

**City of Roanoke, Virginia
MS4 Permit
Annual Report and Program Plan Update**

**Reporting Period
July 1, 2014 - June 30, 2015**

**Submitted to:
The Virginia Department of
Environmental Quality
Blue Ridge Regional DEQ Office
MS4 Stormwater Permitting Division
3019 Peters Creek Road
Roanoke, VA 24019**

**Prepared by:
The City of Roanoke's**

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Annual Report and Program Plan Update Sections

This report consists of documentation of the City of Roanoke's compliance with the following seven Minimum Control Measures as required by the General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4)

City of Roanoke Permit Number VAR040004

- I. Modifications to Departmental Roles and Responsibilities***
- II. Number of New MS4 Outfalls and Associated Acreage by HUC Added During the Permit Year***
- III. Signed Executive Certification Statement***
- IV. Permit Section I – Special Conditions, TMDL Requirements***
- V. MCM#1 Public Education and Outreach on Stormwater***
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- VII. MCM#3 Illicit Discharge Detection and Elimination***
- VIII. MCM#4 Construction Site Stormwater Runoff Control***
- IX. MCM#5 Post-Construction Stormwater Management***
- X. MCM#6 Pollution Prevention and Good Housekeeping for Municipal Operations***

City of Roanoke Permit Number VAR040004

I. Modifications to Departmental Roles and Responsibilities

This reporting year marked the official beginning of the City of Roanoke’s new Stormwater Division, within the Department of Public Works. This new Division was created to administer all programs and duties under the City’s Stormwater Utility Fee, which became effective on July 1, 2014. The funds collected from the utility fee are used to provide dedicated funding to:

1. Support the construction of capital stormwater projects
2. Provide maintenance of the City’s stormwater infrastructure
3. Meet requirements necessary to comply with current and emerging Federal and State environmental regulations

During its initial year the focus of the Stormwater Division has largely been on building and installing the personnel necessary for; the management of ongoing and planned stormwater capital projects, building the capacity to provide enhanced stormwater infrastructure inspection and maintenance, and assuming primary responsibility for MS4, TMDL, and FEMA’s Community Rating System Flood Insurance Program compliance and reporting. Regarding the MS4 Program, the new Division will be assuming most of the duties historically performed by the Office of Environmental Management. A Table summarizing the evolving roles and who is responsible is included below.

At the time of this reporting the Planning Department’s Development Review Coordinator position had been recently vacated and was unfilled. This position vacancy has been advertised and the hiring process is underway.

General Program or Permit Area	Permit Year							
	1	2	3	4	5			
	2013	2014	2015	2016	2017	2018+		
Overall Compliance Assurance	C. Blakeman, Environmental Mgmt.			D. D’Ardenne, Stormwater				
Overall Program Plan Administration	C. Blakeman, Environmental Mgmt.			L. Weitzenfeld, Stormwater				
Section I	C. Blakeman, Environmental Mgmt.			L. Weitzenfeld, Stormwater				
Section II, MCM 1	C. Blakeman, Environmental Mgmt.			L. Weitzenfeld, Stormwater				
Section II, MCM 2	C. Blakeman, Environmental Mgmt.			L. Weitzenfeld, Stormwater				
Section II, MCM 3	C. Blakeman, Environmental Mgmt.							
Section II, MCM 4	D. Bishop, Planning			Unknown, TBD				
Section II, MCM 5	D. Bishop, Planning			Unknown, TBD				
Section II, MCM 6	C. Blakeman, Environmental Mgmt.			L. Weitzenfeld, Stormwater				
Section II Remainder and Section III	C. Blakeman, Environmental Mgmt.			L. Weitzenfeld, Stormwater				

Listed Personnel and their Titles: Christopher Blakeman – Environmental Administrator, Dwayne D’Ardenne – Stormwater Division Manager, Leigh Anne Weitzenfeld – Water Quality Administrator, and Danielle Bishop – Former Development Review Coordinator.

II. Number of New MS4 Outfalls and Associated Acreage by HUC Added During the Permit Year

No new MS4 outfalls were added during the permit year.

***III.* Signed Executive Certification Statement**

Continued on following page.

Certification Statement and Requirements

As required by 9VAC25-870-370 B, all reports required by state permits, and other information requested by the board shall be signed by a responsible official or by a duly authorized representative of that person. A responsible official is:

- 1. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-making or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for state permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;*
- 2. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or*
- 3. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.*

Duly Authorized Representatives

A person is a duly authorized representative only if:

- 1. The authorization is made in writing by a person described above;*
- 2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. A duly authorized representative may thus be either a named individual or any individual occupying a named position; and*
- 3. The written authorization is submitted to the department.*

CERTIFICATION

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.

 9-25-15
Responsible Official Signature Date

VAR040004, City of Ronoake, Virginia
Permit Number MS4 Name



City of Roanoke, VA

City of Roanoke, VA MS4 SWMP 2018

September 30, 2014 To September 30, 2015

This program consists of the following 8 Minimum Control Measure(s).

1. Special conditions for approved total maximum daily loads (TMDL) other than the Chesapeake Bay TMDL.
2. MCM#1 Public Education and Outreach on Stormwater Impacts
3. MCM#2 Public Participation/Involvement
4. MCM#3 Illicit Discharge Detection and Elimination (IDDE)
5. MCM#4 Construction Site Stormwater Runoff Control
6. MCM#5 Post-Construction Stormwater Management in New Development and Development on Prior Developed Lands
7. MCM#6 Pollution Prevention/ Good Housekeeping for Municipal Operations
8. MS4 Program Evaluation

1 Special conditions for approved total maximum daily loads (TMDL) other than the Chesapeake Bay TMDL.

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Description

An approved TMDL may allocate an applicable wasteload to a small MS4 that identifies a pollutant or pollutants for which additional stormwater controls are necessary for the surface waters to meet water quality standards. The MS4 operator shall address the pollutants in accordance with this special condition where the MS4 has been allocated a wasteload in an approved TMDL.

1. The operator shall maintain an updated MS4 Program Plan that includes a specific TMDL Action Plan for pollutants allocated to the MS4 in approved TMDLs. TMDL Action Plans may be implemented in multiple phases over more than one state permit cycle using the adaptive iterative approach provided adequate progress to reduce the pollutant discharge in a manner consistent with the assumptions and requirements of the specific TMDL wasteload is demonstrated in accordance with subdivision 2 e of this subsection. These TMDL Action Plans shall identify the best management practices and other interim milestone activities to be implemented during the remaining terms of this state permit.

a. In accordance with Table 1 in this section, the operator shall update the MS4 Program Plans to address any new or modified requirements established under this special condition for pollutants identified in TMDL wasteload allocations approved prior to July 9, 2008.

b. In accordance with Table 1 in this section, the operator shall update the MS4 Program Plan to incorporate approvable TMDL Action Plans that identify the best management practices and other interim milestone activities that will be implemented during the remaining term of this permit for pollutants identified in TMDL wasteload allocations approved either on or after July 9, 2008, and prior to issuance of this permit.

c. Unless specifically denied in writing by the department, TMDL Action Plans and updates developed in accordance with this section become effective and enforceable 90 days after the date received by the department.

2. The operator shall:

a. Develop and maintain a list of its legal authorities such as ordinances, state and other permits, orders, specific contract language, and interjurisdictional agreements applicable to reducing the pollutant identified in each applicable WLA;

b. Identify and maintain an updated list of all additional management practices, control techniques and system design and engineering methods, beyond those identified in Section II B, that have been implemented as part of the MS4 Program Plan that are applicable to reducing the pollutant identified in the WLA;

c. Enhance its public education and outreach and employee training programs to also promote methods to eliminate and reduce discharges of the pollutants identified in the WLA;

d. Assess all significant sources of pollutant(s) from facilities of concern owned or operated by the MS4 operator that are not covered under a separate VPDES permit and identify all municipal facilities that may be a significant source of the identified pollutant. For the purposes of this assessment, a significant source of pollutant(s) from a facility of concern means a discharge where the expected pollutant loading is greater than the average pollutant loading for the land use identified in the TMDL. (For example, a significant source of pollutant from a facility of concern for a bacteria TMDL would be expected to be greater at a dog park than at other recreational facilities where dogs are prohibited);

e. Develop and implement a method to assess TMDL Action Plans for their effectiveness in reducing the pollutants identified in the WLAs. The evaluation shall use any newly available information, representative and adequate water quality monitoring results, or modeling tools to estimate pollutant reductions for the pollutant or pollutants of concern

from implementation of the MS4 Program Plan. Monitoring may include BMP, outfall, or in-stream monitoring, as appropriate, to estimate pollutant reductions. The operator may conduct monitoring, utilize existing data, establish partnerships, or collaborate with other MS4 operators or other third parties, as appropriate. This evaluation shall include assessment of the facilities identified in subdivision 2 d of this subsection. The methodology used for assessment shall be described in the TMDL Action Plan.

3. Analytical methods for any monitoring shall be conducted according to procedures approved under 40 CFR Part 136 or alternative methods approved by the Environmental Protection Agency (EPA). Where an approved method does not exist, the operator must use a method consistent with the TMDL.

4. The operator is encouraged to participate as a stakeholder in the development of any TMDL implementation plans applicable to their discharge. The operator may incorporate applicable best management practices identified in the TMDL implementation plan in the MS4 Program Plan or may choose to implement BMPs of equivalent design and efficiency provided that the rationale for any substituted BMP is provided and the substituted BMP is consistent with the assumptions and requirements of the TMDL WLA.

5. Annual reporting requirements.

a. The operator shall submit the required TMDL Action Plans with the appropriate annual report and in accordance with the associated schedule identified in this state permit.

b. On an annual basis, the operator shall report on the implementation of the TMDL Action Plans and associated evaluation including the results of any monitoring conducted as part of the evaluation.

6. The operator shall identify the best management practices and other steps that will be implemented during the next state permit term as part of the operator's reapplication for coverage as required under Section III M.

7. For planning purposes, the operator shall include an estimated end date for achieving the applicable wasteload allocations as part of its reapplication package due in accordance with Section III M.

Best Management Practices

1.1 MS4 Program Plan/TMDL Action Plan Requirements

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Required Yes

Description

A description of the measures, procedures, and processes used to comply with the Section I.B. of the MS4 Permit. For reporting purposes reference may be made to materials which can be found elsewhere and where such materials are available to the public either freely or upon request.

Justification

Required under Section I.B.

Annual Reporting Items

1. TMDL Action Plan Submittal
2. Facility Assessment

Goals

1.1.1 TMDL Action Plan Submittal

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Description

The City shall submit the required TMDL Action Plans with the appropriate annual report and in accordance with the associated schedule identified in the City's permit. The items from Sections I.B.2.a-c. of the permit will be included in the TMDL Action Plan.

For reporting year 2015 this will include TMDLs issued prior to 2008 for bacteria and sediment. For the 2016 reporting year this will include the TMDL issued in December 2009 for PCBs.

