



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 Year 5
July 1, 2017 through June 30, 2018**

Annual Report Prepared: September 4, 2018

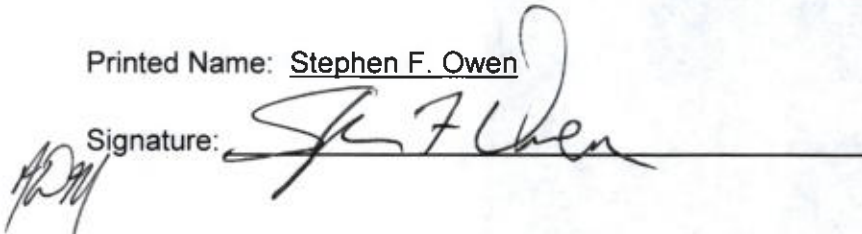
Certification

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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Date: 9-4-18

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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 February 18, 2014, the City of Staunton submitted a Registration Statement outlining the City's MS4 Program to the Department of Environmental Quality (DEQ). On May 12, 2014, the City received notification from DEQ that the City had obtained 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 called Best Management Practices or BMPs.

This document is the City of Staunton's required Annual Report for Permit Year 5. Permit Year 5 is the period starting on July 1, 2017 and ending on June 30, 2018. The annual report includes the statuses 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

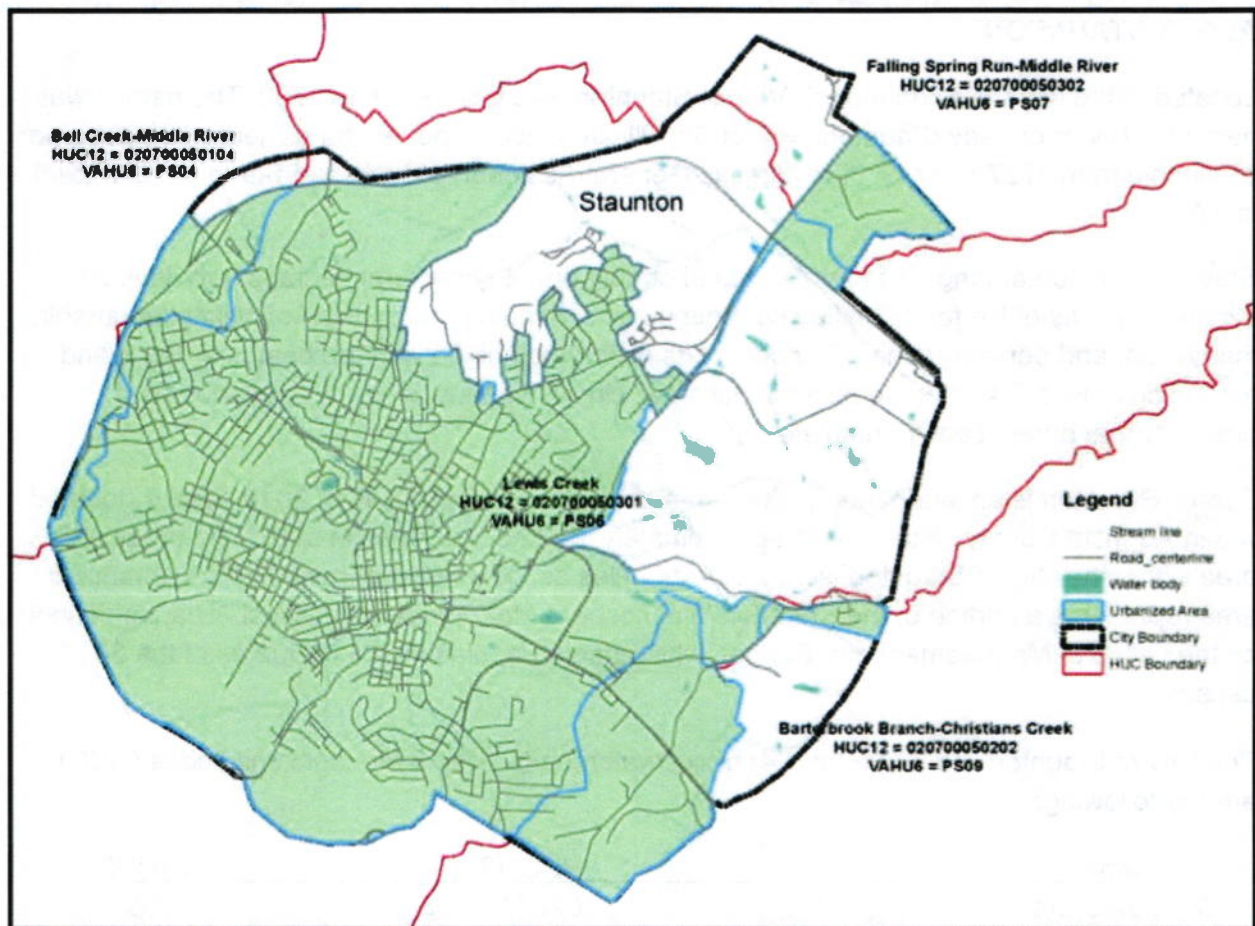


Figure 1

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 a providing variety of ways to communicate observed issues to the program administer.

Modifications to MCM1:

Date: September 4, 2018

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

BMP – 1.1 School Presentations

The City will develop a targeted presentation 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. An EnviroScape model, or similar, will be purchased and used as an interactive tool to help better understand the effects of water pollution and strategies for prevention.

