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 4
July 1, 2016 through June 30, 2017

Annual Report Prepared: September 20, 2017

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.

Printed Name: Stephen F. Owen

Title: City Manager

Signature: _____

Date: 9-20-'17

Permit Number: VAR040132

MS4 Name: City of Staunton

Annual Report prepared by:

Ray N. Moyer, Jr., PE
Stormwater Engineer
City of Staunton
116 West Beverley Street
Staunton, VA 24401
(540) 332-3858
moyerrn@ci.staunton.va.us

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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 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 4. Permit Year 4 is the period starting on July 1, 2016 and ending on June 30, 2017. The annual report includes the statues 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

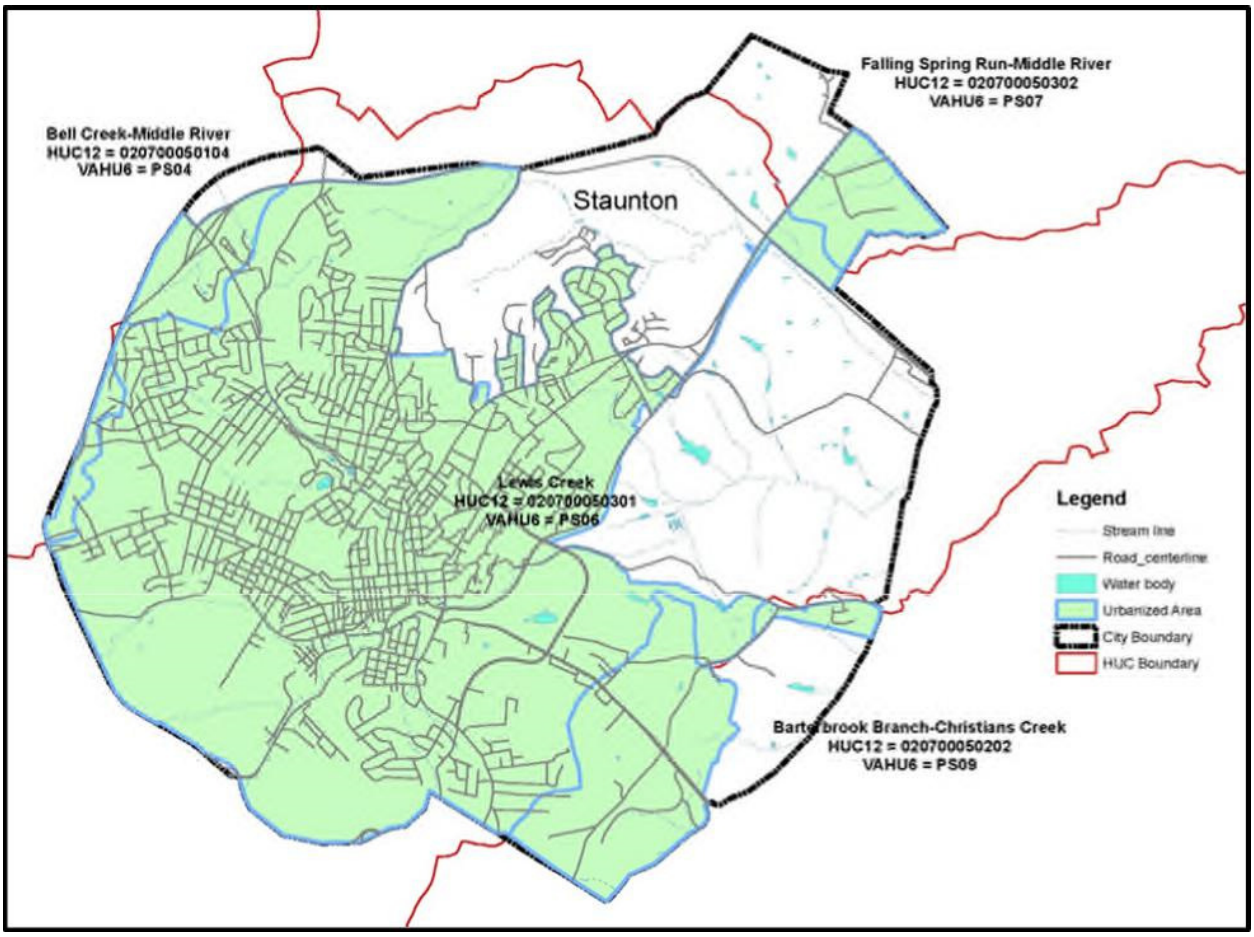
Located in the historic Shenandoah Valley, Staunton was first settled in 1732. The hamlet was named in honor of Lady Staunton, wife of Sir William Gooch who served as lieutenant-governor of Virginia from 1727 to 1749. The Virginia General Assembly established Staunton as a town in 1761.