Planned: 2014 2015 2016

Complete: 2014 2015

Activity Date	Name
06/30/2015	FY15 TMDL Action Plan

Description

The City of Roanoke is submitting its sediment and bacteria TMDL Action Plan in conjunction with its 2015 MS4 Permit Annual Report. TMDLs for these priority pollutants were approved prior to July 2008. The Action Plan describes the legal authorities, BMPs, education and training programs, and other initiatives the city will undertake to meet its waste load allocations and successfully delist the Roanoke River and its tributaries.

File Attachment [2015 City of Roanoke TMDL Action Plan FINAL .pdf](#)

File Attachment [2015 City of Roanoke TMDL BMP Prioritization FINAL.pdf](#)

1.1.2 Facility Assessment

Responsible Staff / Position:

LeighAnne Weitzenfeld
Water Quality Administrator

Description

The City shall assess all significant sources of pollutants from facilities of concern owned or operated by the City that are not covered by a separate VPDES permit and identify all municipal facilities that may be a significant source of the identified pollutant. The City will annually report on its assessment.

Planned: 2014 2015

Complete: 2014 2015

Activity Date

Name

09/21/2015

FY15 TMDL Assessment at City Facilities

Description

The City assessed all facilities in accordance with Section II.B.6.b. of the permit and identified several facilities that are high priority. At our Public Works Service Center, sediment pollution may occur as it is washed off of the pavement. To counteract this potential problem, the City mechanically sweeps these lots (moving all equipment and vehicles) twice a year. Bacterial pollution is possible on the Solid Waste Division "Ready Line" where all garbage and recycling collection trucks are stored overnight. To counteract this, the "Ready Line" is swept and cleaned even more frequently, usually every two weeks, and the garbage trucks are fully washed at least weekly, and at times more often, especially during warm or hot weather.

In addition to this identified facility, the City has several parks and green spaces where citizens play with their pets. In an attempt to limit the pollution from their pet's waste, the City has installed 40 pet waste stations, which provide free bags for waste collection. This operation is constantly expanding and is discussed in greater detail under Section 7.1.4 of this report.

For the permit year 2014-2015, the city is adding two dog parks due to the potential for larger bacterial contamination loads. Thrasher Park has a fenced, leash-free acre sized yard. Thrasher Park straddles both Tinker Creek and Glade Creek watersheds but is geographically closer to Glade Creek. Highland Park also contains a fenced leash-free zone that is about an acre in size. Highland Park is in close proximity to the Roanoke River.

1.2 Annual Reporting Requirements

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Required Yes

Description

A report of all elements required under Section I.B.5. of the MS4 Permit, plus any additional items the City feels it should include in the annual MS4 report.

Justification

Required under Section II.B.5.

Annual Reporting Items

1. Progress Report on the Implementation of the TMDL Action Plan and an Assessment of Its Effectiveness

Goals

1.2.1 TMDL Action Plan Progress Report and Evaluation

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Description

The City shall submit a report on the implementation of the TMDL Action Plan and associated evaluation including the results of any monitoring conducted as part of the evaluation. Evaluation of the effectiveness of the TMDL Action Plan shall follow the guidelines in Section I.B.2.e. of the permit.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
09/18/2015	FY15 TMDL Action Plan Assessment

Description

As the TMDL Action Plan has just been developed in the FY15 permit year, there is not an assessment included in this permit report. Assessment of the Action Plan will commence in accordance with Section I.B.2.e in FY16.

2 MCM#1 Public Education and Outreach on Stormwater Impacts

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Description

To comply with this MCM, the City must satisfy the following:

a. The operator shall continue to implement the public education and outreach program as included in the registration statement until the program is updated to meet the conditions of this state permit. Operators who have not previously held MS4 permit coverage shall implement this program in accordance with the schedule provided with the completed registration statement.

b. The public education and outreach program should be designed with consideration of the following goals:

(1) Increasing target audience knowledge about the steps that can be taken to reduce stormwater pollution, placing priority on reducing impacts to impaired waters and other local water pollution concerns;

(2) Increasing target audience knowledge of hazards associated with illegal discharges and improper disposal of waste, including pertinent legal implications; and

(3) Implementing a diverse program with strategies that are targeted towards audiences most likely to have significant stormwater impacts.

c. The updated program shall be designed to:

(1) Identify, at a minimum, three high-priority water quality issues, that contribute to the discharge of stormwater (e.g., Chesapeake Bay nutrients, pet wastes and local bacteria TMDLs, high-quality receiving waters, and illicit discharges from commercial sites) and a rationale for the selection of the three high-priority water quality issues;

(2) Identify and estimate the population size of the target audience or audiences who is most likely to have significant impacts for each high-priority water quality issue;

(3) Develop relevant message or messages and associated educational and outreach materials (e.g., various media such as printed materials, billboard and mass transit advertisements, signage at select locations, radio advertisements, television advertisements, websites, and social media) for message distribution to the selected target audiences while considering the viewpoints and concerns of the target audiences including minorities, disadvantaged audiences, and minors;

(4) Provide for public participation during public education and outreach program development;

(5) Annually conduct sufficient education and outreach activities designed to reach an equivalent 20% of each high-priority issue target audience. It shall not be considered noncompliance for failure to reach 20% of the target audience. However, it shall be a compliance issue if insufficient effort is made to annually reach a minimum of 20% of the target audience; and

(6) Provide for the adjustment of target audiences and messages including educational materials and delivery mechanisms to reach target audiences in order to address any observed weaknesses or shortcomings.

d. The operator may coordinate their public education and outreach efforts with other MS4 operators; however, each operator shall be individually responsible for meeting all of its state permit requirements.

e. Prior to application for continued state permit coverage required in Section III M, the operator shall evaluate the education and outreach program for:

(1) Appropriateness of the high-priority stormwater issues;

(2) Appropriateness of the selected target audiences for each high-priority stormwater issue;

- (3) Effectiveness of the message or messages being delivered; and
- (4) Effectiveness of the mechanism or mechanisms of delivery employed in reaching the target audiences.

f. The MS4 Program Plan shall describe how the conditions of this permit shall be updated in accordance with Table 1 in this section.

g. The operator shall include the following information in each annual report submitted to the department during this permit term:

- (1) A list of the education and outreach activities conducted during the reporting period for each high-priority water quality issue, the estimated number of people reached, and an estimated percentage of the target audience or audiences that will be reached; and
- (2) A list of the education and outreach activities that will be conducted during the next reporting period for each high-priority water quality issue, the estimated number of people that will be reached, and an estimated percentage of the target audience or audiences that will be reached.

Best Management Practices

2.1 MS4 Program Plan Requirements

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Required Yes

Description

A description of the measures, procedures, and processes used to comply with the Section II.B.1. of the MS4 Permit. For reporting purposes reference may be made to materials which can be found elsewhere and where such materials are available to the public either freely or upon request.

Justification

Required under Section II.B.1.

Annual Reporting Items

1. Education and Outreach Plan
2. Plan for Updates in Accordance with the 2013-2018 MS4 Permit

Goals

2.1.1 Education and Outreach Plan

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Description

The City has designed a public education and outreach plan in accordance with Section II.B.1.b-c. of the permit. This plan, including target audience selection and estimates, will be described and updated as needed.

Planned: 2014 2015

Complete: 2014 2015

Activity Date	Name
09/22/2015	FY15 Contracted Support Services

Description

The City of Roanoke has contracted with the Clean Valley Council (CVC) for the past several years to provide effective and efficient stormwater and water quality information and education throughout our region. The CVC's program offerings, as well as it's classroom and field lessons reach a wide range of citizens and have a demonstrated track record of successfully fostering greater environmental awareness and stewardship.

A copy of the City's contract with the CVC is attached for reference as needed.

File Attachment [CVC Contract 2012-15.pdf](#)

09/24/2015	FY15 Target Audience Identification and Estimation
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Description

The City, in collaboration with other area localities, identified sediment, bacteria, and nutrients as our three high-priority water quality issues. Target audiences were identified and their populations estimated based on various data sources. In addition, the City developed messages and outreach mechanisms, also in collaboration with other localities.

All of this information, as well as a more in-depth description of our rationale, is included in the attached

spreadsheet.

A newly identified target audience for bacteria is septic system owners and will be added into the targeted education and outreach matrix for FY16.

File Attachment [*City of Roanoke Targeted Outreach Matrix.pdf*](#)

09/24/2015 FY15 Selected High Priority Water Quality Issues

Description

The City of Roanoke selected sediment, bacteria, and nutrients as its priority water quality issues. These issues were selected because of our local TMDL's (in the case of bacteria and sediment), as well as the regular threat these issues pose to our waterways (for all three issues).

These categories are mostly in-line with those selected by other localities in the area, so outreach activities may be either individual or coordinated going forward.

2.1.2 Plan for Updates in Accordance with New Permit Conditions

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Description

In accordance with Section II.B.1.f., the City shall describe how the conditions of the permit shall be updated in accordance with Table 1 of the permit.

Planned: 2014 2015

Complete: 2014 2015

Activity Date Name

09/24/2015 FY15 Plan For Updates to the Program Plan

Description

The City's MS4 Program Plan will be constantly updated in accordance with the schedule in Table 1 of the permit. As the Program Plan is updated, the new, revised version will be included with the next Annual Report. All necessary updates will be completed by the required dates (as specified in Table 1) until the Program Plan is fully updated for the City's 2013-2018 MS4 Permit.

2.2 Annual Reporting Requirements

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Required Yes

Description

A report of all elements required under Section II.B.1.g. of the MS4 Permit, plus any additional items the City feels it should include in the annual MS4 report.

Justification

Required under Section II.B.1.g.

Annual Reporting Items

1. Past Permit Year's Education and Outreach Events
2. Planned Education and Outreach Events for the Next Permit Year
3. Educational Resource Inventory

Goals

2.2.1 Past Permit Year's Education and Outreach Events

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Description

The City will discuss the development, implementation, maintenance, and activities associated with the City's education and outreach plan, including a list of activities from the past year that states the number of people reached and the percentage of the target audience they constitute.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
08/30/2015	FY15 Education & Outreach Events

Description

In the permit year 2014, the city updated it's Education and Outreach Plan in collaboration with the neighboring county (Roanoke County). The plan, which outlines target issues, audiences, populations, messages, media, etc. is available in the previous section (2.1.2 - Target Audience Estimation). This is the plan that the city will operate under going forward.

The City engaged a wide array of public educational processes during the past permit year. Examples documenting some of those efforts are attached here. These include education events through the Clean Valley Council, local school programs, sediment-related outreach materials, and bacteria-specific outreach targeting restaurants and pet owners. Please note materials distributed during outreach events are included in each event report and can be found in Section 3.2.2 of this report.

A new event, the Fairland Neighborhood Conference was an opportunity to begin the Clean Water Legacy presentation, teach the community about stormwater effects, and provide visual images of what Lick Run Creek looks like near their neighborhood. This will be the foundation which other neighborhood organization presentation will be patterned after.

Efforts to track our target audience outreach performance for FY15 were hampered by confusion surrounding

responsibilities that stemmed from both staffing and duty changes within the city, as well as in service agreements with our local non-profit civic organization partners. While outreach to dog owners, veterinarians, and automotive shops did occur, we are unfortunately not able to provide an accurate account of what portions of those audiences were reached. As noted below in Section 2.2.2, we are developing a shared performance tracking matrix to ensure those data are captured going forward.