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 plans to have the presentation developed and all needed material purchased by the end of the 2nd year of the permit (June 30, 2015). Once developed, the city will target 4 to 6 presentations per year. The Engineering Department will be responsible for developing and giving the presentations.

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

Achievements for Permit Year 5: The City continued school presentations during Permit Year 5. The City will continue school presentations during the next permit year.

Annual Reporting: The estimated target audience for Permit Year 5 was based on the number of students in the 6th and 9th grades. The estimated target audience for Permit Year 6 will again be based on the number of students in the 6th and 9th grades. After consulting with school officials, 6th and 9th grades present the best opportunity to accommodate stormwater topics within their curriculum.

The Engineering Department also participated in Staunton's Earth Day activities on April 21, 2018. The actual target audience reached total includes the number of elementary school age children that visited the City's Earth Day presentation.

School Presentations

Permit Year		Number of presentations	Estimated target audience	Actual target audience	Estimated target audience to be reached (minimum)	Actual target audience reached
5	July 1, 2017 - June 30, 2018	8	384	384	77 (20%)	341 (88%)
6	July 1, 2018 - June 30, 2019		392		78 (20%)	

BMP – 1.2 Stormwater Webpage

The City will develop a dedicated stormwater webpage which will allow detailed information to be available to the public. The new stormwater webpage will be added to the existing City website. Information that will be 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, accessibility 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 detailed information pertaining to the City of Staunton's MS4 Program.

Implementation Schedule: The City plans to complete the website by the end of the 2nd year of the permit (June 30, 2015). Once developed, the City will maintain the website by adding the

annual reports and updating the site's content and links. The Engineering Department will be responsible for the page's content and will direct the webmaster of all required changes.

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

Achievements for Permit Year 5: The City's Stormwater Webpage was updated as necessary during Permit Year 5. The City will continue to update the Stormwater Webpage during the next permit year.

Web link to the City's Stormwater Webpages:

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

Annual Reporting:

Stormwater Webpage		
Permit Year		Number of website hits
5	July 1, 2017 - June 30, 2018	1,041

BMP – 1.3 Waste

The City will develop educational brochures to provide information in an easy to read format. The brochures will concentrate on the topic of "Waste". In keeping the topic more general as "waste", it will allow the City to have the flexibility to modify the Program from one type of waste as "common litter" to "pet waste" 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 be developed by the end of the 2nd year of the permit (June 30, 2015). Distribution of the brochures will begin during the 3rd year of the permit (July 1, 2015 through June 30, 2016). The Engineering Department will be responsible for the brochure's content and distribution.

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

Achievements for Permit Year 5: An educational brochure, “Staunton’s Solutions for Stormwater Pollution, Issue Number III”, was distributed during Permit Year 5. The brochure was distributed city-wide by inserting the brochures into the City’s water and sewer bills and by also placing copies of the brochures at various locations throughout the City. A copy of the brochure has been included in Appendix A.

An educational brochure will be developed and distributed during the next permit year. The brochure for the next permit year will focus on construction waste.

Annual Reporting: The estimated target audience is based on the City’s population. The actual target audience reached is based on the total number of brochures distributed.

Waste

Permit Year		Number of brochures distributed	Estimated target audience	Actual target audience	Estimated target audience to be reached (minimum)	Actual target audience reached
5	July 1, 2017 - June 30, 2018	12,135	24,000	24,000	4,800 (20%)	12,135 (51%)
6	July 1, 2018 - June 30, 2019		24,000		4,800 (20%)	

BMP – 1.4 Watershed Awareness

The City will develop internet social media material to provide information in an easy to share format. The material will concentrate 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 being 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 its effect 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.

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 be developed by the end of the 2nd year of the permit (June 30, 2015). Postings of the material will begin during the 3rd year of the permit (July 1, 2015 through June 30, 2016). The Engineering Department will be responsible for the social media material and its distribution.

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

Achievements for Permit Year 5: Postings of material were added and updated on the Staunton Stormwater Facebook during Permit Year 5. Postings and updates will continue during the next permit year.

Web link to the City's Facebook page:

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

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

Watershed Awareness

Permit Year		Number of hits/likes/reaches	Estimated target audience	Actual target audience	Estimated target audience to be reached (minimum)	Actual target audience reached
5	July 1, 2017 - June 30, 2018	4,519	2,000	2,000	400 (20%)	2,093 (226%)
6	July 1, 2018 - June 30, 2019		4,000		800 (20%)	

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.

Modifications to MCM2:

Date: None this permit year

Web link to the MS4 Program and annual reports

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

BMP – 2.1 Tree Planting Program

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 will be 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.

Achievements for Permit Year 5: The City continued the Tree Planting Program during Permit Year 5. The City will continue the Tree Planting Program during the next permit year.

Annual Reporting:

Tree Planting Program

Permit Year		Number of trees planted	Number of trees pruned	Number of Arbor Day participants	Number of seedlings distributed
5	July 1, 2017 - June 30, 2018	65	410	300	300

BMP – 2.2 DEQ/DCR Adopt-A-Stream Program

The City will actively participate in the Virginia Adopt-A-Stream program. The Stormwater Webpage will include 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 while improving stream quality.

Implementation Schedule: The City will make the modifications to the Stormwater Webpage by the end of the 3rd year of the permit cycle (June 30, 2016). The Engineering Department will be responsible for the websites content and for supplying volunteers with the available materials.