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:

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


Falling Spring Run-Middle River
HUC12 = 020700050302
VAHU6 = PS07
Bell Creek-Middle River
HUC12 = 020700050104
VAHU6 = PS04
Staunton
Lewis Creek
HUC12 = 020700050301
VAHU6 = PS06
Barterbrook Branch-Christians Creek
HUC12 = 020700050202
VAHU6 = PS09
Legend
Stream line
Road_centerline
Water body
Urbanized Area
City Boundary
HUC Boundary
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 20, 2017

A copy of the educational brochure, "Staunton's Solutions for Stormwater Pollution, Issue Number II", has been included in Appendix A. The web link to the City's Stormwater Webpage has been revised.

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 4: The City continued school presentations during Permit Year 4. The City will continue school presentations during Permit Year 5.

Annual Reporting: The estimated target audience for Permit Year 4 was based on the number of students in the 6th and 9th grades. The estimated target audience for Permit Year 5 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 22, 2017. 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
4	July 1, 2016 - June 30, 2017	4	403	403	81 (20%)	435
5	July 1, 2017 - June 30, 2018		384		77 (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 4*:* The City's Stormwater Webpage was updated as necessary during Permit Year 4. The City will continue to update the Stormwater Webpage during Permit Year 5.

Web link to the City's Stormwater Webpage:
https://www.ci.staunton.va.us/departments/engineering-division

Annual Reporting:

Stormwater Webpage

Permit Year		Number of website hits
4	July 1, 2016 - June 30, 2017	1,228

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 4: An educational brochure, "Staunton's Solutions for Stormwater Pollution, Issue Number II", was distributed during Permit Year 4. 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 Permit Year 5. The brochure for Permit Year 5 will focus on trash and debris such as cigarette butts, pet waste and yard 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
4	July 1, 2016 - June 30, 2017	11,750	24,000	24,000	4,800 (20%)	11,750
5	July 1, 2017 - June 30, 2018		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 4: Postings of material were added and updated on the Staunton Stormwater Facebook during Permit Year 4. Postings and updates will continue during Permit Year 5.

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
4	July 1, 2016 - June 30, 2017	2,093	2,000	2,000	400 (20%)	2,093
5	July 1, 2017 - June 30, 2018		2,000		400 (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: September 20, 2017

The web link to the MS4 Program and annual reports has been revised.

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 event where seedlings are handed out to participants. The City will continue its tree planting program and its participation in the Arbor 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 event. Parks and Recreations 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 event. The annual report will include these numbers.

Achievements for Permit Year 4: The City continued the Tree Planting Program during Permit Year 4. The City will continue the Tree Planting Program during Permit Year 5.

Annual Reporting:

Tree Planting Program

Permit Year		Number of trees planted	Number of trees pruned	Number of Arbor Day participants	Number of seedlings distributed
4	July 1, 2016 - June 30, 2017	53	298	150	200

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 4: The Adopt-A-Stream Program began on July 1, 2016. The City promoted and implemented the program during Permit Year 4. The City will continue the Adopt-A-Stream Program during Permit Year 5.

Annual Reporting: No streams were adopted during Permit Year 4.

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 4: The City continued the Adopt-A-Street Program during Permit Year 4. The City will continue the Adopt-A-Street Program during Permit Year 5.

Annual Reporting:

Adopt-A-Street Program

Permit Year		Total miles of street adopted
4	July 1, 2016 - June 30, 2017	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. Also, 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 4: The City's Stormwater Hot-line continued during Permit Year 4. The City will continue the Stormwater Hot-line during Permit Year 5.

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

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

Annual Reporting:

Stormwater Hot-Line

Permit Year		Total number of phone calls	Total number of emails
4	July 1, 2016 - June 30, 2017	0	4

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 4: The City continued Stormwater Partnerships during Permit Year 4. The City will continue Stormwater Partnerships during Permit Year 5.

A representative 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
4	July 1, 2016 - June 30, 2017	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 20, 2017

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 4: The City continued participating in the regional household hazardous waste collection day during Permit Year 4. The City will continue participating in the regional household hazardous waste collection day during Permit Year 5.

Annual Reporting:

Hazardous Waste Collection Day

Permit Year		Total number of City vehicles
4	July 1, 2016 - June 30, 2017	71

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 will 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 4: The IDDE Detection Program began on July 1, 2016. The City promoted and implemented the program during Permit Year 4. The City will continue the IDDE Detection Program during Permit Year 5.

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 4, 56 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. 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 (6^{th} 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 4: The mapping of City's stormwater network began during Permit Year 3 has been substantially completed during Permit Year 4. The stormwater network mapping will be updated as necessary during Permit Year 5.

Annual Reporting: The mapping of the City's stormwater network has been substantially completed 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
4	July 1, 2016 - June 30, 2017	2,646	760

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 4: The City continued to provide personnel with spill prevention control and countermeasure training during Permit Year 4. The City will continue to

provide personnel with spill prevention control and countermeasure training during Permit Year 5.