- File Attachment [MCM#1 CVC SW Report_2014-2015.pdf](#)
- File Attachment [2015_06 Car Wash PSA 30.wmv](#)
- File Attachment [2015_06 RVTV RestaurantBacteriaPSA2015.doc](#)
- File Attachment [City of Roanoke Dog Poop Poster.pdf](#)
- File Attachment [Final SWP Residential Brochure.pdf](#)
- File Attachment [FairlandNeighborhoodConference.pdf](#)
- File Attachment [Stormwater Ad in Play Magazine.pdf](#)
- File Attachment [2015_05 Scoop the Poop.wmv](#)
- File Attachment [Educational Programs and activities and Giveaways FY14-15.pdf](#)

2.2.2 Planned Education and Outreach Events for the Next Permit Year

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Description

In each annual report, the City will describe the planned education and outreach activities for the next permit year, including the number of people that will be reached and the estimated percentage of the target audience that this constitutes.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
09/21/2015	Education and Outreach Activities for FY16

Description

As acknowledged above in Section 2.2.1, our target audience outreach performance tracking data for FY15 lacks sufficient accuracy for reporting. Our challenge has been ensuring that the multiple parties involved understand the need to document their efforts better, and that all have a simple and accessible means to record those efforts. To correct this matter going forward we are developing a shared performance tracking matrix to ensure that all target audience education and outreach efforts are captured.

The city will continue to have involvement in both large-scale watershed clean-up days - Clean Valley Day in the spring and Fall Waterways Clean-up in the fall. In addition to these two events, the city will have a presence at many local events through our outreach contractor, the Clean Valley Council. The city will also continue to reach citizens through mailers, internet and social media outlets, online newsletters and direct engagement.

Several new activities will be planned for FY16. The city will focus on pet waste through outreach at events such as RVSPCS Tail Chaser and Why Scoop the Poop? signs and brochures at greenway kiosks, veterinarian offices, libraries, and pet stores. Additionally, the city will further develop its strategy on reducing sources of bacteria from improperly functioning septic systems.

Additionally, through a collaborative effort with CVC and local civic groups, we will begin our "Train-the-Trainer" Rainbarrel Workshop Initiative.

A concerted effort will be made to give the "Creating a Clean Water Legacy" presentation to each neighborhood association. Development of a watershed information website with local watershed pictures and oral histories are

currently planned. Our newsletters will be distributed via email to each neighborhood group.

2.2.3 Educational Resource Inventory

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Description

The city will revise existing, and develop new listings of publications, programs and educational opportunities found in the region and continually update the library (at least) annually.

Documentation of this goal will be an updated record of publication and publication library inventory. Maintenance and updating of library is ongoing and subject to audit as per contract between the city and Clean Valley Council.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
09/21/2015	FY15 Education Resource Inventory

Description

The Clean Valley Council serves as the City's stormwater outreach contractor. They constantly maintain an inventory of the various handouts and educational materials they have access to. Any or all of these materials may be utilized in different outreach settings, depending on the target audience/issue. Attached is the Clean Valley Council's educational resource inventory.

Prior to the City's implementation of the stormwater utility, detailed education and information books were developed and distributed to both single family residences, as well as multi-family and commercial property owners. These books describe the utility and provide details for how to obtain credit for installing stormwater best management practices on one's property. Copies of each book are attached.

- File Attachment [MCM#1 CVC Education Resources 2014-2015.pdf](#)
- File Attachment [Final SWP Residential Brochure.pdf](#)
- File Attachment [StormwaterIdeabook.pdf](#)
- File Attachment [Stormwater Utility Fee Credit Manual for Single Family Residential Properties.pdf](#)
- File Attachment [Stormwater Utility Fee Credit Manual for Commercial_Industrial_Institutional_Multifamily Residential Properties.pdf](#)
- File Attachment [2015_05 Scoop the Poop.wmv](#)

2.2.4 Other Public Information Mechanisms

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Description

The City has recently begun using other public information mechanisms, such as Facebook and Twitter, to spread awareness about stormwater topics and issues. A description of the past year's efforts will be included in each annual report.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date**Name**

09/18/2015

FY15 Social Media and Website Update

Description

The city's Stormwater Division has grown its Facebook by 31.4% with a jump to 1217 followers. Twitter currently has 284 followers and the division is diversifying its social media portfolio with Pinterest. Regular posts, multiple times each week include relevant stormwater related topics. Many local photographers are able to feature their local stream pictures.

Roanoke Stormwater Social Media Accounts can be viewed through the links below:

- Facebook
- Twitter
- Pinterest

The City of Roanoke has created a new and improved website. The Stormwater Division page can be viewed [here](#). Land-use change, ecosystem services, bacteria sources and water quality are covered to inform the public about our local water assets.

3 MCM#2 Public Participation/Involvement

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Description

To comply with this MCM, the City must satisfy the following:

a. Public involvement.

(1) The operator shall comply with any applicable federal, state, and local public notice requirements.

(2) The operator shall:

(a) Maintain an updated MS4 Program Plan. Any required updates to the MS4 Program Plan shall be completed at a minimum of once a year and shall be updated in conjunction with the annual report. The operator shall post copies of each MS4 program plan on its webpage at a minimum of once a year and within 30 days of submittal of the annual report to the department.

(b) Post copies of each annual report on the operator's web page within 30 days of submittal to the department and retain copies of annual reports online for the duration of this state permit; and

(c) Prior to applying for coverage as required by Section III M, notify the public and provide for receipt of comment of the proposed MS4 Program Plan that will be submitted with the registration statement. As part of the reapplication, the operator shall address how it considered the comments received in the development of its MS4 Program Plan. The operator shall give public notice by a method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any other forum or medium to solicit public participation.

b. Public participation. The operator shall participate, through promotion, sponsorship, or other involvement, in a minimum of four local activities annually e.g., stream cleanups; hazardous waste cleanup days; and meetings with watershed associations, environmental advisory committees, and other environmental organizations that operate within proximity to the operator's small MS4. The activities shall be aimed at increasing public participation to reduce stormwater pollutant loads; improve water quality; and support local restoration and clean-up projects, programs, groups, meetings, or other opportunities for public involvement.

c. The MS4 Program Plan shall include written procedures for implementing this program.

d. Each annual report shall include:

(1) A web link to the MS4 Program Plan and annual report; and

(2) Documentation of compliance with the public participation requirements of this section.

Best Management Practices

3.1 MS4 Program Plan Requirements

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Required Yes

Description

A description of the measures, procedures, and processes used to comply with the Section II.B.2. of the MS4 Permit. For reporting purposes reference may be made to materials which can be found elsewhere and where such materials are available to the public either freely or upon request.

Justification

Required under Section II.B.2.

Annual Reporting Items

1. Procedure for Implementing the City's Public Participation Program

Goals

3.1.1 Procedure for Implementing the City's Public Participation Program

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Description

The City shall present its written procedure for implementing its public participation program.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
09/24/2015	FY15 Procedure for Implementing the City's Public Participation Program

Description

The City fully commits to continue its regular involvement with both annual local "river clean-up" days - Clean Valley Day (spring) and Fall Waterways Cleanup (autumn). In addition to this, the City plans to participate in the Clean Valley Council's Recycled Regatta, which was a new annual event in 2014, that promotes recycling and clean waterways. Lastly, the City will have a presence, either with its own employees or through the City's public education and involvement contractor (Clean Valley Council), at many applicable local and/or regional events intended to make the public aware of stormwater and broader environmental stewardship issues and topics. Examples include but are not limited to: Earth Day celebration, Household Hazardous Waste and Electronic Waste collection events, various neighborhood group and other civic organization meetings and events, as well as maintain its membership on local and regional watershed planning and coordination committees. Otherwise, the City engages businesses, citizen groups, and the general public to participate in related events, and regularly takes steps to market and otherwise support such events.

3.2 Annual Reporting Requirements

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Required Yes

Description

A report of all elements required under Section II.B.2.d. of the MS4 Permit, plus any additional items the City feels it should include in the annual MS4 report.

Justification

Required under Section II.B.2.d.

Annual Reporting Items

1. Verification of the Posting of the City's Program Plan and Annual Reports for Public View
2. Stormwater Events with City Involvement
3. Other Public Information Mechanisms
4. Storm Drain Marking Program
5. Household Hazardous Waste Collection Program
6. Local and Regional Stormwater Management Planning

Goals

3.2.1 Posting of Program Plan and Annual Reports for Public View

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Description

The City will post the Program Plan and all annual reports to the City of Roanoke Stormwater Division's web page. A link will be provided in every annual report.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
09/21/2015	FY15 Public Information Availability Update

Description

The City of Roanoke posts each Annual Report under the current permit cycle, the Program Plan, and the Permit itself on its website under the Stormwater Division's webpage.

3.2.2 Stormwater Events with City Involvement

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Description

In its annual report, the City shall provide a list of all stormwater-related public events that it has been involved with through participation, sponsorship, or other involvement. The City must be involved in a minimum of 4 events per year.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
09/21/2015	FY15 City Stormwater Events

Description

This past year, the city participated in several events promoting the health of our local waterways. As usual, the city organized a clean-up team for both Clean Valley Day and the Fall Waterways Cleanup, which are both service days (one in Spring and one in Fall) aimed at collecting litter in and around waterways. Both events were a success. During the Fall Waterways Cleanup, 900 participants removed 26.3 tons of trash and at the conclusion of the Clean Valley Day, 1200 participants had eliminated 64.85 tons of garbage from our waterways. In total, 5800 citizens throughout the Roanoke Valley community were reached via the CVC public outreach events.

The city police department also sponsored a "Drug Take Back Day" in September, providing citizens with an outlet for expired or unused medications, thereby keeping them out of the landfill and/or waterways.

Through the city's contracted outreach coordinator (Clean Valley Council), we were also involved in several other events aimed at increasing stormwater awareness among both the general population and children. Attached are lists detailing the events that the Clean Valley Council organized in the past permit year. The first details community events or activities where the Clean Valley Council had a presence and promoted stormwater awareness. The second details individual educational events that the Clean Valley Council organized within schools or with youth/adult participation in mind.

In addition to these events, the Clean Valley Council also co-sponsored and helped to organize the Roanoke River Currents Conference at Ferrum College. City staff attended and also presented at this conference on the creation of the city's new Stormwater Utility.

Lastly, the City continued to serve on the Roanoke Valley/Alleghany Regional Commission's Stormwater Technical Committee, as well as it's Blueways Committee, and maintained its stakeholder role in the development of the Upper Roanoke River TMDL Implementation Plan. The city has also participated as a stakeholder in the development of the TMDL Implementation Plan for the North and South Fork Rivers.

File Attachment [DrugTakeBackFALL2014SeptFlyer.pdf](#)

File Attachment [SW Public Events.pdf](#)

File Attachment [CVC Outreach Adult Audiences.pdf](#)

File Attachment [CVC Public Ed. and Outreach on SW Impacts Stream School Seminars.pdf](#)

3.2.3 Storm Drain Marking Program

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Description

The City shall provide an update on the past year's progress in the marking of storm drains. The City marks storm drains with either a spray-painted stenciled message or by placement of a stainless steel puck. Both messages communicate that the drain conveys flow to the river, and no dumping should occur.

