



September 30, 2015

Megan K. O'Gorek
Water Permit Writer
Department of Environmental Quality
Valley Regional Office
4411 Early Road
Harrisonburg, VA 22801

RE: Permit Year 2 Annual Report for VSMP General Permit for Stormwater Discharges from
Small Municipal Separate Storm Sewer Systems, MS4
Permit Number: VAR040132

Dear Ms. O'Gorek:

In accordance with Permit VAR040132, effective May 12, 2014, the City of Staunton has compiled our required Annual Report addressing the status of our MS4 Program Plan that was presented in our permit registration statement of February 18, 2014. The annual report is for Permit Year 2 covering the time period from July 1, 2014 to June 30, 2015.

If you have questions or comments, please do not hesitate to contact me at 540-332-3858 or moyerrn@ci.staunton.va.us.

Respectfully,

A handwritten signature in blue ink, appearing to read "Ray N. Moyer, Jr.".

Ray N. Moyer, Jr. PE
Stormwater Engineer

DEPARTMENT OF ENGINEERING
116 W. BEVERLEY STREET, P.O. BOX 58
STAUNTON, VA 24402
540-332-3858



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 2
July 1, 2014 through June 30, 2015**

Annual Report Prepared: September 30, 2015
Revised per DEQ comments: February 16, 2016

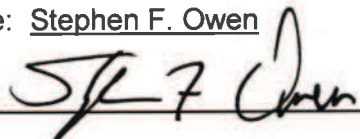
Certification

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: 

Date: 9-14-15

Permit Number: VAR040132

MS4 Name: City of Staunton

Annual Report prepared by:

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*February 16, 2016: Appendix G added per DEQ comments dated 02/08/2016

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 status of the BMPs implemented as part of the City's MS4 Program Plan. The annual report lists the measurable goals and the accomplishments achieved for each BMP. The annual report also includes any changes to the City's MS4 Program Plan.

ABOUT STAUNTON

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

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

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

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

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

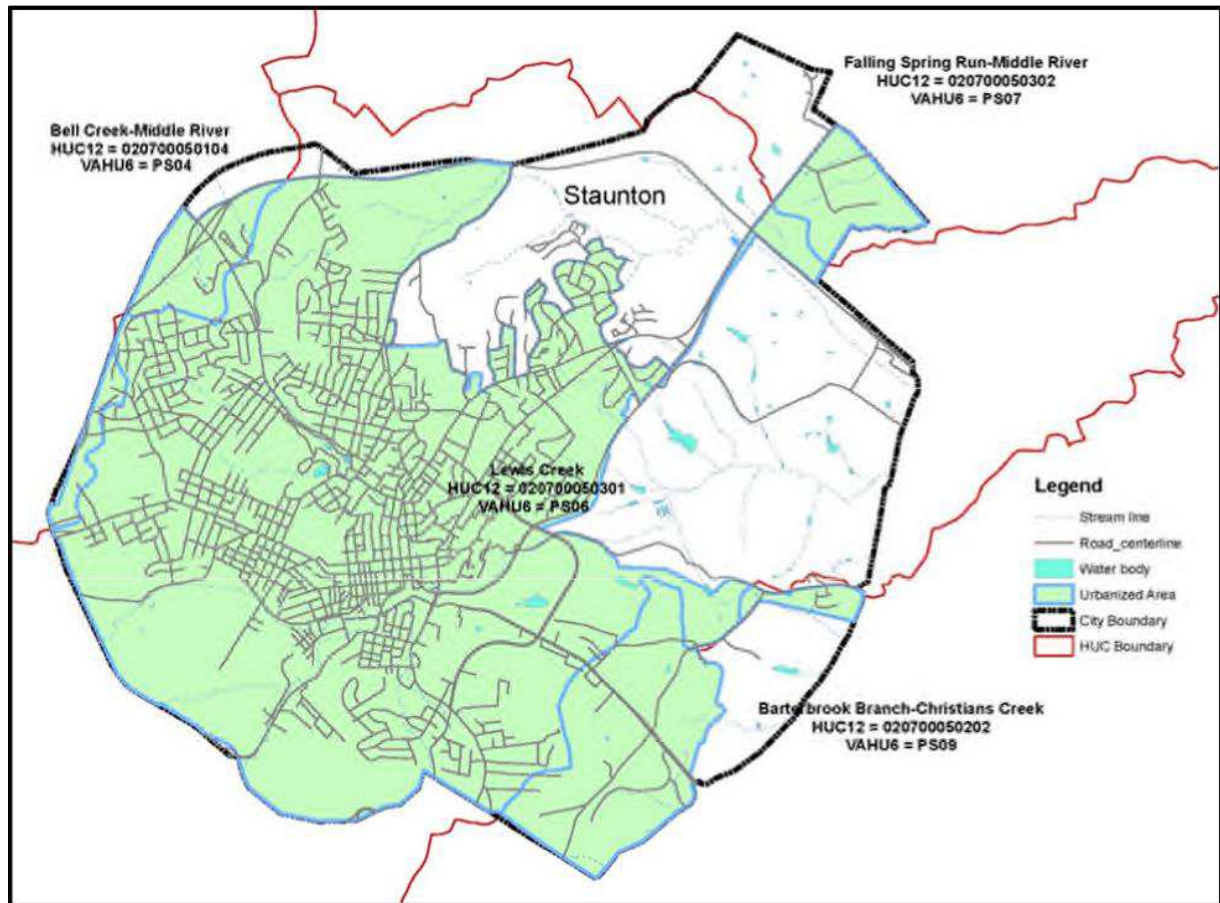


Figure 1

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 30, 2015

Added web links to City's Stormwater Webpage and Facebook page.

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 2: School Presentations have been developed and will begin during the 3rd year of the permit (July 1, 2015 through June 30, 2016).

