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 3
July 1, 2015 through June 30, 2016

Annual Report Prepared: September 20, 2016

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: S F Owen

Date: 9-20-16

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 2. Permit Year 2 is the period starting on July 1, 2014 and ending on June 30, 2015. 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

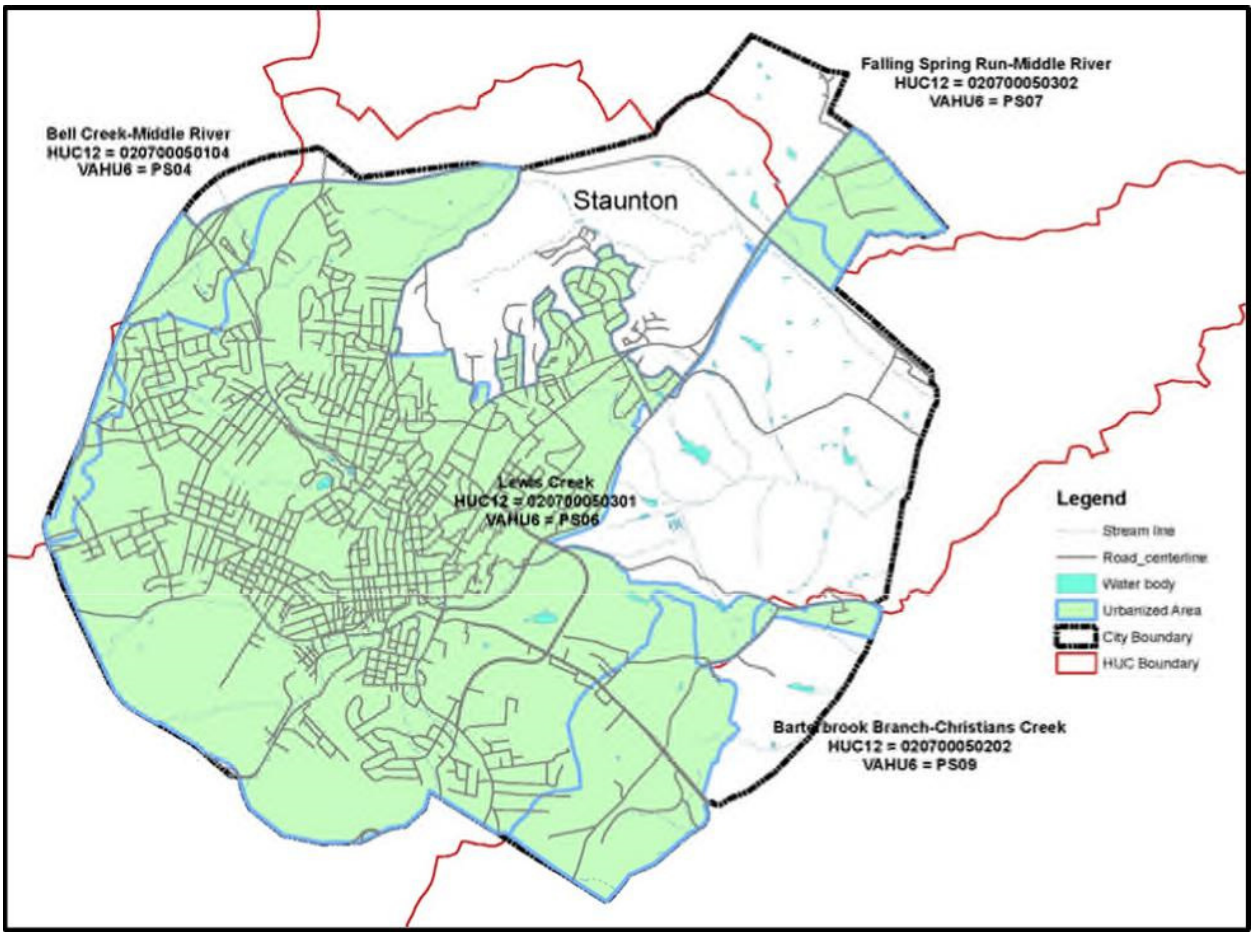
Located in the historic Shenandoah Valley, Staunton was first settled in 1732. The hamlet was named in honor of Lady Staunton, wife of Sir William Gooch who served as lieutenant-governor of Virginia from 1727 to 1749. The Virginia General Assembly established Staunton as a town in 1761.

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, 2016

A copy of the educational brochure, "Staunton's Solutions for Stormwater Pollution, Issue Number I", 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 3: School Presentations began during Permit Year 3. School presentations will continue during Permit Year 4.

Annual Reporting: The estimated target audience for Permit Year 3 was based on the number of students in the 6th and 9th grades. The estimated target audience for Permit Year 4 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.

School Presentations

Permit Year		Number of presentations	Estimated target audience	Actual target audience	Estimated target audience to be reached (minimum)	Actual target audience reached
3	July 1, 2015 - June 30, 2016	3	379	379	76 (20%)	347
4	July 1, 2016 - June 30, 2017		403		81 (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 3*:* The Stormwater Webpage went on-line on July 1, 2015. The webpage was updated as necessary during Permit Year 3. The webpage will continue to be updated during Permit Year 4.

Web link to the City's Stormwater Webpage:
http://www.staunton.va.us/directory/departments-a-g/city-engineer

Annual Reporting:

Stormwater Webpage

Permit Year		Number of website hits
3	July 1, 2015 - June 30, 2016	975

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 3: An educational brochure, "Staunton's Solutions for Stormwater Pollution, Issue Number I", was distributed during Permit Year 3. 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 4. The brochure for Permit Year 4 will focus on illicit discharges and the City's Illicit Discharge Detection and Elimination (IDDE) Program.

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
3	July 1, 2015 - June 30, 2016	11,250	24,000	24,000	4,800 (20%)	11,250
4	July 1, 2016 - June 30, 2017		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 3: The Staunton Stormwater Facebook page went on-line on July 1, 2015. Postings of material were added and updated as necessary during Permit Year 3. Postings and updates will continue during Permit Year 4.

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
3	July 1, 2015 - June 30, 2016	1,325	2,000	2,000	400 (20%)	1,325
4	July 1, 2016 - June 30, 2017		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, 2016

Written procedures for the Adopt-A-Stream Program have been included in Appendix B.

Web link to the MS4 Program and annual reports
http://www.staunton.va.us/directory/departments-a-g/city-engineer

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 3: The City continued the Tree Planting Program during Permit Year 3.

Annual Reporting:

Tree Planting Program

Permit Year		Number of trees planted	Number of trees pruned	Number of Arbor Day participants	Number of seedlings distributed
3	July 1, 2015 - June 30, 2016	60	176	130	230

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 3*:* The Adopt-A-Stream Program was developed during Permit Year 3 and began on July 1, 2016. The City chose to run our own Adopt-A-Stream Program instead of using the DCR Adopt-A-Stream Program. The program will be promoted and implemented during Permit Year 4.

Annual Reporting: Written procedures for the Adopt-A-Stream Program have been included in Appendix B. A list of adopted streams and the total linear feet of adopted streams will be reported starting with the annual report for 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 3: The City continued the Adopt-A-Street Program during Permit Year 3.

Annual Reporting:

Adopt-A-Street Program

Permit Year		Total miles of street adopted
3	July 1, 2015 - June 30, 2016	1.8

Adopted Street Names		
Name of street	**Miles adopted**	**Organization**
Bells Lane	1.80	Augusta Bird Club

(see MS4 Program Plan 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 3: The Stormwater Hot-line continued during Permit Year 3.

