastructure
2. A home page for the City's MS4 permit, to include the following items:
  - a. MS4 Program Plan,
  - b. MS4 Program Annual Reports, and
  - c. A process for the public to provide input on the MS4 Program Plan

The Stormwater Program webpage can be found at: <https://hopewellva.gov/stormwater-management>

**Measureable Goals:** Confirmation that information on the stormwater website is up to date along with screen shots will be provided in annual reports.

**Responsible Individual for Implementation:** Stormwater Program Manager

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### BMP 2.2: Tree Stewards Program (w/ CBF)

**BMP Description:** The City is initiating the grant-funded project *Expanding Urban Tree Canopy and Green Infrastructure* in partnership with the Chesapeake Bay Foundation that includes the creation of a Tree Stewards program. The grant work plan includes recruiting volunteers to be trained to work with the city's arborist to nurture newly planted trees during the first 3 years after planting, after which they should be well established and require little ongoing maintenance. The Tree Stewards curriculum has been developed by Trees Virginia and will be taught by Virginia Department of Urban Forestry Community Forestry Specialists, Virginia Cooperation Extension Urban Forestry Specialists, and Tree Stewards from neighboring localities.

**Measureable Goals:** The number of new tree stewards trained in the reporting year and the training efforts will be provided in the annual reports.

**Responsible Individual for Implementation:** Stormwater Program Manager

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### BMP 2.3: Educational Events

**BMP Description:** The City hosts several community events through the Hopewell Downtown Partnership, Recreation & Parks Department, etc., including Third Thursdays Open Air Marketplace, Healthy Garden Series, Rockin' On the River, etc., that offer opportunities to promote clean water, the stormwater program, and other initiatives related to stewardship of the City's aquatic resources.

**Measureable Goals:** The approximate number of citizens reached through the identified educational events.

**Documentation:** A list of the educational events, the high priority stormwater issue and how it was delivered, and the approximate number of citizens reached will be provided in annual reports.

**Responsible Individual for Implementation:** Stormwater Program Manager

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#### **BMP 2.4: Restoration (Stream or Watershed Cleanup)**

**BMP Description:** Stormwater Program staff will continue to partner with local groups including the Friends of the lower Appomattox River (FOLAR), the Chesapeake Bay Foundation, Keep Hopewell Beautiful, etc., other City Departments such as the Recreation & Parks Department and the Hopewell School Board, and local businesses with active community outreach volunteer programs such as AdvanceSix and Ashland Hercules, to facilitate 'Adopt a Stream' and Adopt an Inlet programs, host Stream Walks and Stream Clean-up Days, etc.

**Measureable Goals:** The approximate number of citizens participating in the identified restoration events.

**Documentation:** A list of the restoration events including a description of the event, the date, and the approximate number of participants will be provided in annual reports.

**Responsible Individual for Implementation:** Stormwater Program Manager

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#### **BMP 2.5: Pollution Prevention**

**BMP Description:** Stormwater Program staff will continue to promote and host storm drain inlet stenciling and 'No Dumping' storm drain discs. Likewise, staff will continue to collaborate with Recreation & Parks Department to install pet waste stations at popular locations throughout the City.

**Measureable Goals:** The approximate number of citizens participating in the identified pollution prevention activities.

**Documentation:** A list of the events, inlet locations, and the approximate number of citizens participating, and other activity specific information will be provided in annual reports.

**Responsible Individual for Implementation:** Stormwater Program Manager

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#### **BMP 2.6: Water Quality Monitoring Program**

**BMP Description:** The Stormwater Program proposes to develop a Citizen Water Quality Monitoring program in partnership with the Alliance for the Chesapeake Bay. It is anticipated that the program will be developed during the first 2 years of the permit cycle, and continue for the remaining 3 years and into subsequent permit cycles.

**Measureable Goals:** The number of citizens participating in the water quality monitoring program.

**Documentation:** A formal monitoring program, framework, implementation schedule, and the anticipated number of participants will be provided in the annual reports.

**Responsible Individual for Implementation:** Stormwater Program Manager

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### MCM 3 Illicit Discharge Detection & Elimination

This section describes the best management practices to be implemented in order to meet regulatory requirements for illicit discharge detection and elimination as set forth in the General Permit found at 9VAC25 890-40 Part I E 3 (Part I of the General Permit is provided in Appendix A).

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#### BMP 3.1: MS4 Map and Information Table

**BMP Description:** Stormwater Program staff developed a robust GIS map and accompanying table to reflect the MS4 infrastructure data and other spatial elements of the stormwater program.