Annual Reporting: After consulting with school officials, the estimated target audience is based on the number of students in the 6th and 9th grades. These grades present the best opportunity to accommodate stormwater topics within their curriculum. The actual number of school presentations, the actual target audience and the actual percentage of the target audience reached will be reported starting with the annual report for Permit Year 3.

School Presentations

Permit Year		Estimated Target Audience	Estimated Target Audience To Be Reached (Minimum)
2	July 1, 2014 - June 30, 2015	379	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 2: The Stormwater Webpage has been developed and went on-line on July 1, 2015.

Web link to the City's Stormwater Webpage:

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

Annual Reporting: The total number of website hits that occur will be reported starting with the annual report for Permit Year 3.

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 2: A brochure has been developed and will be distributed during the 3rd year of the permit (July 1, 2015 through June 30, 2016).

Annual Reporting: The estimated target audience is based on the City’s population. The total number of brochures distributed, the actual target audience and the actual percentage of the target audience reached will be reported starting with the annual report for Permit Year 3.

Waste

Permit Year		Estimated Target Audience	Estimated Target Audience To Be Reached (Minimum)
2	July 1, 2014 - June 30, 2015	24,000	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 2: A Staunton Stormwater Facebook page has been developed and went on-line on July 1, 2015. Postings of material will begin during the 3rd year of the permit (July 1, 2015 through June 30, 2016).

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 total number of web hits, the actual target audience and actual percentage of the target audience reached will be reported starting with the annual report for Permit Year 3.

Watershed Awareness

Permit Year		Estimated Target Audience	Estimated Target Audience To Be Reached (Minimum)
2	July 1, 2014 - June 30, 2015	2,000	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 30, 2015

Added email address and phone number for City's Stormwater Hotline. Written procedures for recordkeeping of calls and emails for the Stormwater Hotline have been included in Appendix A.

Web link to the MS4 Program and annual reports:

<http://www.staunton.va.us/directory/departments-a-q/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 2: The City continued our Tree Planting Program during Permit Year 2 (July 1, 2014 to June 30, 2015).

Annual Reporting:

Tree Planting Program

Permit Year		Number of trees planted	Number of existing trees pruned	Number of Arbor Day Participants	Number of seedlings distributed
2	July 1, 2014 - June 30, 2015	59	423	90	200

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

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

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

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

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

Achievements for Permit Year 2: The Adopt-A-Stream Program is scheduled to be developed by the end of the 3rd year of the permit (June 30, 2016) and begin during the 4th year of the permit (July 1, 2016 through June 30, 2017).

Annual Reporting: Written procedures for the Adopt-A-Stream program will be included in the annual report for Permit Year 3. 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 2: The City continued our Adopt-A-Street Program during Permit Year 2 (July 1, 2014 to June 30, 2015).

Annual Reporting:

Adopt-A-Street Program

Permit Year		Total miles of street adopted
2	July 1, 2014 - June 30, 2015	2.20

ADOPTED STREET NAMES

<u>Name of Street</u>	<u>Miles Adopted</u>	<u>Organization</u>
Lacy B King Way	0.60	Liberty Point
West Beverley Street (from Thornrose Avenue to western corporate limits)	1.60	Newtown Neighborhood Association
Total – Permit Year 2	2.20	

(see MS4 Program Plan for list of all Adopted Street 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 2: The Stormwater Hot-line has been developed and went live on July 1, 2015.

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

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

Annual Reporting: Written procedures for recordkeeping of calls and emails have been included in Appendix A. The total number of phone calls and emails will be reported starting with the annual report for Permit Year 3.

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 2: Stormwater Partnerships are scheduled to begin during the 3rd year of the permit (July 1, 2015 to June 30, 2016).

Annual Reporting: The total number of meetings attended will be reported starting with the annual report for Permit Year 3.

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 30, 2015
None

Date: February 16, 2016
Revised per DEQ comments dated 02/08/2016

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 2: The City continued our participation in the regional household hazardous waste collection day during Permit Year 2 (July 1, 2014 to June 30, 2015).

Annual Reporting:

Hazardous Waste Collection Day

Permit Year		Total number of City vehicles
2	July 1, 2014 - June 30, 2015	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 with all outfalls identified. The mapping system will be used to screen for illicit discharges. The dry weather screening element of the program will include:

- Develop prioritized screening schedule
- Perform a minimum 50 field screenings per year, or screen all outfalls if less than 50 total in system
- Methodologies to collect general information such as last rain, quantity of rain, visual observations, etc.
- Define time frame to conduct investigations based on priorities
- Methodologies to determine the source of all illicit discharges
- Mechanisms to eliminate illicit discharges, including procedures for legal action
- Methods for follow up
- Mechanisms to track all investigations

The City will prohibit non-stormwater discharges into the storm sewer system through modifications to the ordinance. The stormwater webpage, BMP 1.2 and hot-line, BMP 2.4, will be used to promote and facilitate public reporting of illicit discharges.

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

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

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

Achievements for Permit Year 2: The IDDE Detection Program is scheduled to be developed by the end of the 3rd year of the permit (June 30, 2016) and to begin implementation during the 4th year of the permit (July 1, 2016 through June 30, 2017).

Annual Reporting: Written procedures of the IDDE Program will be included in the annual report for Permit Year 3. 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 2. Physical interconnection letters were 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
- An unique identifier for each outfall
- The name of location of all waters receiving discharges from MS4 outfalls and the associated HUC (6th order)

The associated information table for each outfall will include at least the following:

- An 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 2: The Mapping of Stormwater Network is scheduled to be completed by the end of the 4th year of the permit (June 30, 2017).

Annual Reporting: The City anticipates beginning the mapping of the stormwater network during the 3rd year of the permit (July 1, 2015 to June 30, 2016). 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 3. The information table will also be reported starting with the annual report for Permit Year 3.

