



City of Staunton, Virginia



MS4 ANNUAL REPORT

**For the Virginia Stormwater Management Program General
Permit Registration Statement for Small Municipal Separate
Storm Sewer Systems (MS4)**

General Permit No. VAR040132

**Reporting Period: Permit Cycle 2, Year 3
July 1, 2020 through June 30, 2021**

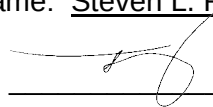
Certification

CERTIFICATION STATEMENT

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.

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Title: City Manager

Signature:  _____ Date: September 30, 2021

Permit Number: VAR040132

MS4 Name: City of Staunton

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INTRODUCTION

Discharges from municipal separate storm sewer systems are regulated under the Virginia Stormwater Management Act, the Virginia Stormwater Management Program (VSMP) Permit regulations and the Clean Water Act as point source discharges. MS4 regulations were developed and implemented in two phases. Implementation of the first phase began in the early 1990s and required that operators of MS4s serving populations of greater than 100,000 people (per the 1990 decennial census) apply for and obtain a permit to discharge stormwater from their outfalls. The second phase of MS4 regulations became effective March 23, 2003, and required that operators of small MS4s in "urbanized areas" (as defined by the latest decennial census) obtain a permit to discharge stormwater from their outfalls.

In August 2013, the City of Staunton received a Notice of Designation as a regulated small MS4. Part of the City's jurisdiction had been identified as being located within an urbanized area according to the 2010 Decennial Census. As a result, the City must apply for and maintain coverage under the General Permit for the Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems. Similar to the Phase I programs, small MS4 programs must be designed and implemented to control the discharge of pollutants from their storm sewer system to the maximum extent practicable in a manner that protects the water quality in nearby streams, rivers, wetlands and bays.

On May 16, 2018, the City of Staunton submitted a Registration Statement outlining the City's MS4 Program to the Department of Environmental Quality (DEQ). On November 1, 2018, the City received notification from DEQ that the City had obtained continuing coverage under the General VPDES Permit for Small MS4s. Coverage under the Virginia General Permit for Discharges from Small Municipal Storm Sewer Systems requires each MS4 locality to submit an annual report by October 1 of each year describing the status of the Program's implementation for the previous permit year, July 1 through June 30.

Stormwater discharges from Phase II (small) MS4s are regulated under the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems. Small MS4s include storm sewer systems operated by cities, counties, towns, federal facilities such as military bases, Veteran's Affairs hospitals and research facilities, Department of Defense facilities and parkways, and state facilities such as VDOT, community colleges and public universities. Under the General Permit, small MS4s must develop, implement and enforce a program that includes the following "six minimum control measures":

- Public education and outreach on stormwater impacts
- Public involvement and participation
- Illicit discharge detection and elimination
- Construction site stormwater runoff control
- Post-construction stormwater management in new development and redevelopment
- Pollution prevention/good housekeeping for municipal operations

Activities within each of the control measures are termed Best Management Practices or BMPs.

This document is the City of Staunton's required Annual Report for Permit Year 3. Permit Year 3 is the period starting on July 1, 2020 and ending on June 30, 2021. The annual report includes the status of the BMPs implemented as part of the City's MS4 Program Plan. The annual report lists the measurable goals and the accomplishments achieved for each BMP. The annual report also includes any changes to the City's MS4 Program Plan.

ABOUT STAUNTON

Located in the historic Shenandoah Valley, Staunton was first settled in 1732. The hamlet was named in honor of Lady Staunton, wife of Sir William Gooch who served as lieutenant-governor of Virginia from 1727 to 1749. The Virginia General Assembly established Staunton as a town in 1761.

Staunton, unique among cities for its natural beauty and architectural heritage, provides an excellent quality of life for its unified community by continuing the tradition of citizen leadership, innovation, and perseverance. The best of its history combined with the best new ideas and technology make Staunton an exceptional small city with charm, energy, ambiance, and creativity that others seek to emulate.

Today, Staunton is an independent city with a population of 24,512 as of 2010 census, located within Augusta County. Staunton is approximately 19.7 square miles in size. The urbanized area within the City of Staunton is 13.2 square miles as identified in Figure 1. This urbanized area represents a portion of the Staunton-Waynesboro Metropolitan Statistical Area, as defined by the Office of Management and Budget, which had a population of 118,502 as of the 2010 census.

The City of Staunton lies within four (4) major watersheds. The hydrologic unit codes (HUC) are the following:

<u>Name</u>	<u>HUC 12</u>	<u>VAHU6</u>
➤ Lewis Creek	020700050301	PS06
➤ Christians Creek/Barterbrook Branch	020700050202	PS09
➤ Middle River/Falling Spring Run	020700050302	PS07
➤ Middle River/Bell Creek	020700050104	PS04

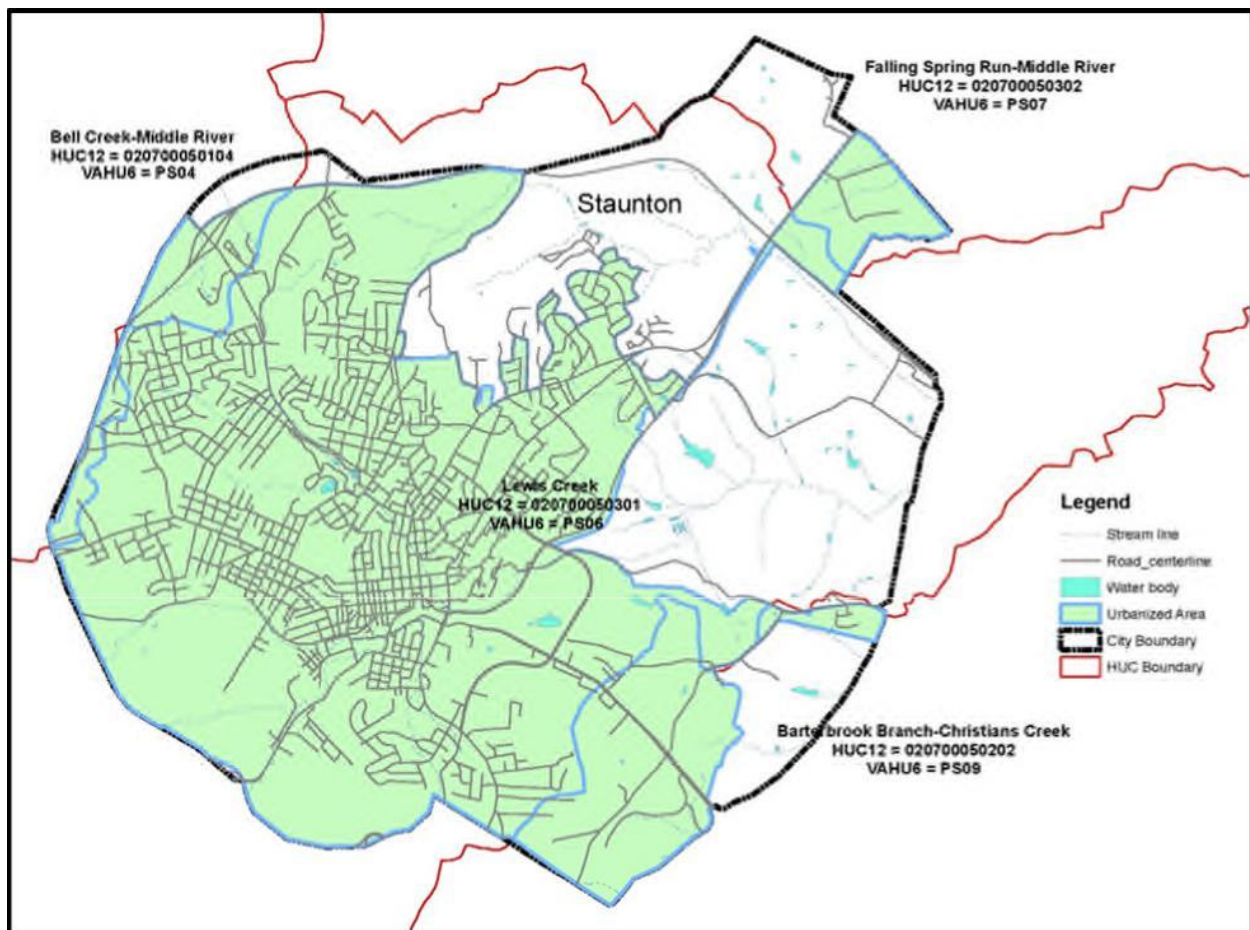


Figure 1

Due to COVID 19 some activities and measures could not be implemented during the Permit Cycle 2 – Year 3 – July 1, 2020 - June 30, 2021 reporting period. These items will be noted throughout the report.

MS4 PROGRAM

Minimum Control Measure 1 – Public Education and Outreach

The public education and outreach (PE&O) BMPs will be a critical component of City's MS4 program. The PE&O program will help the citizens of the community better understand the environmental challenges that they are facing as a community. This new knowledge will encourage the community as a whole to implement changes in their lifestyles that will reduce the negative impacts their daily choices have on the environment. Additionally, this program empowers the citizens to become part of the stormwater solution by developing an understanding of program goals and providing a variety of ways to communicate observed issues to the program administrator.