The City of Roanoke's procedure for storm drain marking was provided in the 2011 MS4 Annual Report. All storm drain stenciling/ marking activity will follow the same protocols in subsequent years, unless this section is revised in future reports or Program Plan updates.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

3.2.5 Local and Regional Stormwater Management Planning

Responsible Staff / Position: LeighAnne Weitzenfeld
Water Quality Administrator

Description

The City will provide a description of actions where public input is a component of our local and regional stormwater management planning.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
09/21/2015	FY15 Regional Stormwater Management Planning

Description

In the past permit year, City staff have been involved with other area municipalities and organizations in different forms of stormwater management planning.

The City continued its long history of coordinating with Roanoke County and the Town of Vinton to collaboratively tackle shared and/or mutually important stormwater issues. Preliminary discussions have begun in an attempt to create a regional branding approach to how we might best market our stormwater education and outreach efforts. The purpose is to provide a unified message during a coordinated time frame to educate local communities in the Roanoke River Watershed. More discussions will be needed to find an approach that works for each municipality.

Management strategies and interpretation of permit provisions are often discussed in these meetings. This close coordination helps all three localities ensure their methods of stormwater management and permit compliance are the best they can be, are reasonably aligned and most appropriate and accurate in meeting both permit conditions as well as common goals for regional water quality.

At this point the bulk of our local and regional management planning efforts are being incorporated into the TMDL Action Plan and coordinating our efforts with those of our neighbors when and where possible.

4 MCM#3 Illicit Discharge Detection and Elimination (IDDE)

Responsible Staff / Position: Christopher Blakeman
Environmental Administrator
(540) 853-1173

Description

To comply with this MCM, the City must satisfy the following:

a. The operator shall maintain an accurate storm sewer system map and information table and shall update it in accordance with the schedule set out in Table 1 of this section.

(1) The storm sewer system map must show the following, at a minimum:

(a) The location of all MS4 outfalls. In cases where the outfall is located outside of the MS4 operator's legal responsibility, the operator may elect to map the known point of discharge location closest to the actual outfall. Each mapped outfall must

be given a unique identifier, which must be noted on the map; and

(b) The name and location of all waters receiving discharges from the MS4 outfalls and the associated HUC.

(2) The associated information table shall include for each outfall the following

(a) The unique identifier;

(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.

(3) Within 48 months of coverage under this state permit, the operator shall have a complete and updated storm sewer system map and information table that includes all MS4 outfalls located within the boundaries identified as "urbanized" areas in the 2010 Decennial Census and shall submit the updated information table as an appendix to the annual report.

(4) The operator shall maintain a copy of the current storm sewer system map and outfall information table for review upon request by the public or by the department.

(5) The operator shall continue to identify other points of discharge. The operator shall notify in writing the downstream MS4 of any known physical interconnection.

b. The operator shall effectively prohibit, through ordinance or other legal mechanism, nonstormwater discharges into the storm sewer system to the extent allowable under federal, state, or local law, regulation, or ordinance. Categories of nonstormwater discharges or flows (i.e., illicit discharges) identified in 4VAC50-60-400 D 2 c (3) must be addressed only if they are identified by the operator as significant contributors of pollutants to the small MS4. Flows that have been identified in writing by the Department of Environmental Quality as de minimis discharges are not significant sources of pollutants to surface water and do not require a VPDES permit.

c. The operator shall develop, implement, and update, when appropriate, written procedures to detect, identify, and address unauthorized nonstormwater discharges, including illegal dumping, to the small MS4. These procedures shall include:

(1) Written dry weather field screening methodologies to detect and eliminate illicit discharges to the MS4 that include field observations and field screening monitoring and that provide:

(a) A prioritized schedule of field screening activities determined by the

operator based on such criteria as age of the infrastructure, land use, historical illegal discharges, dumping or cross connections.

(b) The minimum number of field screening activities the operator shall complete annually to be determined as follows: (i) if the total number of outfalls in the small MS4 is less than 50, all outfalls shall be screened annually or (ii) if the small MS4 has 50 or more total outfalls, a minimum of 50 outfalls shall be screened annually.

(c) Methodologies to collect the general information such as time since the last rain, the quantity of the last rain, site descriptions (e.g., conveyance type and dominant watershed land uses), estimated discharge rate (e.g., width of water surface, approximate depth of water, approximate flow velocity, and flow rate), and visual observations (e.g., odor, color, clarity, floatables, deposits or stains, vegetation condition, structural condition, and biology);

(d) A time frame upon which to conduct an investigation or investigations to identify and locate the source of any observed continuous or intermittent nonstormwater discharge prioritized as follows: (i) illicit discharges suspected of being sanitary sewage or significantly contaminated must be investigated first and (ii) 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 sewage or significantly contaminated discharges have been investigated, eliminated, or identified. Discharges authorized under a separate VPDES or state permit require no further action under this permit.

(e) Methodologies to determine the source of all illicit discharges shall be conducted. If an illicit discharge is found, but within six months of the beginning of the investigation neither the source nor the same nonstormwater discharge has been identified, then the operator shall document such in accordance with Section II B 3 f. If the observed discharge is intermittent, the operator must document that a minimum of three separate investigations were made in an attempt to observe the discharge when it was flowing. If these attempts are unsuccessful, the operator shall document such in accordance with Section II B 3 f.

(f) Mechanisms to eliminate identified sources of illicit discharges including a description of the policies and procedures for when and how to use legal authorities;

(g) Methods for conducting a follow-up investigation in order to verify that the discharge has been eliminated.

(h) A mechanism to track all investigations to document:

(i) the date or dates that the illicit discharge was observed and reported;

(ii) the results of the investigation;

(iii) any follow-up to the investigation;

(iv) resolution of the investigation; and

(v) the date that the investigation was closed.

d. The operator shall promote, publicize, and facilitate public reporting of illicit discharges into or from MS4s. The operator shall conduct inspections in response to complaints and follow-up inspections as needed to ensure that corrective measures have been implemented by the responsible party.

e. The MS4 Program Plan shall include all procedures developed by the operator to detect, identify, and address nonstormwater discharges to the MS4 in accordance with the schedule in Table 1 in this section. In the interim, the operator shall continue to implement the program as included as part of the registration statement until the program is updated to meet the conditions of this permit. Operators, who have not previously held MS4 permit coverage, shall implement this program in accordance with the schedule provided with the completed registration statement.

f. Annual reporting requirements. Each annual report shall include:

(1) A list of any written notifications of physical interconnection given by the operator to other MS4s;

(2) The total number of outfalls screened during the reporting period, the screening results, and detail of any follow-up actions necessitated by the screening results; and

(3) A summary of each investigation conducted by the operator of any suspected illicit discharge. The summary must include:

- (i) the date that the suspected discharge was observed, reported, or both;
- (ii) how the investigation was resolved, including any follow-up, and
- (iii) resolution of the investigation and the date the investigation was closed.

Best Management Practices

4.1 MS4 Program Plan Requirements

Responsible Staff / Position: Christopher Blakeman
Environmental Administrator
(540) 853-1173

Required Yes

Description

A description of the measures, procedures, and processes used to comply with the Section II.B.3. of the MS4 Permit. For reporting purposes reference may be made to materials which can be found elsewhere and where such materials are available to the public either freely or upon request.

Justification

Required under Section II.B.3.

Annual Reporting Items

1. Mapping of Storm Sewer System in GIS
2. Verification of Public Access to GIS Maps
3. Dry Weather Outfall Screening Methodologies and Standard Operating Procedures
4. Official IDDE Ordinance
5. Standard Operating Procedures for IDDE Enforcement
6. Promotion of Public Illicit Discharge Reporting

Goals

4.1.1 Mapping of Storm Sewer System in GIS

Responsible Staff / Position: Christopher Blakeman
Environmental Administrator
(540) 853-1173

Description

The city has developed a storm sewer system map using Global Positioning System (GPS) technology that readily identifies MS4 features, down-/up-gradient pipe orientation, termination points and outfalls. This system will be continually updated until it conforms to the requirements set forth in Section II.B.3.a. of the permit. Regular updates will be provided as the update continues.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
07/20/2015	FY15 GIS Update

Description

The City has developed and maintained a robust GIS map of our MS4 for over a decade. The system is continually updated using as-built drawings for new construction, as well revisions and amendments based on field reconnaissance and investigative findings.

Responsibility for the operation and maintenance of this GIS map is currently in the process of transitioning from our Engineering Division to our Stormwater Division.

In the spring of 2015 our Stormwater Division began a collaborative project with the Virginia Tech Dept. of Civil and Environmental Engineering to develop and implement a plan for revising our MS4 GIS map so as to accurately reflect the true drainage basin of our storm pipe network for the Lick Run sub-watershed. Using field GPS collection, coupled with real time field surveys and pipe camera investigations, this project will provide a model that we will replicate across the remainder of our MS4 boundary to ensure that we meet all of the requirements of this permit

section.

4.1.2 Public Access to GIS Maps

Responsible Staff / Position: Christopher Blakeman
Environmental Administrator
(540) 853-1173

Description

The City intends to post the most current version of its GIS representation of the City's MS4 components on its website for public viewing/use. This City will provide a link and instruction to access this information.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
07/23/2015	Public Access Verification

Description

As in previous years, the City maintains public access to its GIS storm drainage system map via its website. The GIS data may be viewed by either clicking the below link or visiting the City's homepage at roanokeva.gov and clicking on "GIS Maps and Real Estate" in the lower right hand menu, and then "Real Estate GIS" on the following page.

<http://gisre.roanokeva.gov/>

The stormwater layer may be turned on using the "Map Layers" tab in the left window pane. In this tab, the storm drainage system layer is under the "Utilities Layers" heading. If the stormwater layer is grayed-out and locked, the map is zoomed out too far. Zooming the map in further should reveal the data layer.

4.1.3 Dry Weather Outfall Screening Methodologies and Standard Operating Procedures

Responsible Staff / Position: Christopher Blakeman
Environmental Administrator
(540) 853-1173

Description

The City of Roanoke will present its written dry weather field screening methodologies/standard operating procedures, and highlight any changes that have been made during the last year.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
08/03/2015	Revised Outfall Survey SOP

Description

Minor text and procedural revisions were made to our Standard Operating Procedure. The revised version is attached.

File Attachment [City of Roanoke Outfall Reconnaissance SOP \(1\).docx](#)

4.1.4 Official IDDE Ordinance

Responsible Staff / Position: Christopher Blakeman
Environmental Administrator
(540) 853-1173

Description

The City will maintain and periodically review IDDE ordinance for permit compliance and operational effectiveness. Any changes will be highlighted as appropriate.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
08/03/2015	FY15 IDDE Ordinance Review

Description

No changes have been made to this ordinance.

It is available for viewing

at: https://www.municode.com/library/va/roanoke/codes/code_of_ordinances?nodeId=COCI_CH11.3STDIRE.