BMP – 3.4 SPCC Training

The City will continue to provide personal 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 personal trained. The annual report will include this number.

Achievements for Permit Year 2: The City continued to provide personal with spill prevention control and countermeasure training during Permit Year 2 (July 1, 2014 to June 30, 2015).

Annual Reporting:

SPCC Training

Permit Year		Total number of City Personnel Trained	Department	Training Date
2	July 1, 2014 - June 30, 2015	14	Public Works	7/24/2014
		16	Public Works	10/16/2014
		14	Public Works	12/18/2014
		10	Public Works	2/19/2015

		17	Public Works	4/16/2015
		13	Public Works	6/18/2015
		14	Parks & Rec	6/21/2015
		30	Fire Department	5/12/2015 – 5/14/2015

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 30, 2015
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 2: The City continued to administer our 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 2 (July 1, 2014 to June 30, 2015).

Annual Reporting:

Erosion and Sediment Control Program

Permits	Total	Commercial Sites	Single-family Sites
Total number of regulated land-disturbing activities	69	18	51
Total number of acres disturbed	97.66	87.32	10.34
Total number of inspections conducted	419	138	281

Enforcement	Total	Notices to Comply	Stop Work Orders
Total number of enforcement actions taken	44	29	15

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 2: The City became a VSMP Authority on July 1, 2014. The City began implementing our VSMP Program at the beginning of the 2nd year of the permit (July 1, 2014). City Engineering staff (total of 2) passed the DEQ certification examination for Stormwater Management Combined Administrator. City Engineering staff (total of 1) passed the DEQ certification examination for Stormwater Management Inspector.

Annual Reporting:

Stormwater Management Program

Permits	Total	Commercial Sites	Single-family Sites
Total number of regulated land-disturbing activities	33	8	25
Total number of exemptions applied for	0	0	0
Total number of inspections conducted	215	69	146

Enforcement	Total	Notices to Comply	Stop Work Orders
Total number of enforcement actions taken	25	23	2

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 30, 2015

Written procedures for BMP maintenance on City-owned facilities have been included in Appendix B. Written procedures for BMP maintenance on Private-owned facilities have been included in Appendix C.

Date: February 16, 2016

Revised per DEQ comments dated 02/08/2016

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 2: Written procedures for BMP maintenance on City-owned facilities have been included in Appendix B. Written procedures for BMP maintenance on Private-owned facilities have been included in Appendix C.

Annual Reporting:

Structural BMP Maintenance

Permit Year		Total number of BMP Maintenance Agreements
2	July 1, 2014 - June 30, 2015	4

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 2: The Structural BMP Inspection Program is scheduled to be developed by the end of the 3rd year of the permit (June 30, 2016) and begin during the 4th year of the permit (July 1, 2016 through June 30, 2017).

Annual Reporting: The total number of BMP inspections conducted by property owners and the total number of BMP inspections conducted by the City and the number of enforcement actions taken will be reported starting with the annual report for Permit Year 4.

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 2: The Structural BMP Database is scheduled to be completed by the end of the 3rd year of the permit (June 30, 2016).

Annual Reporting: The BMP database for BMPs brought online during Permit Year 2 has been included in Appendix G.

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 30, 2015

Added Written Protocols for Daily Operations and Maintenance and Annual Written Training Plan

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 2: The City continued our Street Sweeping Program during Permit Year 2 (July 1, 2014 to June 30, 2015).

Annual Reporting:

Street Sweeping

Permit Year		Total number of road miles swept	Total number of tons collected
2	July 1, 2014 - June 30, 2015	5,748	1,055

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 2: The City continued to provide personnel with pollution prevention training during Permit Year 2 (July 1, 2014 to June 30, 2015).

Annual Reporting:

Pollution Prevention Training

Permit Year		Total number of City Personnel Trained	Department	Training Date
2	July 1, 2014 - June 30, 2015	19	Public Works	10/16/2014
		26	Public Works	2/19/2015
		37	Public Works	6/18/2015
		14	Parks & Rec	6/21/2015
		30	Fire Department	5/12/2015 – 5/14/2015

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 2: The City continued our Yard Debris Collection Program during Permit Year 2 (July 1, 2014 to June 30, 2015).

Annual Reporting:

Yard Debris Collection Program

Permit Year		Total number of cubic yards collected	Total number of loads collected
2	July 1, 2014 - June 30, 2015	5,880	420

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 2: The City continued to operate and maintain a dedicated vehicle wash facility at our equipment maintenance shop during Permit Year 2 (July 1, 2014 to June 30, 2015).

Annual Reporting:

Dedicated Vehicle Wash Facility

Permit Year		Total number of Vehicles Washed
1	July 1, 2013 - June 30, 2014	650

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 2: The Storm Sewer Inspection and Maintenance Program is scheduled to be developed by the end of the 4th year of the permit (June 30, 2017) and begin implementation during the 5th year of the permit (July 1, 2017 through June 30, 2018).

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 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 2: The development of SWPPPs for city facilities is scheduled to be completed by the end of the 4th year of the permit (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 an NMP. Once identified, an 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 2: The development of NMPs for city sites is scheduled to be completed by the end of the 5th year of the permit (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

See Appendix H for daily operations procedures for the City's Fire Department. The daily operations procedures for the City's Public Works and Parks and Recreation Departments are in the process of being developed and will be included in the annual report for Permit Year 3.

Annual Written Training Plan

See Appendix I for the annual training plan for the City's Fire Department. The written training plan for the City's Public Works and Parks and Recreation Departments are in the process of being developed and will be included in the annual report for Permit Year 3.