The PE&O BMP will focus on the following high priority areas:

- Waste/Pollution Management was selected due to the immediate impact to the community. The City of Staunton spends significant resources every year to clean streets, maintain BMP's, and to facilitate better water quality for the community.
- Watershed Awareness brings attention to the importance of caring for and maintaining the quality of the City's watersheds because the City's watersheds are located at the headwaters of the Chesapeake Bay and so can impact downstream watersheds and ultimately the Chesapeake Bay itself.
- Chesapeake Bay and local waterway nutrient impacts was chosen to increase citizen understanding and support for the City's nutrient reduction efforts. The City will be required to dedicate significant resources on the reduction of nutrients to address TMDL's. Resource allocation will be restricted without significant community support and funding.

Modifications to MCM 1:

Date: SWM Brochure was updated March of 2021

A copy of the educational brochure, "Staunton's Solutions for Stormwater Pollution, Issue Number IV," has been included in Appendix A.

BMP – 1.1 School Presentations (Category - Speaking Engagements)

The City will continue to develop targeted presentations to school age children in grades 4 through 9. The presentations will be age appropriate with the goal to build on past presentations in future years. Presentations will include interactive tools to help better understand the effects of water pollution and strategies for prevention as they relate to the City's high priority topics.

Objective and Expected Results: By targeting grades 4 through 9, the City will be providing these children with the required information to foster stormwater awareness that will translate into long lasting positive changes toward stormwater issues.

Implementation Schedule: The City will continue to provide the presentations throughout the permit cycle. The City will target 4 to 6 presentations per year. The Engineering Division will be responsible for developing and giving the presentations.

Method to Determine Effectiveness: The measure for this BMP is based on the total number of presentations per year and the total number of students. The annual report will include these numbers.

Annual Reporting: The audience for Permit Year 3 was based on the number of students in the 6th and 9th grades attending the presentations. After consulting with school officials, it was determined that 6th and 9th grades present the best opportunity to accommodate stormwater topics within the curricula for those grades. ***Due to COVID-19 restrictions, the Environmental Programs Division produced a 10-minute video presentation of the Enviroscope that was presented to the 6th grade class at Shelburne Middle School in Staunton.**

Earth Day Scavenger Hunt: *Environmental Programs Division also participated in this year's Earth Day, an event that included a citywide scavenger hunt. The Enviroscope was set up in a downtown storefront window, and participants needed to view and describe certain aspects of the display to receive credit as part of the activity.*

Approximate Number of Earth Day Scavenger Participants: +/- 25

School Presentations:

Permit Year 3	Number of Presentations Planned	Number of Presentations Conducted	Number of Students Impacted	Number Presentations Anticipated once COVID protocol allows	Number Anticipated Students Impacted
July 1, 2020- June 30, 2021	7 to 9	*1	160	7-9	400

BMP – 1.2 Waste Awareness Brochures (Category - Written Materials)

The City will develop educational brochures to provide information in an easy to read format. The brochures will concentrate on the high priority topics. In keeping the topics open to all high priority areas, the City will have the flexibility to modify the Program from one topic to another as priorities change from one year to the next. Each brochure will include information about the topic, identify desirable changes in behavior and provide contact information for questions and reporting. The educational brochures will be made available through mass mailings and at various City offices and community events.

Objective and Expected Results: By distributing educational brochures to the citizens, the City will be raising the general awareness of stormwater issues as well as providing actions the public can take to help protect water quality and minimize impacts to stormwater runoff.

Implementation Schedule: Waste brochures will continue to be developed and distributed throughout the permit cycle. The Engineering Division will be responsible for the brochure's content and distribution.

Method to Determine Effectiveness: The effectiveness of this BMP is based on the total number of brochures distributed. The annual report will include this number.

Annual Reporting: The brochures were distributed citywide with the City's water and sewer bills and by placing copies of the brochures at various locations throughout the City. A copy of the brochure has been included as Appendix A.

Waste Awareness Brochures:

Permit Year 3	Number of Brochures Distributed
July 1, 2020- June 30, 2021	+/-12,200

BMP – 1.3 Watershed Awareness (Category - Electronic Media)

The City has developed internet social media material to provide information in an easy to share format. The material concentrates on the topic of “Watershed Awareness”. This topic was chosen in order to bring awareness to the importance of caring for and maintaining the quality of the City’s watersheds and how the City’s watersheds, located at the headwaters, affect downstream watersheds and ultimately the Chesapeake Bay. In keeping the social media format general, it will allow the City to have the flexibility to incorporate multiple types of social media outlets, i.e., Facebook, YouTube, etc. as priorities change and opportunities arise from one year to the next. Each post will include resources and information in regards to Staunton’s watersheds and their impact on a local and state environmental well-being, identify desirable changes in behavior and provide contact information for questions and reporting. The material will be made available through social media posts through a public, City-run social media format.

Web link to the City’s Facebook page:

<https://www.facebook.com/stauntonstormwater>

Objective and Expected Results: By using social media to reach citizens, the City will be raising the general awareness of the stormwater issues concerning watersheds, both locally and at the state level. The material will also provide actions the public can take to help protect water quality and minimize impacts to stormwater runoff.

Implementation Schedule: The Watershed Awareness social media material will continue be developed and posted throughout the permit cycle. The Engineering Division will be responsible for the social media material and its distribution.

Method to Determine Effectiveness: The effectiveness of this BMP is based on the total number of website hits. The annual report will include this number.

Annual Reporting: The estimated target audience reached is calculated by using Facebook's publishing tools and using audience details such as City of Staunton and Environmentalism, and the total number of hits, likes, and reaches on the Facebook page.

Watershed Awareness Social Media:

Permit Year 3	Number hits/likes/reaches
July 1, 2020 - June 30, 2021	2919

Minimum Control Measure 2 – Public Involvement / Participation

The public involvement/participation (POP) BMP will promote valuable input and assistance from the community. Providing the public opportunities to play an active role in the program is instrumental in a successful program. By promoting the availability of the program to the community, public participation will increase leading to a reduction in stormwater pollutants and improved water quality.

The first Lewis Creek Technical Advisory Committee meeting (PCB study) of January 25, 2020 had 15 attendees, including representatives of various local and state agencies and concerned citizens. Meeting summary is available upon request.

The second Lewis Creek Technical Advisory Committee meeting (Lewis Creek PCB Total Maximum Daily Load (TMDL) study) of August 18, 2021 had 14 attendees, including representatives of various local and state agencies and concerned citizens. Meeting summary is available upon request.

Web link to the MS4 Program and annual reports

<https://www.ci.staunton.va.us/departments/engineering-division/ms4-program>

Modifications to MCM 2: None this permit year

BMP – 2.1 Stormwater Webpage

The City has a dedicated stormwater webpage which provides detailed stormwater information to the public. The stormwater webpage is found on the City website at the address above. Information available on the webpage includes: definitions of common stormwater elements (i.e. stormwater, watershed, Chesapeake Bay, pollution prevention, etc.), details about why stormwater is important, identification of how citizens can help, links to the City's stormwater program elements (Ordinances, erosion & sediment control, policies, design standards, general permit, annual reports, etc.), links to Federal and State stormwater program information and contact information for reporting and questions.

Objective and Expected Results: The objective of the dedicated website is to provide large amounts of detailed federal, state and local program information, accessible to a large number of citizens. The expected result is to easily be able to search for and find detailed information on stormwater in general as well as information pertaining to the City of Staunton's MS4 Program. The website also provides citizens with information on how to comment on the City's MS4 program plan, and report erosion/sediment control issues, illicit discharges, and stormwater related complaints.

Implementation Schedule: The City has implemented the website and will maintain the website by adding the annual reports and updating the site's content and links. The Engineering Division will be responsible for the page's content and will advise the webmaster of all required changes.

Method to Determine Effectiveness: The effectiveness of this BMP is based on the total number of website hits that occur each year. The annual report will include this number.

Web link to the City's Stormwater Webpage:

<https://www.ci.staunton.va.us/departments/engineering-division>

Annual Reporting:

Stormwater Webpage:

Permit Year 3	Number of Website Hits
July 1, 2020 - June 30, 2021	1146

BMP – 2.2 Tree Planting Program (Restoration)

The City currently has a Tree Planting Program where new trees are planted, dead or diseased trees are replaced with new plantings and structural pruning is performed on young existing trees. The City also organizes and participates in an Arbor Day/Earth Day event where seedlings are handed out to participants. The City will continue its tree planting program and its participation in the Arbor Day/Earth Day event. The City will hand out seedlings and educational brochures and discuss the benefits of tree planting on water quality.

Objective and Expected Results: Encourage the community to actively take part in stormwater enhancements. Raise the general awareness of stormwater issues as well as discussing actions, such as tree planting, the public can take to help protect water quality and minimize impacts to stormwater runoff.

Implementation Schedule: The City will continue its Tree Planting Program and participating in the Arbor Day/Earth Day event. Parks and Recreation will continue to be responsible for these programs

Method to Determine Effectiveness: The effectiveness of this BMP is based on the total number of trees planted, the number of trees pruned, the number of participants and the number of seedlings handed out at the Arbor Day/Earth Day event. The annual report will include these numbers.

Annual Reporting: Permit Year 3

1. Tree planting day- multiple tree related events & tree planting days were held:
 - An Arbor Day Celebration was held in Gypsy Hill Park on April 23, 2021 to celebrate the release of a new, interactive tree tour for the park.