**Measureable Goal:** The MS4 Map and Information Table will be updated as new construction is completed and additional information is received concerning existing infrastructure. The objective is to maintain an up-to-date map of the storm sewer outfalls that provides a tool for the City's Illicit Discharge Detection and Elimination Program. Effectiveness will be determined based on its use as a tool for identifying illicit discharges.

**Documentation:** A confirmation statement that the MS4 Map and corresponding information table have been updated to reflect any changes to the MS4 occurring on or before June 30 of the reporting year will be provided in annual reports.

The MS4 Map and Information Table will be maintained and updated as per Part I E 3 a (1-5) of the General Permit, and will include, at a minimum, the following information:

1. The MS4 regulated service area boundary
2. The storm sewer system owned or operated by the City, including Location of MS4 points of discharge to surface waters
3. The name of the receiving waters to which the MS4 discharges
4. Stormwater management facilities owned by the City
5. Stormwater management facilities owned by private parties
6. Unique identifier for each mapped item

The MS4 information Table includes the following data for each point of discharge:

1. The unique identifier for each point of discharge
2. The latitude and longitude of the point of discharge;
3. The estimated regulated acreage draining to the point of discharge;
4. The name of the receiving water;
5. The 6th Order Hydrologic Unit Code of the receiving water;
6. An indication as to whether the receiving water is listed as impaired in the Virginia 2016 305(b)/303(d) Water Quality Assessment Integrated Report;
7. The predominant land use for each point of discharge to an impaired water; and
8. The name of any EPA approved TMDL that assigns a wasteload allocation to the City.

**Responsible Individual for Implementation:** Stormwater Program Manager

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### **BMP 3.2: Notification of Interconnections with Adjacent MS4s**

**BMP Description:** The City of Hopewell’s MS4 system interconnects with VDOT’s and Ft Lee’s MS4. Both have been previously notified and are aware of the interconnection. No other MS4s are currently adjacent to the City, however, any new MS4s will be notified if they interconnect with the City.

**Measureable Goal:** Updates to the MS4 Map and copies of written notifications of new physical interconnections to other MS4s within 90 days..

**Responsible Individual for Implementation:** Stormwater Program Manager

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### **BMP 3.3: Implementation of an Illicit Discharge Detection & Elimination Program**

**BMP Description:** The City of Hopewell prohibits non-stormwater discharges, including illegal dumping, into the storm sewer system through Chapter 31 (*Storm Sewers and Sewage Disposal*) Article I (*In General*) and VI (*Storm Sewers*) of the City Code of Ordinances. Article VI prohibits illicit connections and discharges to the storm sewer system and establishes legal authority to inspect, conduct surveillance, and monitor to ensure compliance. The Article also gives the City the authority to initiate enforcement actions and establishes enforcement provisions for violations.

In addition, the Stormwater Program implements an Illicit Discharge Detection and Elimination (IDDE) Program that includes written procedures to detect, identify, and address non-stormwater discharges, including illegal dumping. Procedures include written dry weather field screening of selected MS4 outfalls.

**Measureable Goal:** The number of outfalls screened in accordance with the dry weather field screening procedures, and the number of potential illicit non-stormwater discharges reported or observed, actions taken, and the resolution.

**Documentation:** The City’s IDDE Program Manual can be found on the Stormwater Program webpage: Illicit Discharges: Reporting Stormwater Pollution. Documentation of reported and/or observed non-stormwater discharges and any corrective actions taken during the reporting period will be documented in the Annual Reports in accordance with the City’s IDDE Program Manual. Documentation includes:

1. A description of the reported or observed discharge, including:
2. Date of violation of the potential illicit non-stormwater discharge
3. Location of the potential illicit non-stormwater discharge
4. Necessary corrective or disciplinary action taken

**Responsible Individual for Implementation:** Stormwater Program Manager

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#### MCM 4: Construction Site Stormwater Runoff Control

This section describes the best management practices that will be implemented in order to meet regulatory requirements for construction site stormwater runoff control as set forth in the General Permit found at 9VAC25-890-40 Part I E 4.

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##### **BMP 4.1: Implement a Virginia Erosion & Sediment Control Program (VESCP)**

**BMP Description:** The City implements a VESCP in accordance with the Virginia Erosion & Sediment Control Law (§62.1-44.15:51 et seq.), regulations (9VAC25-840) and the Erosion and Sediment Control and Stormwater Management Certification Regulations (9VAC25-850). The City’s VESCP is codified in the City’s Code of Ordinances:

Chapter 14 Article I: General (Sections 14-1 thru 14-8)

Chapter 14 Article II: Permit & Plan for Land Disturbing Activities (Sections 14-26 thru 14-32).