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

Achievements for Permit Year 5: The Adopt-A-Stream Program began on July 1, 2016. The City promoted and implemented the program during Permit Year 5. The City will continue the Adopt-A-Stream Program during the next permit year.

Annual Reporting: No streams were adopted during Permit Year 5. The City plans to utilize our social media accounts to hopefully gain more interest in this BMP.

BMP – 2.3 Adopt-A-Street Program

The City currently has an Adopt-A-Street Program that is 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 lot. The Stormwater Webpage will include 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.

Achievements for Permit Year 5: The City continued the Adopt-A-Street Program during Permit Year 5. The City will continue the Adopt-A-Street Program during the next permit year.

Annual Reporting:

Adopt-A-Street Program

Permit Year		Total miles of street adopted
5	July 1, 2017 - June 30, 2018	0.50

Adopted Street Names

Name of street	Miles adopted	Organization
Morris Mill Road	0.50	Bea Henry

(see MS4 Program Plan Appendix B for list of all adopted streets and total miles adopted)

BMP – 2.4 Stormwater Hot-Line

The City will establish a dedicated stormwater hot line. The hot line will consist of a dedicated un-manned telephone line with all calls going to voicemail and a dedicated email address. Daily, the messages will be checked and any issues will be addressed in accordance with the written procedure.

Objective and Expected Results: The hot line will give the community the opportunity to report any type of pollution or to ask questions related to stormwater and water quality. In addition, the hot line will allow for the reporting of suspected illicit discharges.

Implementation Schedule: The hot line will be set up by the end of the 2nd year of the permit cycle (June 30, 2015). The Engineering Department will be responsible for housing the hot-line and initiating the response to any stormwater issues.

Method to Determine Effectiveness: The effectiveness of this BMP will be based on the total number of calls/emails per year. The annual report will include this number.

Achievements for Permit Year 5: The City's Stormwater Hot line continued during Permit Year 5. The City will continue the Stormwater Hot line during the next permit year.

Email address for City's Stormwater Hot line: StauntonStormwater@ci.staunton.va.us

Phone number for City's Stormwater Hot line: (540) 213-6517

Annual Reporting:

Stormwater Hot-Line			
Permit Year		Total number of phone calls	Total number of emails
5	July 1, 2017 - June 30, 2018	0	0

BMP – 2.5 Stormwater Partnerships

The City will establish partnerships with local environmental advocacy groups, such as 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.

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 Engineering Department will begin sending a representative to committee meetings by the end of the 2nd year of the permit cycle (June 30, 2015).

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

Achievements for Permit Year 5: The City continued Stormwater Partnerships during Permit Year 5. The City will continue Stormwater Partnerships during the next permit year.

One or more representatives of the City Engineering Department attended monthly meetings of the Lewis Creek Watershed Advisory Committee. Two representatives of the Engineering Department also attended quarterly meetings of the Stormwater Network, a group of local MS4 and VSMP localities hosted by the Central Shenandoah Planning District Commission.

Annual Reporting:

Stormwater Partnerships

Permit Year		Total number of meetings attended
5	July 1, 2017 - June 30, 2018	16

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 the exceptions for those 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 MCM3:

Date: September 4, 2018

A summary of all illicit discharge reports and investigations has been included in Appendix B. An outfall/points of discharge map has been included in Appendix C.

BMP – 3.1 Hazardous Waste Collection Day

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 send an informational flyer 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.

Achievements for Permit Year 5: The City continued participating in the regional household hazardous waste collection day during Permit Year 5. The City will continue participating in the regional household hazardous waste collection day during the next permit year.

Annual Reporting:

Hazardous Waste Collection Day

Permit Year		Total number of City vehicles
5	July 1, 2017 - June 30, 2018	43

BMP – 3.2 IDDE Detection Program

The City will develop and implement an IDDE Detection Program to detect, identify and address unauthorized discharges. The program will require a storm sewer map to be developed and maintained with all outfalls identified. The mapping system will be used to screen for illicit discharges. The dry weather screening element of the program will include:

- Develop prioritized screening schedule
- Perform a minimum 50 field screenings per year, or screen all outfalls if less than 50 total in system
- Methodologies to collect general information such as last rain, quantity of rain, visual observations, etc.
- Define 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, BMP 1.2 and hot-line, BMP 2.4, will be used to promote and facilitate public reporting of illicit discharges.

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

Implementation Schedule: The City will develop and implement the IDDE program by the end of the 3rd year of the permit cycle (June 30, 2016). Engineering will be responsible for implementing the program with support from Public Works for investigations. The Engineering Department will be responsible for development and maintenance of the storm sewer mapping.

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

Achievements for Permit Year 5: The IDDE Detection Program began on July 1, 2016. The City promoted and implemented the program during Permit Year 5. The City will continue the IDDE Detection Program during the next permit year.

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>

Annual Reporting: During Permit Year 5, 53 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 is available upon request. A summary of all illicit discharge reports and investigations has been included in Appendix B.

A total of 352 MS4 outfalls and points of discharges were identified during Permit Year 4. 2 more were added in Permit Year 5, totaling 354 regulated outfalls. An outfall/points of discharge map has been included in Appendix C. Further documentation of the outfalls and points of discharge is available upon request.

Physical interconnection letters have been sent to VDOT and Augusta County during Permit Year 2.