Chesapeake Bay TMDL

In December of 2010, the United States Environmental Protection Agency established a total maximum daily load (TMDL), or “Pollution Diet”, to limit the amount of phosphorus, nitrogen, and sediments that can be released into the streams, creeks, and rivers that feed the Chesapeake Bay. These measures were established as an effort to improve the water quality of the Bay and to return it to a swimmable and fishable state. The Bay TMDL limits were divided into smaller TMDLs that were assigned to drainage basins across six (6) states including Virginia. To respond to the TMDL the Commonwealth of Virginia committed to a phased approach to implementation for MS4 programs. The phased approach for existing MS4 communities (MS4 communities established prior to 2013) includes a requirement to meet a reduction goal of 5% during the current 5 year MS4 Permit Cycle. New MS4 programs, including the City of Staunton, are required to develop a Chesapeake Bay TMDL Action Plan during the first MS4 Permit Cycle and submit the Action Plan with the registration statement for the second permit cycle.

Modifications to Bay TMDL:

Date: September 30, 2015

None

Objective and Expected Results: The development of a Chesapeake Bay TMDL Action Plan that will provide implementation guidelines and a program of management practices that will facilitate compliance with the condition of future permits.

Implementation Schedule: The City will submit the TMDL Action Plan with the registration statement for the second permit (July 1, 2018- June 30, 2023) cycle by the end of the permit cycle (June 30, 2018).

Achievements for Permit Year 2: The City has begun preliminary planning for the Chesapeake Bay TMDL Action Plan. The development of the Action Plan is scheduled to be completed by the end of the 5th year of the permit (June 30, 2018).

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

Responsible Parties

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

Modifications to Responsible Parties:

Date: September 30, 2015

None

Executive Officer

Title: City Manager

Name: Stephen F. Owen

Address: P.O. Box 58

Staunton, VA 24402

Phone: 540-332-3812

Email: Owensf@ci.staunton.va.us

Program Management

Department of Engineering

Title: City Engineer

Name: James D. Davis

Address: P.O. Box 58

Staunton, VA 24402

Phone: 540-332-3858

Email: davisjd@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: garberr@ci.staunton.va.us

APPENDICES

APPENDIX A

STORMWATER HOTLINE PROCEDURES

Per the City's General Permit VAR040132 for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4), the City has established a stormwater hotline. The stormwater hotline consists of dedicated unmanned telephone line and dedicated email address. The city has developed a database for recording all messages received on the hotline. In implementing the city's stormwater hotline, the following procedures shall be followed:

1. The Hotline shall be checked for messages on a daily basis by the proper personnel in the City Engineering Department.
2. The Engineering Department shall log all necessary information into the hotline database.
3. The Engineering Department will determine the urgency and nature of each message (drainage issues, erosion control issues, general questions, etc.). If the issue of concern involves another city department, engineering will notify the appropriate departments.
4. If required, city personnel will conduct a site visit for assessment.
5. All actions by city departments shall be recorded in the hotline database.
6. After the issue has been addressed, all outcomes/conclusions shall be entered in the hotline database.

APPENDIX B

INSPECTION AND MAINTENANCE POLICY FOR CITY OWNED STORMWATER MANAGEMENT FACILITIES

Per General Permit VAR04 for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4), Section II-B-5-c-(2), for stormwater management facilities owned by the MS4 operator, the following conditions apply:

- a) The operator shall provide for adequate long-term operation and maintenance of its stormwater management facilities in accordance with written inspection and maintenance procedures included in the MS4 Program Plan,
- b) The operator shall inspect these stormwater management facilities annually. The operator may choose to implement an alternative schedule to inspect these stormwater facilities based on facility type and expected maintenance needs provided that the alternative schedule is included in the MS4 Program Plan, and
- c) The operator shall conduct maintenance on its stormwater management facilities as necessary.

Accordingly, the City of Staunton has developed an Inspection and Maintenance Program for city owned stormwater management facilities. The program is implemented through a joint effort between the city's engineering department and public works department. The engineering department is responsible for inspecting each facility. If any facility is found to be in need of maintenance, the necessary work is performed by the public works department. The engineering department has developed a database for all city owned facilities that will be utilized in tracking the annual inspections and maintenance efforts.

In implementing of the city's Inspection and Maintenance Program for city owned facilities, the following procedures shall be utilized:

- 1) The engineering department shall inspect each facility annually (on a fiscal year basis).
- 2) For each facility inspected, the engineering department shall complete a "Stormwater Management Facility Annual Inspection Report" form.
- 3) For any facility found in need of maintenance, a copy of the inspection form shall be sent by the engineering department to the city's street superintendent in the public works department.
- 4) The street superintendent shall schedule any necessary maintenance. The street superintendent shall coordinate with the engineering department the extent of the maintenance work, if necessary.
- 5) Upon completion of the required maintenance, the public works department shall fully note the work performed on the inspection form.
- 6) The street superintendent shall send a copy of the inspection form containing the description of the completed maintenance to the engineering department.
- 7) The engineering department will update the city owned facility database.
- 8) Records of all inspection forms shall be kept by the engineering department.

APPENDIX C

INSPECTION AND MAINTENANCE POLICY FOR PRIVATE OWNED STORMWATER MANAGEMENT FACILITIES

Per General Permit VAR04 for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4), Section II-B-5-c-(1), for stormwater management facilities not owned by the MS4 operator, the following conditions apply:

- a) The operator shall require adequate long-term operation and maintenance by the owner of the stormwater management facility by requiring the owner to develop a recorded inspection schedule and maintenance agreement to the extent allowable under state or local law or other mechanism;
- b) The operator or his designee shall implement a schedule designed to inspect all privately owned stormwater management facilities that discharge into the MS4 at least once every five years to document that maintenance is being conducted in such a manner to ensure long-term operation in accordance with the approved design;
- c) The operator shall utilize its legal authority for enforcement of maintenance responsibilities if maintenance is neglected by the owner. The operator may develop and implement a progressive compliance and enforcement strategy provided that the strategy is included in the MS4 Program Plan; and
- d) Beginning with the issuance of this state permit, the operator may utilize strategies other than maintenance agreements such as periodic inspections, homeowner outreach and education, and other methods targeted at promoting the long-term maintenance of stormwater control measures that are designed to treat stormwater runoff solely from individual residential lot. Within 12 months of coverage under this permit, the operator shall develop and implement these alternative strategies and include them in the MS4 Program Plan.