Annual Reporting:

SPCC Training

Permit Year		Total number of City personnel trained	Department	Training Date
4	July 1, 2016 - June 30, 2017	12	Public Works	7/25/2016
		11	Public Works	8/15/2016
		15	Public Works	10/24/2016
		10	Public Works	11/14/2016
		15	Public Works	2/13/2017
		13	Public Works	4/10/2017
		10	Public Works	6/11/2017
		14	Parks & Rec	4/3/2017
		44	Police Department	10/13/2016 thru 3/5/2017
		48	Fire Department	8/24/2016 thru 8/26/2016

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: September 20, 2017

The web links to the City's Erosion and Sediment Control Program and written procedures for plan review, inspection and enforcement have been revised.

BMP – 4.1 Erosion and Sediment Control Program

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 E&S controls and to review the plan. A City E&S control inspector also makes site visits and approves the initial controls installed. The program is enforceable through the City Code (Chapter 13.14 Enforcement and Miscellaneous). The City has 1 certified ESC Program Manager, 2 certified ESC inspectors and 3 ESC certified plan reviewers.

The legal authorities utilized by the City to ensure compliance with our Erosion and Sediment Control Program and our VSMP Program include the following:

- Title 13 – Environment, Chapters 13.05, 13.10, 13.12, 13.14 of the Staunton City Code
- 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 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 erosion and sediment control program is in place to prevent adverse impacts from erosion and sedimentation from all construction sites.

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

Method to Determine Effectiveness: A number of parameters will be tracked pertaining to the ESC program 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 4: The City continued to administer the Erosion and Sediment Control Program 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 4. The City will continue to administer the Erosion and Sediment Control Program during Permit Year 5.

Annual Reporting:

Erosion and Sediment Control Program

Permit Year		Permits	Total	Commercial sites	Single-family sites
4	July 1, 2016 - June 30, 2017	Total number of regulated land-disturbing activities	80	16	64
		Total number of acres disturbed	130.83	111.58	19.25
		Total number of inspections conducted	676	154	522

		Enforcement	Total	Notices to Comply	Stop Work Orders
		Total number of enforcement actions taken	286	158	128

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 disturbances of 1 acre or greater and disturbances less than 1 acre and 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.

See BMP 4.1 for a description of the legal authorities and written procedures utilized by the City to ensure compliance with our Erosion and Sediment Control Program and VSMP Program.

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 4: The City continued to administer the VSMP Program during Permit Year 4. The City will continue to administer the VSMP Program during Permit Year 5.

City Engineering staff (total of 1) passed the DEQ certification examination for Stormwater Management Inspector. City Engineering staff (total of 2) passed the DEQ certification examination for Erosion and Sediment Control Inspector.

Annual Reporting:

Stormwater Management Program

Permit Year		Permits	Total	Commercial sites	Single-family sites
4	July 1, 2016 - June 30, 2017	Total number of regulated land-disturbing activities	67	12	55
		Total number of exemptions applied for	0	0	0
		Total number of inspections conducted	534	111	423

		Enforcement	Total	Notices to Comply	Stop Work Orders
		Total number of enforcement actions taken	224	125	99

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 20, 2017

The BMP database for BMPs brought online during Permit Year 4 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 4: The City continued the Structural BMP Maintenance Program during Permit Year 4. 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 Permit Year 5.

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
4	July 1, 2016 - June 30, 2017	4	2	2	3	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 4: The City continued the Structural BMP Inspection Program during Permit Year 4. The City will continue the Structural BMP Inspection Program during Permit Year 5.

Annual Reporting:

Structural BMP Inspection

Permit Year		Total number of inspections	
		Public BMPs	Private BMPs
4	July 1, 2016 - June 30, 2017	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 data base will be used to track BMP inspection and maintenance to ensure proper operability of BMPs is achieved.

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 BMP database in the annual report.

Achievements for Permit Year 4: The City updated the Structural BMP Database during Permit Year 4. The City will continue to update the database as necessary during Permit Year 5.

Annual Reporting: The BMP database for BMPs brought online during Permit Year 4 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: September 20, 2017
Written procedures for the Storm Sewer Inspection and Maintenance Program have been included in Appendix E.

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 4: The City continued the Street Sweeping Program during Permit Year 4. The City will continue the Street Sweeping Program during Permit year 5.

Annual Reporting:

Street Sweeping

Permit Year		Total number of road miles swept	Total number of tons collected
4	July 1, 2016 - June 30, 2017	5,748	1,053

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 4: The City continued to provide personnel with pollution prevention training during Permit Year 4. The City will continue to provide personnel with pollution prevention training during Permit Year 5.

Annual Reporting:

Pollution Prevention Training

Permit Year		Total number of City personnel trained	Department	Training Date
4	July 1, 2016 - June 30, 2017	11	Public Works	8/18/2016
		8	Public Works	10/20/2016
		8	Public Works	12/15/2016
		12	Public Works	2/16/2017
		10	Public Works	4/6/2017
		9	Public Works	6/15/2017
		14	Parks & Rec	4/3/2017
		44	Police Department	10/13/2016 thru 3/5/2017
		48	Fire Department	8/24/2016 thru 8/26/2016

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 4. The City will continue the Yard Debris Collection Program during Permit Year 5.