- An Arbor Day planting was held at the Dixon Educational Center on April 30, 2021. The event was hosted by Shenandoah Green, a local environmental group, and a swamp white oak was planted with children from the school.
- Shenandoah Green held multiple tree planting days in the city. City staff assisted the group. Trees were planted at City schools, parks, as well as private residences and businesses. To date 2,000 seedlings and trees have been planted in Staunton with a goal of planting 2,746 trees. Tree plantings were held on:
 - March 20, 2021
 - March 27, 2021
 - October 17, 2020
 - October 24, 2020

Tree Planting Program

Permit Year 3	Number of trees planted	Number of trees pruned	Number of Arbor Day participants	Number of seedlings distributed
July 1, 2020 - June 30, 2021	61	203	+/-30	2000

BMP – 2.3 DEQ/DCR Adopt-A-Stream Program (Restoration)

The City actively participates in the Virginia Adopt-A-Stream program. The Stormwater Webpage includes links to Virginia's program with directions on how to apply. The City will procure and house the needed material for volunteers to use during the clean-up event. Materials will include safety information, trash bags, safety vests and traffic control-warning signs. The City will also coordinate trash pick-up if needed.

Objective and Expected Results: Encourage the community to actively take part in stormwater enhancements to improve stream quality.

Implementation Schedule: The City continues to implement the Adopt-A-Stream program. The Engineering Division is responsible for the website's content and for coordinating the provision of available materials to volunteers.

Method to Determine Effectiveness: The effectiveness of this BMP is based on the total linear feet of stream adopted. The annual report will include this number.

Annual Reporting: No streams were adopted during Permit Year 3. The City plans to utilize its social media accounts to hopefully gain more interest in this BMP.

BMP – 2.4 Adopt-A-Street Program (Restoration)

The City currently has an Adopt-A-Street Program designed to provide an opportunity for citizens and civic groups to get involved in their community. Individuals, organizations or businesses may participate. These groups agree to adopt a street and to keep the designated area cleared of litter and other debris. In exchange, the program participants are given materials to help them with the cleanup. Signs bearing the name of their organization will be posted at the beginning of their designated cleanup areas. Areas may include City streets, vacant lots, walkways and public parking lots. The Stormwater Webpage includes links to the City's program.

Objective and Expected Results: Encourage the community to actively take part in stormwater enhancements by decreasing the trash and litter that could possibly reach a waterway.

Implementation Schedule: This program will be ongoing with Public Works continuing to be responsible for its implementation.

Method to Determine Effectiveness: The effectiveness of this BMP will be based on the total miles of street adopted. The annual report will include this number.

Annual Reporting: No additional streets were adopted during Permit Year 3. The City plans to utilize its social media accounts to gain more interest in this BMP.

Adopt-A-Street Program:

Permit Year 3	Total miles of street adopted
July 1, 2020 - June 30, 2021	0

BMP – 2.5 Stormwater Partnerships (Monitoring)

The City has established a partnership with the local environmental advocacy group, the Lewis Creek Watershed Advisory Committee. The partnership will ensure that local impaired waters and pollutants of concern are emphasized in education and outreach efforts. With the historic flooding which occurred in Staunton (August 8 and 22, 2020), the committee plans to focus more on property owner outreach relative to implementing SWM BMPs on private properties.

The City has procured a flood study of the watershed areas entering the City to determine the best means forward for funding and implementation of recommended flood control measures. These measures if implemented would account for both quantity and quality treatment of detention in order to meet TMDL requirements and mandates.

Objective and Expected Results: To ensure the education, outreach efforts, and volunteer opportunities are enhanced to the maximum extent possible by a coordinated effort.

Implementation Schedule: The Environmental Programs Division will continue to send a representative to committee meetings during the upcoming permit cycle.

Method to Determine Effectiveness: The effectiveness of this BMP is based on the total number of meetings that were attended. The annual report will include this number.

Annual Reporting:

Stormwater Partnerships

Permit Year 3	Total Number of Meeting Attended
July 1, 2020 - June 30, 2021	12

BMP – 2.6 Hazardous Waste Collection Day (Disposal/Collection Event)

The City will continue to participate in the regional household hazardous waste collection day. The event is held once a year in the fall at the Augusta County Government Center. The following types of waste are accepted; solvents, oil based paints, fuels, used oil, computer equipment, lead-acid batteries, rechargeable batteries, herbicides/pesticides, small electronics, antifreeze, compact fluorescent bulbs, and fluorescent bulbs. Information about the event will be made available on the stormwater website. The City will also continue to promote this BMP by sharing informational flyers prior to the event.

Objective and Expected Results: By actively promoting the hazardous waste collection day, the City will reduce the risk of improper storage, disposal and discharges within the MS4.

Implementation Schedule: The program is ongoing. Public Works will continue to be responsible for coordinating the informational flyer.

Method to Determine Effectiveness: The City will track the total number of City vehicles dropping off hazardous waste. The annual report will include this number.

Annual Reporting:

Hazardous Waste Collection Day

Permit Year 3	Total Number of City Vehicles
July 1, 2020 - June 30, 2021	92

Minimum Control Measure 3 – Illicit Discharge Detection and Elimination

For the purposes of this permit, an illicit discharge is defined as any discharge to a municipal separate storm sewer that is not composed entirely of storm water, with exceptions for those discharges which occur pursuant to any other VSMP permit. These discharges can have immediate and long lasting impacts to the ecosystem of your local water bodies.

Modifications to MCM 3: None.

BMP – 3.1 IDDE Detection Program

The City will update and maintain the IDDE Program to detect, identify and address unauthorized discharges. The program will use maintained and updated storm sewer mapping with all outfalls identified. The mapping system will be used to screen for illicit discharges. The dry weather screening element of the program includes:

- Prioritized screening schedule
- Perform a minimum 50 field screenings per year
- Methodologies to collect general information such as the date of last rain, quantity of rain, visual observations, etc.
- Defines the time frame to conduct investigations based on priorities
- Methodologies to determine the source of all illicit discharges
- Mechanisms to eliminate illicit discharges, including procedures for legal action
- Methods for follow up
- Mechanisms to track all investigations

The City will prohibit non-stormwater discharges into the storm sewer system through modifications to the ordinance. The stormwater webpage and stormwater hotline will be used to promote and facilitate public reporting of illicit discharges. A copy of the program has been included in Appendix K.

Objective and Expected Results: The goal of this control measure is to maintain, update, and enforce a program to detect, identify and address illicit discharges into City's regulated MS4 system.

Implementation Schedule: The City will maintain and implement the IDDE program throughout the permit cycle. Environmental Programs Division is responsible for implementing the program with support from Public Works for investigations. The Environmental Programs Division is responsible for ongoing maintenance of the storm sewer mapping.

The illicit discharge ordinance, City of Staunton City Code, Title 13, Division IV, Illicit Discharge and Connections, can be found at: <http://www.codepublishing.com/VA/staunton.html>

Physical interconnection letters were sent to VDOT and Augusta County during Permit Cycle 1, Year 2.

Method to Determine Effectiveness: The City will track the number of illicit discharges detected and enforcement actions. The annual report will include these numbers.

Annual Reporting:

During Permit Year 3, **50 MS4 regulated outfalls were screened**. No active illicit discharges were observed or required follow-up. Further documentation of the outfall screenings and reports of illicit discharges are available upon request. A summary of all illicit discharge reports and investigations has been included in Appendix B.

Mapping and Information Tables Confirmation Statement:

Mapping updates continued during Permit Year 3 to add/delete regulated outfalls as necessary, and **currently there are 353 regulated outfalls**. An outfall point of discharge map has been included in Appendix C. Further documentation of the outfalls and points of discharge is available upon request.

BMP – 3.2 Mapping of Stormwater Network

The City will continue to maintain an accurate storm sewer system mapping and information table for City owned stormwater facilities using GIS and GPS locating technologies. Information to be collected and maintained includes:

- Outfalls
- Natural Streams
- Structural stormwater BMPs type and location
- Storm sewer type and size

- The storm sewer map will include at least the following:
 - Location of all MS4 outfalls
 - A unique identifier for each outfall
 - The name and location of all waters receiving discharges from MS4 outfalls and the associated HUC (6th order)

- The associated information table for each outfall will include at least the following:
 - A unique identifier
 - The estimated MS4 acreage served
 - The name of the receiving water and indication if the receiving water is impaired
 - The name of any applicable TMDL(s)

Objective and Expected Results: The storm sewer mapping will be a critical element of the IDDE (BMP 3.1) and structural BMP maintenance (BMP 5.2) programs. Accurate and up-to-date mapping will be necessary for these programs to succeed.

Implementation Schedule: The City will continue to maintain the storm sewer mapping throughout the duration of the permit cycle. Engineering will be responsible for developing and maintaining the sewer mapping using GIS/CAD.

Method to Determine Effectiveness: The City will track the number of storm structures mapped. The annual report will include these numbers.

Annual Reporting:

Mapping of Stormwater Network

Permit Year 3	Total number of storm sewer structures	Total number of storm sewer outfalls
July 1, 2020 - June 30, 2021	2747	749

BMP – 3.3 SPCC Training

The City will continue to provide personnel with spill prevention control and countermeasure training. The plan specifies material handling procedures and storage requirements and identifies spill cleanup procedures for areas and processes in which spills may potentially occur.