The VESCP establishes the provisions for addressing stormwater runoff, erosion, and sedimentation on regulated land disturbing activities. Regulated land disturbance activities are those defined in §62.1-44.15:51 of the Code of Virginia that result in the disturbance of 2,500 square feet or greater and those on individual residential lots or sections of residential developments being developed by different property owners and where the total land disturbance of the residential development is 2,500 square feet or greater. The City utilizes an agreement in lieu of a plan as provided in §62.1-44.15:55 of the Code of Virginia for this category of land disturbances.

Article II requires a land disturbance permit prior to engaging in land disturbance activity that is conditioned on an approved erosion and sediment control plan or an agreement in lieu of a plan in accordance with the Erosion and Sediment Control Law (§62.1-44.15:51 et seq. of the Code of Virginia). Plans shall be compliant with the minimum standards identified in 9VAC25-840-40 of the Erosion and Sediment Control Regulations.

Chapter 14 Article II also provides legal authority to require compliance with the approved plan and require changes to an approved plan when an inspection finds that the approved plan is inadequate.

Chapter 14 Article I provides legal authority to conduct inspections with an inspector holding an ESC Inspector’s Certification from DEQ.

**Measureable Goal:** The objective is to ensure ESC plans are prepared and approved according to ESC Laws and Regulations, inspections are performed as specified in the regulations, and that correction or enforcement, when appropriate, occurs when inspections find deficiencies. The expected result is that ESC is effective at all regulated land disturbance activities.

**Documentation** The regulated land disturbing activities reviewed, approved, and inspected during the reporting period will be provided in the Annual Reports, to include:

1. the number of regulated land disturbing projects that occur during the reporting year,
2. the number of inspections conducted, and
3. the number and type of enforcement actions.

**Responsible Individual for Implementation:** Stormwater Program Manager

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**BMP 4.2: Written Procedures for the Effective implementation of the City VESCP.**

**BMP Description:** The Stormwater Program has developed a formal guidance document: *Guidance for Land Disturbing Activities – Tools & Procedures for Implementation of the City’s Erosion & Sediment Control and Stormwater Management Programs*, latest revision date July 2017.

This document provides written procedures and schedules for plan submission, review and approval, and inspections to ensure the erosion and sediment controls are properly implemented. This document also provides written procedures for requiring compliance through corrective action or enforcement action to the extent allowable under City ordinance.

The guidance document also outlines the roles and responsibilities of the City Stormwater Program in implementing the VESCP.

**Measureable Goal:** Regulated land disturbing activities are reviewed, approved, and inspected in accordance with City ordinances and approved standards and specifications. The referenced guidance documents are regularly reviewed and updated as needed, and maintained on the City’s Stormwater Program webpage: Erosion & Sediment Control and Stormwater Management for Land Disturbing Activities.

**Documentation:** The guidance document: *Guidance for Land Disturbing Activities – Tools & Procedures for Implementation of the City’s Erosion & Sediment Control and Stormwater Management Programs* can be found on the Stormwater Program webpage: includes the following:

1. Written inspection procedures and inspection schedule to ensure the erosion and sediment controls are properly implemented and all of the applicable documents are utilized during inspection;
2. Written procedures for requiring compliance through corrective action or enforcement action to the extent allowable under City ordinance, or other legal mechanisms; and
3. The roles and responsibilities of Stormwater Program personnel.

**Responsible Individual for Implementation:** Stormwater Program Manager

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## MCM 5: Post Construction Stormwater Management for New Development and Development on Prior Developed Lands

This section describes the best management practices for post-construction stormwater management for new development and development on prior developed lands as set forth in the General Permit found at 9VAC25-890-40 Part I E 5.

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### BMP 5.1: Implement a Virginia Stormwater Management Program (VSMP)

**BMP Description:** The Stormwater Program implements a Virginia Stormwater Management Program (VSMP) consistent with the Virginia Stormwater Management Law (§ 62.1-44.15:15:24 et seq. of the Code of Virginia), VSMP Regulations (9VAC25-870) and the Erosion and Sediment Control and Stormwater Management Certification Regulations (9VAC25-850). The VSMP is codified in the City’s Code of Ordinances:

Chapter 14 Article IV: Stormwater Management (Sections 14-51 thru 14-65)

The VSMP establishes the provisions for all regulated land disturbance activities over 2,500 square feet (new development and development on prior developed lands) to design a stormwater management (SWM) plan that addresses the applicable water quality and water quantity requirements, is installed in accordance with approved plans, and has an enforceable long term maintenance plan. The VSMP also establishes the roles and responsibilities of the Stormwater Program personnel in implementing the program.