Annual Reporting:

Yard Debris Collection Program

Permit Year		Total number of cubic yards collected	Total number of loads collected
4	July 1, 2016 - June 30, 2017	5,530	395

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 4: The City continued to operate and maintain a dedicated vehicle wash facility at the Public Works Department's equipment maintenance shop during Permit Year 4. The City will continue to operate and maintain a dedicated vehicle wash facility during Permit Year 5.

Annual Reporting:

Dedicated Vehicle Wash Facility

Permit Year		Total number of vehicles washed
4	July 1, 2016 - June 30, 2017	722

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 4: The mapping of City's stormwater network began during Permit Year 3 has been 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 will begin implementation during Permit Year 5.

Annual Reporting: Written procedures for the Storm Sewer Inspection and Maintenance Program have been included in Appendix E. The total number of storm sewer structures inspected and the total number of linear feet inspected will be reported starting with the annual report for Permit Year 5.

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 4: The City identified all municipal high-priority facilities and high-priority facilities with a high potential for pollutant discharges. 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 and will begin implementation 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
4	July 1, 2016 - June 30, 2017	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 Storge 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 4: 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.

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 require 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 4: The City has continued the preliminary planning for the Chesapeake Bay TMDL Action Plan. The development of the Action Plan is scheduled to be completed by the end of Permit Year 5 (June 30, 2018).

Annual Reporting: The completed Chesapeake Bay TMDL Action Plan will be submitted with the City's registration statement for the next permit cycle (July 1, 2018 to June 30, 2023). 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 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

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: 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 II

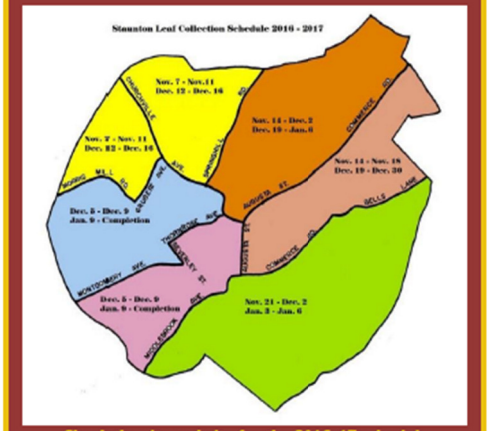
More useful tips

For swimming pool draining:

- Dispose of pool water into a sanitary sewer system **(highly recommended)**, but please contact Public works first
- Discharge into highly vegetated areas
- Discharge slowly
- Clean out pool water of debris, floatables, and solids
- Discharge pool water with a pH between 6.0-8.0
- Remove chlorine and bromine
- Let pool set for 10 days to dissipate chemicals
- Heated pools need to cool for at least 10 days
- Maintain filtration equipment

For leaf clean up:

- Do not push leaves over the curb and into the street
- Push leaves right to the curb
- Bag leaves and sit on top of the curb
- Mow or mulch the leaves



Check the city website for the 2016-17 schedule

Staunton's Solutions for Stormwater Pollution

This brochure is the second 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 Day

Department of Engineering
116 West Beverley Street
3rd Floor
Staunton, VA 24401
Phone: (540) 332-3858
www.staunton.va.us
StauntonStormwater@ci.staunton.va.us

Find us on Facebook

Staunton's Solutions for Stormwater Pollution

Issue Number II

STAUNTON VIRGINIA

January 2017

Staunton's IDDE Program

As part of the City's Municipal Separate Storm Sewer System (MS4) permit issued by the Virginia Department of Environmental Quality (DEQ), the City is mandated to develop and enforce an Illicit Discharge Detection and Elimination (IDDE) program. The IDDE program's goal is to seek out and respond to any unlawful act of disposing, dumping, spilling, or other discharge of any substance other than stormwater into the City's storm drain system. These types of discharges can be extremely harmful to our local streams and tributaries.

In July 2016, the City adopted an illicit discharge ordinance (Staunton City Code Title 13 - Environmental). This ordinance defines an illicit discharge and establishes enforcement methods, including legal actions, that the City may pursue to eliminate illicit discharges.

Storm sewer outfalls will be routinely inspected to detect an illicit discharge. If present, the City will attempt to identify its source to eliminate the discharge.

To report any suspected (non-emergency) illicit discharge, please call our Stormwater Hotline at 540-213-6517 or email StauntonStormwater@ci.staunton.va.us.

For more information on Staunton's IDDE Program, visit the City Engineering Department's website at **www.staunton.va.us/directory/departments-a-g/city-engineer/illicit-discharge-detection-and-elimination-program**

What is an illicit discharge?

An illicit discharge is any discharge to the City's storm sewer system or waterway that is not entirely composed of stormwater or snow/ice melt.