Accordingly, the City of Staunton has developed an Inspection and Maintenance Program for privately owned stormwater management facilities. The program is implemented through the city's engineering department. The engineering department is responsible for inspecting each facility. If any facility is found to be in need of maintenance, a letter will be sent to the owner of the facility addressing the necessary maintenance.

The engineering department has developed a Stormwater Management Inspection and Maintenance Agreement. This legal agreement between the facility owner and the city requires the owner to inspect the facility on a regular basis and to maintain the facility as necessary to assure safe and proper functioning of the facility. The engineering department has also developed a database for all privately owned facilities that will be utilized in tracking the inspections and maintenance efforts.

In implementing of the city's Inspection and Maintenance Program for privately owned facilities, the following procedures shall be utilized:

- 1) The engineering department shall inspect each facility at least once every five (5) years (on a fiscal year basis).
- 2) For each facility inspected, the engineering department shall complete a "Stormwater Management Facility Annual Inspection Report" form.

- 3) For any facility found in need of maintenance, a letter shall be sent to the facility owner including a copy of the inspection form describing the required maintenance that needs to be performed.
- 4) If requested by the facility owner, the engineering department will coordinate with the owner the extent of the maintenance work.
- 5) Upon completion of the required maintenance, the owner shall fully note the work performed on the inspection form.
- 6) The facility owner shall send a copy of the inspection form containing the description of the completed maintenance to the engineering department.
- 7) The engineering department shall perform a follow-up inspection to ensure that the required maintenance has been adequately addressed.
- 8) The engineering department will update the private owned facility database.
- 9) Records of all inspection forms shall be kept by the engineering department.
- 10) If the property owner fails to complete the required maintenance acceptable to the City, the City may, after giving proper notice to the property owner, correct the deficiencies identified in the inspection form and charge the costs of such repairs to the property owner.

APPENDIX D

WRITTEN PROTOCOLS FOR DAILY OPERATIONS AND MAINTENANCE



Section 300 Hazardous Materials

Table of Contents

Section 300

Hazardous Materials

- 300.01, Program Management
- 301.01, Emergency Response
- 301.02, Containment and Cleanup
- 301.03, Decontamination Procedures
- 301.04, Personnel Safety
- 301.05, Contaminated Protective Clothing

	City of Staunton Fire & Rescue Department Standard Operating Guidelines	
	Hazardous Materials	
	Subject: Program Management	Section 300
	Approved: Assistant Chief	SOG# 300.01
	Approved: Jason C. Ball Deputy Chief	Initiated 01 APR 03
500 North Augusta Street Staunton, Virginia 24401	Approved: R. Scott Garber Fire Chief	Revised 01 JAN 15

I. Scope

This standard defines the parameters of the department's efforts to manage the hazardous materials problem within the community, both before and after the incident. It was promulgated to:

- A. Establish a program to identify occupancies that store, use, manufacture, or distribute hazardous materials in an effort to prevent incidents from occurring that could potentially involve a hazardous material; and
- B. Establish guidelines to be followed by the department for managing an incident that involves a hazardous material.

II. General

- A. The potential always exists within the community for an incident to occur that involves one or more hazardous materials. The frequency of occurrence and the fiscal resources of the district do not, however, allow the department to operate beyond the first-responder operational level as defined by NFPA 472, *Professional Competence of Responders to Hazardous Materials Incidents*.
- B. At the operational level, members are responsible for protecting people, property, and the environment from the effects of a hazardous material. Members will operate in a defensive role to contain the incident and prevent a release of a hazardous material from spreading.
- C. After the incident commander has secured the scene, a private vendor shall be called to the incident to control the incident and clean up the site.
- D. The private vendor may be furnished by the party responsible for the incident; otherwise, the department will contact a contractor from the approved vendor list.
 1. The responsible party shall be billed for all expenses incurred in resolving the incident.
 2. The local ordinance granting this authority:

III. Responsibilities

- A. The emergency management coordinator shall be responsible for the management and oversight of the department's hazardous materials program and shall be responsible for ensuring that the department is in strict compliance with all applicable state and federal regulations.
- B. The fire marshal shall be responsible for:
 1. Identifying businesses and other concerns that are involved in the manufacture, use, storage, or distribution of hazardous materials.

2. Causing the periodic inspection of these businesses so as to reduce the possibility that an incident might occur.
 3. Providing a list of these businesses to the company officers for use in preparing tactical surveys of these occupancies.
- C. The department shall equip each apparatus with a pair of binoculars, the appropriate manuals and reference materials, portable monitoring devices, and a supply of disposable protective suits.
- D. The Assistant Chief shall be responsible for training the members assigned to each shift to the first-responder operational level as outlined in NFPA 472.
- E. Company officers shall be responsible for:
1. Preparing tactical surveys for occupancies within their first-due areas that manufacture, store, use, or distribute hazardous materials. During the preparation of the tactical survey, the company officer shall ask the business owner or manager to affix an NFPA 704, *Standard System for the Identification of the Hazards of Materials for Emergency Response* placard in a conspicuous place to identify the most severe hazard present in the occupancy.
 2. Ensuring that their driver inspects the manuals, equipment, and protective clothing assigned to their apparatus for use in a hazardous materials incident at the beginning of each shift.
 3. Ensuring that all members under their command maintain their training and skill levels at the first-responder operational level as defined by NFPA 472.