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
3	July 1, 2015 - June 30, 2016	3	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 3: Stormwater Partnerships began during Permit Year 3. A representative of the City Engineering Department began attending the monthly meetings of the Lewis Creek Watershed Advisory Committee.

Annual Reporting:

Stormwater Partnerships

Permit Year		Total number of meetings attended
3	July 1, 2015 - June 30, 2016	11*

* Monthly meeting for December 2015 was cancelled

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, 2016
Added web link to City Illicit Discharge Ordinance. Written procedures for the IDDE Program have 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 3: The City continued participating in the regional household hazardous waste collection day during Permit Year 3.

Annual Reporting:

Hazardous Waste Collection Day

Permit Year		Total number of City vehicles
3	July 1, 2015 - June 30, 2016	35

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 3: The IDDE Detection Program was developed during Permit Year 3 and began implementation on July 1, 2016. Staunton City Council adopted an illicit discharge ordinance in May 2016, with an effective date of July 1, 2016.

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: Written procedures of the IDDE Program have been included in Appendix C. The number of outfalls screened, screening results and a detail of any follow-up actions will be reported starting with the annual report for Permit Year 4. A summary of all illicit discharge reports and investigations will also be reported starting with the annual report for Permit Year 4.

There were no new MS4 outfalls added during Permit Year 3.

Physical interconnection letters have been sent to VDOT and Augusta County.

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 3: The Mapping of Stormwater Network began during Permit Year 3 and is scheduled to be completed by the end of Permit Year 4.

Annual Reporting: The City began the mapping of the stormwater network during Permit Year 3. The total number of storm sewer structures and the total number of miles of storm sewer mapped will be reported starting with the annual report for Permit Year 4. The associated information table will also be reported starting with the annual report for Permit Year 4.

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 3: The City continued to provide personnel with spill prevention control and countermeasure training during Permit Year 3.

Annual Reporting:

SPCC Training

Permit Year		Total number of City personnel trained	Department	Training Date
3	July 1, 2015 - June 30, 2016	9	Public Works	8/20/2015
		15	Public Works	10/15/2015
		17	Public Works	12/10/2015
		12	Public Works	2/18/2016
		12	Public Works	6/16/2016
		9	Parks & Rec	6/25/2016
		30	Fire Department	5/25/2016 thru 5/27/2016

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, 2016

None

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: http://www.staunton.va.us/directory/departments-a-g/city-engineer

Written procedures and policies for plan review, inspection and enforcement can be found at: http://www.codepublishing.com/VA/staunton.html and http://www.staunton.va.us/directory/departments-a-g/city-engineer/downloadable-forms

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 3: 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 3.

Annual Reporting:

Erosion and Sediment Control Program

Permit Year		Permits	Total	Commercial sites	Single-family sites
3	July 1, 2015 - June 30, 2016	Total number of regulated land-disturbing activities	68	17	51
		Total number of acres disturbed	103.15	89.37	13.78
		Total number of inspections conducted	612	171	441

		Enforcement	Total	Notices to Comply	Stop Work Orders
		Total number of enforcement actions taken	95	91	4

BMP – 4.2 Require VSMP Permits

The City anticipates becoming a VSMP Authority, responsible for administration of our local VSMP Program in accordance with Commonwealth of Virginia regulations. Subsequent to that date, 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 3: The City continued to administer the VSMP Program during Permit Year 3. City Engineering staff (total of 1) passed the DEQ certification examination for Stormwater Management Inspector.

Annual Reporting:

Stormwater Management Program

Permit Year		Permits	Total	Commercial sites	Single-family sites
3	July 1, 2015 - June 30, 2016	Total number of regulated land-disturbing activities	52	12	40
		Total number of exemptions applied for	0	0	0
		Total number of inspections conducted	523	142	381

		Enforcement	Total	Notices to Comply	Stop Work Orders
		Total number of enforcement actions taken	88	84	4

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, 2016

The BMP database for BMPs brought online during Permit Year 3 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 3: The City continued the Structural BMP Maintenance Program during Permit Year 3. The City acquired Maintenance Agreements on all new BMPs and was able to acquire Maintenance Agreements on several existing BMPs.

Annual Reporting:

Structural BMP Maintenance

Permit Year		Total number of BMP maintenance agreements	No. of agreements New BMPs / Ex. BMPs	No. of facilities New BMPs / Ex. BMPs
3	July 1, 2015 - June 30, 2016	8	5 / 3	9 / 6

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 3: The Structural BMP Inspection Program was developed during Permit 2 and began implementation during Permit Year 3.

Annual Reporting:

Structural BMP Inspection

Permit Year		Total number of inspections Public BMPs	Total number of inspections Private BMPs
3	July 1, 2015 - June 30, 2016	12	36

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 3: The Structural BMP Database was completed during Permit Year 3.

Annual Reporting: The BMP database for BMPs brought online during Permit Year 3 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, 2016

Daily operational procedures and annual training plan for the City's Public Works Department have been included in Appendix E. Daily operational procedures and annual training plan for the City's Parks and Recreation Department have been included in Appendix F.

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 3: The City continued the Street Sweeping Program during Permit Year 3.

Annual Reporting:

Street Sweeping

Permit Year		Total number of road miles swept	Total number of tons collected
3	July 1, 2015 - June 30, 2016	5,104	1,047

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 3: The City continued to provide personnel with pollution prevention training during Permit Year 3.

Annual Reporting:

Pollution Prevention Training

Permit Year		Total number of City personnel trained	Department	Training Date
3	July 1, 2015 - June 30, 2016	10	Public Works	8/18/2015
		21	Public Works	2/17/2016
		29	Public Works	6/1/2016
		9	Parks & Rec	6/25/2016
		30	Fire Department	5/25/2016 thru 5/27/2016

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 3: The City continued the Yard Debris Collection Program during Permit Year 3.

Annual Reporting:

Yard Debris Collection Program

Permit Year		Total number of cubic yards collected	Total number of loads collected
3	July 1, 2015 - June 30, 2016	6,104	436

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 3: The City continued to operate and maintain a dedicated vehicle wash facility at the Public Works Department's equipment maintenance shop during Permit Year 3.

Annual Reporting:

Dedicated Vehicle Wash Facility

Permit Year		Total number of vehicles washed
3	July 1, 2015 - June 30, 2016	745

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 3: The Storm Sewer Inspection and Maintenance Program is scheduled to be developed by the end Permit Year 4 (June 30, 2017) and begin implementation during Permit Year 5.

Annual Reporting: 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 3: The development of SWPPPs for city facilities is scheduled to be completed by the end of Permit Year 4 (June 30, 2017).

Annual Reporting: The total number of sites requiring SWPPPs and the total number of sites where SWPPPs have been developed will be reported starting with the annual report for Permit Year 4.

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 3: 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.

Written Protocols for Daily Operations and Maintenance

Daily operational procedures for the City's Public Works Department has been included in Appendix E. Daily operational procedures for the City's Parks and Recreation Department has been included in Appendix F.

Annual Written Training Plan

Annual training plan for the City's Public Works Department has been included in Appendix E. Annual training plan for the City's Parks and Recreation Department has been included in Appendix F.