BMP – 3.3 Mapping of Stormwater Network

The City will produce and 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 of 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 3.2) 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 develop the storm sewer mapping by the end of the 4th year of the permit cycle (June 30, 2017). Maintenance of the mapping will be ongoing after this. Engineering will be responsible for developing and maintaining the sewer mapping using GIS.

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

Achievements for Permit Year 5: The mapping of the City's stormwater network began during Permit Year 3. The mapping reached substantial completion during Permit Year 4. Necessary updates to the stormwater network mapping were made during Permit Year 5. Updates will continue as needed during the next permit year.

Annual Reporting: The mapping of the City's stormwater network reached substantial completion during Permit Year 4. The associated information table is available upon request.

Mapping of Stormwater Network

Permit Year		Total number of storm sewer structures	Total number of storm sewer outfalls
5	July 1, 2017 - June 30, 2018	2,633	749

BMP – 3.4 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 process 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, Engineering, Public Works, Parks & Recreation and Fire Department will continue to be responsible for their departmental SPCC training.

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

Achievements for Permit Year 5: The City continued to provide personnel with spill prevention control and countermeasure training during Permit Year 5. The City will continue to provide personnel with spill prevention control and countermeasure training during the next permit year.

Annual Reporting:

SPCC Training

Permit Year		Total number of City personnel trained	Department	Training Date
5	July 1, 2017 - June 30, 2018	8	Public Works	8/21/2017
		12	Public Works	10/16/2017
		7	Public Works	12/12/2017
		6	Public Works	2/20/2017
		13	Parks & Rec	7/31/17
		54	Fire Department	8/2/2017 thru 8/4/2017

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 MCM4:

Date: 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 Department 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 1 certified VESCP Program Administrator, 2 certified VESCP inspectors and 2 VESCP certified plan reviewers.

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.

Achievements for Permit Year 5: The City continued to administer the VESCP and to issue land disturbing permits for any land disturbance activity over 10,000 square feet as well as single-family home construction during Permit Year 5. The City will continue to administer the VESCP during the next permit year.

Annual Reporting:

Erosion and Sediment Control Program (VESCP)

Permit Year		Permits	Total	Commercial sites	Single-family sites
5	July 1, 2017 - June 30, 2018	Total number of regulated land-disturbing activities	91	17	74
		Total number of acres disturbed	112.35	94.28	18.07
		Total number of inspections conducted	1055	231	824

		Enforcement	Total	Notices to Comply	Stop Work Orders
		Total number of enforcement actions taken	456	311	145

BMP – 4.2 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 has 1 certified VSMP Program Administrator, 2 certified VSMP inspectors and 1 VSMP certified plan reviewers.

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 Program 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.

Achievements for Permit Year 5: The City continued to administer the VSMP Program during Permit Year 5. The City will continue to administer the VSMP Program during the next permit year.

Annual Reporting:

Stormwater Management Program

Permit Year		Permits	Total	Commercial sites	Single-family sites
5	July 1, 2017 - June 30, 2018	Total number of regulated land-disturbing activities	73	14	59
		Total number of exemptions applied for	0	0	0

		Total number of inspections conducted	851	224	627
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		Enforcement	Total	Notices to Comply	Stop Work Orders
		Total number of enforcement actions taken	422	280	142

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 MCM5:

Date: September 4, 2018

The BMP database for BMPs brought online during Permit Year 5 has been included in Appendix D.

BMP – 5.1 Structural BMP Maintenance

The City will develop 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 also encourage owners of private structural BMPs without agreements to acquire the maintenance agreement.

Objective and Expected Results: By developing 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 completed by the end of the 2nd year of the permit cycle (June 30, 2015). 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.

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

Achievements for Permit Year 5: The City continued the Structural BMP Maintenance Program during Permit Year 5. The City acquired Maintenance Agreements on all new BMPs and was able to acquire Maintenance Agreements on several existing BMPs. The City will continue the Structural BMP Maintenance Program during the next permit year.

Annual Reporting:

Structural BMP Maintenance

Permit Year		Total Number of BMP Maintenance Agreements	Number of SWM Agreements		Number of SWM Facilities	
			New BMPs	Existing BMPs	New BMPs	Existing BMPs
5	July 1, 2017 - June 30, 2018	4	3	1	9	2

BMP – 5.2 Structural BMP Inspection

The City will develop 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. This report will be standardized and 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 5.1.

Objective and Expected Results: By developing 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 developed and implemented by the end of the 3rd year of the permit cycle (June 30, 2016). 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 inspection reports submitted by private owners and completed by city personnel. The annual report will include these numbers.

Achievements for Permit Year 5: The City continued the Structural BMP Inspection Program during Permit Year 5. The City will continue the Structural BMP Inspection Program during the next permit year.

Annual Reporting:

Structural BMP Inspection

Permit Year		Total number of inspections	
		Public BMPs	Private BMPs
5	July 1, 2017 - June 30, 2018	18	45

BMP – 5.3 Structural BMP Database

The development of a structural BMP database will be instrumental in implementing BMP 5.1 and BMP 5.2. The BMP database will include 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: Once complied, 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 completed by the end of the 3rd year of the permit cycle (June 30, 2016). 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.

Achievements for Permit Year 5: The City updated the Structural BMP Database during Permit Year 5. The City will continue to update the database as necessary during the next permit year

Annual Reporting: The BMP database for BMPs brought online during Permit Year 5 has been included in Appendix D.