	City of Staunton Fire & Rescue Department	
	Standard Operating Guidelines	
	Hazardous Materials	
	Subject: Emergency Response	Section 300
	Approved: Assistant Chief	SOG# 301.01
500 North Augusta Street Staunton, Virginia 24401	Approved: Jason C. Ball Deputy Chief	Initiated 01 APR 03
	Approved: R. Scott Garber Fire Chief	Revised 01 JAN 15

I. Scope

This standard establishes guidelines to be followed during the management of an incident involving a hazardous material. It was promulgated to:

- A. Establish guidelines for the management of a hazardous materials incident.
- B. Provide for the safety of response personnel.

II. Definitions

The following definitions are taken from a variety of sources including NFPA 472, *Standard for Professional Competence of Responders to Hazardous Materials Incidents*.

- A. Cold zone: The zone of a hazardous materials incident that contains the command post and such other support functions as are deemed necessary to control the incident. This zone is also referred to as the clean zone or support zone.

- B. Confinement: Those procedures taken to keep a material in a defined or local area once released.
- C. Containment: The actions taken to keep a material in its container (e.g., stop the release of the material or reduce the amount being released.)
- D. Contaminant: A hazardous material that physically remains on or in people, animals, the environment, or equipment, thereby creating a continuing risk of direct injury or a risk of exposure outside of the hot zone.
- E. Decontamination: The physical or chemical process of reducing and preventing the spread of contamination from persons and equipment used at a hazardous materials incident.
- F. Exposure: The process by which people, animals, the environment, and equipment are subjected to or come in contact with a hazardous material.
- G. Hazardous material: A substance that when released is capable of creating harm to people, the environment, animals, and property.
- H. Hot zone: The area immediately surrounding a hazardous materials incident. It extends far enough to where adverse effects from hazardous materials release will not be expected. It is also referred to as the exclusion zone or the restricted zone.
- I. Penetration: The movement of a material through a suit's closures-such as zippers, buttonholes, seams, flaps, or other design features of chemical protective clothing-and through punctures, cuts, and tears.
- J. Stabilization: The point in an incident at which the adverse behavior of the hazardous material is controlled.
- K. Warm zone: The control zone at a hazardous materials incident where personnel and equipment decontamination and hot zone support takes place. It includes control points for the access corridor, helping to reduce the spread of contamination. This zone is also referred to as the decontamination, contamination reduction, or limited access zone.

III. General

- A. The first-arriving officer at an incident involving hazardous materials shall report the following information to Dispatch:
 - 1. The exact location of the incident.
 - 2. The type and quantity of the materials involved, if known.
 - 3. The extent of damage and the number and types of injuries.
 - 4. The name of the carrier if a vehicle is involved.
 - 5. Any other pertinent information such as the hazardous material entering the storm drain or sanitary sewer system.
- B. The first-arriving officer shall also request any additional resources that may be needed, establish command, and begin securing the incident scene to prevent additional injuries or contamination.
- C. The area shall be evacuated if necessary. This function should be turned over to the police once sufficient law enforcement resources arrive on the scene.
- D. Dispatch shall provide the incident commander with the temperature, wind speed and direction, and humidity as soon as it is possible to do so.

IV Tactical Objectives

- A. The incident commander shall assess the situation and identify the products involved prior to committing personnel.
- B. If entry must be made into the hot zone to rescue someone or to contain a release, the appropriate level of protective clothing shall be worn by the personnel who enter.

- C. If personnel are committed to the hot zone, decontamination and rehab groups shall be established, as well as a warm zone and a cold zone.
- D. Decontamination of victims shall also occur prior to their being transported to a medical facility.
- E. Additional resources shall be requested in accordance with the district's Emergency Operations Plan. This includes the dispatch of additional resources or a private vendor if the incident exceeds the department's capabilities.
- F. The incident commander's objectives will be containment and stabilization. Final extinguishment and cleanup of incidents that exceed the capabilities of the department will be the responsibility of the private vendor who responds to the incident.
- G. In more complicated incidents, it may be necessary to activate the Emergency Operations Plan.

	City of Staunton Fire & Rescue Department Standard Operating Guidelines	
	Hazardous Materials	
	Subject: Contamination and Cleanup	Section 300
	Approved: Assistant Chief	SOG# 301.02
	Approved: Jason C. Ball Deputy Chief	Initiated 01 APR 03
500 North Augusta Street Staunton, Virginia 24401	Approved: R. Scott Garber Fire Chief	Revised 01 JAN 15

I. Scope

This standard establishes guidelines for managing the containment and cleanup of a hazardous materials incident.

II. General

A. Containment methods may include but shall not be limited to:

1. Barriers in soil.
2. Berms and drains.
3. Booms.
4. Dikes.
5. Diverting streams.
6. Over-packed drums or other forms of containerization.
7. Patching and plugging of containers or vessels.
8. Portable catch basins.
9. Reorienting the container.
10. Trenches.

B. Displacement techniques may include but shall not be limited to:

1. Dispersion/dilution.

2. Excavating.
3. Hydraulic and mechanical dredging.
4. Skimming.
5. Vacuuming.

III. Responsibilities

- A. The incident commander, in coordination with the appropriate state or federal official, is responsible for selecting and implementing the appropriate countermeasures to bring a hazardous materials incident to a safe and successful conclusion. This includes:
 1. Ensuring that temporary storage sites, if necessary, are safe and secure.
 2. Ensuring that final disposal is handled at an approved site.
- B. Notification of Virginia Department of Emergency Management and Virginia Environmental Protection Agency should occur during any major release of a hazardous material. Discretion of this notification is the responsibility of the Incident Commander.
- C. The persons responsible for the hazardous material are responsible for paying the full costs for cleanup and disposal operations.