4.1.5 Standard Operating Procedures for IDDE Enforcement

Responsible Staff / Position: Christopher Blakeman
Environmental Administrator
(540) 853-1173

Description

The City has established Standard Operating Procedures (SOPs) for response and enforcement of IDDE ordinance, and process for tracking violations and actions taken.

Documentation of this goal was provided in the City of Roanoke's 2011 MS4 Annual Report. All IDDE investigation & enforcement activity will follow the same protocols in subsequent years, unless this section is revised in future reports or Program Plan updates.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
08/03/2015	FY15 IDDE Enforcement SOP

Description

The City continues to perform illicit discharge investigations under the same SOP as was provided in the 2011 report. No changes to the SOP have occurred during the past permit year. A Copy of the City's SOP is attached here.

File Attachment [*IDDE Investigation & Enforcement SOP.pdf*](#)

4.1.6 Promotion of Public Illicit Discharge Reporting

Responsible Staff / Position: Christopher Blakeman
Environmental Administrator
(540) 853-1173

Description

The City encourages the public to report any illicit discharges to the storm sewer system. City staff will then follow up on these reports for investigation and elimination.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
03/02/2015	Revised Promotion & Reporting

Description

The City has promoted public reporting of illicit discharges for quite some time. Information for contacting the Office of Environmental Management (the City's stormwater pollution response designees), and/or the City's Stormwater Division, was included in every piece of stormwater literature. Designated staff instruct the public to report any suspect or illicit discharges using the phrase "If you see something, say something."

In addition to allowing the public to report these issues by phone or email, staff in the Office of Environmental Management have also designed a page on their website to encourage the public to report pollution events. It can be viewed by going to the main page for the City of Roanoke Office of Environmental Management and then clicking on "Pollution Complaints."

<http://www.roanokeva.gov/85256A8D0062AF37/vwContentByKey/N252WS3B493JEASEN>. The wording on this page is designed to encourage the public to report anything that may be considered a pollution event, including stormwater pollution events.

New in 2015 the City has implemented a CRM or Citizen Request Management system. This system is accessed by internet, phone, and a mobile device app. It allows anyone to report issues and concerns, including GPS location, and the system then routes the issue to preassigned responsible work units at the City. Environmental Mgmt. is set up to receive all pollution complaints. This system further tracks issues through to closure and maintains basic data regarding the issues.

4.2 Annual Reporting Requirements

Responsible Staff / Position: Christopher Blakeman
Environmental Administrator
(540) 853-1173

Required Yes

Description

A report of all elements required under Section II.B.3.f. of the MS4 Permit, plus any additional items the City feels it should include in the annual MS4 report.

Justification

Required under Section II.B.3.f.

Annual Reporting Items

1. Interconnection Notifications Given By the City to Other MS4's
2. Outfall Inspection Records from the Previous Permit Year
3. IDDE Investigations from the Previous Permit Year

Goals

4.2.1 Interconnection Notifications

Responsible Staff / Position: Christopher Blakeman
Environmental Administrator
(540) 853-1173

Description

The City shall annually provide a list of all interconnection notifications given by the City to another MS4.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
06/01/2015	FY15 Interconnection Notifications

Description

In 2008, the City of Roanoke notified both the Town of Vinton and Roanoke County that our storm sewer system is physically interconnected and discharging to their system. No other interconnection notifications have been issued since that time.

4.2.2 Outfall Inspections

Responsible Staff / Position: Christopher Blakeman
Environmental Administrator
(540) 853-1173

Description

The City will provide documentation of the requisite dry weather screenings, which will include the number of outfalls surveyed, their TMDL water body, and the findings of the surveyor(s). Copies of field data sheets and/or related notes will be presented as documentation. A minimum of 50 outfalls will be inspected annually.

Planned: 2014 2015 2016 2017 2018

Complete: 2014

Activity Date	Name
06/19/2015	FY15 Outfall Inspections

Description

During this permit year we inspected fifty one outfalls. The majority of those were along the mainstem Roanoke River in the eastern portion of the City between the I-581 corridor and the mouth of Tinker Creek. Additional outfall reconnaissance occurred along the residential section of upper Peters Creek in the City's NW section. One outfall showed considerable dry weather flow, but with no pollution indicators. This flow was subsequently traced to a potable water main break immediately adjacent to a storm drain invert box. This issue has been reported to the Western Virginia Water Authority who were in the process of investigating to assess what repair location(s) and needs are necessary at the time of this reporting. Copies of reconnaissance forms are attached - note that the form is double sided so it appears here as two pages in length.

File Attachment [FY15 Roanoke River Outfall Inspections.pdf](#)

4.2.3 IDDE Investigations

Responsible Staff / Position: Christopher Blakeman
Environmental Administrator
(540) 853-1173

Description

The City of Roanoke has implemented the IDDE SOPs for illicit discharge response and ordinance enforcement actions.

Documentation of this goal will be annual reporting of all IDDE ordinance violations and actions taken.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
08/03/2015	FY15 IDDE Investigations

Description

In the past permit year, the City investigated 25 reported illicit discharges. The City's IDDE log is attached, which contains information on location, nature, and actions taken against each illicit discharge. Please note that the file is arranged by calendar year, so there are IDDE investigations from the past permit year present in both the 2014 and 2015 worksheets.

File Attachment [Violations Log.xls](#)

5 MCM#4 Construction Site Stormwater Runoff Control

Responsible Staff / Position: Danielle Bishop
Development Review Coordinator

Description

a. Applicable oversight requirements. The operator shall utilize its legal authority, such as ordinances, permits, orders, specific contract language, and interjurisdictional agreements, to address discharges entering the MS4 from the following land-disturbing activities:

- (1) Land-disturbing activities as defined in § 10.1-560 of the Code of Virginia that result in the disturbance of 10,000 square feet or greater;
- (2) Land-disturbing activities in Tidewater jurisdictions, as defined in § 10.1-2101 of the Code of Virginia, that disturb 2,500 square feet or greater and are located in areas designated as Resource Protection Areas (RPA), Resource Management Areas (RMA) or Intensely Developed Acres (IDA), pursuant to the Chesapeake Bay Preservation Area Designation and Management Regulations adopted pursuant to the Chesapeake Bay Preservation Act;
- (3) Land-disturbing activities disturbing less than the minimum land disturbance identified in subdivision (1) or (2) above for which a local ordinance requires that an erosion and sediment control plan be developed; and
- (4) Land-disturbing activities on individual residential lots or sections of residential developments being developed by different property owners and where the total land disturbance of the residential development is 10,000 square feet or greater. The operator may utilize an agreement in lieu of a plan as provided in § 10.1-563 of the Code of Virginia for this category of land disturbances.

b. Required plan approval prior to commencement of the land disturbing activity.

The operator shall require that land disturbance not begin until an erosion and sediment control plan or an agreement in lieu of a plan as provided in § 10.1-563 is approved by a VESCP authority in accordance with the Erosion and Sediment Control Act (§ 10.1-560 et seq.). The plan shall be:

- (1) Compliant with the minimum standards identified in 4VAC-50-30-40 of the Erosion and Sediment Control Regulations; or
- (2) Compliant with department-approved annual standards and specifications. Where applicable, the plan shall be consistent with any additional or more stringent, or both, erosion and sediment control requirements established by state regulation or local ordinance.

c. Compliance and enforcement.

- (1) The operator shall inspect land-disturbing activities for compliance with an approved erosion and sediment control plan or agreement in lieu of a plan in accordance with the minimum standards identified in 4VAC50-30-40 or with department-approved annual standards and specifications.
 - (2) The operator shall implement an inspection schedule for land-disturbing activities identified in Section II B 4 a as follows:
 - (a) Upon initial installation of erosion and sediment controls;
 - (b) At least once during every two-week period;
 - (c) Within 48 hours of any runoff-producing storm event; and
 - (d) Upon completion of the project and prior to the release of any applicable performance bonds. Where an operator establishes an alternative inspection program as provided for in 4VAC50-30-60 B 2, the written schedule shall be implemented in lieu of Section II B 4 c (2) and the written plan shall be included in the MS4 Program Plan.
 - (3) Operator inspections shall be conducted by personnel who hold a certificate of competence in accordance with 4VAC-50-50-40. Documentation of certification shall be made available upon request by the VESCP authority or other regulatory agency.
 - (4) The operator shall promote to the public a mechanism for receipt of complaints
-

regarding regulated land-disturbing activities and shall follow up on any complaints regarding potential water quality and compliance issues.

(5) The operator shall utilize its legal authority to require compliance with the approved plan where an inspection finds that the approved plan is not being properly implemented.

(6) The operator shall utilize, as appropriate, its legal authority to require changes to an approved plan when a inspection finds that the approved plan is inadequate to effectively control soil erosion, sediment deposition, and runoff to prevent the unreasonable degradation of properties, stream channels, waters, and other natural resources.

(7) The operator shall require implementation of appropriate controls to prevent nonstormwater discharges to the MS4, such as wastewater, concrete washout, fuels and oils, and other illicit discharges identified during land-disturbing activity inspections of the MS4. The discharge of nonstormwater discharges other than those identified in 4VAC50-60-1220 through the MS4 is not authorized by this state permit.

(8) The operator may develop and implement a progressive compliance and enforcement strategy provided that such strategy is included in the MS4 Program Plan and is consistent with 4VAC50-30.

d. Regulatory coordination. The operator shall implement enforceable procedures to require that large construction activities as defined in 4VAC50-60-10 and small construction activities as defined in 4VAC50-60-10, including municipal construction activities, secure necessary state permit authorizations from the department to discharge stormwater.

e. MS4 Program requirements. The operator's MS4 Program Plan shall include:

(1) A description of the legal authorities utilized to ensure compliance with the minimum control measure in Section II related to construction site stormwater runoff control such as ordinances, permits, orders, specific contract language, and interjurisdictional agreements;

(2) Written plan review procedures and all associated documents utilized in plan review;

(3) For the MS4 operators who obtain department-approved standards and specifications, a copy of the current standards and specifications;

(4) Written inspection procedures and all associated documents utilized during inspection including the inspection schedule;

(5) Written procedures for compliance and enforcement, including a progressive compliance and enforcement strategy, where appropriate; and

(6) The roles and responsibilities of each of the operator's departments, divisions, or subdivisions in implementing the minimum control measure in Section II related to construction site stormwater runoff control. If the operator utilizes another entity to implement portions of the MS4 Program Plan, a copy of the written agreement must be retained in the MS4 Program Plan. The description of each party's roles and responsibilities, including any written agreements with third parties, shall be updated as necessary. Reference may be made to any listed requirements in this subdivision provided the location of where the reference material can be found is included and the reference material is made available to the public upon request.

f. Reporting requirements. The operator shall track regulated land-disturbing activities and submit the following information in all annual reports:

(1) Total number of regulated land-disturbing activities;

(2) Total number of acres disturbed;

(3) Total number of inspections conducted; and

(4) A summary of the enforcement actions taken, including the total number and type of enforcement actions taken during the reporting period.