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 Bay TMDL:

Date: September 20, 2016

Listed a City water quality project completed during Permit Year 3 that obtained pollutant reductions. The achieved reductions will be included in the City's Chesapeake Bay TMDL Action Plan to be submitted by July 1, 2018.

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 3: 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.

The following project has been completed and has achieved a pollutant reduction that will be counted towards the 40% pollutant reduction required by the end of the next permit cycle (June 30, 2023).

Chesapeake Bay TMDL Action Plan

Permit Year		Project	Cost	Pollutant Removal (lbs/yr)		
				TP	TN	TSS
3	July 1, 2015 - June 30, 2016	Lake Tams Shoreline Stabilization - Phase II	$579,909	39	399	29,634

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, 2016
Changed name of City Engineer

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 I

Be the Solution for Staunton's Stormwater Pollution

Yards

- Don't sweep grass clippings or leaves into storm drains
- Use pesticides sparingly
- Don't overuse and be aware of when applying fertilizer

Vehicles

- Properly clean oil spills
- Do not dispose of fluids (oils, antifreeze, soap, etc.) into storm drains

Home or Business

- Dispose of grease in appropriate receptacles
- Collect litter and debris from sidewalks and parking lots & dispose of properly
- Plant trees, shrubs, and plants at your site to help reduce contaminants

Pets

- Put your pet's waste in a plastic bag and dispose of it properly

Remember - Only Rain Down the Storm Drain

Reminder to clean up after your pet in Gypsy Hill Park

Staunton's Solutions for Stormwater Pollution

This brochure is the first 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 Hot-line 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
- Attend a monthly meeting of the Lewis Creek Watershed Advisory Committee

Call 540-332-3858 for details

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

"City of Staunton – Stormwater Education"

Staunton's Solutions for Stormwater Pollution

Issue Number I

STAUNTON VIRGINIA

January 2016

About Staunton

- Population: 24,647
- Size: 20 square miles
- Average Rainfall: 38.5 inches per year
- 3.5 square miles of Impervious Surfaces
- 50 miles of storm sewer pipe
- 2,300 storm sewer structures
- Over 200 Stormwater Management Facilities (rain gardens, retention ponds, permeable pavers, etc.)

Permeable pavers in Staunton's RMA downtown parking lot

Dry detention pond at Westside Fire Station

What is Stormwater Pollution?

Like most Virginia cities, Staunton faces an ever growing issue of controlling stormwater runoff. Stormwater runoff is precipitation that is unable to be absorbed into the ground as a result of impervious surfaces, such as buildings, roads, sidewalks, driveways, and parking lots. As the stormwater runoff travels over these impervious surfaces, it picks up contaminants and debris. This polluted stormwater flows into the city's storm sewer system and eventually into our local waterways. Pollutant loaded stormwater runoff can occur very rapidly and impair local streams and tributaries.

Storm drain in downtown Staunton

Staunton's MS4 Program

Based on the 2010 Decennial Census, Staunton was identified as being located within a "regional urbanized area." Because of this, in 2013 the Department of Environmental Quality (DEQ), designated Staunton as a Municipal Separate Storm, Sewer System (MS4) Community. As such, the city is mandated to obtain a permit from the DEQ and to develop, implement, and enforce a program to minimize the discharge of pollutants into the surface waters of the Commonwealth, particularly the Chesapeake Bay. Staunton obtained a MS4 permit in May 2014.

MS4 communities are required to include the following six minimum control measures, also called Best Management Practices (BMPs).

- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post Construction Runoff Control
- Pollution Prevention and Good Housekeeping

Another integral component of the MS4 permit is the Chesapeake Bay TMDL (Total Maximum Daily Load) or "pollution diet", established by the EPA. This TMDL mandate sets specific pollutant reductions in phosphorus, nitrogen, and sediments that MS4s must meet by 2028. Staunton is required to develop a Chesapeake Bay Action Plan that demonstrates how the City will meet these mandated reductions.

For more information on Staunton's MS4 Program, visit the City Engineering Department's website at **www.staunton.va.us/directory/departments-a-g/city-engineer/ms4-program**

APPENDIX B

ADOPT-A-STREAM PROGRAM

ADOPT-A-STREAM PROGRAM APPLICATION

In order to enhance the environment and the appearance of our City, the undersigned applicant, requests permission to Adopt-A-Stream at the following location:

_____
_____
_____
_____
_____

In consideration of being allowed to be part of the Adopt-A-Stream program and to be present on or near any public lands or rights of way, any accepted applicant will perform any related activity in accordance with the City of Staunton's terms attached hereto and incorporated herein by reference and any applicable law. The applicant also hereby agrees to indemnify and save harmless the City of Staunton, its officials, employees or agents, from responsibility, damage or liability or any claim arising from the applicant's exercise of the activities and privileges granted under this agreement.

This agreement may be terminated by the City of Staunton at any time the applicant does not comply with this agreement or at any time the applicant's work effort is discovered to be unsatisfactory. The City reserves the right to revise or discontinue the Adopt-a-Stream program at any time. The applicant likewise may terminate this agreement at any time.

The applicant hereby assumes all risk of damage or injury resulting from the activities performed hereunder, and acknowledges that certain risks are inherent in litter pick up and removal, especially in areas where navigation may be difficult, such as along stream banks, or in areas that may be open to the public or where vehicular traffic is present, such as on or near the public right of way.

It is agreed that the applicant is not an agent, employee or volunteer of the City of Staunton while participating in this Adopt-a-Stream program. As such, the City will not provide any worker's compensation insurance, general liability or automobile insurance or uninsured/underinsured insurance motorist coverage, or any other insurance for the acts or omissions of the applicant while engaged in any activities arising out of or related to this Adopt-A-Stream agreement or activity. It is further agreed that the City will not defend, hold harmless, or indemnify the applicant for any claims of loss, injury, death, or damage arising out of or related to this Adopt-A-Stream agreement.

APPLICANT: _____

PRIMARY CONTACT NAME/TITLE: _____

ADDRESS: _____

TELEPHONE NUMBER: _____

EMAIL ADDRESS: _____

As a designated representative of, _____,
I have read, understand, and shall comply with the Adopt-a-Stream program conditions and safety tips regarding participation in the program.

SIGNATURE: _____

The undersigned is the official City representative who has the legal authority to give permission for the property location named in the aforesaid agreement to be involved in and designated in the Adopt-A-Stream program as administered by the City of Staunton.

Permission is hereby given to perform the work described, insofar as the City of Staunton has the right, power, and authority under the terms of this agreement.

CITY OFFICIAL: _____

TITLE: _____

DATE: _____

ADOPT-A-STREAM PROGRAM CONDITIONS

The Adopt-a-Stream program provides an opportunity for citizens and civic groups to get involved in their community. The program is designed to encourage citizen participation in beautification and litter cleanup of designated stream reaches in their community. Individuals, organizations or businesses may participate in the program. Participation involves agreeing to clear a designated stream reach of litter and other debris on a regular interval.

In exchange, a sign bearing the name of the organization will be installed at the designated cleanup area. The City will bear the cost of producing, installing and maintaining the sign. The City will also provide program participants materials to help with the cleanup.

Selected City maintained streams are eligible for adoption. Eligible sections will be determined by the City. Those stream sections determined unsafe will not be eligible for adoption. Selected privately owned streams may also be eligible for adoption providing the property owner gives written consent allowing access to their property and is one of the signatories of the Adopt-a-Stream agreement.