	City of Staunton Fire & Rescue Department Standard Operating Guidelines	
	Hazardous Materials	
	Subject: Decontamination Procedures	Section 300
	Approved: Assistant Chief	SOG# 301.03
	Approved: Jason C. Ball Deputy Chief	Initiated 01 APR 03
500 North Augusta Street Staunton, Virginia 24401	Approved: R. Scott Garber Fire Chief	Revised 01 JAN 15

I. Scope

This standard establishes a procedure for the decontamination of people, equipment, and apparatus that become contaminated as a result of an exposure to a hazardous material. It was promulgated to:

- A. Prevent the spread of contaminants beyond the hazard zone at an incident involving a hazardous material.
- B. Reduce the possibility of death or injury due to exposure to a hazardous material.
- C. Establish a procedure to decontaminate equipment and apparatus exposed to a hazardous material so that the equipment and apparatus might promptly be returned to service.

II. General

- A. Contamination is the transfer of a hazardous material to persons, equipment, and the environment due to an exposure or contact with a hazardous material. The magnitude of the

exposure depends on the duration of the exposure and the concentration of the hazardous material.

- B. Decontamination (decon) is the process of removing contaminants from people and equipment. Decon should occur in the warm zone so as to minimize the possibility of secondary contamination.
- C. There are four basic methods of decontamination available to response personnel:
 - 1. Dilution: The use of water to flush the contaminant from the victim or piece of equipment. Be sure to impound or collect the contaminated water from this process.
 - 2. Absorption: The use of an absorbent for picking up a liquid contaminant. This works well on a spill.
 - 3. Chemical degradation: The use of another material (e.g., household bleach or baking soda) to change the chemical structure of the hazardous material so as to neutralize the material.
 - 4. Isolation and disposal: The isolation of a hazardous material by collecting it and then disposing of it in accordance with state and federal regulations. While this may be a more costly alternative, it is often the easiest technique to employ.

III. Procedure

- A. If contamination has occurred at a hazardous materials incident, the incident commander shall appoint a decon officer. The decon officer shall establish a decontamination group in the warm zone. The site of the decon group should be selected on the basis of
 - 1. Accessibility and location. (Special note: Due consideration must be given to the privacy of potential victims and rescue workers.)
 - 2. Surface material.
 - 3. Lighting.
 - 4. Drains and waterways.
 - 5. Water supply.
 - 6. Weather.
- B. All personnel, victims, and equipment must be decontaminated prior to being allowed entry into the cold zone. The specific decontamination measures employed in the decon group will depend on the circumstances surrounding the incident and the level of contamination.
- C. Members assigned to the decon group will instruct contaminated members to follow the following procedure:
 - 1. Gross decontamination: A decontamination worker will remove the majority of the contamination from the victim and their tools by hosing down the victim or by providing a portable shower. A catch basin shall be used to confine the water used in this process.
 - 2. Tools and equipment: Any tools and equipment used by the victim should then be discarded at a designated location for further decontamination, if necessary.
 - 3. Scrub-down: The victim should then step into the rinse area, where a decontamination worker will scrub them with detergent and water. The water shall be kept for analysis prior to being released.
 - 4. Final step: After being washed down, the victim should then proceed to the final area, where articles of clothing and other equipment will be removed. These items shall be left in the decontamination area for further treatment or disposal.
- D. If a contaminated victim must be transported prior to being properly decontaminated, Medical Control and the destination emergency room shall be notified.
- E. If an ambulance becomes contaminated, the ambulance will be quarantined until the unit can be properly decontaminated.

- F. Members who are exposed to a hazardous material shall complete a Hazardous Materials Exposure Form and place a copy of it in their medical file.

	City of Staunton Fire & Rescue Department Standard Operating Guidelines	
	Hazardous Materials	
	Subject: Personnel Safety	Section 300
	Approved: Assistant Chief	SOG# 301.04
	Approved: Jason C. Ball Deputy Chief	Initiated 01 APR 03
500 North Augusta Street Staunton, Virginia 24401	Approved: R. Scott Garber Fire Chief	Revised 01 JAN 15

I. Scope

This standard establishes guidelines for members to follow when engaged in an incident involving a hazardous material. It was promulgated so as to minimize the risk of death and injury during Haz-mat incidents.

II. General

- A. The most important action to be taken at a hazardous materials incident is to recognize that a hazardous material is present. If the potential exists, assume the worst until it can be confirmed that no danger exists.
- B. The area must be secured and no one must be allowed to enter the area until the incident commander determines that it is safe to do so.
- C. Appropriate help should be summoned and the material or materials present should be identified.
- D. Once the problem has been identified, the incident commander should formulate an action plan to resolve the incident. Tactical surveys will be useful in this process. The action plan should focus on three goals:
 1. Life safety.
 2. Environmental protection.
 3. Property conservation.
- E. The incident commander should appoint a safety officer early in this process. The safety officer must remain in constant contact with the IC and should immediately correct any unsafe conditions or practices.

III. Operations

- A. There are three recognized levels of response:
 1. Level I: The least serious and within the capabilities of the department. Evacuation, if required, will be limited to the immediate area. Example: a gasoline or diesel spill.