Objective and Expected Results: The SPCC training attempts to standardize operating procedures and employee training toward the goal of minimizing accidental pollutant release that could contaminate storm water runoff.

Implementation Schedule: The SPCC training is a current policy that will continue to be implemented throughout the permit cycle. Each department or division, Engineering, Public Works, Parks & Recreation and Fire Department will continue to be responsible for their departmental or divisional SPCC training.

Method to Determine Effectiveness: The City will track the number of personnel trained. The annual report will include this number.

Annual Reporting: 38 Public Works personnel trained July 27-30 of Permit Year 3.
0 Parks & Rec personnel trained due to Covid issues.

Minimum Control Measure 4 – Construction Site Runoff Control

Uncontrolled stormwater runoff from construction sites can significantly impact rivers, lakes and estuaries. Sediment is the main pollutant of concern leaving a construction site. However, there are also other pollutants that commonly discharge from construction sites, including fertilizer, pesticides, oil and grease, concrete truck washout and construction debris. The construction site stormwater runoff control (CSSRC) BMP will be developed to significantly reduce or eliminate construction site pollutants from entering the local water bodies.

Modifications to MCM 4: None this permit year

BMP – 4.1 Erosion and Sediment Control Program (VESCP)

The City administers an existing program that applies to large sites as well as single family home construction. The Engineering Division reviews site plans and performs site inspections. Any commercial site and any disturbance over 10,000 square feet require an erosion and sediment control plan to be submitted and approved. The City issues a land-disturbance permit prior to any land-disturbance taking place. A pre-construction meeting is held to discuss VESCP controls and to review the plan. A City VESCP inspector also makes site visits and approves the initial controls installed. The program is enforceable through the City Code (Chapter 13). **The City has one DEQ certified VESCP/VSMP Combined Administrator. A new Environmental Programs Specialist started on September 27, 2021, and is a DEQ certified VESCP & VSMP Inspector.**

The legal authorities utilized by the City to ensure compliance with our VESCP and VSMP Programs include the following:

- Staunton City Code - Title 13
- City's Subdivision and Zoning Ordinance
- Virginia Erosion and Sediment Control Law and Regulations
- Virginia Stormwater Management Act and Regulations

Additional information concerning the City's Erosion and Sediment Control Program (VESCP) can be found at: <https://www.ci.staunton.va.us/departments/engineering-division/erosion-and-sediment-control-program>

Written procedures and policies for plan review, inspection and enforcement can be found at: <http://www.codepublishing.com/VA/staunton.html> and <https://www.ci.staunton.va.us/government/permits>

Objective and Expected Results: The City's VESCP is in place to prevent adverse impacts from erosion and sedimentation from all construction sites.

Implementation Schedule: The VESCP is an existing program and will continue to be implemented throughout the permit cycle. Engineering will continue to be responsible for the VESCP.

Method to Determine Effectiveness: A number of parameters will be tracked pertaining to the VESCP including; number of land disturbing activities, acres of land disturbed, number of inspections, and enforcement actions. The annual report will include these values.

Annual Reporting:

Erosion and Sediment Control Program (VESCP)

Permit Year 3	Permits	Total	Commercial sites	Single-family sites
July 1, 2020 - June 30, 2021	Total number of regulated land-disturbing activities	75	20	55
	Total number of acres disturbed	29.36	22.16	7.2
	Total number of inspections conducted	830	144	686

	Enforcement	Total	Notices to Comply	Stop Work Orders
	Total number of enforcement actions taken	200	136	64

Minimum Control Measure 5 – Post Construction Runoff Control

Post-construction stormwater impacts are increases in the type and quantity of pollutants entering the receiving streams. An increase in the quantity of runoff can cause stream bank scouring and downstream flooding. Implementing a combination of structural and non-structural BMPs can reduce the water quality effects of increased impervious areas and are crucial elements of MS4 programs. Procedures need to be developed and implemented to inspect and maintain all permanent structural BMPs for both City and privately maintained facilities.

Modifications to MCM 5: No modifications in Permit Year 3

BMP – 5.1 Require VSMP Permits

The City became a VSMP Authority on July 1, 2014, responsible for administration of our local VSMP Program in accordance with Commonwealth of Virginia regulations. The City will require a VSMP permit for land disturbances of 1 acre or greater and land disturbances less than 1 acre but part of a common plan of development 1 acre or greater. Evidence of permit coverage from DEQ will be required prior to any land-disturbance taking place. The City Environmental Programs Division is responsible for BMP 5.1 and employs 1 certified VSMP Program Administrator (E&SC & SWM Combined Administrator). A new certified VSMP Inspector will started on September 27, 2021. Written procedures for inspection and enforcement are located in the engineering offices at 116 W Beverley Street. A copy of the VSMP approval letting is in Appendix Q. **The City has one DEQ certified VESCP/VSMP Combined Administrator. A new Environmental Programs Specialist start on September 27, 2021, and is DEQ certified VESCP & VSMP Inspector.**

See BMP 4.1 for a description of the legal authorities and written procedures utilized by the City to ensure compliance with our VESCP and VSMP Programs.

Objective and Expected Results: The City will adhere to current Commonwealth of Virginia regulations with regard to the VSMP permitting to prevent adverse impacts of urban stormwater runoff.

Implementation Schedule: The City of Staunton will implement local VSMP administration in accordance with Commonwealth of Virginia Regulations and will continue to require applicable VSMP requirements be instituted throughout the permit cycle. The City will implement changes to their local ordinances to comply with modifications to the VSMP permitting regulations. Engineering will be responsible for verifying VSMP permit compliance.

Method to Determine Effectiveness: The total number of permits, inspections, enforcement actions, exemptions applied for and exemptions granted will be tracked. The annual report will include these values.

Annual Reporting:

Stormwater Management Program

Permit Year 3	Permits	Total	Commercial sites	Single-family sites
July 1, 2020 - June 30, 2021	Total number of regulated land-disturbing activities	49	13	39
	Total number of exemptions applied for	0	0	0
	Total number of inspections conducted	395	107	288

Permit Year 3	Enforcement	Total	Notices to Comply	Stop Work Orders
July 1, 2020- June 30, 2021	Total number of enforcement actions taken	122	99	23

BMP – 5.2 Structural BMP Maintenance

The City has a program to ensure proper maintenance of all City owned structural BMPs. The City will continue to require a maintenance agreement for any new privately owned structural BMP. The City will continue to encourage owners of private structural BMPs without agreements to acquire the maintenance agreement. The City's Engineering Division maintains a database of stormwater management facilities. This database is located at the engineering offices at 116 W Beverley Street.

Objective and Expected Results: By continuing the BMP maintenance program the City will ensure BMPs are performing optimally and are minimizing adverse impacts to state waters.

Implementation Schedule: The BMP maintenance program will be an ongoing effort throughout the permit cycle. The development of the program will be a joint effort between Engineering and Public Works. Public Works will be responsible for the actual maintenance of all City owned structural BMPs. Engineering will be responsible for documenting new privately owned BMP agreements.

Maintenance Required/Performed in Permit Year 2: None

Method to Determine Effectiveness: The City will track the total number of new BMP agreements. The annual report will include this number.

Annual Reporting:

Structural BMP Maintenance					
Permit Year 3	Total Number of BMP Maintenance Agreements	Number of SWM Agreements		Number of SWM Facilities	
		New BMPs	Existing BMPs	New BMPs	Existing BMPs
July 1, 2020 - June 30, 2021	8	8	0	8	0

BMP – 5.3 Structural BMP Inspection

The City operates a program to inspect structural BMPs within the City. The existing maintenance agreements require property owners of private BMPs to inspect maintain and submit a report to the City upon request. The standardized report is available on the stormwater webpage. The City will also inspect private BMPs once every five years. City owned BMPs will be inspected annually per the program described in BMP 5.2.

Objective and Expected Results: By continuing the BMP inspection program the City will ensure BMPs are performing optimally and achieving design pollutant reduction.

Implementation Schedule: The BMP inspection program will be ongoing throughout the permit cycle. Engineering will be responsible for implementing the programs and performing the inspections.

Method to Determine Effectiveness: The City will track the total number of BMP inspections performed by private owners and completed by City personnel. The annual report will include these numbers.

Annual Reporting:

Structural BMP Inspection		
Permit Year 3	Total number of inspections	
	Public BMPs	Private BMPs
July 1, 2020 - June 30, 2021	19	33

BMP – 5.4 Structural BMP Database

The maintenance of the structural BMP database will be instrumental in implementing BMP 5.2 and BMP 5.3. The BMP database includes the type of BMP, ownership, location, date brought online, HUC code, receiving waters, if receiving waterway is impaired, if maintenance agreement exists, number of acres treated and most recent inspection.

Objective and Expected Results: The database will be used to track BMP inspections and maintenance to ensure that all BMPs are functioning properly and as designed.

Implementation Schedule: The BMP database will be maintained throughout the permit cycle. Engineering will be responsible for compiling and maintaining the database.

Method to Determine Effectiveness: The City will include the updates to the BMP database in the annual report.

Annual Reporting: The BMP database for BMPs brought online during Permit Year 3 has been included in Appendix D. SMF information as required was provided to CGP through database for which coverage was obtained.