- The Adopt-a-Stream agreement must be approved by the City of Staunton. The agreement shall be submitted to the City MS4 Coordinator. The agreement will be forwarded on to the

appropriate City agency for review and approval. If there are any unresolved concerns with regard to safety or any questions concerning safety, the proposed adoption will not be approved.

- Local community organizations, such as civic, social or school groups, businesses or individuals 18 years or older are allowed to adopt a stream. The City of Staunton reserves the right to deny adoption requests for any reason whatsoever.

- All participants must sign the Liability Release Form.

- Participants are required to adopt for a minimum of two (2) years, with a minimum of two (2) cleanups per year. After two years, the adopting organization may renew their designation and agreement, modify their designation (choose a different stream) or terminate the agreement.

- Group members less than fifteen (15) years of age must be supervised by an adult at least eighteen (18) years of age. There shall be at least one adult eighteen (18) years of age or older for every six (6) group members less than fifteen (15) years of age.

- Participants should hold at least two (2) meetings a year to review safety and other guidelines.

- The City of Staunton will supply participants with plastic trash bags, safety vests and appropriate traffic control signs. The group's representative should contact the City's MS4 Coordinator at 540-332-3858 before a planned cleanup to arrange for pickup of materials and to coordinate dates and times. The representative shall ensure all items are returned to the City. Traffic control signs shall be displayed only during times when cleanup is actually taking place.

- If participants cannot dispose of the collected trash and debris, the Department of Public Works will assist in disposing of the trash.

- Within two weeks of each cleanup, participants shall file a report to the City's MS4 Coordinator detailing the following information:
    a) copies of all sign in sheets
    b) copies of signed liability release forms
    c) date of cleanup
    d) time of cleanup
    e) number of participants involved
    f) number of bags of trash collected
    g) total pounds of trash collected (if available)
    h) hours spent on cleanup

- Participants are urged to separate and recycle appropriate materials.

- A sign noting the Adopt-A-Street program and the participant's name will be provided for installation at the cleanup area. The City will bear the cost of producing, installing and

maintaining the sign. Businesses that wish to sponsor groups may do so. However, only the business name may go on the sign in block letters. No business slogans or logos are allowed.

- Participants are encouraged to schedule their two (2) cleanups in April and October to coincide with the national and statewide litter control clean ups or with Earth Day (April) and America Recycles Day (November).

- Prior to participating in a cleanup, participants are encouraged to read *Adopt-A-Stream Manual* published by the Department of Conservation and Recreation. The manual can be found at http://www.dcr.virginia.gov/environmental-education/adopt#forms

- The City of Staunton reserves the right to revise these terms as needed.

ADOPT-A-STREAM PROGRAM CLEANUP MATERIALS

The following equipment items have been loaned to:

_____

in support of cleaning up

_____

_____ Safety vests _____ Grab sticks

_____ Trash bags _____ Signs

Date of cleanup: _____

Date items will be returned on: _____

Organizational Representative

Printed Name: _____

Signature: _____

Date: _____

City Representative

Printed Name: _____

Signature: _____

Date: _____

ADOPT-A-STREAM PRECAUTIONS AND SAFETY TIPS

Urban streams often have some water quality impairment by the very nature of the lands that drain into them. This is the case with many of the streams and waterways in the City of Staunton, some of which have been identified by the Virginia Department of Environmental Quality as being impaired due to excessive levels of sediment and bacteria. A stream being impaired does not mean necessarily that the stream is dangerous to be in or around. What it does mean is that it is always advisable to follow some practical guidelines when interacting with an urban stream:

- Never conduct a stream cleanup or go into a stream during, or immediately following, a rainfall event. Stormwater runoff during storm events carry pollutants from impervious surfaces such as roof tops, streets, parking lots, etc., into local waterways, thereby increasing the levels of pollutants at these times.
- Always wear shoes and gloves to protect your feet and hands.
- Always wash your hands or use hand sanitizer immediately after being in contact with the stream.
- Do not ingest any of the stream water or sediment.

It is also advisable to abide by the following DOs and DON'Ts to help avoid injury:

DOs:

- Always wear an orange/yellow reflective safety vest so you can be easily seen and be identified as being part of the cleanup team.
- Always wear protective clothing that is easy to see; shoes (preferably waterproof boots), and work gloves. Sandals or open toed shoes should never be worn.
- Always work in daylight hours only and in good weather.
- Always be aware of your surroundings and passing motorists.
- Always work in groups of at least two people, never work alone.

DON'Ts

- Never horse around or do anything dangerous or distracting to yourself or others.
- Never participate in a cleanup under the influence of alcohol or drugs or while taking certain medications.
- Never overexert yourself.
- Never pick up hazardous materials - call the City Fire Department (911) to arrange for proper handling and disposal.

CITY OF STAUNTON ADOPT-A-STREAM PROGRAM
LIABILITY RELEASE FORM

As an Adopt-a-Stream program volunteer, I understand and shall comply with the City of Staunton Adopt-a-Stream program guidelines Conditions and Safety Tips. I will exercise care and safety while participating in any program events. I will seek further direction or explanation of anything not fully understood by me.

As an Adopt-a-Stream Program volunteer, I will at all times indemnify and save harmless the City of Staunton, City of Staunton employees, agents and officers from responsibility, damage, or liability arising from the exercise of the privileges granted under the Adopt-a-Stream program.

By voluntarily engaging in a stream cleanup activity, I personally assume all risks for any harm, injury, or damage during my participation.

Signature _____

Name (print) _____

Date _____

CITY OF STAUNTON ADOPT-A-STREAM PROGRAM
CLEANUP SIGN-IN SHEET

Page _____ of _____

Adopting Organization_____

Name of Waterway _____

Date of cleanup _____

Name	Street Address	City	State	Zip	Phone #	Email	Over 18?

APPENDIX C

ILLICIT DISCHARGE DETECTION & ELIMINATION PROGRAM

ILLICIT DISCHARGE DETECTION & ELIMINATION (IDDE) PROGRAM

Per the City of Staunton's General Permit VAR040132 for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4s), the City is required to effectively prohibit, through ordinance or other legal mechanism, non-stormwater discharges into the City's storm sewer system and local waterways. Accordingly, the City has developed an Illicit Discharge Detection and Elimination (IDDE) Program to detect, identify and address unauthorized non-stormwater discharges, including illegal dumping.

Per the General Permit, the City's IDDE Program must include the following elements:

Element #1 - The development of a prioritized dry weather screening schedule based on such criteria as age of infrastructure, land use, historical illegal discharges, dumping, cross connections, etc.;

The City will begin the program by dry weather screening all known outfalls. Once all known outfalls have been screened, the City will develop a prioritized screening schedule based on such criteria as age of infrastructure, land use, historical illegal discharges, dumping, cross connections, etc.

Element #2 - Dry weather screening of a minimum fifty (50) field screenings per year;

The City will screen a minimum of fifty (50) MS4 outfalls each year. For dry weather screening procedures, see the City of Staunton Dry Weather Field Screening of Outfalls Procedures.