Best Management Practices

5.1 MS4 Program Plan Requirements

Responsible Staff / Position: Danielle Bishop
Development Review Coordinator

Required Yes

Description

A description of the measures, procedures, and processes used to comply with the Construction Site SW Mgmt. regulations and this section of the MS4 Permit. For reporting purposes reference may be made to materials which can be found elsewhere and where such materials are available to the public either freely or upon request.

Justification

Required under MS4 permit Section II B 4 e.

Education Program / Public Outreach

The various elements that the City of Roanoke uses to comply are communicated to all permit applicants and are available to others via the City's website. Members of the development community were included in the City's development of these procedures and their comments were considered when drafting and refining versions thereof.

Annual Reporting Items

References and links to all such elements.

Goals

5.1.1 Legal Authorities Descriptions

Responsible Staff / Position: Danielle Bishop
Development Review Coordinator

Description

Documentation of the legal authorities used to comply with the minimum control measure related to construction site stormwater runoff control such as ordinances, permits, orders, etc.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
07/27/2015	'14 - '15 Ordinance

Description

The City of Roanoke has an Erosion and Sediment Control Ordinance, Chapter 11.2 (E&S) and a Stormwater Management Ordinance, Chapter 11.6 (SWM). These ordinances give the City of Roanoke the legal authority to enforce E&S and SWM requirements for new development. The SWM threshold was increased from 5,000sf to 10,000sf this past fiscal year while the E&S threshold remained at 2,000sf.

While no new updates have been made to the E&S Ordinance, we will be looking to make updates based on changed to SWM Law and regulations in fiscal year 2015 - 2016.

The City of Roanoke has been operating under a new SWM Ordinance that incorporates the Virginia Stormwater Management Program for 1 year now. The ordinance was written such that it references the VSMP regulations as frequently as possible. However, one change does need to be made to this ordinance due to miscommunication between DEQ and Localities. Section 11.6-200(d)(2) of the SWM ordinance indicates that general permit coverage

is required before the local VSMP Authority Permit can be issued. This should be modified to recognize that the City of Roanoke regulates at a lower threshold than the state and therefore no general permit coverage is required for project between 10,000sf and 1 acres, assuming they are not part of a common plan of development. Access is available through the Planning Department webpage:
<http://www.roanokeva.gov/85256A8D0062AF37/CurrentBaseLink/N27A2LAK411FGUREN>

5.1.2 Written Plan Review Procedures

Responsible Staff / Position: Danielle Bishop
Development Review Coordinator

Description

A copy of the procedures and policies used by the City of Roanoke when performing development plan reviews.

Planned: 2014 2015

Complete: 2014 2015

Activity Date	Name
07/27/2015	'14 – '15 Plan Review

Description

Erosion and Sediment Control and Stormwater Pollution Prevention Plans (SWPPP) are generally reviewed in 12 business days using a checklist that incorporates City requirements as well as state requirements. Our checklists were updated this past fiscal year in order to incorporate the new SWPPP requirements.

Due to an increase in development activity, the department's goal of facilitating development, new regulations and additional documentation to review our plan review times have increased. The VSMP funding and staffing plan identified this as a likely issue that would arise as part of the implementation of the VSMP and recommended that an additional plan reviewer would be required so the desired review time could be accommodated.

The City of Roanoke's plan review process was updated to include VSMP requirements and can be found in Chapter 3 of the Design Manual (see attached link).

File Attachment [*'14 - '15 Chapter 3 Design Manual.pdf*](#)

5.1.3 Standards and Specifications

Responsible Staff / Position: Danielle Bishop
Development Review Coordinator

Description

A copy of the current standards and specifications for construction site stormwater runoff control.

Planned: 2014 2015

Complete: 2014 2015

Activity Date	Name
07/27/2015	'14 – '15 SWM Design Manual

Description

The City of Roanoke utilizes a design manual to ensure engineering standards and specifications are utilized for the design of new development. In addition, our manual specifies that all new BMPs must be designed in accordance with the Virginia BMP Clearinghouse specifications.

No changes have been made this past fiscal year to our Stormwater Management Design Manual. Access to this

5.1.4 Written Inspection Procedures

Responsible Staff / Position: Danielle Bishop
Development Review Coordinator

Description

A copy of the site inspection procedures and all associated documents utilized during inspections, including the inspection schedule.

Planned: 2014 2015

Complete: 2014 2015

Activity Date	Name
07/27/2015	'14 – '15 Inspection Procedures

Description

Erosion and Sediment Control Inspections and SWPPP inspections are performed at a rate in accordance with the State requirements of once per every two weeks, including rainfall events within 48 hours for E&S inspection and periodic SWPPP inspections. Generally we do SWPPP inspections every two weeks along with the E&S inspections.

The City of Roanoke's design manual, Chapter 16 sets forth guidance on inspection procedures (see attached link).
File Attachment ['14 - '15 Chapter 16 Design Manual.pdf](#)

5.1.5 Written Compliance and Enforcement Procedures

Responsible Staff / Position: Danielle Bishop
Development Review Coordinator

Description

A copy of the progressive compliance and enforcement procedures and strategies.

Planned: 2014 2015

Complete: 2014 2015

Activity Date	Name
07/27/2015	'14 – '15 Enforcement

Description

Generally verbal notifications of E&S and SWPPP violations are used as a first measure. If we find this is not enough we move to a formal Notices to Comply and if necessary Stop Work Orders. In addition we issue Stop Work orders for any land disturbance that occurs without an approved plan. With the implementation of the new regulations education has been a big component that ties in with inspections and enforcements. Generally contractors want to do the right thing. They just need help in understanding the regulations.

The City of Roanoke's Design Manual, Chapter 16 (referenced and linked above), sets forth guidance on enforcement procedures.

5.1.6 Roles and Responsibilities

Responsible Staff / Position: Danielle Bishop
Development Review Coordinator

Description

A description of the roles and responsibilities of each Department, Division, and/or work unit and personnel used in implementing the programs associated with this Minimum Control Measure, to include any that may be met by third parties.

Planned: 2014 2015

Complete: 2014 2015

Activity Date	Name
07/27/2015	'14 - '15 Staffing

Description

One new development inspector position was added to this department in October of 2014 to help with additional VSMP requirements and the increase in development activity.

Staff devoted to E&S and VSMP compliance is essentially the same, with just the addition of the one new inspector. There are 6 staff members responsible for E&S and VSMP compliance within the Department of Planning, Building and Development.

Danielle Bishop – Development Review Coordinator – E&S and Stormwater Administrator for the City of Roanoke – Professional Engineer’s License 038057 – Certified E&S/SWM Combined Administrator – Program Administrator – E&S Certification #375, exp. 11/30/2016, SWM Certification #SWCA0129, exp. 10/31/2017.

Kenneth Richardson - Certified E&S Combined Administrator & Certified SWM Plan Reviewer – Plan Reviewer – E&S Certification #775, exp. 05/31/2017, SWM Certification #SWPR0127, exp. 06/05/2018

George Nevergold - Certified E&S/SWM Combined Administrator – Plan Reviewer – E&S Certification #658, exp. 11/30/2016, SWM Certification #SWCA0203, exp. 06/15/18

Lewis Blankenship – Certified E&S/SWM Inspector – Development Inspector – E&S Certification #3369, exp. 05/31/2018, SWM Certification #

Winston Corbett – Certified E&S/SWM Inspector – Development Inspector – Certification #838, exp. 12/15/2014, SWM Certification #SWIN0166, exp.11/24/2017

Mark Bowles – Provisionally Certified E&S/SWM Inspector – Development Inspector

5.2 Annual Reporting Requirements

Responsible Staff / Position: Danielle Bishop
Development Review Coordinator

Required Yes

Description

A report of all required land disturbance activity tracking elements.

Justification

Required under permit Section II B 4 f.

Annual Reporting Items

Land disturbance activities as noted in the Goal Activities under this BMP.

Goals

5.2.1 Regulated LD Activities

Responsible Staff / Position: Danielle Bishop
Development Review Coordinator

Description

Total number of land disturbance activities and total disturbed area for each reporting year (July 1 - June 30).

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
07/27/2015	'14 - '15 Land Disturbance Projects

Description

A total of 60 land disturbance permits were issued for this past fiscal year with the total disturbed acreage of 70.98 acres. A record of all permitted land disturbance activities detailing permit number, address, acreage disturbed, contractor and dates has been included as the excel files labeled: '14 - '15 LD Permits.

File Attachment ['14 - '15 LD Permits.xlsx](#)

5.2.3 Number of Inspections

Responsible Staff / Position: Danielle Bishop
Development Review Coordinator

Description

Total number of inspections performed during each reporting year (July 1-June 30).

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
07/27/2015	'14 - '15 Erosion and Sediment Control Inspections

Description

A total of 3232 erosion and sediment control inspections were conducted this past fiscal year. Of those 3232 inspections 1227 (38%) of them were rain event inspections that are required to be performed within 48 hours after a rain fall event. A report detailing permit number, address and number of inspections per permit has been included as the pdf file labeled '14 – '15 E&S Inspections Report and a Rain Event Report is attached as well.

File Attachment ['14 - '15 E&S Inspections Report.pdf](#)

File Attachment ['14 - '15 Rain Event Inspections Report.pdf](#)

5.2.4 Enforcement Summary

Responsible Staff / Position: Danielle Bishop
Development Review Coordinator

Description

A summary of all enforcement actions taken during the reporting year (July 1 - June 30), including the total number and type of action(s) taken.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
07/29/2015	'14 - '15 Enforcement Procedures

Description

Generally verbal notifications of E&S and SWPPP violations are used as a first measure. If we find this is not enough we move to a formal Notices to Comply and if necessary Stop Work Orders. In addition we issue Stop Work orders for any land disturbance that occurs without an approved plan.

With the implementation of the new regulations education has been a big component that ties in with inspections and enforcements. Generally contractors want to do the right thing. They just need help in understanding the regulations, and guidance for how they apply to their specific projects/sites.

The City issued a total of 8 Stop Work orders this past fiscal year. All for beginning grading work without an approved erosion and sediment control plan or land disturbance permit.

The City of Roanoke's design manual, chapter 16 (referenced and linked above), sets forth guidance on enforcement procedures.