**Measurable Goal:** Regulated land disturbing activities reviewed, approved, and inspected during the reporting year consistent with City ordinances and approved standards and specifications for Stormwater Management.

**Documentation:** Annual reports will include the following information for the reporting period:

1. The number of stormwater management facilities installed,
2. The number of inspections conducted, number of enforcement actions to ensure long term maintenance, and
3. The number and description of significant maintenance or repair activities performed.

**Responsible Individual for Implementation:** Stormwater Program Manager

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### BMP 5.2: Implement an Inspection & Maintenance Program for City & Privately Owned Stormwater Management Facilities

**BMP Description:** The Stormwater Program’s inspection and maintenance procedures for post construction stormwater management facilities is outlined in *Guidance for Land Disturbing Activities – Tools & Procedures for Implementation of the City’s Erosion & Sediment Control and Stormwater Management Programs*. This guidance document includes written procedures for performing inspection and maintenance in order to ensure adequate long-term operation and maintenance of stormwater facilities. City owned stormwater facilities are inspected at least once each year and maintenance performed as identified by the inspection, and privately owned stormwater facilities are inspected at least once each 5-year period. Owners of private stormwater facilities are notified if the inspection identifies any maintenance needs..

**Measurable Goal:** The inspection and maintenance of all City owned stormwater management facilities, including those implemented to meet the Chesapeake Bay TMDL load reduction requirements, and inspections of privately owned facilities consistent with VSMP requirements.

**Documentation:** The inspection and maintenance of stormwater facilities are tracked in a spreadsheet. Updates to the spreadsheet will be noted in the Annual Reports. The spreadsheet data is described in BMP 5.3.

**Responsible Individual for Implementation:** Stormwater Program Manager

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### BMP 5.3: Stormwater Management Facility Tracking Data

**BMP Description:** The Stormwater Program maintains a spreadsheet of all known city-owned and privately owned stormwater management facilities that discharge into the MS4. The data also includes all BMPs implemented by the permittee to meet the Chesapeake Bay TMDL load reduction, as required in Part II A. The dataset includes:

1. The stormwater management facility or BMP type;
2. Location: latitude and longitude, and 6th Order Hydrologic Unit Code;
3. The total acres, pervious acres, and impervious acres treated;
4. The date the facility was brought online (MM/YYYY). When the online date is unknown, an online date of June 30, 2005 is used;
5. Whether private or public owned and operated;
6. If an enforceable maintenance agreement is in place;
7. Whether part of the Chesapeake Bay or a Local TMDL action plan;
8. The date of the most recent inspection

**Measureable Goal:** All stormwater facilities are tracked and data is updated annually.

**Documentation:** Identification of any new SWM facility brought online during the reporting year. A confirmation statement that:

1. All stormwater management facility information for those projects which required coverage under the General VPDES Construction Permit was submitted through the Virginia Construction Stormwater General Permit database
2. All stormwater management facility information for those projects which did not require General VPDES Construction Permit was electronically reported using the DEQ BMP Warehouse and the date on which the information was submitted.

**Responsible Individual for Implementation:** Stormwater Program Manager

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## MCM 6: Pollution Prevention and Good Housekeeping for Municipal Facilities

This section describes the best management practices that will be implemented in order to meet regulatory requirements for post-construction stormwater management for new development and development on prior developed lands as set forth in the General Permit found at 9VAC25-890-40 Part I E 5.

### BMP 6.1: Good Housekeeping and Pollution Prevention Manual

**BMP Description:** The Stormwater Program maintains written procedures for operational activities at city owned facilities, such as road, street, and parking lot maintenance; equipment maintenance; and the application, storage, transport, and disposal of pesticides 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 permittee vehicle wash water or both 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) through the use of best management practices;
6. Prevent pollutant discharge into the MS4 from leaking municipal automobiles and equipment; and
7. Ensure that the application of materials, including fertilizers and pesticides, is conducted in accordance with the manufacturer's recommendations.

**Measureable Goal:** Appropriate City personnel are familiar with the Good Housekeeping and Pollution Prevention Manual

**Documentation:** The Good Housekeeping and Pollution Prevention Manual is regularly reviewed and updated as needed and can be found on the Stormwater Program webpage: Illicit Discharges: Reporting Stormwater Pollution

**Responsible individual for implementation:** Stormwater Program Manager

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### BMP 6.2: Develop of Stormwater Pollution Prevention Plans for High Priority Facilities

**BMP Description:** A review of city owned properties and facilities identified the closed City Landfill and the City Public Works Yard as *High Priority Facilities (Identification of High Priority Facilities, September, 2015)*. High priority facilities are those facilities that have a high potential for discharging pollutants and are not covered under a separate VPDES permit.