Minimum Control Measure 6 – Pollution / Good Housekeeping

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

Modifications to MCM6:

Date:

BMP – 6.1 Street Sweeping

The City will continue its program of regular street sweeping.

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 tons of debris collected. The annual report will include these numbers.

Achievements for Permit Year 5: The City continued the Street Sweeping Program during Permit Year 5. The City will continue the Street Sweeping Program during the next permit year.

Annual Reporting:

Street Sweeping			
Permit Year		Total number of road miles swept	Total number of tons collected
5	July 1, 2017 - June 30, 2018	6490	1,324

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 that will continue to be 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.

Achievements for Permit Year 5: The City continued to provide personnel with pollution prevention training during Permit Year 5. The City will continue to provide personnel with pollution prevention training during the next permit year

Annual Reporting:

Pollution Prevention Training

Permit Year		Total number of City personnel trained	Department	Training Date
5	July 1, 2017 - June 30, 2018	8	Public Works	8/18/2017
		12	Public Works	2/15/2018
		14	Parks & Rec	7/31/17
		54	Fire Department	8/2/2017 thru 8/4/2017

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 an ongoing 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.

Achievements for Permit Year 4: The City continued the Yard Debris Collection Program during Permit Year 5. The City will continue the Yard Debris Collection Program during the next permit year.

Annual Reporting:

Yard Debris Collection Program

Permit Year		Total number of cubic yards collected	Total number of loads collected
5	July 1, 2017 - June 30, 2018	5,348	382

BMP – 6.4 Dedicated Vehicle Wash Facility

The City currently operates and maintains a dedicated vehicle wash facility at its equipment maintenance shop.

Objective and Expected Results: This program eliminates the many pollutants that would otherwise enter into the stormwater system in 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.

Achievements for Permit Year 5: The City continued to operate and maintain a dedicated vehicle wash facility at the Public Works Department's equipment maintenance shop during Permit Year 5. The City will continue to operate and maintain a dedicated vehicle wash facility during the next permit year.

Annual Reporting:

Dedicated Vehicle Wash Facility		
Permit Year		Total number of vehicles washed
5	July 1, 2017 - June 30, 2018	1,165

BMP – 6.5 Storm Sewer Inspection and Maintenance

The City will develop a programmatic storm sewer inspection and maintenance program. The program will include 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 program will be developed by the end of the 4th year of the permit cycle (June 30, 2017). 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.

Achievements for Permit Year 5: The mapping of City's stormwater network began during Permit Year 3 and was substantially completed during Permit Year 4. Storm structures in need of repair were identified. The Storm Sewer Inspection and Maintenance Program was developed during Permit Year 4 and was implemented during Permit Year 5.

Annual Reporting: The total number of storm sewer structures inspected and the total number of linear feet of storm drain inspected are below.

Storm Sewer Inspection

Permit Year		Total number of Storm Structures Inspected	Total Linear Feet of Storm drain Inspected
5	July 1, 2017 - June 30, 2018	250	3,523

BMP – 6.6 Develop SWPPP for Required City Facility

The City will identify high priority City facilities and develop and implement Stormwater Pollution Prevention Plans (SWPPPs) for each high priority facility.

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

Implementation Schedule: The city will identify the high priority facilities and will develop and implement the SWPPPs by the end 4th year of the permit cycle (June 30, 2017).

Method to Determine Effectiveness: Producing the required SWPPPs. The annual report will include the total number of completed SWPPPs.

Achievements for Permit Year 5: The City identified all municipal high-priority facilities and high-priority facilities with a high potential for pollutant discharges during Permit Year 4. The City will continue to update this list as new facilities are created or as existing facilities are modified or updated.

Site-specific SWPPPs for each high-priority facility with a high potential for pollutant discharge were developed during Permit Year 4. The SWPPPs were implemented during Permit Year 5. Each SWPPP will be updated as existing facilities are modified or updated.

Each SWPPP shall be included in the City's MS4 Program Plan by reference and is available upon request.

Annual Reporting:

Stormwater Pollution Prevention Plans (SWPPPs)

Permit Year		Total number of sites requiring a SWPPP	Total number of sites with a completed SWPPP
5	July 1, 2017 - June 30, 2018	5	5

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
Recycle Center	600 Churchville Avenue	Public Works	1911 Craigmont Road
Parks and Recreation Pools	600 Churchville Avenue / 1000 Montgomery Avenue	Parks and Recreation	1000 Montgomery Avenue

BMP – 6.7 Develop Nutrient Management Plan for Required City Sites

The City will identify sites over one acre that require a Nutrient Management Plan (NMP). Once identified, a NMP will be developed and implemented for each site.

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 identify the sites that require Nutrient Management Plans and will develop and implement the NMPs by the end of the 5th year of the permit cycle (June 30, 2018).

Method to Determine Effectiveness: Producing the required NMP. The annual report will include the total number of completed NMPs.

Achievements for Permit Year 5: The development of NMPs for city sites is scheduled to be completed by the end of Permit Year 5 (June 30, 2018).

Annual Reporting: The total number of sites requiring NMPs, the total number of acres requiring NMPs, the total number of sites where NMPs have been developed and the total number of acres where NMPs have been developed will be reported starting with the annual report for Permit Year 5.