Element #3 - Methodologies to collect general information such as last rain, quantity of rain, site descriptions, visual observations, estimated discharge rate, etc.;

For all illicit discharge investigations and outfall screenings, the following methods shall be utilized to collect the following general information:

- Date and quantity of the last rainfall event:
  - The official City weather observations located at watertreat$ (cossrv24)monthyearwth
- Use the City Dry Weather Field Screening Outfall Inspection Form to collect the following data:
  - Site descriptions (conveyance type and dominant watershed land uses);
  - Estimated discharge rate (width of water surface, approximate depth of water, approximate flow velocity, and flow rate); and

    - Visual observations (odor, color, clarity, floatables, deposits or stains, vegetation condition, structural condition and biology).
- A blank screening form can be found at stormwater$ (\\cossrv24) \MS4\IDDE\IDDE Program\Dry Weather Field Screening

Element #4 - Define time frame to conduct investigations based on priorities;

Per the General Permit, a time frame upon which to conduct an investigation or investigations to identify and locate the source of any observed continuous or intermittent non-stormwater discharge shall be prioritized as follows:

- Illicit discharges suspected of being sanitary sewage or significantly contaminated must be investigated first;
- Investigations of illicit discharges suspected of being less hazardous to human health and safety such as noncontact cooling water or wash water may be delayed until after all suspected sanitary or significantly contaminated discharges have been investigated, eliminated, or identified;
- Discharges authorized under a separate VPDES or state permit require no further action under the MS4 General Permit.

Element #5 - Methodologies to determine the source of an illicit discharge;

All potential illicit discharges shall be investigated. For investigation procedures, see City of Staunton Illicit Discharge Investigation Procedures.

A dedicated stormwater hotline has been created for the reporting of potential illicit discharges and other types of pollution.

- The hotline phone number is (540) 213-6517
- The email address is StauntonStormwater@ci.staunton.va.us
- For calls or emails to the City stormwater hotline, see City of Staunton Stormwater Hotline Procedures.
- The City will utilize our stormwater webpage and Facebook page to promote the public reporting of illicit discharges.

Element #6 - Mechanisms to eliminate identified sources of illicit discharges, including procedures for legal action;

The City Council for the City of Staunton, on May 26, 2016, adopted an Illicit Discharge ordinance defining an illicit discharge and giving the City the enforcement powers to eliminate an illicit discharge. For the Illicit Discharge ordinance, see SCC Title 13, Division IV, Illicit Discharges and Connections.

Element #7 - Methods for follow-up investigations;

Illicit discharge investigations shall include follow-up investigations to verify that the illicit discharge has been eliminated. For follow-up investigation procedures, see City of Staunton Illicit Discharge Investigation Procedures.

Element #8 - Mechanisms to track all illicit discharge investigations;

Illicit discharge investigations shall include tracking and recordkeeping procedures. For these procedures, see the City of Staunton Illicit Discharge Investigation Procedures.

Illicit Discharge Investigation Procedures

Per the City of Staunton Illicit Discharge Detection & Elimination (IDDE) Program, the following procedures shall be utilized in the investigation of all illicit discharges:

(1) An initial report of a potential illicit discharge is received by City staff. Report may be received by any of the following methods:
   a. in person;
   b. telephone;
   c. email;
   d. stormwater hotline (phone call or email); or
   e. routine dry weather field screening of outfalls.

(2) The initial report information shall be routed to the IDDE Administrator.

(3) IDDE administrator shall enter the initial information into the City IDDE Database.

(4) The administrator or designee, if warranted, shall perform a site visit to investigate for a potential illicit discharge.

(5) If a potential, suspect or obvious illicit discharge is discovered, the administrator shall open an illicit discharge investigation. For each investigation, the administrator shall input all pertinent information into the City IDDE Database. The administrator is responsible for all recordkeeping during and after the investigation.

(6) All pertinent information concerning illicit discharge investigations shall be filed in folders located at stormwater$ (\\cossrv24) (V:)\MS4\IDDE\IDDE Program\IDDE Database - where associated documentation will be filed based on fiscal year.

(7) The administrator or designee shall complete, if applicable, a City Dry Weather Field Screening Outfall Inspection Form. A blank screening form can be found at stormwater$ (\\cossrv24) (V:)\MS4\IDDE\IDDE Program\Dry Weather Field Screening

(8) If required, the administrator shall request the assistance of other city departments in the investigation. For example, the public works department can provide, as necessary, videoing of utility lines, utility line flushing, utility line discovery, dye testing and smoke testing.

(9) Unknown substances discovered during an inspection may be tested with the following:

a. The equipment in the IDDE Backpack;
b. Fire Department substance identification kit;
c. The incubator located at the City water treatment plant;
d. Through a third party consultant; and/or
e. The Central Shenandoah Planning District Commission's IDDE Kit (call 540-885-5174).

Testing procedures should be consistent with: *Illicit Discharge Detection and Elimination Field Guide: How to Identify and Quickly Report Pollution Problems for Shenandoah Valley MS4 Communities*.

(10) Investigators may use, as guides, the following Center for Watershed Protection's publications found at: http://cwp.org/online-watershed-library/cat_view/64-manuals-and-plans/79-illicit-discharge-detection-and-elimination:

a. *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*
b. *Illicit Discharge Detection and Elimination: Technical Appendices*
c. *Illicit Discharge Detection and Tracking Guide*
d. *Illicit Discharge Detection and Elimination Field Guide: How to Identify and Quickly Report Pollution Problems for Shenandoah Valley MS4 Communities*

(11) As the investigation progresses, the administrator shall update the IDDE Database and other investigation files with all documentation, photos, letters, emails, telephone conversation logs, etc. associated with the illicit discharge event.

(12) The time frame upon which to conduct an investigation or investigations to identify and locate the source of any observed continuous or intermittent non-stormwater discharge shall be prioritized as stated in the City Illicit Discharge Detection and Elimination (IDDE) Program.

(13) If an illicit discharge is found, but within six months of the beginning of the investigation neither the source, nor the same non-stormwater discharge has been identified, then this shall be documented by the administrator in the IDDE Database and the investigation closed.

(14) If the observed discharge is intermittent, the administrator must document that a minimum of three separate investigations were made in attempt to observe the discharge when it was flowing.

If these attempts are unsuccessful, this shall be documented by the administrator in the IDDE Database and the investigation closed.

(15) If an illicit discharge is found, the IDDE administrator will coordinate, as necessary, a clean-up of the discharge. This may involve other City departments.

(16) If the source of the illicit discharge is discovered, the administrator shall contact the property owner or responsible party and require that mitigation procedures, a Pollution Prevention Plan, be created and implemented as soon as possible. Any procedures developed will be filed with the City's IDDE Database to ensure corrective actions. The timeframe for follow-up investigations and corrective actions are determined by the administrator on a case-by-case basis.

(17) Enforcement escalation against violators is outlined as follows:

a. Warning letter – A warning letter is issued for a first offense illicit discharge with typically a two week follow-up investigation by the City.
b. Pollution Prevention Plan (PPP) – A Pollution Prevention Plan is required from the property owner or responsible party of a larger discharge incident during a first offense. The PPP will include the corrective actions to be taken to address the discharge specifically and the mitigation measures to be implemented to prevent further discharges.
c. Notice of Violation – A Notice of Violation is issued after a second offense, if corrective actions have not been taken prior to the two week follow-up investigation, or if a PPP required by the City has not been developed.
d. Civil Penalties – Civil penalties are assessed per SCC Title 13, Division IV, Illicit Discharges and Connections.

(18) If an illicit discharge is detected, the administrator will utilize the enforcement actions as stated in the City of Staunton City Code Title 13, Division IV, Illicit Discharge and Connections to eliminate the illicit discharge. Once the illicit discharge has been terminated, the resolution shall be documented by the administrator in the IDDE Database and the investigation closed.