Common illicit discharges into storm drains include (but are not limited to) the following:

- Disposal of vehicle maintenance fluids into storm drains
- Pouring of paints or stains into storm drains
- Leaking dumpsters/trash into storm drains
- Allowing yard clippings and leaves in storm drains
- Allowing washwater with soaps and/or detergents into storm drains
- Washing of silt, sediment, concrete, cement, or gravel into storm drains
- Discharging of swimming pool water into storm drains
- Pouring of common household cleaners/chemicals into storm drains
- Sewer backups/overflows going into storm drains

Only Rain Down the Storm Drain!

Tips to use

For Car Washing:

- Wash in a grassy area or permeable surface
- Use non-toxic soaps
- Minimize water usage
- Limit amount of soap used
- Wash at a commercial car wash where water is properly treated

Charity car washes:

- Partner with a commercial car wash whenever possible
- Wash in areas where water is conveyed to a sanitary sewer system
- Use a plug, seal, or boom to prevent wash water from entering a storm drain
- Empty buckets of soapy water into a sanitary sewer via drain, sink, or toilet

Washing in the grass allows water to soak into the ground

Soapy water entering the storm drain ends up in waterways

APPENDIX B

ILLICIT DISCHARGE DETECTION & ELIMINATION PROGRAM DATABASE

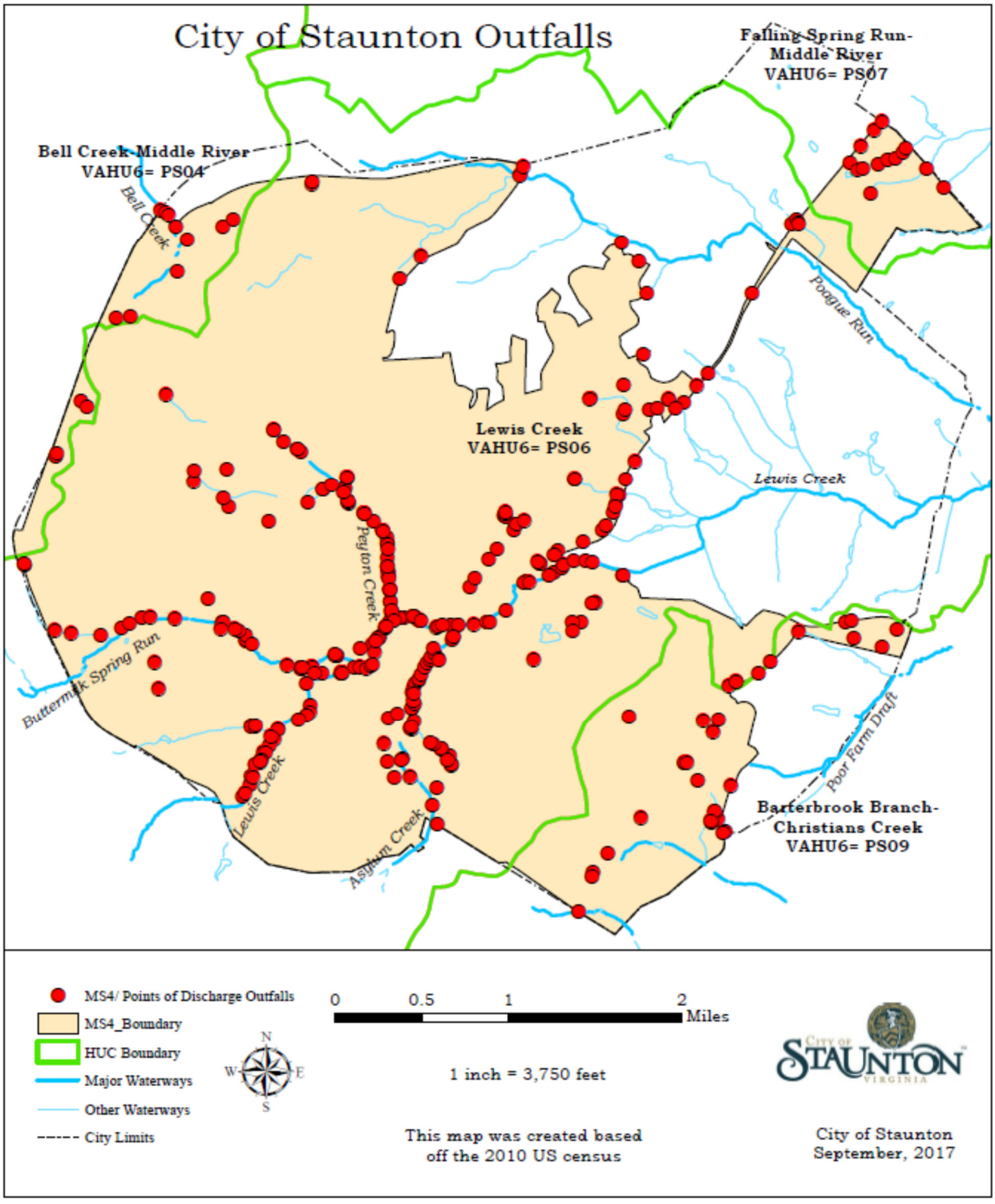
Illicit Discharge Detection and Elimination (IDDE) Database - FY17 **July 1, 2016 thru June 30, 2017**