Nutrient Management Plans (NMPs)			
Total Number of Sites Requiring NMP	Total Acres Requiring NMP	Total Number of NMPs Developed	Total Acres Covered Under NMP
6	18.55	6	18.55

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 existing MS4 communities (MS4 communities established prior to 2013) includes a requirement to meet a reduction goal of 5% during the current 5 year MS4 Permit Cycle. New MS4 programs, including the City of Staunton, are required to develop a Chesapeake Bay TMDL Action Plan during the first MS4 Permit Cycle and submit the Action Plan with the registration statement for the second permit cycle.

Modifications to Chesapeake Bay TMDL:

Date: September 20, 2017

None

Objective and Expected Results: The development of a Chesapeake Bay TMDL Action Plan 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 will submit the TMDL Action Plan with the registration statement for the second permit (July 1, 2018- June 30, 2023) cycle by the end of the permit cycle (June 30, 2018).

Achievements for Permit Year 5: The City has continued the preliminary planning for the Chesapeake Bay TMDL Action Plan and submitted the Draft Action Plan with our registration statement for second cycle permitting. The development of the Final Action Plan is scheduled to be completed by the end of the next permit year (June 30, 2019).

Annual Reporting: The Draft Chesapeake Bay TMDL Action Plan has been submitted with the City's registration statement for the next permit cycle (July 1, 2018 to June 30, 2023). The final action plan will be submitted before the end of the next permit year (June 30, 2019). The Action Plan will show how the City will meet the 40% pollutant reduction required by the end of the next permit cycle (June 30, 2023). If the City constructs any projects during this permit cycle (July 1, 2013 to June 30, 2018) where a pollutant reduction is achieved, the total amount of pollutant removal will be included in the corresponding annual report.

Responsible Parties

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

Modifications to Responsible Parties:

Date: September 20, 2017

None

Executive Officer

Title: City Manager

Name: Stephen F. Owen

Address: P.O. Box 58
Staunton, VA 24402

Phone: 540-332-3812

Email: Owensf@ci.staunton.va.us

Program Management

Department of Engineering

Title: City Engineer

Name: Nickie D. Mills

Address: P.O. Box 58
Staunton, VA 24402

Phone: 540-332-3858

Email: millsnd@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

Department of Public Works

Title: Director

Name: Thomas C. Sliwoski

Address: P.O. Box 58
Staunton, VA 24402

Phone: 540-332-3892

Email: sliwoskitc@ci.staunton.va.us

Staunton Fire Department

Title: Fire Chief

Name: R. Scott Garber

Address: 500 N. Augusta Street
Staunton, VA 24401

Phone: 540-332-3884

Email: garberrs@ci.staunton.va.us

APPENDICES

APPENDIX A

STAUNTON'S SOLUTION FOR STORMWATER POLLUTION, ISSUE NUMBER III

How do I recycle?

The City collects items for recycling on the same days as residential trash. In the Central Business District, recycling is collected on Monday and Thursday. There is a \$25 service fee for the use of three recycling bins, which is refunded when you close your account and all bins are returned in good condition.

Items accepted by the City for recycling:

- Mixed paper; magazines, newspapers, phone books, hard and soft bound books, poster board, office paper, folders, envelopes, and brochures
- Cardboard
- Plastic #1 - #7, including plastic caps
- Glass that is clear, green, and brown
- Metal cans
- Aluminum cans



City crews pick up recycled items in downtown.

The City also provides a recycling center for residents to drop off items seven days a week. The center is located in Gypsy Hill Park next to Lake Tams. (Pictured below)



Staunton's Solutions for Stormwater Pollution

This brochure is the third 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](https://www.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 III



March 2018

Where does litter go?

Trash and waste that is misplaced and enter a body of water is considered aquatic litter and debris. These items are usually highly visible and have extremely negative impacts on wildlife and our own health.

Our local streams and rivers as well as the Chesapeake Bay are all under a lot of stress due to human activities, such as littering and improper waste management. We need to be aware of how much litter we create, how we dispose of it, and what we can do to prevent it from reaching our waterways.

Trash and debris located in the streets, curbs, sidewalks, and even our yards can make its way into a stream, river, or the Chesapeake Bay. During storm events, stormwater can pick up the litter and carry it into the city's storm drain system. All city storm drains eventually discharge into the nearest creek or stream, taking the litter directly into our water bodies, harming the environment, aquatic life, and human health.



Litter swept away by stormwater gathers along stream banks

Common Litter Items

- Cigarette butts
- Bags/food wrappers
- Drink bottles/cans
- Plastic cups, plates, plastic-ware
- Styrofoam
- Straws/stirrers
- Tobacco packaging



Cigarette butts tossed in the streets find their way into streams

Plastic is a major issue when it comes to pollution, particularly stream pollution. Plastic is an extremely common material used and unfortunately found too often in water bodies. Plastic can take hundreds of years to break down, so when not disposed of correctly, it can kill animals and threaten the environment. Study shows that nearly 90 percent of debris floating in the ocean is plastic.



Other types of waste

Pet waste- Bacteria in pet feces can infiltrate into water sources or be swept away into the storm drain system during rain events.

- Bag it and trash it
- Scoop and trash
- Scoop and flush (most recommended)
- Scoop & bury/ compost

Hazardous materials- Augusta County hosts an event at the county Government Center in the fall. Residents of Staunton may bring materials to the event for proper disposal and recycling. Items include:

- Antifreeze
- Oil
- Gas
- Solvents
- Oil based paint
- Acids
- Pesticides and herbicides

Heavy trash- During one week each spring (usually April), the City collects large and bulky items not picked up during routine trash collection. Items include:

- Yard waste (brush and limbs)
- Old appliances (refrigerators, lawn mowers, microwaves, etc.)
- Furniture (mattresses, sofas, dressers, etc.)