(19) Enforcement actions shall include follow-up investigations in order to verify that the illicit discharge has been eliminated.

(20) When an illicit discharge investigation is resolved, the investigation is closed by the administrator and the IDDE Database updated. The location of the illicit discharge is added to the City storm sewer system mapping.

(21) If an illicit discharge is traced to jurisdictional boundaries, the following individuals shall be notified of the investigation:

a. Morgan Shrewsbury, County of Augusta, MS4 Coordinator
540-245-5700 or mshrewsbury@co.augusta.va.us
b. Morris Walton with Louis Berger, VDOT IDDE Contact
804-317-8720 or mwalton@louisberger.com or IDDEReports@vdot.virginia.gov

(22) The IDDE Database will be included with the MS4 Annual Reports. The reported information shall include the following:

a. The date that the suspected discharge was observed, reported, or both;
b. How the investigation was resolved, including any follow-up investigations; and
c. Resolution of the investigation and the date the investigation was closed.

(23) The City public works department has its own processes and procedures for managing sanitary sewer overflows and for the reporting of the information to DEQ. In the event that there is a sewer overflow that enters the City's storm sewer system or local waters, the public works department will inform the IDDE administrator. The administrator will determine what steps, if any, should be followed. The public works department will provide copies of Sanitary Sewer Overflow (SOS) reports to the IDDE administrator.

(24) The City fire department has its own processes and procedures for managing hazardous chemicals/materials and for the reporting of the information to DEQ. In the event that there is a discharge that enters the City's storm sewer system or local waters, the fire department will inform the IDDE administrator. The administrator will determine what steps, if any, should be followed.

(25) The City police department notifies the City fire department of any hazardous chemicals/materials spills/overflows, which is handled accordingly per Fire Department procedures. The police department will notify the IDDE administrator of any suspected illicit discharges. The administrator will determine what steps, if any, should be followed.

(26) Required materials for an illicit discharge investigation:

a. Waders (if applicable)
b. Camera/Smartphone/Tablet
c. Safety Vest
d. Manhole Hook & Large hammer
e. Outfall Maps
f. Current Dry Weather Field Screening Inspection Form (if available)
g. IDDE Backpack
    i. First Aid Kit
    ii. Nitrile/latex Gloves
    iii. Flashlight
    iv. Clipboard/Notepad
    v. Pencils/Pens/Permanent Marker/Highlighter
    vi. Measuring Tape
    vii. Hand Sanitizing Gel
    viii. Duct Tape
    ix. Water Collection Bottles
    x. Water Collection Bags

xi. Chlorine detection kit
xii. Dye Tablets
xiii. Plumber's Putty
xiv. Measuring Bottle/Jug
xv. Stopwatch

Dry Weather Field Screening of Outfalls Procedures

Per the City of Staunton Illicit Discharge Detection & Elimination (IDDE) Program, the following procedures shall be utilized in all dry weather field screenings of outfalls:

(1) A minimum of fifty (50) MS4 outfalls shall be dry weather field screened annually.

(2) Dry weather filed screening of outfalls shall only be performed after at least forty-eight (48) hours has passed since the last storm event.

(3) The IDDE administrator or designee will conduct all dry weather field screenings of outfalls.

(4) For each screening, the administrator or designee shall complete a City Dry Weather Field Screening Outfall Inspection Form. A blank screening form can be found at stormwater$ (\\cossrv24) (V:)\MS4\IDDE\IDDE Program\Dry Weather Field Screening.

(5) Investigators may use, as guides, the following Center for Watershed Protection's publications found at: http://cwp.org/online-watershed-library/cat_view/64-manuals-and-plans/79-illicit-discharge-detection-and-elimination:

a. *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*
b. *Illicit Discharge Detection and Elimination: Technical Appendices*
c. *Illicit Discharge Detection and Tracking Guide*
d. *Illicit Discharge Detection and Elimination Field Guide: How to Identify and Quickly Report Pollution Problems for Shenandoah Valley MS4 Communities*

(6) During the inspection, if a potential, suspect or obvious illicit discharge is discovered, the inspector shall notify the IDDE administrator and the procedures stated in the City Illicit Discharge Investigations Procedures shall be followed.

(7) The following minimum information shall be collected during each screening for each outfall and inputted into the City MS4 Outfall Database:

a. A unique identifier for the outfall;
b. The estimated MS4 acreage served;
c. The name of the receiving surface water and indication as to whether the receiving water is listed as impaired in the Virginia 2010 303(d)/305(b) Water Quality Assessment Integrated Report; and

d. The name of any applicable TMDL or TMDLs.
e. The MS4 Outfall Database will be provided upon request by DEQ or the public.

(8) If a new MS4 outfall is located, the outfall shall be given a unique identifier and the location of the outfall shall be added to the City storm sewer MS4 Outfall Map.

(9) The number of MS4 outfalls screened will be reported to DEQ with the MS4 Annual Report. The report shall include the following:
a. The total number of outfalls screened;
b. The screening results; and
c. Details of any follow-up actions necessitated by the screening results.

(10) IDDE administrator shall be responsible for the recordkeeping of all documentation on dry weather field screenings of outfalls.

(11) All dry weather field screening of outfalls information shall be filed in the City's Field Screening Database file located at stormwater$ (\\cossrv24) (V:)\MS4\IDDE\IDDE Program\Dry Weather Field Screening - where associated documentation will be filed based on fiscal year. The City's MS4 Outfall Database can be found at stormwater$ (\\cossrv24) (V:)\MS4\IDDE\IDDE Program\IDDE Database - where associated documentation will be filed based on fiscal year.

(12) Required materials for dry weather field screening of outfalls:
a. Waders
b. Camera/Smartphone
c. Safety Vest
d. Outfall Maps
e. Current Dry Weather Field Screening Inspection Form (if available)
f. Gloves
g. Flashlight
h. Clipboard/Notepad
i. Pencils/Pens/Highlighter
j. Measuring Tape

DRY WEATHER FIELD SCREENING OUTFALL INSPECTION FORM

Section 1: Background Data

Subwatershed:		Outfall ID:	
Today's date:		Time:	
Investigators:		Form completed by:	
Air Temperature (°F):	Rainfall (in.): Last 48 hours:	Last 72 hours:	
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

- ☐ Industrial
- ☐ Ultra-Urban Residential
- ☐ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional

Other: _____

Known Industries: _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
☐ Closed Pipe	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other:	☐ Circular ☐ Elliptical ☐ Box ☐ Other:	☐ Single ☐ Double ☐ Triple ☐ Other:	Diameter, circular: Dimensions, Box: h - w - Elliptical: h - w -	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other:	☐ Trapezoid ☐ Parabolic ☐ Other:	Depth: Top Width: Bottom Width:	

Flow Present? ☐ Yes ☐ No *If No, Skip to Section 5* **Flow Description (If present)** ☐ Trickle ☐ Moderate ☐ Substantial

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐ Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	Stopwatch
☐ Flow #2	Flow depth	1. 2. 3. 4.	In	Tape measure
	Flow width	' "	Ft, In	Tape measure
	Measured length	' "	Ft, In	Tape measure
	Time of travel	1. 2. 3. 4.	S	Stop watch
Water Temperature			°F	Thermometer
Ammonia			mg/L	Ammonia photometer
Salinity		Dilution? %	ppm	Refractometer
Conductivity		Dilution? %	µs	Conductivity meter
pH			pH	pH meter
Potassium			ppm	Potassium ion meter
Fluoride			mg/L	Fluoride photometer
Detergents			ppm	Colorimeter

DRY WEATHER FIELD SCREENING OUTFALL INSPECTION FORM

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Overall Outfall Characterization

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

If box for Potential, Suspect or Obvious is checked, contact IDDE Administrator to begin investigation for illicit discharge.