NUMBER	NOTIFICATION TYPE	DATE POTENTIAL ILLICIT DISCHARGE OBSERVED	DATE POTENTIAL ILLICIT DISCHARGE REPORTED	DESCRIPTION OF THE INVESTIGATION INCLUDING ANY FOLLOW-UP	RESOLUTION OF THE INVESTIGATION	DATE CLOSED
1	Call from Fire Department	7/27/2016	7/27/2016	A buried Fuel tank was exposed at 280 N Central Ave, heavy rains caused fuel to directly enter a tributary to Lewis Creek	Fire Dept. followed their normal procedures, contained the fuel spill and notified hazmat and DEQ	7/28/2016
2	Public Works	7/28/2016	7/28/2016	Street crew noticed pool water being discharged into the street at 2608 Fourth St	Stormwater crew member hand delivered our pool draining guidelines to the property owner to prevent future improper draining	7/29/2016
3	Engineering Department	8/10/2016	8/10/2016	Engineering Department personnel observed concrete truck washout in street on Johnson Street - city crews were replacing city sidewalk on Johnson Street	City Street Superintendent was contacted by Eng. Dept. and reminded that concrete washout in street was not permitted - Superintendent said he would talk to the crews and remind them that was not permitted	8/10/2016
4	Email from Public Works	9/3/2016	9/6/2016	Lifeguard at Montgomery Park swimming pool failed to shut off the water feed before leaving pool. Chlorinated pool water overflowed and ran down the adjacent grass bank and may have reached Buttermilk Spring Run. Parks and Rec Dept. estimates that the water r may have overflowed for approximately 1 hour.	Water feed was turned off as soon as it when discovered.	9/3/2016
5	Call from Fire Department	9/9/2016	9/9/2016	Fire Marshal noticed a custodial contractor (Cornerstone Janitorial 946-2322) draining a liquid from inside their work van directly into the curb/gutter on the Albemarle Ave entrance to 300 Churchville Ave	IDDE Administrator made a site visit, informed the property owner and the custodial contractor of the City's IDDE ordinance , the contractor removed the draining hose from the curb/gutter, the contractor noted that the liquid was water from a collection tank	9/9/2016
6	Public Works	9/11/2016	9/12/2016	Standby crew was called out to investigate running water in street at 1208 Stoneburner St, after a site visit it was determined to be pool water being discharged into the street	Stormwater crew member hand delivered our pool draining guidelines to the property owner to prevent future improper draining, it was noted by the crew member that the water had been sitting some time and should be dechlorinated at this point	9/12/2016
7	Public Works	10/6/2016	10/6/2016	Street Crew noticed an individual at 512 Bridge St (QBC Paint LLC) spraying the shop floor off and directing the wash water to the street/curb	Stormwater Technician made a site visit and spoke with the business owner to explain our IDDE program, and that wash water should not be directed into the storm drain system	10/6/2016
8	Planning & Inspections	Jul-16	10/18/2016	Resident at 18 W Peabody St. registered a complaint regarding his neighbor at 18 W Hampton St was possibly discharging diesel fuel into a drop inlet adjacent to his	Stormwater Technician made a site visit - no evidence (staining, or odor) was witnessed at time of visit	10/18/2016
9	Email from Fire Department	12/19/2016	12/19/2016	A single vehicle accident at the intersection of Middlebrook Ave/Perry St occurred, approximately 1-2 gallons of fluid (power steering/antifreeze) entered the curb and gutter and possibly a drop inlet.	The fire department responded to the accident, placed absorbent on the fluid in the curb and gutter, entered the creek and verified that no fluid entered the waterway through the pipe from the drop inlet	12/20/2016
10	Email from Division of Planning & Zoning	1/13/2017	1/13/2017	An anonymous caller called in and reported that a material that looked like "concrete" was being washed into a drop inlet adjacent to 711 W Beverley St	IDDE Administrator made a site visit, and determined that old bonding material (mortar/sand) from the building's masonry had been/is being replaced and that some of that material had been washed down the street and into the drop inlet, IDDE Administrator informed the property owner (Will Wright 480-0226) of City IDDE Ordinance and discussed immediate cleanup and ways to prevent any further material from leaving the site. The owner and contractor came in that evening and shoveled/swept up most all of the remaining material and notified the IDDE Administrator upon completion.	1/17/2017