BMP – 5.5 BMP Warehouse Submittal Confirmation Statement

All BMPs not reported in accordance with Part I.E.5 were reported through DEQ BMP Warehouse per Part I.E.5.g of the MS4 General Permit.

Minimum Control Measure 6 – Pollution / Good Housekeeping

The Pollution Prevention/Good Housekeeping BMPs allow the City to examine and alter its own actions in an effort to reduce the amount of pollutant that collects on streets, parking lots, and open spaces because of runoff from vehicle maintenance areas and poor stormwater maintenance.

Modifications to MCM 6:

Date: August 22, 2019

List of SWPPP sites changed to reflect discontinuation of recycling center and addition of equipment washing facility located at Parks and Recreation maintenance shop.

BMP – 6.1 Street Sweeping

The City is in the process of modifying its street sweeping program to best conform to the new TMDL guidance standards.

Objective and Expected Results: The street sweeping program will reduce the adverse effects that pollutants found on public roads have on receiving waters.

Implementation Schedule: Public works will continue this ongoing program through the permit cycle.

Method to Determine Effectiveness: The City will track the number of road miles swept and relative data collected. The annual report will include these numbers.

Annual Reporting:

Street Sweeping		
Permit Year 3	Total number of road miles swept	Total number of tons collected
July 1, 2020 - June 30, 2021	4532	998

BMP – 6.2 Pollution Prevention Training

City departments, Public Works, Parks & Recreation and Fire Department, will continue its pollution prevention training to its employees. Bi-monthly safety committee meetings will incorporate environmental protection into the agenda as part of Public Works' environmental management systems program.

Objective and Expected Results: The pollution prevention training empowers employees with the knowledge and operating procedures to minimize accidental pollutant release that could contaminate storm water runoff. Through this training, employees realize environmental stewardship has many far-reaching benefits.

Implementation Schedule: The pollution prevention training is a current policy implemented throughout the permit cycle. Each department, Public Works, Parks & Recreation and Fire Department will continue to be responsible for their departmental pollution prevention training.

Method to Determine Effectiveness: The City will track the number of personnel trained. The annual report will include this number.

Annual Reporting: Some trainings not performed in Permit Year 3.

Pollution Prevention Training			
Permit Year 3	Total number of City personnel trained	Department	Training Date
July 1, 2020 - June 30, 2021	*No trainings due to Covid*	Public Works	
	No trainings due to Covid	Parks & Rec	
	No training due to Covid	Fire Department	
	45	Police Department	Various dates from 7/21/20-8/15/20

BMP – 6.3 Yard Debris Collection Program

The City will continue its yard debris collection program. Residents are asked to rake leaves to the curb each fall where Public Works crews vacuum them up for composting. Usually each area of the City will have two specific periods for leaf collection. Leaves may be bagged and, in limited numbers, put out with regular refuse.

Objective and Expected Results: By collecting and composting yard waste the City is reducing the amount of gross discards that would otherwise end up in streams.

Implementation Schedule: This is a program that Public Works will continue throughout the permit cycle.

Method to Determine Effectiveness: The City will track the total number of cubic yards and loads of debris collected. The annual report will include these numbers.

Annual Reporting:

Yard Debris Collection Program

Permit Year 3	Total number of cubic yards collected	Total number of loads collected
July 1, 2020 - June 30, 2021	3878	277

BMP – 6.4 Dedicated Vehicle Wash Facility

The City currently operates and maintains two dedicated vehicle/equipment wash facilities, one at its equipment maintenance shop and one at its parks and recreation maintenance shop.

Objective and Expected Results: This program eliminates the many pollutants that would otherwise enter into the stormwater system if a dedicated vehicle wash facility did not exist.

Implementation Schedule: This is an ongoing program that Public Works will continue throughout the permit cycle.

Method to Determine Effectiveness: The City will track the total number of vehicles washed. The annual report will include this number.

Annual Reporting:

Dedicated Vehicle Wash Facilities

Permit Year 3	Total number of vehicles washed
July 1, 2020 - June 30, 2021	1456

BMP – 6.5 Storm Sewer Inspection and Maintenance

The City has developed a programmatic storm sewer inspection and maintenance program. The program includes expected routine maintenance and non-routine (repair) maintenance.

Objective and Expected Results: The storm sewer inspection and maintenance program will ensure the storm sewer system is in good working order.

Implementation Schedule: The ongoing program will continue throughout the permit cycle. Engineering and Public works will be responsible for developing and implementing the program.

Method to Determine Effectiveness: The City will document the number of storm structures and linear feet of storm sewer inspected. The annual report will include these numbers.

Annual Reporting:

Storm Sewer Inspection		
Permit Year 3	Total number of Storm Structures Inspected	Total Linear Feet of Storm drain Inspected
July 1, 2020 - June 30, 2021	91	625

BMP – 6.6 Develop/Maintain SWPPPs for Required City Facility

The City has identified four high priority City facilities that it operates. They are:

Municipal High-Priority Facilities with A High Potential for Pollutant Discharge			
Name of facility	Facility Address	Operator	Location of SWPPP
Public Works Operations Facility	1911 Craigmont Road	Public Works	1911 Craigmont Road
Parks and Recreation Maintenance Facilities	330 Park Boulevard	Parks and Recreation	330 Park Boulevard
Middlebrook Avenue Salt Storage Facility	866 Middlebrook Avenue	Public Works	1911 Craigmont Road
Parks and Recreation Pools	600 Churchville Avenue / 1000 Montgomery Avenue	Parks and Recreation	1000 Montgomery Avenue

The City will maintain the Stormwater Pollution Prevention Plans (SWPPPs) for each high priority facility. The SWPPS will be maintained by the facilities operators, which include Public Works and Parks and Recreation staff. Each SWPPP is located on site at the facility and is available upon request.

Objective and Expected Results: These documents will provide guidance to prevent and reduce pollutant runoff from municipal operations.

Implementation Schedule: The City will maintain the SWPPPs for each high priority facilities throughout the permit cycle.

Method to Determine Effectiveness: The annual report will include the total number of SWPPP inspections completed.

Annual Reporting:

Permit Year 3 - SWPPP Inspections Performed

Name of facility	Facility Address	Number of Inspections Performed	Number of SWPPP Evaluations	Number of weather events prompting inspection
Public Works Operations Facility	1911 Craigmont Road	55	1 (8/6/19)	5
Parks and Recreation Maintenance Facility	330 Park Boulevard	92		0
Middlebrook Avenue Salt Storage Facility	866 Middlebrook Avenue	51	1 (8/6/19)	4
Parks and Recreation Pools	600 Churchville Avenue / 1000 Montgomery Avenue	82		0

BMP – 6.7 Develop/Maintain Nutrient Management Plans for Required City Sites

The City has identified six sites, over one acre, that require a Nutrient Management Plan (NMP). Those sites are:

Municipal Facilities Requiring Nutrient Management Plans			
Name of facility	Facility Address	Planner	Acres Covered Under NMP
Gypsy Hill Golf Course	300 Park Boulevard	Parks and Recreation	1.90
Braves Baseball	600 Churchville Avenue	Parks and Recreation	2.5
Gypsy Hill Baseball Fields	600 Churchville Avenue	Parks and Recreation	2.5
Montgomery Hall Baseball/Softball Fields	1000 Montgomery Avenue	Parks and Recreation	5.4
Montgomery Hall Soccer Fields	1000 Montgomery Avenue	Parks and Recreation	4
Staunton Football Complex	600 Churchville Avenue	Parks and Recreation	2.25

The City maintains a Nutrient Management Plan for each of these sites. The plans are located at each of the facilities and are available for review upon request.

Objective and Expected Results: The developed NMP will define the amount, source, placement, form and timing of the application of nutrients and soil amendments to ensure optimal management.

Implementation Schedule: The City will continue to implement the NMP through this permit cycle.

Method to Determine Effectiveness: The annual report will include the total amount of nutrients applied to the acreage of each site.

Annual Reporting:

Permit Year 3 - Municipal Facilities Requiring Nutrient Management Plans			
Name of facility	Facility Address	Acres Covered Under NMP	Total Amount of Nutrients Applied (lbs./acre)
Gypsy Hill Golf Course	300 Park Boulevard	1.90	Nitrogen: 83.95 Phosphorus: 2.61 Potassium: 63.51
Braves Baseball	600 Churchville Avenue	2.5	Nitrogen: 43.93 Potassium: 7.83
Gypsy Hill Baseball Fields	600 Churchville Avenue	2.5	Nitrogen: 43.93 Potassium: 7.83
Montgomery Hall Baseball/Softball Fields	1000 Montgomery Avenue	5.4	Nitrogen: 43.93 Potassium: 7.83
Montgomery Hall Soccer Fields	1000 Montgomery Avenue	4	Nitrogen: 43.93 Potassium: 7.83
Staunton Football Complex	600 Churchville Avenue	2.25	Nitrogen: 43.93 Potassium: 7.83

Chesapeake Bay TMDL

- In December of 2010, the United States Environmental Protection Agency established a total maximum daily load (TMDL), or “Pollution Diet”, to limit the amount of phosphorus, nitrogen, and sediments that can be released into the streams, creeks, and rivers that feed the Chesapeake Bay. These measures were established as an effort to improve the water quality of the Bay and to return it to a swimmable and fishable state. The Bay TMDL limits were divided into smaller TMDLs that were assigned to drainage basins across six (6) states including Virginia. To respond to the TMDL the Commonwealth of Virginia committed to a phased approach to implementation for MS4 programs. The phased approach for MS4 communities includes a requirement to meet a reduction goal of 40% during the 2018 - 2023 MS4 Permit Cycle. The City of Staunton has developed a draft TMDL action plan based on the 2013 – 2018 permit cycle guidance document. The City is working with consultants to update for the phase II TMDL action plans based on the new guidance. This will include both street sweeping and tree canopy based on the new guidance. The City is aware of the new requirements and is in the process of evaluating the City tracking and reporting methodologies to determine what new measures will be implemented in future plan adjustments. Once the action plan is finalized, the City of Staunton will then employ appropriate actions to meet the planning document during the 2018 – 2023 period, to the maximum extent practicable.