6 MCM#5 Post-Construction Stormwater Management in New Development and Development on Prior Developed Lands

Responsible Staff / Position: Danielle Bishop
Development Review Coordinator

Description

a. Applicable oversight requirements. The operator shall address post-construction stormwater runoff that enters the MS4 from the following land-disturbing activities:

- (1) New development and development on prior developed lands that are defined as large construction activities or small construction activities in 4VAC50-60-10;
- (2) New development and development on prior developed lands that disturb greater than or equal to 2,500 square feet, but less than one acre, located in a Chesapeake Bay Preservation Area designated by a local government located in Tidewater, Virginia, as defined in § 10.1-2101 of the Code of Virginia; and
- (3) New development and development on prior developed lands where an applicable state regulation or local ordinance has designated a more stringent regulatory size threshold than that identified in subdivision (1) or (2) above.

b. Required design criteria for stormwater runoff controls. The operator shall utilize legal authority, such as ordinances, permits, orders, specific contract language, and interjurisdictional agreements, to require that activities identified in Section II B 5 a address stormwater runoff in such a manner that stormwater runoff controls are designed and installed:

- (1) In accordance with the appropriate water quality and water quantity design criteria as required in Part II (4VAC50-60-40 et seq.) of 4VAC50-60;
- (2) In accordance with any additional applicable state or local design criteria required at project initiation; and
- (3) Where applicable, in accordance with any department-approved annual standards and specifications. Upon board approval of a Virginia Stormwater Management Program authority (VSMP Authority) as defined in § 10.1-603.2 of the Code of Virginia and reissuance of the Virginia Stormwater Management Program (VSMP) General Permit for Discharges of Stormwater from Construction Activities, the operator shall require that stormwater management plans are approved by the appropriate VSMP Authority prior to land disturbance. In accordance with § 10.1-603.3 M of the Code of Virginia, VSMPs shall become effective July 1, 2014, unless otherwise specified by state law or by the board.

c. Inspection, operation, and maintenance verification of stormwater management facilities.

- (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 legal 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 designs.
 - (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.
 - (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 the 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.

(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 management facilities based on facility type and expected maintenance needs provided that the alternative schedule is included in the MS4 Program Plan.

(c) The operator shall conduct maintenance on its stormwater management facilities as necessary.

d. MS4 Program Plan requirements. The operator's MS4 Program Plan shall be updated in accordance with Table 1 in this section to include:

(1) A list of the applicable legal authorities such as ordinance, state and other permits, orders, specific contract language, and interjurisdictional agreements to ensure compliance with the minimum control measure in Section II related to post-construction stormwater management in new development and development on prior developed lands;

(2) Written policies and procedures utilized to ensure that stormwater management facilities are designed and installed in accordance with Section II B 5 b;

(3) Written inspection policies and procedures utilized in conducting inspections;

(4) Written procedures for inspection, compliance and enforcement to ensure maintenance is conducted on private stormwater facilities to ensure long-term operation in accordance with approved design;

(5) Written procedures for inspection and maintenance of operator-owned stormwater management facilities;

(6) The roles and responsibilities of each of the operator's departments, divisions, or subdivisions in implementing the minimum control measure in Section II related to post-construction stormwater management in new development and development on prior developed lands. If the operator utilizes another entity to implement portions of the MS4 Program Plan, a copy of the written agreement must be retained in the MS4 Program Plan. Roles and responsibilities shall be updated as necessary.

e. Stormwater management facility tracking and reporting requirements. The operator shall maintain an updated electronic database of all known operator-owned and privately-owned stormwater management facilities that discharge into the MS4. The database shall include the following:

(1) The stormwater management facility type;

(2) A general description of the facility's location, including the address or latitude and longitude;

(3) The acres treated by the facility, including total acres, as well as the breakdown of pervious and impervious acres;

(4) The date the facility was brought online (MMIYYYY). If the date is not known, the operator shall use June 30, 2005, as the date brought online for all previously existing stormwater management facilities;

(5) The sixth order hydrologic unit code (HUG) in which the stormwater management facility is located;

(6) The name of any impaired water segments within each HUG listed in the 2010 § 305(b)/303(d) Water Quality Assessment Integrated Report to which the stormwater management facility discharges;

(7) Whether the stormwater management facility is operator-owned or privately-owned;

(8) Whether a maintenance agreement exists if the stormwater management facility is privately owned; and

(9) The date of the operator's most recent inspection of the stormwater management facility. In addition, the operator shall annually track and report the total number of inspections completed and, when applicable, the number of enforcement actions taken to ensure long-term maintenance.

The operator shall submit an electronic database or spreadsheet of all stormwater

management facilities brought online during each reporting year with the appropriate annual report. Upon such time as the department provides the operators access to a statewide web- based reporting electronic database or spreadsheet, the operator shall utilize such database to complete the pertinent reporting requirements of this state permit.

Best Management Practices

6.1 MS4 Program Plan Requirements

Responsible Staff / Position: Danielle Bishop
Development Review Coordinator

Required Yes

Description

A description of the measures, procedures, and processes used to comply with the Post-Construction SW Mgmt. regulations and this section of the MS4 Permit. For reporting purposes reference may be made to materials which can be found elsewhere and where such materials are available to the public either freely or upon request.

Justification

Required under Section II B 5 d of the MS4 Permit.

Education Program / Public Outreach

The various elements that the City of Roanoke uses to comply are communicated to all permit applicants and are available to others via the City's website. Members of the development community were included in the City's development of these procedures and their comments were considered when drafting and refining versions thereof.

Annual Reporting Items

References and links to all such documentation.

Goals

6.1.1 Legal Authorities Descriptions

Responsible Staff / Position: Danielle Bishop
Development Review Coordinator

Description

Documentation of the legal authorities used to comply with the minimum control measure related to post-construction stormwater management such as ordinances, permits, orders, etc.

Unless changed in subsequent years, these are reported in the 2014 annual report only.

Planned: 2014

Complete: 2014

Activity Date	Name	Description
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None

6.1.2 Design and Installation Assurance

Responsible Staff / Position: Danielle Bishop
Development Review Coordinator

Description

The written policies and procedures used to ensure that stormwater management facilities are designed and installed in accordance with MS4 Permit Section II B 5 b.

Unless changed in subsequent years, these are reported in the 2014 annual report only.

Planned: 2014

Complete: 2014

Activity Date	Name	Description
None		

6.1.3 Written Inspection Procedures

Responsible Staff / Position: Danielle Bishop
Development Review Coordinator

Description

A copy of the inspection policies, procedures and all associated documents utilized during inspections of both private and operator owned SW facilities.

Unless changed in subsequent years, these are reported in the 2014 annual report only.

Planned: 2014

Complete: 2014

Activity Date	Name	Description
None		

6.1.4 Roles and Responsibilities

Responsible Staff / Position: Danielle Bishop
Development Review Coordinator

Description

A description of the roles and responsibilities of each Department, Division, and/or work unit and personnel used in implementing the programs associated with this Minimum Control Measure, to include any that may be met by third parties.

Planned: 2014 2015 2016

Complete: 2014 2015

Activity Date	Name
07/29/2015	'14 - '15 Staffing

Description

Staff devoted to E&S and VSMP compliance is essentially the same, with just the addition of the one new inspector. There are 6 staff members responsible for E&S and VSMP compliance within the Department of Planning, Building and Development.

The Development Inspectors perform annual post construction inspections on all privately owners BMPs within the City of Roanoke.

Danielle Bishop – Development Review Coordinator – E&S and Stormwater Administrator for the City of Roanoke – Professional Engineer’s License 038057 – Certified E&S/SWM Combined Administrator – Program Administrator – E&S Certification #375, exp. 11/30/2016, SWM Certification #SWCA0129, exp. 10/31/2017.

Kenneth Richardson - Certified E&S Combined Administrator & Certified SWM Plan Reviewer – Plan Reviewer – E&S Certification #775, exp. 05/31/2017, SWM Certification #SWPR0127, exp. 06/05/2018

George Nevergold - Certified E&S/SWM Combined Administrator – Plan Reviewer – E&S Certification #658, exp. 11/30/2016, SWM Certification #SWCA0203, exp. 06/15/18

Lewis Blankenship – Certified E&S/SWM Inspector – Development Inspector – E&S Certification #3369, exp. 05/31/2018, SWM Certification #

Winston Corbett – Certified E&S/SWM Inspector – Development Inspector – Certification #838, exp. 12/15/2014, SWM Certification #SWIN0166, exp.11/24/2017

Mark Bowles – Provisionally Certified E&S/SWM Inspector – Development Inspector

6.2 Annual Reporting Requirements

Responsible Staff / Position: Danielle Bishop
Development Review Coordinator

Required Yes

Description

A copy of the electronic database of private and operator-owned stormwater management facilities. To meet this requirement the City of Roanoke will provide its own database until such time as the State provides access to a state-wide web-based database, at which time reporting will be done using the state-wide system.

Justification

Required under section II B 5 e of the permit.

Education Program / Public Outreach

The SW facility tracking database will be made available upon request and posted for public viewing with each year's annual report.

Annual Reporting Items

The database will track and report the following for each SW facility brought online during that reporting year:

- The SW facility type
- The facility location (including address or lat.-long.)
- The total acres treated by the facility, broken down as pervious and impervious
- The date the facility was brought online (if unk. use June 30, 2005)
- The 6th order HUC in which the facility is located
- The name of any impaired water segments to which the facility discharges
- The facility ownership (private or operator-owned)
- If privately owned, whether a maintenance agreement exists
- The date of the City's most recent inspection

Separately the City shall report:

- The number of facility inspections
- The number of enforcement actions

Goals

6.2.1 SW Facility Tracking Database

Responsible Staff / Position: Danielle Bishop
Development Review Coordinator

Description

A copy of the database used to track SW facilities as required by this minimum control measure.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

7 MCM#6 Pollution Prevention/ Good Housekeeping for Municipal Operations

Responsible Staff / Position: Christopher Blakeman
Environmental Administrator
(540) 853-1173

Description

To comply with this MCM, the City must satisfy the following:

a. Operations and maintenance activities. The MS4 Program Plan submitted with the registration statement shall be implemented by the operator until updated in accordance with this state permit. In accordance with Table 1 in this section, the operator shall develop and implement written procedures designed to minimize or prevent pollutant discharge from: (i) daily operations such as road, street, and parking lot maintenance; (ii) equipment maintenance; and (iii) the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers. The written procedures shall be utilized as part of the employee training. At a minimum, the written procedures shall be designed to:

- (1) Prevent illicit discharges;
 - (2) Ensure the proper disposal of waste materials, including landscape wastes;
 - (3) Prevent the discharge of municipal vehicle wash water into the MS4 without authorization under a separate VPDES permit;
 - (4) Prevent the discharge of wastewater into the MS4 without authorization under a separate VPDES permit;
 - (5) Require implementation of best management practices when discharging water pumped from utility construction and maintenance activities;
 - (6) Minimize the pollutants in stormwater runoff from bulk storage areas (e.g., salt storage, topsoil stockpiles) through the use of best management practices;
 - (7) Prevent pollutant discharge into the MS4 from leaking municipal automobiles and equipment; and
 - (8) Ensure that the application of materials, including fertilizers and pesticides, is conducted in accordance with the manufacturer's recommendations.
- b. Municipal facility pollution prevention and good housekeeping.

(1) Within 12 months of state permit coverage, the operator shall identify all municipal high-priority facilities. These high-priority facilities shall include (i) composting facilities, (ii) equipment storage and maintenance facilities, (iii) materials storage yards, (iv) pesticide storage facilities, (v) public works yards, (vi) recycling facilities, (vii) salt storage facilities, (viii) solid waste handling and transfer facilities, and (ix) vehicle storage and maintenance yards.