11	Public Works	4/3/2017	4/3/2017	Street Crew noticed paint chips and discolored water at the intersection of Baldwin St/Central Ave, upon further investigation, the debris was verified to be originating from a building pressure washing activity at 116 Baldwin St	The property owner contact (Enio Vierra 540-810-1450) was notified, he immediately called in a crew to clean up the debris and called the administrator to notify of the completion of clean up activities	4/3/2017
12	Call from Fire Department	4/24/2017	4/24/2017	Fire Marshal responded to a call of potential paint being washed down the road from a vehicle originating at 302 Institute St	Fire Marshall spoke with individuals performing painting actions at residence (Bobby Andrew, 89 Jerusalem Chapel Rd., Churchville, VA 24421 and Andrew Whitelaw, 1515 Hankey Mountain Hwy Churchville, VA 24421). It was determined that paint had spilled in the rear of the individuals pick up truck and they washed the truck bed out and down the road. The individuals were informed of our IDDE program and instructed on proper paint disposal methods.	4/25/2017
13	Call from Fire Department/Email from PD Dispatch	4/27/2017	4/27/2017	PD Dispatch was notified that someone at the neighboring suites to 100-102 Red Oak Dr. (Revenue Medic) was pumping septic directly into the parking lot to where it was running into the storm drain across the parking lot. Once finished they washed off the parking lot with water spraying all down the storm drain. After visiting the site to investigate the alleged illicit discharge, it was determined to be a sanitary sewer overflow at 100 Red Oaks Dr. Suite 103 (Wolfe Speech Therapy)(540-885-7774) due to a sanitary sewer backup	The Administrator made contact with the office manager (Lee Ralston) and determined that Brian Lucas with Royal Flush Plumbing (540-241-2998) was the plumber performing the work. Brian met the administrator on site, explained that while attempting to unclog the sanitary backup, approximately 5 gallons of sanitary waste/water escaped the property's sanitary clean out. He stated that he had also sprayed the material with water to direct it the a local storm water drop inlet. The City's IDDE program was explained in detail and Brian immediately began cleaning up any debris left over from this action while on site. The Administrator notified Cynthia Easterling in Community Development, and Perry Weller, Fire Marshal, of the incident. Both made a site visit and will be responding with their notice of violations on the matter.	4/28/2017
14	Call from Public Works	4/28/2017	4/28/2017	Public Works utility crew was called out to a potential water leak at 103 Spouse St - after reaching the site it was determined to be a resident at the address draining a pool	Stormwater Technician made a site visit, no evidence of continual draining was on site, pool draining guidelines will be delivered to the resident	5/2/2017
15	Call from Public Works	5/1/2017	5/1/2017	Public Works utility crew was called out to a potential water leak at 951 E Beverley St - after reaching the site it was determined to be a resident at the address draining a pool	Stormwater Technician made a site visit and discussed proper pool draining guidelines with employees of Valley Pool and Spa - the water had been sitting all winter and should have been dechlorinated at this point	5/1/2017
16	Email from WTP	5/20/2017	5/20/2017	WTP received a call that water was running down the road adjacent to 712 Cherry Hill Dr, Police Dept. mad a visit and determined that the water was originating from a swimming pool being drained at 712 Cherry Hill Dr	Stormwater Technician made a site visit and delivered our pool draining guidelines to the residence	5/22/2017
17	Call from Public Works	5/22/2017	5/22/2017	Street Department received a call that water was running down the street adjacent to 369 Mary Gray Ln, upon visiting the site it was determined that the water was originating from a swimming pool being drained at 369 Mary Gray Ln.	Stormwater Technician made a site visit and discussed proper pool draining guidelines with the homeowner - homeowner stated that water was being drained from pool cover only and was solely rainwater	5/23/2017
18	Email from Fire Department	6/16/2017	6/16/2017	Flooding caused a business at 310 New Hope Rd to potentially release hazardous material from their storage area	Fire Dept. followed their normal procedures, contained the fuel spill and notified hazmat and DEQ	6/16/2017

APPENDIX C

OUTFALL AND POINTS OF DISCHARGE MAP



APPENDIX D

BMP DATABASE

BMP DATABASE
PUBLICLY OWNED BMPs BROUGHT ONLINE
FROM July 1, 2016 thru June 30, 2017

BMP NO.	SITE NAME	SITE ADDRESS	OWNER	SITE LOCATION		FACILITY TYPE	ACRES TREATED			ONLINE DATE		VA HU6	RECEIVING WATERS	IMPAIRED WATERS	SWM AGREEMENT	LAST INSPECTION
				LATITUDE	LONGITUDE		TOTAL	PERVIOUS	IMPERVIOUS	MONTH	YEAR					
BPF6P	Crossing Way	99 Crossing Way	City of Staunton	38° 8' 0.401" N	79° 2' 17.009" W	Bioretention filter	0.48	0.34	0.14	7	2016	PS09	Poor Farm Draft	No	No	7/27/2016
BPF5P	Crossing Way	100 Crossing Way	City of Staunton	38° 7' 59.359" N	79° 2' 16.197" W	Bioretention filter	0.40	0.29	0.11	7	2016	PS09	Poor Farm Draft	No	No	7/27/2016
BCN1P	Crossing Way	99 Crossing Way	City of Staunton	38° 7' 55.472" N	79° 2' 18.928" W	Bioretention filter	0.35	0.17	0.18	7	2016	PS09	Christians Creek (N)	No	No	7/27/2016
BCN3P	Crossing Way	100 Crossing Way	City of Staunton	38° 7' 55.188" N	79° 2' 17.508" W	Bioretention filter	1.35	1.17	0.18	7	2016	PS09	Christians Creek (N)	No	No	7/27/2016
BCN2P	Crossing Way	100 Crossing Way	City of Staunton	38° 7' 53.938" N	79° 2' 18.010" W	Bioretention filter	0.60	0.38	0.22	7	2016	PS09	Christians Creek (N)	No	No	7/27/2016
BCN4P	Crossing Way	99 Crossing Way	City of Staunton	38° 7' 54.182" N	79° 2' 19.401" W	Bioretention filter	0.36	0.15	0.21	7	2016	PS09	Christians Creek (N)	No	No	7/27/2016