Objective and Expected Results: The development of a Chesapeake Bay TMDL Action Plan based on new guidance of November 12, 2020 that will provide implementation guidelines and a program of management practices that will facilitate compliance with the condition of future permits.

Implementation Schedule: The City submitted the TMDL Action Plan for the second permit cycle (July 1, 2018- June 30, 2023) on April 29, 2020.

- 1) Part II.A.13a – BMPs not Reported to the BMP Warehouse - *No BMPs installed*
- 2) Part II.A.13.b – Credits - *No Credits purchased*
- 3) Part II.A.13.c - *No BMPs installed*
- 4) Part II.A.13.d – BMPs planned for the Next Reporting Period – *Gypsy Hill Park Stream Restoration*

Local TMDL

The City of Staunton is located within the South River and Middle River watersheds in Augusta County Va. This waterway was listed as high priority on the impairment list for fecal coliform and general benthic in 1996. As a result, a TMDL was developed and approved in April of 2004. The City was not specifically allocated a waste load as part of the TMDL planning process. The final TMDL instead provided allocations to the major sub-watersheds including Lewis Creek.

Modification: Per discussion between the City of Staunton and Virginia DEQ it was identified that the City is not required to develop a TMDL Action Plan for the Lewis Creek watershed per email dated April 8, 2020 from Nesha Mcrae.

Objective and Expected Results: Not applicable.

Implementation Schedule: Not applicable.

Responsible Parties

The departments and divisions of responsibility for implementation of MS4 program elements are included in BMP descriptions above. Contact information for each responsible party is located below:

Executive Officer

Title: City Manager

Name: Steven L. Rosenberg

Address: P.O. Box 58

Staunton, VA 24402

Phone: 540-332-3812

Email: RosenbergsI@ci.staunton.va.us

Program Management

Environmental Programs Division

Title: Environmental Programs Administrator

Name: Peter K. Kesecker

Address: P.O. Box 58

Staunton, VA 24402

Phone : 540-332-3858

Email: keseckerpk@ci.staunton.va.us

Department of Public Works

Title: Director

Name: Jeffrey M. Johnston

Address: P.O. 58

Staunton, VA 24402

Phone: 540-332-3892

Email: johnstonjm@ci.staunton.va.us

Department of Parks and Recreation

Title: Director

Name: Christopher Tuttle

Address: P.O. Box 58

Staunton, VA 24402

Phone: 540-332-3945

Email: tuttlecj@ci.staunton.va.us

Staunton Fire Department

Title: Fire Chief

Name: R. Scott Garber

Address: P.O. Box 58

Staunton, VA 24402

Phone: 540-332-3884

Email: garberrs@ci.staunton.va.us

APPENDICES

APPENDIX A

STAUNTON'S SOLUTION FOR STORMWATER POLLUTION, ISSUE NUMBER IV

How does Staunton impact the Chesapeake Bay?

You might wonder, what is means to be within the Chesapeake Bay drainage basin? Well, basically our stormwater here in Staunton drains into at the Chesapeake Bay. Our stormwater begins its journey in Lewis Creek or others and flows through to Middle River, North River, Shenandoah River, Potomac River, and finally enters into the Chesapeake Bay.



It is the City's aspiration that along with our MS4 (municipal separate storm sewer system) program and the Chesapeake Bay Action Plan, we can make our local creeks and streams cleaner and help the water quality in the Chesapeake Bay.

Since beginning our MS4 program and the Chesapeake Bay Action plan, the City of Staunton has been diligently working on planning and installing stormwater best management practices that will help us to achieve this reduction goal for phosphorus, nitrogen, and sediment (or Total Suspended Solids).

Staunton's Solutions for Stormwater Pollution

This brochure is the fifth of an annual publication to inspire the citizens of Staunton to be more proactive to help prevent the stormwater runoff pollution of our local streams and watersheds.

To report stormwater pollution or if you have a question concerning stormwater, please call the City's Stormwater Hotline at **540-213-6517** or send an email to StauntonStormwater@ci.staunton.va.us.

For more information on the City's ongoing efforts to reduce stormwater pollution, please find us on Facebook at: facebook.com/stauntonstormwater

GET INVOLVED!

There are many opportunities in Staunton offering public participation:

- Adopt-a-Street Program
- Adopt-a-Stream Program
- Regional Household Hazardous Waste Collection Day

Community Development Department

Engineering Division

116 West Beverley Street
3rd Floor

Staunton, VA 24401

Phone: (540) 332-3858

www.staunton.va.us



"City of Staunton – Watershed Awareness"

Staunton's Solutions for Stormwater Pollution

Issue Number V



January 2020

The Chesapeake Bay TMDL

In December of 2010, the United States Environmental Protection Agency (EPA) established a Total Maximum Daily Load (TMDL) or "pollution diet" to limit the amount of Phosphorus, nitrogen, and sediment that can be released into the streams, creeks, and rivers that feed the Chesapeake Bay. These measures were established as an effort to improve the water quality of the Bay and to return it to a swimmable and fishable state. The TMDL limits were divided into smaller TMDLs that were assigned to drainage basins across six states including Virginia.



Because the City of Staunton was deemed an urbanized cluster and is within the drainage basin for the Chesapeake Bay, in 2014 Staunton was required to develop an MS4 (Municipal Separate Storm Sewer System) and a Chesapeake Bay Action Plan that would demonstrate how the City would reach these mandated TMDL reductions.

Best Management Practice (BMP)

There are many different stormwater BMPs that can be used to treat stormwater runoff and remove excess amounts of nutrients. However, many of them (ponds for example) are not practical in an urban environment. Don't panic, there are still some stormwater solutions that work and don't take up any extra space. The 3 BMPs highlights below are comprised of layers that aid in removing pollutants from stormwater.

Rain Gardens or Micro-Bioretentation are an amazing BMP that can be installed and look like regular landscaping. Rain Gardens consist of an underdrain, a layer of filter media (typically 18" -36" deep), and have native plantings.



Urban bioinfiltration devices are good to use when there isn't room for landscaping. These concrete boxes can be layered, with an underdrain, filter media, and finally a mulch layer on top.



Best Management Practices (cont.)

Permeable Pavers are another awesome urban BMP. Permeable pavers are comprised of concrete pavers, layers of stone and possibly an underdrain (that releases the filtered water into a storm drain system). The top layers of concrete pavers are separated by small aggregate that allow the water to drain and filter through the stone layers beneath, before entering the ground water/ local waterways or a storm drain system.



What can you do to help?

You might be thinking, this sounds great but I can't do this at my house! Don't worry, here are a few things that you can do around your house to help with stormwater pollution.

- Don't blow grass clippings into the street (Grass clippings contain excess amounts of nitrogen and phosphorus)
- Don't push leaves into the street, leave them behind the curb (leaves contribute to the nitrogen and total suspended solids levels).
- Don't over fertilize your lawn (the excess amount of nitrogen and phosphorus that your lawn does not use, gets carried away when it rains).