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☐ No	2.	Sterile sample for bacteria analysis?	☐ Yes	☐ No
3.	If yes, collected from:	☐ Flow	☐ Pool	4.	Sample for optical brightener?	☐ Yes	☐ No
5.	Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type:	☐ OBM	☐ Caulk dam	

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? ☐ **If yes, contact Public Works Street Superintendent**

APPENDIX D

BMP DATABASE

CITY OF STAUNTON

BMP DATABASE

BMPs BROUGHT ONLINE FROM

July 1, 2015 thru June 30, 2016

BMP NO.	SITE/SUBDIVISION NAME	SITE ADDRESS	CITY PARCEL	OWNER	OWNER ADDRESS	SITE LOCATION		FACILITY TYPE	ACRES TREATED			ONLINE DATE		VA HUC	RECEIVING WATERS	IMPAIRED WATERS	WITHIN MS4 BOUNDARY	PRIVATE PUBLIC	SWM AGREEMENT	LAST INSPECTION
						LATITUDE	LONGITUDE		TOTAL	PERVIOUS	IMPERVIOUS	MONTH	YEAR							
BPC2P	Lake Tams	600 Greenville Avenue	9115	City of Staunton	P. O. Box 58 Staunton, VA 24402	38° 9' 31.610" N	79° 4' 53.830" W	Wet Pond	672.00	493.00	179.00	10	2015	PS06	Peyton Creek	No	Yes	Public	No	11/25/2015
BPC3O	Barrington	100 Kellsye Way	12157	Par Four, LLC	28 Imperial Drive Staunton, VA 24401	38° 10' 09.020" N	79° 5' 11.310" W	Bioretention filter	0.17	0.00	0.17	8	2015	PS06	Peyton Creek	No	Yes	Private	09/02/2015	11/16/2015

APPENDIX E

PUBLIC WORKS DEPARTMENT DAILY OPERATIONAL PROCEDURES AND ANNAUL TRAINING PLAN

Street Department Daily Operating Procedures

Department of Public Works

The City operates by a set of standard operating procedures that seek to minimize or prevent discharge from certain municipal operations titled “Spill Prevention Control and Counter Measures”. The procedure covers road maintenance, vehicle maintenance, utility maintenance, storage of petroleum/chemical handling, spill response and clean up, general housekeeping and refuse collection. The plan is reviewed and updated on an annual basis. Employees have received and will continue to receive training on these procedures.

The City will:

- Maintain and update, as needed, a list of high-priority facilities.
- Maintain and update, as needed, a list of facilities with high potential of contributing pollution in stormwater runoff.

Annual Training Plan

Department of Public Works

All appropriate field employees are to participate in biennial training in the recognition and reporting of illicit discharges. The City will use power point and real life examples in the training. The training will educate the employees on what is an illicit discharge, how to identify them and how to report it to the proper authority.

First training was conducted on July 13th, 2016.

All appropriate employees are trained six time a year on any updates or changes to the MS4 permit.

APPENDIX F

PARKS AND RECREATION DEPARTMENT DAILY OPERATIONAL PROCEDURES AND ANNUAL TRAINING PLAN

Parks and Recreation Department Daily Operating Procedures

Stormwater Pollution Prevention SOP

Fertilizer and Pesticide Application

Parks Maintenance has employees certified as commercial pesticide applicators and certified fertilizer applicators. A full list of certified applicators and their expiration dates can be found here: http://www.vdacs.virginia.gov/pesticides/certification.shtml.

Parks Maintenance Address:
Gypsy Hill Park Maintenance Shop
300 Park Blvd
Staunton, VA 22801

Contact Information:
Phone: 540-332-3945

Certified Applicators:
Steve DeVenny, Superintendent
Chase Dudley, Golf & Athletic Turf
Matthew Sensabaugh,
Horticulturist & Arborist

Nutrient Management Planner:
Chase Dudley, Golf & Athletic Turf

Application Guidelines:

- Take care when unloading fertilizers, pesticides & herbicides. Do not puncture bags or jugs.
- Use products only as directed. Follow all labels and instructions for use, storage, and disposal of fertilizers, pesticides & herbicides and chemicals.
- Provide cleanup supplies near designated maintenance areas to facilitate immediate cleanup. When making applications in the field bring the portable spill kit along.
- Avoid application over impervious surfaces; sweep granular fertilizer back onto the grass to prevent it from washing into the storm sewer system.
- Do not apply herbicides, fertilizers, or pesticides to eroding soil.
- Do not apply herbicides, fertilizers, or pesticides near open waters such as streams and creeks unless the product is specifically designed for use in shoreline or aquatic environments.
- Do not apply herbicides, fertilizers, or pesticides if temperatures are inadequate for them to work properly.
- Never apply chemicals before a rainfall event or during high wind speeds.

- Mix only what is needed in order to avoid excess pesticide or herbicide usage.
- Inspect, maintain, and calibrate equipment used for mixing and application. Including back pack & hand sprayers as well as the golf course spray rig. Also spreaders used to apply fertilizers.
- Ensure that all containers are watertight after each individual use.
- Ensure that any partially used bags of granular fertilizers are properly closed to avoid spills.
- Do not prepare herbicides, pesticides, or fertilizers for application near storm drains or streams.
- Document herbicide, pesticide, and fertilizer applications as required by Virginia Department of Ag & Consumer Services.

Storage Guidelines:

- Do not stockpile herbicides, pesticides & fertilizers.
- Store all pesticides & herbicides in the chemical locker located behind the golf cart shed in Gypsy Hill Park.
- Before entering the chemical locker turn on the ventilation fan from the external switch to vent the building.
- Store fertilizers on pallets off the ground in the golf equipment shed or the horticulture shed.
- Never store pesticides in cabinets with or near food, animal feed, or medical supplies.
- Always store pesticides in their original containers, which includes the label listing ingredients, directions for use, and first aid steps in case of accidental poisoning. *Never* transfer pesticides to other containers.
- Close the container tightly after using the product.
- Do not store pesticides in places where flooding is possible or in places where they might spill or leak into wells, storm sewer drains, ground water, or surface water.
- When transporting pesticides or herbicides keep them secure so that the public does not have access to them.
- When transporting pesticides or herbicides that are mixed and have a volume of 3 gal or more attach the proper identification label to the tank with the name of the chemical, EPA registration number, and mix rate.
- Do not reuse empty containers.
- Triple rinse empty containers, puncture & dispose of empty containers.
- Use rinse water from empty containers to fill sprayers.
- If you can't identify the contents of the container, store it in the chemical locker and contact Virginia Department of Ag and Consumer Services for disposal instructions.

Pesticide Disposal:

- Contact Virginia Department of Ag and Consumer Services for disposal options.
- Do not pour leftover pesticides, herbicides or fertilizers into storm drains.
- Do **not** pour leftover pesticides down the sink, into the toilet, or down a sewer or street drain.