**Measureable Goal:** A Stormwater Pollution Prevention Plan (SWPPP) has been developed for each facility. Each SWPPP is reviewed and updated as needed based on an annual inspection.

**Documentation:** The SWPPP for each High Priority Facility

**Responsible individual for implementation:** Stormwater Program Manager

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### **BMP 6.3: Personnel Stormwater Pollution Prevention Training Program**

**BMP Description:** A classroom and field training program in good housekeeping and pollution prevention based on the City’s Good Housekeeping and Pollution Prevention Manual will be developed and implemented as follows:

1. Stormwater Program personnel responsible for illicit discharge detection will receive training in recognition and reporting of illicit discharges no less than once per 24 months;
2. Public Works personnel performing road, street, and parking lot maintenance will receive training in pollution prevention and good housekeeping associated with those activities no less than once per 24 months;
3. Public Works personnel working in and around the public works yard and vehicle and equipment repair shop will receive training in good housekeeping and pollution prevention practices associated with those facilities no less than once per 24 months

**Measureable Goal:** Appropriate City personnel implement effective good housekeeping and pollution prevention practices during the course of performing their regular duties.

**Documentation:** A written training plan will be developed in the first 12 months of the permit cycle and incorporated into this Program Plan.

**Responsible individual for implementation:** Stormwater Program Manager

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### **BMP 6.4: Training & Certification of City Personnel**

**BMP Description:** The Requirements for city personnel and hired contractors to be trained and certified in the following disciplines:

1. Stormwater Program personnel (and contractors if applicable) serving as Stormwater Program plan reviewers, inspectors, program administrators, and construction site operators will obtain and maintain the appropriate certifications as required under the Virginia Erosion and Sediment Control Law and Virginia Stormwater Management Law and attendant regulations.
2. City personnel who apply pesticides will be certified in accordance with the Virginia Pesticide Control Act (§ 3.2-3900 et seq. of the Code of Virginia; Certification by the Virginia Department of Agriculture and Consumer Services (VDACS) Pesticide and Herbicide Applicator program).
3. Emergency Response personnel with the Hopewell Fire Department and law enforcement are trained in spill response as part of a larger emergency response training program.

**Measureable Goal:** Applicable city personnel have required certifications.

**Documentation:** Copies of certifications and other documentation of training will be included in the Annual Report.

**Responsible individual for implementation:** Stormwater Program Manager

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#### **BMP 6.5: Turf & Landscape Management**

**BMP Description:** City personnel will implement a turf and landscape nutrient management plan (NMP) developed by a certified turf and landscape nutrient management planner in accordance with §10.1-104.2 of the Code of Virginia on all lands owned or operated by the City where nutrients are applied to a contiguous area greater than one acre.

**Measurable Goal:** A Nutrient Management Plan is developed for all lands for which turf and landscape nutrient management plans are required.

**Documentation:** A list of lands for which turf and landscape nutrient management plans are required including the following information: (a) The total acreage on which nutrients are applied; (b) The date of the most recently approved nutrient management plan for the property; and (c) The location in which the individual turf and landscape nutrient management plan is located.

**Responsible individual for implementation:** Stormwater Program Manager

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#### **BMP 6.6 Improved Contractor Safeguards to Ensure Program Consistent Measures and Procedures**

**BMP Description:** The City's standard contract language will be reviewed and modified as needed to incorporate references to standard good housekeeping and pollution prevention practices that require contractors to use appropriate control measures and procedures for stormwater discharges, when applicable.

**Measureable Goal:** Standard contract language includes adequate reference to good housekeeping and pollution prevention practices.

**Documentation:** A copy of applicable contract language will be provided in the Annual Report and the Good Housekeeping and Pollution Prevention Manual.

**Responsible individual for implementation:** Stormwater Program Manager

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#### **BMP 6.7: Compliance with Virginia Pesticide Control Act (§ 3.2-3900 et seq. of the Code of Virginia)**

**BMP Description:** Ensure that the application of materials, including fertilizers and pesticides, is conducted in accordance with the manufacturer's recommendations.

**Measureable Goal:** All personnel responsible for the application of pesticides shall be certified as Pesticide Applicators through the Virginia Department of Agriculture and Consumer Services.

**Documentation:** A current list of certified personnel will be included in the Annual Report

**Responsible individual for implementation:** Stormwater Program Manager

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