APPENDIX B

ILLICIT DISCHARGE DETECTION & ELIMINATION PROGRAM DATABASE

Illicit Discharge Detection and Elimination (IDDE) Database - FY21										July 1, 2020 through June 30, 2021									
NUMBER	NOTIFICATION	TYPE	DATE POTENTIAL ILICIT DISCHARGE OBSERVED	DATE POTENTIAL ILICIT DISCHARGE REPORTED	DID DISCHARGE REACH LOCAL WATERWAY	WAS DISCHARGE TO IMPAIRED WATERS	Photos	Reports	DESCRIPTION OF THE INVESTIGATION INCLUDING ANY FOLLOW-UP	RESOLUTION OF THE INVESTIGATION	DATE CLOSED								
1	Storm hotline called and voicemail left on VADEQ inspector line		7/18/2020	7/18/2020	Yes	No		07-18-2020 IDDE Chamberlain Dr. Call	On 07-18-2020 at approximately 14:00 HRS, the City Engineering Division received a call from Curran Construction regarding three Chamberlain Drive properties (105, 107, 109) stating that muddy stormwater was running off the sites. The Environmental Programs Inspector, Courtney May, and Engineering Technician, Chris Hall, investigated the complaint. The inspectors arrived at approximately 14:30 HRS to find the sites had failing EEC measures. The silt fence between the sites was not installed and the silt fence along the front of the houses began to be compromised. The lowest corner, of the three sites, was located at 105 Chamberlain and stormwater was observed escaping the fence. The inspector contacted the LD, Wesley Pitman of Wesley Pitman construction and left Mr. Pitman a voicemail regarding the inspectors findings at 14:35 HRS and requesting the issue be addressed immediately. At 14:52 HRS the LD returned the call to the inspector and informed her that he too had been contacted by the complainant and that a crew was en route to the site to address the non-compliance. When the inspector returned to the office, she presented her findings to the City Engineer, Nickie Mills, who left the State Stormwater Compliance Specialist, Dustin Stanton a voicemail, followed by calling the storm hotline.										
2	Inspection report emailed to VADEQ. VDH has been notified.		7/17/2020	7/17/2020	No	N/A	N/A	07-17-2020 IDDE SGO Commerce Rd. 14th	Corrective Action Team: On Friday, 7/17/20, at approximately 10:00am a PW employee observed water coming out of a manhole along the edge of Commerce Road, adjacent to 3004 E Beverly St. They contacted the sewer crew, who arrived on-site at approximately 10:45pm. They found that approximately 50 gallons of sewage had discharged from manhole UP157A and was soaking into the adjacent ground.	PW staff jetted the main from the next downstream manhole, and a blockage was encountered and quickly dissipated, effectively ending the overflow at approximately 11:00am. Root fragments were observed. The crew sprayed lime on the affected area, which was primarily wooded. The section of pipe downstream of the overflow will be scheduled for root treatment.	7/17/2020								
3	Inspection report emailed to VADEQ per PW. VDH notified		8/8/2020	8/10/2020	Yes	No	N/A	08-08-2020 IDDE Lewis St. 14th	On Saturday evening, 8/8/20, the City of Staunton encountered a prolonged, heavy, and high intensity rainfall from a slow passing storm. Most streams within the City were inundated, and multiple roads were flooded, including downtown and the Gypsy Hill Park area. Public Works staff observed sewage heavily diluted by VFO overflowing from manhole P5213 located at the intersection of South Central Avenue and West Johnson Street. After the rain event, evidence of an overflow from manhole SMO4494 at 2513 Hickory Street and P38 at 800 Churchillville Avenue were also observed. It is believed that other overflows in the City may have occurred, but were not observed.	After the floodwaters receded, PW conducted an inspection of sewer lines and stream crossings throughout the City to search for other potential overflows and areas needing maintenance as a result of the storm.	8/11/2020								
4	Inspection report emailed to VADEQ. VDH has been notified		8/13/2020	8/13/2020	No	No	N/A	08-13-2020 IDDE Peyton St. 14th	On Thursday afternoon, August 13, 2020, at 2:30pm, Staunton Police Department notified Public Works of an upset manhole cover located in front of 23 Peyton Street. PW staff visited the site and found the cover was only partially in place, and there was what appeared to be sewage solids and debris in the grass in the adjacent yard. Inside the manhole, the sewage was flowing through the trough as designed and there was no sign of any blockage. A resident from across the street told staff that they had observed the overflow from the night before, when the City encountered a prolonged, heavy, and high intensity rainfall from a slow passing storm.	PW staff washed and sprigged lime on the affected area to identify and address sewer capacity issues in this area.	8/13/2020								
5	Inspection report emailed to VADEQ. VDH has been notified		8/22/2020	8/24/2020	Yes	No	N/A	8-22-2020 IDDE SGO 23rd	On Saturday evening, 8/22/20, the City of Staunton encountered a prolonged, heavy, and high intensity rainfall from a slow passing storm. Many streams within the City were inundated, particularly in the western and southern areas. Multiple roads were flooded, including parts of downtown and Greenville Avenue. On Monday, Public Works staff observed evidence of sewage overflows at two locations. A pipe was exposed and damaged by a wash-out in a wet weather streambed at 2301 Cole Ave. It appeared that some stone had extended the line and caused a backup. The overflow had traveled approximately 200' to a jersey to a storm drain, where it then presumably traveled 1 mile until it daylighted at Peyton Creek. Also, the manhole cover to SMO2472 at 604 Greenville Ave was partly dislodged, and sewer debris was in the grass on the downhill side of the manhole, approximately 60 feet from the Asylum Creek; at the time it was discovered, all sewage was flowing within the trough at the bottom of the manhole, as the adjacent lid had subsided. It is suspected that other overflows in the City may have occurred, but were not observed.	PW staff jetted and cleared the line at 2301 Cole Ave and repaired the pipe. The cover to manhole SMO2472 was reset and the adjacent area cleaned.									
6	Inspection report emailed to VADEQ. VDH has been notified		8/31/2020	8/31/2020	Yes	No	N/A	8-31-2020 IDDE SGO Beverly St. 14th	On Monday, 8/31/20, at approximately 11:00am, a citizen called PW to report a possible sewage overflow a foot or 800 W Beverly St. PW staff observed sewage overflowing at approximately 10pm from manhole SMO1110 in the middle of West Beverly Street. The flow traveled across asphalt approximately 30 LF to a storm drain, which then conveyed the flow approximately 150 LF to Hatteras Spring Run. The flow was heavily diluted with stormwater runoff, as it was raining at the time. Based on downstream manhole observations, the blockage appeared to be 250' to 350' downstream. The sewer crew joined the main at that section from the downstream end, and a blockage was encountered and dissipated, effectively ending the overflow at approximately 12:00pm. The exact cause of the blockage is unknown. The crew cleaned the affected surface area.	A video inspection of the sewer main is being scheduled to help determine the cause of the overflow and assess if repairs are needed.									
7	Inspection report emailed to VADEQ. VDH has been notified		9/3/2020	9/3/2020	Yes	Yes			On Tuesday, 9/2/20, at approximately 4:00pm, Staunton Fire Department personnel observed what appeared to be sewage coming from the yard in front of 107 W Hampton Street and flowing into the street. Public Works was contacted and dispatched a crew, which arrived on-site at approximately 4:20 pm. They found that sewage was backing up from a cleanout in front of the house. They jetted the line from the cleanout and were eventually able to clear a blockage, effectively ending the backup at approximately 4:50pm. Approximately 150 gallons of the sewage diluted with the jetting water flowed down the curb and gutter 200' to a storm drain inlet. The storm drain system then conveyed it 160' to its outfall at Lewis Creek. The exact cause of the blockage is unknown. The crew cleaned the affected surface area and spread lime on the yard.	A video inspection of the sewer lateral is being scheduled to help determine the cause of the overflow and assess if repairs are needed.									
8	Inspection report emailed to VADEQ. VDH has been notified		10/13/2020	10/13/2020	Yes	No	N/A	10-13-2020 IDDE Burnett St. 14th	On Tuesday, 10/13/20, at approximately 11:00am, a citizen called PW to report that they noticed a "sewer smell" in the vicinity behind 1201 Burnett Street. PW staff investigated, and at approximately 12:00pm discovered that a cleanout in a wooded area behind 1201 Burnett Street was overflowing at approximately 5 gpm. The flow traveled approximately 10' down an embankment and into Lewis Creek. The sewer crew jetted the lateral, but the overflow did not subside. They jetted the next downstream section of the main, and a blockage was encountered and dissipated, effectively ending the overflow at approximately 4:30pm. Based on downstream manhole observations and jetter hose length, the blockage was believed to be approximately 50' downstream of the cleanout and lateral. The exact cause of the blockage is unknown, although grease build-up was observed in the laterals.	A video and surface inspection of the sewer main and adjacent laterals is being scheduled to help determine the cause of the overflow and assess if repairs are needed.									
9	Inspection report emailed to VADEQ. VDH has been notified		11/28/2020	11/30/2020	No	No	N/A	11-20-2021 IDDE Commerce St. 14th	On Saturday, November 28, 2020, at about 11:55AM, Public Works received a call for a sewer overflow from a cleanout at the referenced address. A crew was dispatched to the site, but were already working another SSO and did not arrive until about 1:00PM. After arriving, the crew jetted the downstream sewer main and eventually unclogged the blockage believed to be roots. Flow was restored to the system. The overflow accumulated in the parking lot of the address where it was cleaned. It did not reach any State waters or enter into storm sewer system.	The crew is returning to the site today to treat the downstream main for roots and additional cleaning.									
10	Inspection report emailed to VADEQ. VDH has been notified		11/28/2020	11/30/2020	No	No	N/A	11-23-2021 IDDE Chamberlain Ave. 14th	On Saturday, November 28, 2020, at about 10:35AM, Public Works received a call of a sanitary sewer overflow (SSO) at the referenced address. A crew was dispatched to the site. Upon arrival, the crew observed sewage overflowing from Manhole SMO2525 adjacent to New Hope Road, as well as from the cleanout at 865 and 867 New Hope Road. The crew joined the sewer main and unclogged the apparent blockage restoring flow to the system. The overflow from each discharge point permeated into the ground and road side ditch. The crew washed the area with the jet hose and then applied lime to the affected areas.	N/A									
11	Inspection report emailed to VADEQ. VDH has been notified		11/28/2020	11/30/2020	No	No	N/A		On Saturday, November 28, 2020 at about 4:20PM, Public Works received a call for a sewer overflow from a cleanout at the referenced address. A crew was dispatched to the site and upon arrival discovered that about 25 gallons of sewage had discharged from the cleanout onto the ground. The crew joined the lateral through the cleaning causing about another 25 gallons to discharge prior to breaking open the apparent blockage and restoring flow. The affected area was cleaned and lime was applied.	The site will be scheduled for follow-up TV inspection.									
12	Inspection report emailed to VADEQ. VDH has been notified.		1/20/2021	1/21/2021	No	No	N/A	11-20-2021 IDDE SGO Commerce St. 14th	On Wednesday, January 20, 2021, at about 2:15PM, Public Works received a call from another City employee who observed/discovered a sewer overflow from a manhole in front of the referenced address. A crew was dispatched to the site and arrived at about 2:40PM. Upon arrival, the crew observed that the overflow had already ceased, but the manhole was still overflowing. The crew jetted the downstream main and normal flow was restored by 3:15PM. The minor overflow mostly permeated into the ground around the manhole. The crew will return to the site today to apply lime to the affected area.	The exact cause of the blockage/overflow could not be determined.									
13	Inspection report emailed to VADEQ. VDH has been notified		2/23/2021	2/23/2021	Yes	No	N/A	02-23-2021 IDDE SGO Churchville Ave. 14th	On Tuesday, 2/23/21, at about 7:00AM, Public Works received a call from Police Dispatch about water discharging from a manhole at the intersection of Churchillville Avenue and C Street. A City utility crew was immediately dispatched to the site where they found sewage overflowing from a manhole and nearby cleanout at the referenced address. After opening the downstream manhole to jet the line, the apparent blockage broke loose and released the backed-up sewage at about 7:50AM, stopping the overflow. Discharge from the overflow had entered a nearby storm drain discharging into Peyton Creek. No significant impact to the creek or fish kills were observed. The crew cleaned and applied lime to the affected area.	The exact cause of the blockage/overflow could not be determined.									
14	Inspection report emailed to VADEQ. VDH has been notified		3/5/2021	3/5/2021	No	No	N/A	03-05-2021 IDDE SGO Commerce St. 14th	On Friday, 3/5/21, at about 8:15AM, Public Works received a call from a homeowner at 1415 Dagwood Road about water discharging from a manhole at the rear of his yard. A utility crew was immediately notified and they arrived at the site at about 8:30AM and found sewage overflowing from a manhole (SMO1120) in the backyard as reported. The crew jetted the downstream sewer main and in a short time broke through the apparent blockage restoring normal flow to the main. The discharge was mostly liquid and had permeated into the ground surrounding the manhole. The crew cleaned the residual sewage and applied lime to the affected area.	The exact cause could not be determined, but was suspected to be roots.									
15	Inspection report emailed to VADEQ. VDH has been notified.		3/9/2021	3/9/2021	No	No	N/A	03-09-2021 IDDE SGO Preston Dr.	On Wednesday, June 23, 2021 at about 2:30PM, Public Works received a call from a citizen about sewage overflowing from a manhole along Preston Dr. Upon arrival, the crew confirmed the discharge from the manhole and the overflow from the manhole was jetted upstream. An apparent blockage was encountered about 30 feet upstream. Crew continued jetting until blockage was cleaned restoring normal flow to the system. Discharge ran overland into grassy field with most permeating into ground. Discharge did not reach State Waters. Crew cleaned surface and applied lime to affected area. Blockage caused by roots in sewer main.	Crew is returning to site today to continue dig and remove roots.									
16	Inspection report emailed to VADEQ. VDH has been notified.		3/9/2021	3/9/2021	No	No	N/A	6-23-2021 IDDE SGO 885 Preston Dr.	On Saturday, 3/9/21, at about 4:00PM, Public Works received a call from a citizen about water discharging from a manhole at the referenced address. A utility crew was immediately notified and dispatched to the site. The crew arrived at about 4:20PM and found sewage overflowing from a manhole (SMO1120) in the street. The crew jetted the downstream sewer main. After about 10 minutes, the crew unclogged the sewer main restoring normal flow to the system. The small volume of discharged sewage had accumulated into the adjacent concrete curb where it was cleaned up and the street washed down.	Crew is returning to site today to CCTV inspect the main.									