For tires and electronics, drop off is available at the Gypsy Hill Football parking lot for disposal on Saturday of heavy trash collection week.

For more information on hazardous and heavy material pick up days, please visit: <https://www.ci.staunton.va.us/departments/public-works/trash-recycling-collection>

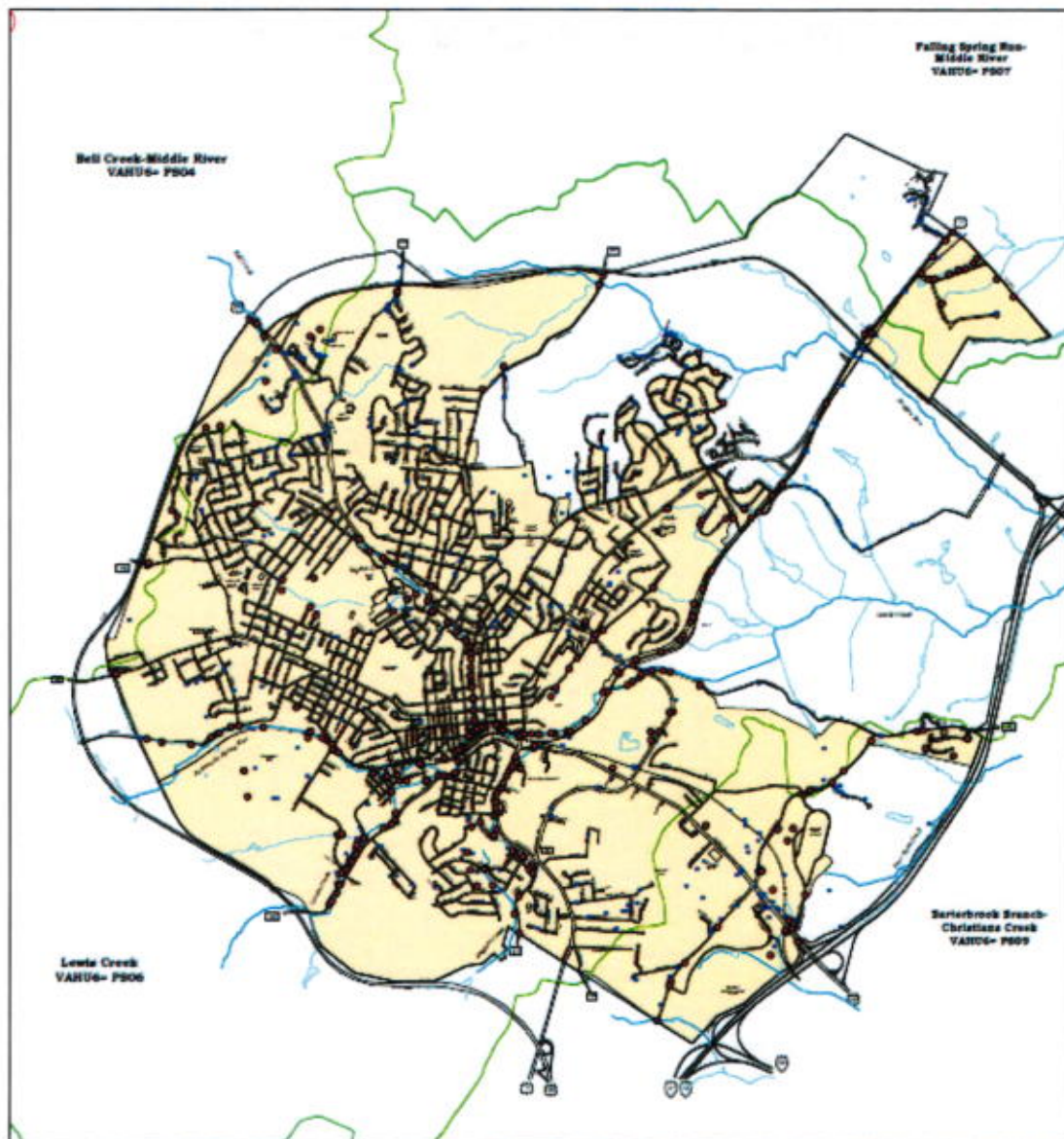
APPENDIX B

ILLICIT DISCHARGE DETECTION & ELIMINATION PROGRAM DATABASE

July 1, 2017 thru June 30, 2018						
Illicit Discharge Detection and Elimination (IDDE) Database - FY18						
NUMBER	NOTIFICATION TYPE	DATE POTENTIAL ILICIT DISCHARGE OBSERVED	DATE POTENTIAL ILICIT DISCHARGE REPORTED	DESCRIPTION OF THE INVESTIGATION INCLUDING ANY FOLLOW UP	RESOLUTION OF THE INVESTIGATION	DATE CLOSED
1	Email from Fire Department	7/25/2017	7/26/2017	A truck hit a power pole, knocking it over and damaging the 3 transformers attached to it. Each transformer held about 30 gallons of mineral oil that was released into and adjacent drop inlet	Fire Dept. followed their normal procedures, contained the fuel spill and notified hazmat and DEQ	7/26/2017
2	Call from Public Works	8/1/2017	8/1/2017	Public Works crew noticed water being discharged into the street from 325 W Frederick St	Stormwater technician made a site visit and determined the discharge to be potable water being pumped from a basement due to an internal water leak. The property owner was notified of the City's IDDE ordinance and moved the discharge to a grassy area	8/1/2017
3	Call/Email from Fire Department	8/29/2017	8/29/2017	Fire Department received a call regarding diesel fuel leaking from a pickup truck in the Walmart parking lot	Fire Dept. followed their normal procedures, contained the fuel spill and notified hazmat and DEQ	8/29/2017
4	Call / email from Public Works, Police Department, and Fire Department	11/7/2017	11/7/2017	Police Department was notified that diesel fuel had been spilled along Hampton St. Upon site visit, it was determined that a pickup truck leaking diesel fuel had driven from Seth Dr to Greenville Ave	Fire Dept., Police Dept., and Public works responded to the site. Fire Dept. followed their normal procedures, with assistance from Public Works to contain the fuel spill and notified hazmat and DEQ. Fire Dept will be pursuing charges for incurred clean up fees.	11/7/2017
5	Email from Public Works	2/16/2018	2/16/2018	Public works discovered a County manhole overflowing and entering an adjacent SWAM pond at 1403 Greenville Ave	Public Works notified the Augusta County Service Authority, which responded and followed up with their standard protocol to address the stoppage, clean up the overflow, and notify DEQ.	2/16/2018
6	Call from Fire Department	5/16/2018	5/16/2018	Fire Department received a call regarding diesel truck incident lead diesel fuel leaking onto parking lot and into drop inlet.	Fire Dept. followed their normal procedures, contained the fuel spill.	