BMP DATABASE
PRIVATELY OWNED BMPs BROUGHT ONLINE
FROM July 1, 2016 thru June 30, 2017

BMP NO.	SITE NAME	SITE ADDRESS	OWNER	SITE LOCATION		FACILITY TYPE	ACRES TREATED			ONLINE DATE		VA HU6	RECEIVING WATERS	IMPAIRED WATERS	SWM AGREEMENT	LAST INSPECTION
				LATITUDE	LONGITUDE		TOTAL	PERVIOUS	IMPERVIOUS	MONTH	YEAR					
BVT17	Fed Ex Ground	7 Industry Way	ET Staunton LLC	38° 9' 25.368" N	79° 6' 40.605" W	Wet Pond Level 2	19.05	4.28	14.77	10	2016	PS07	Verona Tributary	No	4/27/2016	3/9/2017
BVT18	Fed Ex Ground	7 Industry Way	ET Staunton LLC	38° 10' 40.202" N	79° 1' 32.165" W	Wet Pond Level 1	5.84	1.88	3.96	10	2016	PS07	Verona Tributary	No	4/27/2016	3/9/2017
BBC7	Van Fossen	2507 West Beverley Street	Van Fossen Self Storage	38° 10' 52.806" N	79° 1' 24.945" W	Extended detention	5.15 onsite 6.83 offsite	2.30 onsite 6.83 offsite	2.85	7	2016	PS04	Bell Creek	No	6/4/2015	7/27/2016
BLC58	Silver Creek	571 Statler Boulevard	Silver Creek Properties, LLC	38° 9' 4.259" N	79° 2' 59.094" W	Bioretention	0.95	0.48	0.47	10	2016	PS06	Lewis Creek	Yes	11/10/2015	10/31/2016
BLC59	Silver Creek	571 Statler Boulevard	Silver Creek Properties, LLC	38° 9' 5.152" N	79° 2' 57.791" W	Dry detention	7.40	4.40	3.00	10	2016	PS06	Lewis Creek	Yes	11/10/2015	10/31/2016
BAC29	Green Spring Valley Section 16	903 Fisher Circle	Oaktree Builders, Inc.	38° 8' 2.552" N	79° 4' 41.178" W	Extended detention	9.93 onsite 15.03 offsite	6.95 onsite 13.33 offsite	2.98 onsite 1.70 offsite	9	2016	PS06	Asylum Creek	No	7/15/2015	10/31/2016
BAC30	Wheary Building	100 Village Drive	Wheary LLC	38° 8' 43.541" N	79° 3' 56.016" W	Permable pavers Level 2	0.52	0.21	0.31	8	2016	PS06	Asylum Creek	No	8/29/2016	10/31/2016
BAC31	Wheary Building	100 Village Drive	Wheary LLC	38° 8' 43.256" N	79° 3' 55.016" W	Permable pavers Level 1	0.73	0.23	0.50	8	2016	PS06	Asylum Creek	No	8/29/2016	10/31/2016
BPF3	Valley Center Office Building	75 Valley Center Drive	Commonwealth of VA - State Police	38° 8' 35.648" N	79° 2' 2.984" W	Grass channel	1.22	0.99	0.23	10	16	PS09	Poor Farm Draft	No	3/24/2016	10/31/2016
BLC1S	VDOT Staunton District Office	811 Commerce Road	Commonwealth of VA	38° 9' 38.321" N	79° 2' 41.263" W	Extended detention	20.53	4.63	15.90	6	2015	PS06	Lewis Creek	Yes	No	N/A

APPENDIX E

STORM SEWER INSPECTION AND MAINTENANCE PROGRAM

INSPECTION:

The City will perform long-term inspection and maintenance on all City owned storm pipes and structures. Inspections will be performed using written procedures which will include a check list and list of potential issues and methods to address each issue. Necessary maintenance identified during inspection will be conducted in a timely manner as indicated on the check list or no later than the next scheduled inspection.

OBJECTIVE:

The objective is to ensure that the intended function of the City owned pipes and structures are maintained through a long term inspection and maintenance program to insure that the storm water system is functioning as designed. The expected result is completed inspection forms and timely repairs of the identified problems.

EFFECTIVNESS:

1. The completion of the required inspections.
2. The timely completion of repairs of the identified problems.

APPENDIX F

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 4 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.