Stormwater Pollution Prevention SOP

Staunton Parks Equipment Maintenance

The City of Staunton Parks & Recreations department maintains a fleet of vehicles, buses, trucks, small & heavy equipment at the Gypsy Hill Park Maintenance facility. The Parks Maintenance facility is located at 300 Park Blvd in Gypsy Hill Park. Vehicle & equipment maintenance and repairs are done indoors, under cover see figure 1.

Address:	**Contact Information:**	**Managers:**
Gypsy Hill Park Maintenance Shop 330 Park Blvd Staunton, VA 24401	**Phone:** 540-332-3945 **Fax:** 540-851-4002 Monday - Friday 7:30AM to 4:00PM	Steve DeVenny, Superintendent Randy Williamson, Mechanic

Spills & Leaks: Any spills or leaks within the maintenance garage are cleaned up promptly. Spill cleanup supplies are located in the shop, see figure 2. A drain cover is located behind the shop on the red shed to cover the storm drain if needed, see figure 4**.** Personnel response procedures are as follows:

Any minor leaks are cleaned up with shop rags and rags are placed in marked, metal container and are picked up as needed by an outside contractor that launders the rags and returns them the following week. See figure 3.

- Any spills or more serious spills are cleaned up using absorbent, see figure 2 or absorbent pads (pig mats). Used pads & used absorbent are placed in a marked, metal container in the mechanic shop, and are picked up for disposal by an outside contractor, see figure 2.

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

- Used Shop Rags: Used shop rags are stored indoors in the mechanic's shop in the marked container and are picked up weekly to be laundered by an outside contractor, see figure 3.

- Used Batteries: Used batteries are stored under cover in the golf shed on spill containment pallets before they are picked up for disposal by an outside contractor, see figure 5.
- Used Oil Filters: Used oil filters are stored in a metal container in the waste oil shed before being picked up for disposal by an outside contractor, see figure 6.
- Used Antifreeze: Used antifreeze is stored indoors in the waste oil shed over spill containment pallets before being picked up by an outside contractor for disposal, see figure 6.
- Used Motor Oil*:* Used motor oil is stored indoors in the waste oil shed in drums over spill containment pallets in the oil shed before being picked up by an outside contractor for disposal, see figure 6
- Used Absorbent & Pig Mats: Used absorbent & pig mats are stored indoors in the labeled drum in the mechanic's shop for pick up and disposal by an outside contractor, see figure 2
- Hydraulic Fluid*:* Used Hydraulic fluid is stored indoors in the waste oil shed on spill containment pallets before being picked up for disposal by an outside contractor, see figure 6

Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

Figure 6

General Equipment Maintenance

Since all Park Maintenance employees perform daily, small-scale maintenance on vehicles and equipment, the following are basic pollution prevention strategies to mitigate spills into waterways or the storm sewer system.

Storage of Equipment:

- Whenever possible, store vehicles, equipment, and related fluids under covered areas to prevent exposure to precipitation.
- Provide cleanup supplies near designated maintenance areas to facilitate immediate cleanup.

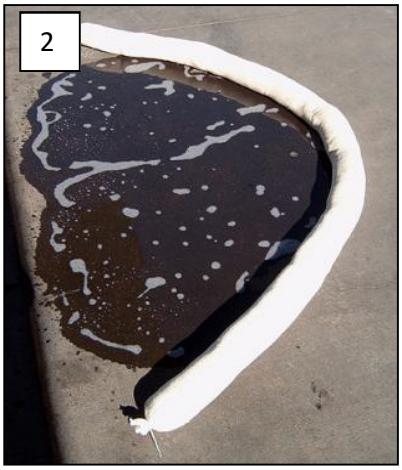
Preventing Leaks:

- Do not dump any toxic substances or liquid waste on the pavement, the ground, or in adjacent areas draining to storm drains or storm sewer conveyances.
- Inspect vehicles and equipment regularly for leaks.
- Inspect vehicles and equipment and have faulty equipment replaced or repaired immediately once a leak is discovered.
- Perform vehicle and equipment maintenance inside under cover in the mechanic shop.
- When pouring liquids, use a funnel and place a tray underneath the vehicle to catch spills. *See Image 1*.
- When applicable, keep a drip pan under vehicles and equipment while performing maintenance.
- Promptly transfer used fluids to the proper waste or recycling drums. Do not leave full drip pans or other open containers containing used fluids open and exposed to precipitation.
- Recycle whenever possible. Store recyclable material in a non-leaking drum or covered container under a roofed area. This includes used motor oil, hydraulic oil, oil filters, and other vehicle fluids.
- Keep caps and covers on chemicals and storage materials and ensure all containers are properly labeled.
- Reduce the transportation of potential pollutants by only transporting the minimum amount of material required for maintenance.
- Use drip pans or absorbent material whenever grease containers are emptied.
- Never leave grease on the ground. Collect and properly dispose of as garbage in a sealed container.

Responding to Spills and Leaks:

- If possible, move leaking vehicles or equipment indoors or into a covered area.
- Use dry cleanup methods (e.g., rag, pig mat, absorbent material) rather than hosing down the area.
- If the spill or leak is non-hazardous, attempt to contain the spill using a broom and/or absorbent material, see figure 2.
- If the spill is in the area of the storm drain behind the shop cover the drain with the mat, see figure 4.

- Block any floor drains in the vicinity to prevent the spill from entering a floor drain.
- Properly dispose of all used cleaning supplies when cleanup procedures are complete.
- If the spill is large and suspected of being hazardous, call 911.



Specialized Equipment:

Park Maintenance maintains specialized equipment used on multiple sites for a variety of tasks. Because this equipment is often hydraulic, spill kits are kept with the equipment at all times.

- A spill kit is kept in the Horticulture Bucket truck, in the cab.
- A spill kit is mounted on both the Jacobson & Toro Greensmowers
- A spill kit is mounted on the Toro Groundsmaster mower used on the golf course.
- A spill kit is mounted on the Toro Groundsmaster mower used on the football field.
- Absorbent and Pig mats are kept in the battery box compartment of the Wood Chuck Chipper.
- Absorbent & Pig mats are kept in the Case 580 Back Hoe.

If you operate the above equipment be sure to review spill cleanup procedures for the above equipment with your supervisor or the mechanic.

Used Cooking oil & concessions waste

Park Maintenance employees are tasked with cleaning up the parks after multiple events & activities involving concessions by a third party. These concessions may lead to used cooking oil & grease.

- Used cooking oil & grease is collected in drums and stored on spill containment pallets, under cover in the golf shed, see figure 5.
- Used cooking oil & grease is removed by an outside contractor for recycling.
- Do not allow concessionaires to dump used cooking oil or grease on the ground or down storm drains.

- Do not allow concessionaires to dump used cooking oil or grease down sanitary sewer drains.
- Do not allow concessionaires to wash or rinse out frying equipment on site.

Annual Training Plan

Staunton Parks Equipment Maintenance

Spill Prevention Training

- Review common spill issues and what to do in reaction to them
- Review location of spill kits and listed new kits needed
- Look at various areas of compound and how spill issues can arise

Pollution Prevention training

- Look at different areas of work that can cause pollution
- Review BMPs for proper pesticide storage & usage
- Review fertilizer BMPs for usage, hauling & storage
- Discuss need to keep grass clippings, mulch, dirt etc. off hard surfaces and get them back into lawn areas
- Review proper procedure for cleaning out line painting machine
- Review basic housekeeping & clean up
- Review what to do when abandoned paint, solvents, chemicals are found

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 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.