APPENDIX C
OUTFALL AND POINTS OF DISCHARGE MAP

City of Staunton Outfall Map



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

1 in = 1,500 ft

This map was created based off the 2010 US census

City of Staunton
July, 2018

STAUNTON
VIRGINIA



APPENDIX D
BMP DATABASE ADDITIONS

BMP DATABASE PUBLICLY OWNED BMPs BROUGHT ONLINE FROM July 1, 2017 thru June 30, 2018									
BMP NO.	SITE NAME	SITE ADDRESS	OWNER	SITE LOCATION		FACILITY TYPE		ACRES TREATED	ONLINE DATE
				LATITUDE	LONGITUDE			PERVIOUS IMPERVIOUS	MONTH YEAR
BCC3P	Wharf Parking Lot	2 West Johnson St	City of Staunton	38.1475	-79.0733	Permeable Pavers		TOTAL 1.25 PERVIOUS 0.09 IMPERVIOUS 1.16	4 2018
									VA HUS P506
									RECEIVING WATERS Lewis Creek
									IMPAIRED WATERS Yes
									SWM AGREEMENT No
									LAST INSPECTION 5/6/2018

BMP DATABASE PRIVATELY OWNED BMPs BROUGHT ONLINE FROM July 1, 2017 thru June 30, 2018									
BMP NO.	SITE NAME	SITE ADDRESS	OWNER	SITE LOCATION		FACILITY TYPE		ACRES TREATED	ONLINE DATE
				LATITUDE	LONGITUDE			PERVIOUS IMPERVIOUS	MONTH YEAR
BPC31	Burroughs Section 2	1211 Stocker Street	Par Four, LLC	38.1689	-79.0869	Bioretention filter		TOTAL 0.19 PERVIOUS 0.02 IMPERVIOUS 0.17	11 2017
BPF3C	Big Sky Apartments Phase II	106 Community Way	Bluestone Land, LLC	38.137	-79.049	Underground pipes		4.38 2.93	8 2017
BPF29	Big Sky Apartments Phase II	106 Community Way	Bluestone Land, LLC	38.113	-79.082	Bioretention filter w/ detention		0.52 0.14	8 2017
BPF28	Big Sky Apartments Phase II	106 Community Way	Bluestone Land, LLC	32.134	-79.032	Bioretention filter w/ detention		0.42 0.14	8 2017
BPF27	Big Sky Apartments Phase II	106 Community Way	Bluestone Land, LLC	38.135	-79.085	Bioretention filter w/ detention		0.20 0.18	8 2017
BPF26	Big Sky Apartments Phase II	106 Community Way	Bluestone Land, LLC	38.136	-79.035	Bioretention filter w/ detention		0.23 0.20	8 2017
BPF25	Big Sky Apartments Phase II	106 Community Way	Bluestone Land, LLC	38.137	-79.049	Bioretention filter w/ detention		4.58 2.11	8 2017
BCN7	Frontier Center (swm located on American Frontier Culture Foundation)	1274 Richmond Avenue	Staunton Frontier LLC American Frontier Culture Foundation	38.133	-79.0436	Wet pond 1		25.50 17.78	10 2017
BPC3A	Mary Baldwin University	101 E Frederick St	Mary Baldwin College	38.15067	-79.05983	Filterra Unit (2)		0.27 0.19	4 2018
BPC33	Mary Baldwin University	101 E Frederick St	Mary Baldwin College	38.150818	-79.070498	Filterra Unit (1)		0.27 0.18	4 2018
									VA HUS P506
									RECEIVING WATERS Peyton creek
									IMPAIRED WATERS No
									SWM AGREEMENT 43216
									LAST INSPECTION 4/3/2018

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 2 and began implementing in Permit Year 3 and continued during Permit Year 5 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.