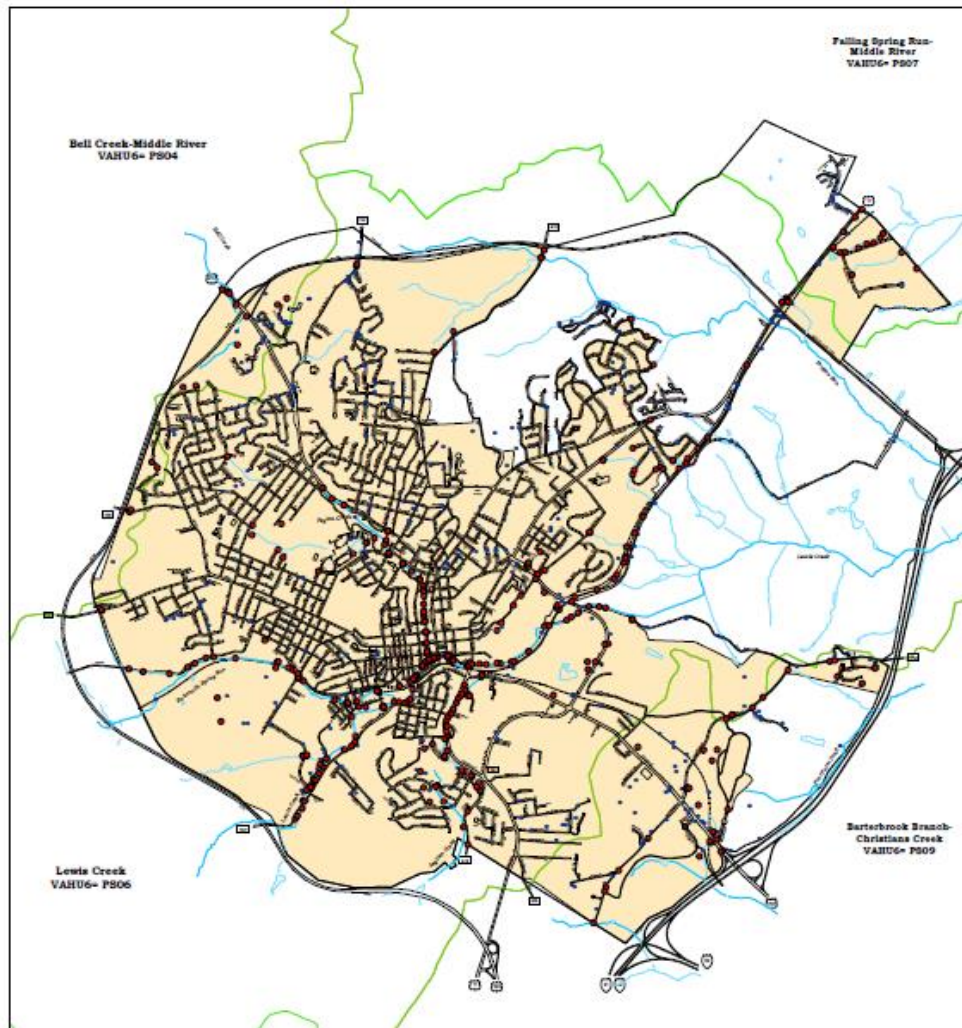
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APPENDIX C

OUTFALL AND POINTS OF DISCHARGE MAP

City of Staunton Outfall Map



- Urbanized (MS4) Outfalls
- Non-Urbanized Outfalls
- Streams
- City Limits
- Tributaries
- HUC Boundary
- Urbanized Area Boundary

1 in = 1,500 ft

This map was created based off the 2010 US census

City of Staunton
August, 2019

STAUNTON
VIRGINIA



APPENDIX D

BMP DATABASE ADDITIONS

BMP DATABASE PRIVATELY OWNED BMPs BROUGHT ONLINE FROM July 1, 2020 thru June 30, 2021															
BMP NO.	SITE NAME	SITE ADDRESS	OWNER	SITE LOCATION		FACILITY TYPE	ACRES TREATED			ONLINE DATE		VA HU6	RECEIVING WATERS	IMPAIRED WATERS	SWM AGREEMENT
				LATITUDE	LONGITUDE		TOTAL	PERVIOUS	IMPERVIOUS	MONTH	YEAR				
	Staunton Crossing Station LLC/Holtzman	99 Crossing Way	Staunton Crossing Station LLC	38.1506	-79.0482	Underground concrete storage	1.52	0.23	1.29	2	2021	PS06	Christian Creek Trib (N)	No	4/6/2021
	Gypsy Hill Cell Tower	2330 Morris Mill Rd	TowerCO 2013 LLC	38.161161	-79.416641	Detention Basin	1.79	1.51	0.28	1	2020	PS06	Gum Springs Branch	No	2/4/2020
BAC28	The Villages @ Staunton	101 W Village Dr.	Wheary, LLC	38.145438	-79.066018	Underground hdpe pipes	1.28	0.99	0.29	4	2021	PS06	Aylum Creek	No	5/6/2021
	High Tech	120 Crossing Way	North Ridge, LLC	38.187884	-79.026365	Bio-detention basins & pavers	2.50	0.97	1.53	1	2021	PS06	Lewis Creek	Yes	5/17/2021

APPENDIX E

Assessment of the Appropriateness of Identified BMPs

The City of Staunton has determined that the best management practices included in the MS4 Program Plan that the City already had in place during Permit Year 3 represent an appropriate selection and implementation of a stormwater management program as defined by the General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems.

No deficiencies have been found within the existing BMPs or within the new BMPs currently being developed for the Program.