2. Level II: Beyond the capabilities of the department, a Level II incident requires the service of a formal Haz-Mat Response Team. Examples: the rupture of a pipeline or a fire with the threat of a BLEVE.
 3. Level III: The most serious type, requiring special resources from public and private agencies. It will require a large-scale evacuation and implementation of the jurisdiction's Emergency Operations Plan. Example: an incident that extends across jurisdictional boundaries.
- B. Operations will either be defensive or offensive.
1. Defensive operations focus on confinement without directly contacting the hazardous materials creating the problem.
 2. Offensive operations focus on aggressive actions on the material, container, or process, and they may result in contact with the materials. Offensive operations will not be conducted unless the incident commander can determine that the risk is worth the benefit.
- C. Personnel will not be allowed to enter the warm zone or the hot zone without the proper level of training and personal protection.
- D. Personnel will not be permitted to leave the warm zone or the hot zone without undergoing proper decontamination.
- E. The safety officer will appoint a medical surveillance team. The team will be responsible for monitoring members for indicators of toxic exposure effects, including:
1. Change in complexion, skin discoloration.
 2. Lack of coordination.
 3. Changes of demeanor.
 4. Excessive salivation, papillary response.
 5. Changes in speech pattern.
 6. Headaches.
 7. Dizziness.
 8. Blurred vision.
 9. Cramps.
 10. Irritation of eyes, skin, or respiratory tract.
- F. Any member exposed to a hazardous material shall complete a Hazardous Materials Exposure Form. A copy of the form shall be placed in the member's medical file.
- G. The incident commander shall also appoint a rehab officer. The rehab officer shall establish a rehab group. Members shall be rotated through the rehab group in accordance with the department's SOGS.

	City of Staunton Fire & Rescue Department Standard Operating Guidelines	
	Hazardous Materials	
	Subject: Contaminated Protective Clothing	Section 300
	Approved: Assistant Chief	SOG# 301.05
	Approved: Jason C. Ball Deputy Chief	Initiated 01 APR 03
500 North Augusta Street Staunton, Virginia 24401	Approved: R. Scott Garber Fire Chief	Revised 01 JAN 15

I. Scope

This standard establishes guidelines to be followed when uniforms, protective clothing, or items of personal protective equipment are contaminated by a hazardous material.

II. Procedure

- A. Personnel who enter the warm zone or the hot zone at a hazardous materials incident run the risk of becoming contaminated by the materials involved.
- B. Members must pass through the decontamination group prior to being allowed to enter the cold zone.
 1. At the entrance to the decon group, the member should discard any hand tools and equipment at the edge of the corridor so that they can be decontaminated.
 2. After the member has been rinsed off and decontaminated as much as possible, they shall proceed to the final area where a decontamination worker will assist them in removing their protective clothing.
 3. All articles of contaminated protective clothing shall be placed in a bag, then sealed and tagged. The tag should list the contaminant, the contents of the bag, the member's name, and the time and date.
 4. If a member's personal clothing or work uniform has been contaminated, the member should proceed to a showering station. After showering, they should dry off their body and change into clean clothes. Ensure that the member is afforded all due privacy.
 5. Contaminated uniforms and articles of personal clothing should be bagged, then sealed and tagged. Towels and other items used to dry off should also be placed in a bag for decontamination or disposal.
- C. The decon officer shall make a determination if contaminated items are salvageable. Items that cannot be properly decontaminated shall be disposed of in accordance with state and federal regulations.
- D. Items that may be decontaminated shall be returned to the member after being properly decontaminated.

APPENDIX E

ANNUAL TRAINING PLAN FOR FIRE DEPARTMENT

Fire Department Training is in accordance with ISO:

- Fire Department personnel receive a minimum 6 hours per year of Hazardous Materials Training
- Hazardous Materials Technicians require an additional 24 hours per year of Hazardous Materials Training
- Hazardous Materials Specialists require an additional 48 hours per year of Hazardous Materials Training and must meet Hazardous Material Technician requirements

APPENDIX F

Assessment of the Appropriateness of Identified BMPs

The City of Staunton's assessment of the appropriateness of the best management practices that constitute the City's MS4 Program is limited because the City obtained permit coverage in May 2014 of Permit Year 1. However, the City has determined that the best management practices included in the MS4 Program Plan that the City already had in place during Permit Year 1 and started in Permit Year 2 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.

APPENDIX G

BMP Database

CITY OF STAUNTON

BMP DATABASE

BMPs CONSTRUCTED FROM

July 1, 2014 thru June 30, 2015

BMP NO.	SITE/SUBDIVISION NAME	SITE ADDRESS	CITY PARCEL	OWNER	OWNER ADDRESS	SITE LOCATION		FACILITY TYPE	ACRES TREATED			ONLINE DATE		VA HUG	RECEIVING WATERS	IMPAIRED WATERS	WITHIN MS4 BOUNDARY	PRIVATE PUBLIC	SWM AGREEMENT	LAST INSPECTION
						LATITUDE	LONGITUDE		TOTAL	PERV.	IMPERV.	MONTH	YEAR							
BBC6	Faith Baptist Church	620 Essex Drive	9063	Faith Baptist Church	620 Essex Drive Staunton, VA 24401	38° 9' 59.202" N	79° 6' 20.800" W	Extended detention	2.74	2.53	0.21	12	2014	PS04	Bell Creek	No	No	Private	12/9/2014	4/30/2015
BLC20	Baldwin Place Dry Pond	3000 North Augusta Street	10603	Baldwin Place HOA	C/O Carol Broderick 303 Laketree Drive Staunton, VA 24401	38° 10' 17.690" N	79° 2' 39.013" W	Dry Detention	75.84	61.39	14.45	11	2014	PS06	Lewis Creek	Yes	No	Private	11/7/2014	4/28/2015
BLC34	The Legacy @ North Augusta	1410A North Augusta Street	11597	North Augusta, LLC	C/O National Lutheran Home 1803 Reseach Blvd Rockville, MD 20850	38° 9' 44.531" N	79° 4' 3.266" W	Bioretention filter w/ detention	0.12	0.04	0.08	7	2014	PS06	Lewis Creek	Yes	Yes	Private	10/1/2013	7/18/2014