(2) Within 12 months of state permit coverage, the operator shall identify which of the municipal high-priority facilities have a high potential of discharging pollutants. Municipal high-priority facilities that have a high potential for discharging pollutants are those facilities identified in subsection (1) above that are not covered under a separate VPDES permit and which any of the following materials or activities occur and are expected to have exposure to stormwater resulting from rain, snow, snowmelt or runoff:

- (a) Areas where residuals from using, storing or cleaning machinery or equipment remain and are exposed to stormwater;
- (b) Materials or residuals on the ground or in stormwater inlets from spills or leaks;
- (c) Material handling equipment (except adequately maintained vehicles);
- (d) Materials or products that would be expected to be mobilized in stormwater runoff during loading/unloading or transporting activities (e.g., rock, salt, fill dirt);
- (e) Materials or products stored outdoors (except final products intended for outside use where exposure to stormwater does not result in the discharge of pollutants);
- (f) Materials or products that would be expected to be mobilized in stormwater runoff contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar

containers;

(g) Waste material except waste in covered, non-leaking containers (e.g., dumpsters);

(h) Application or disposal of process wastewater (unless otherwise permitted); or

(i) Particulate matter or visible deposits of residuals from roof stacks, vents or both not otherwise regulated (i.e., under an air quality control permit) and evident in the stormwater runoff.

(3) The operator shall develop and implement specific stormwater pollution prevention plans for all high-priority facilities identified in subdivision 2 of this subsection. The operator shall complete SWPPP development and implementation shall be completed within 48 months of coverage under this state permit. Facilities covered under a separate VDPES permit shall adhere to the conditions established in that permit and are excluded from this requirement.

(4) Each SWPPP shall include:

(a) A site description that includes a site map identifying all outfalls, direction of flows, existing source controls, and receiving water bodies;

(b) A discussion and checklist of potential pollutants and pollutant sources;

(c) A discussion of all potential nonstormwater discharges;

(d) Written procedures designed to reduce and prevent pollutant discharge;

(e) A description of the applicable training as required in Section II B 6 d;

(f) Procedures to conduct an annual comprehensive site compliance evaluation;

(g) An inspection and maintenance schedule for site specific source controls. The date of each inspection and associated findings and follow-up shall be logged in each SWPPP;

(h) The contents of each SWPPP shall be evaluated and modified as necessary to accurately reflect any discharge, release, or spill from the high priority facility reported in accordance with Section III G. For each such discharge, release, or spill, the SWPPP must include the following information: date of incident; material discharged, released, or spilled; and quantity discharged, released or spilled; and

(i) A copy of each SWPPP shall be kept at each facility and shall be kept updated and utilized as part of staff training required in Section II B 6 d.

c. Turf and Landscape management.

(1) The operator shall implement turf and landscape nutrient management plans that have been developed by a certified turf and landscape nutrient management planner in accordance with § 10.1-104.2 of the Code of Virginia on all lands owned or operated by the MS4 operator where nutrients are applied to a contiguous area greater than one acre. Implementation shall be in accordance with the following schedule:

(a) Within 12 months of state permit coverage, the operator shall identify all applicable lands where nutrients are applied to a contiguous area of more than one acre. A latitude and longitude shall be provided for each such piece of land and reported in the annual report.

(b) Within 60 months of state permit coverage, the operator shall implement turf and landscape nutrient management plans on all lands where nutrients are applied to a contiguous area of more than one acre. The following measurable outcomes are established for the implementation of turf and landscape nutrient management plans: (i) within 24 months of permit coverage, not less than 15% of all identified acres will be covered by turf and landscape nutrient management plans; (ii) within 36 months of permit coverage, not less than 40% of all identified acres will be covered by turf and landscape nutrient management plans; and (iii) within 48 months of permit coverage, not less than 75% of all identified acres will be covered by turf and landscape nutrient management plans. The operator shall not fail to meet the measurable goals for two consecutive years.

(c) MS4 operators with lands regulated under § 10.1-104.4 of the Code of Virginia shall continue to implement turf and landscape nutrient management plans in accordance with this statutory requirement.

(2) Operators shall annually track the following:

(a) The total acreage of lands where turf and landscape nutrient management plans are required; and

(b) The acreage of lands upon which turf and landscape nutrient management plans have been implemented.

(3) The operator shall not apply any deicing agent containing urea or other forms of nitrogen or phosphorus to parking lots, roadways, and sidewalks, or other paved surfaces.

d. Training. The operator shall conduct training for employees. The training requirements may be fulfilled, in total or in part, through regional training programs involving two or more MS4 localities provided; however, that each operator shall remain individually liable for its failure to comply with the training requirements in this permit. Training is not required if the topic is not applicable to the operator's operations and therefore does not have applicable personnel provided the lack of applicability is documented in the MS4 Program Plan. The operator shall determine and document the applicable employees or positions to receive each type of training. The operator shall develop an annual written training plan including a schedule of training events that ensures implementation of the training requirements as follows:

(1) The operator shall provide biennial training to applicable field personnel in the recognition and reporting of illicit discharges.

(2) The operator shall provide biennial training to applicable employees in good housekeeping and pollution prevention practices that are to be employed during road, street, and parking lot maintenance.

(3) The operator shall provide biennial training to applicable employees in good housekeeping and pollution prevention practices that are to be employed in and around maintenance and public works facilities.

(4) The operator shall ensure that employees, and require that contractors, who apply pesticides and herbicides are properly trained or certified in accordance with the Virginia Pesticide Control Act (§3.2-3900 et seq. of the Code of Virginia).

(5) The operator shall ensure that employees and contractors serving as plan reviewers, inspectors, program administrators, and construction site operators obtain the appropriate certifications as required under the Virginia Erosion and Sediment Control Law and its attendant regulations.

(6) The operator shall ensure that applicable employees obtain the appropriate certifications as required under the Virginia Erosion and Sediment Control Law and its attendant regulations.

(7) The operator shall provide biennial training to applicable employees in good housekeeping and pollution prevention practices that are to be employed in and around recreational facilities.

(8) The appropriate emergency response employees shall have training in spill responses. A summary of the training or certification program provided to emergency response employees shall be included in the first annual report.

(9) The operator shall keep documentation on each training event including the training date, the number of employees attending the training, and the objective of the training event for a period of three years after each training event.

e. The operator shall require that municipal contractors use appropriate control measures and procedures for stormwater discharges to the MS4 system. Oversight procedures shall be described in the MS4 Program Plan.

f. At a minimum, the MS4 Program Plan shall contain:

(1) The written protocols being used to satisfy the daily operations and maintenance requirements;

(2) A list of all municipal high-priority facilities that identifies those facilities that have a high potential for chemicals or other materials to be discharged in stormwater and a schedule that identifies the year in which an individual SWPPP will be developed for those facilities required to have a SWPPP. Upon completion of a SWPPP, the SWPPP shall be part of the MS4 Program Plan. The MS4 Program Plan shall include the location in which the individual SWPPP is located;

(3) A list of lands where nutrients are applied to a contiguous area of more than one acre. Upon completion of a turf and landscape nutrient management plan, the turf and landscape nutrient management plan shall be part of the MS4 Program Plan. The MS4 Program Plan shall include the location in which the individual turf and landscape nutrient management plan is located; and

(4) The annual written training plan for the next reporting cycle.

g. Annual reporting requirements.

(1) A summary report on the development and implementation of the daily operational procedures;

(2) A summary report on the development and implementation of the required SWPPPs;

(3) A summary report on the development and implementation of the turf and landscape nutrient management plans that includes: (a) The total acreage of lands where turf and landscape nutrient management plans are required; and (b) The acreage of lands upon which turf and landscape nutrient management plans have been implemented; and

(4) A summary report on the required training, including a list of training events, the training date, the number of employees attending training and the objective of the training.

Best Management Practices

7.1 MS4 Program Plan Requirements

Responsible Staff / Position: Christopher Blakeman
Environmental Administrator
(540) 853-1173

Required Yes

Description

A description of the measures, procedures, and processes used to comply with the Section II.B.6. of the MS4 Permit. For reporting purposes reference may be made to materials which can be found elsewhere and where such materials are available to the public either freely or upon request.

Justification

Required under Section II.B.6.

Annual Reporting Items

1. Operational BMP's/SOP's for City Facilities
2. Evaluation of City Facilities for Pollution Potential
3. Evaluation of City-Managed Lands for Nutrient Management Plan Need
4. Detailing of Employee Stormwater Awareness Training Program

Goals

7.1.1 Operational BMP's/SOP's

Responsible Staff / Position: Dwayne DArdenne
Stormwater Manager
(540) 853-1756

Description

This section of the report is meant as a place holder for assorted municipal BMP's and SOP's associated with our operations and/or policies. It will be updated as needed to reflect any new or revised policies and/or procedures related to the City's over-all stormwater management operations.

Planned: 2014

Complete: 2014

Activity Date	Name	Description
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None

7.1.2 Facility Pollution Potential Evaluations

Responsible Staff / Position: Dwayne DArdenne
Stormwater Manager
(540) 853-1756

Description

By July 1, 2014, the City must identify all municipal high-priority facilities.

By July 1, 2017 stormwater pollution prevention plans (SWPPP's) must be written and fully implemented for all identified facilities.

Planned: 2014 2015 2016 2017

Complete: 2014 2015

Activity Date	Name
06/30/2015	FY14 Facility Report

Description

No additional facilities have been identified during the reporting year. Initial steps towards the development of a SWPPP for our Public Works Service Center are underway. These include identification of potential pollution sources, control options, evaluation of responsibilities and more.

07/10/2015	FY15 Facility Report
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Description

No additional facilities have been identified during the reporting year. Continued steps towards the development of a SWPPP for our Public Works Service Center remain ongoing. These include further articulation of potential pollution sources, evaluation, development and implementation of control options, as well as the evaluation and assignment of roles and responsibilities.

7.1.3 Land Evaluation for Nutrient Management Plans

Responsible Staff / Position: Dwayne DArdenne
Stormwater Manager
(540) 853-1756

Description

The City must evaluate all lands it owns or operates and applies fertilizer to. Any contiguous area meeting these criteria and being over one acre in size must be identified as needing a nutrient management plan.

The City has identified two properties to which this provision of the permit applies, and is prepared to implement nutrient management plans for each in accordance with the mandated deadline of July 1, 2018.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name	Description
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None

7.1.4 Employee Stormwater Awareness Training Program

Responsible Staff / Position: Dwayne DArdenne
Stormwater Manager
(540) 853-1756

Description

The City is committed to training all applicable personnel in accordance with Section II.B.6.d. of the permit.

The City has designed a training program to ensure conformance with this requirement, as well as to ensure all employees, regardless of their job duties, receive stormwater pollution awareness training at a basic level.

Planned: 2014 2015

Complete: 2014 2015

Activity Date	Name
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06/30/2015	Employee Training Implementation
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Description

The employee training plan that was developed and submitted last year for compliance with Section II,B,6,d was completed on schedule as required. Documentation of our compliance with this requirement is included below in Section 7.2.4 of this report.

7.2 Annual Reporting Requirements

Responsible Staff / Position: Christopher Blakeman
Environmental Administrator
(540) 853-1173

Required Yes

Description

A report of all elements required under Section II.B.6.g. of the MS4 Permit, plus any additional items the City feels it should include in the annual MS4 report.

Justification

Required under Section II.B.6.g.

Annual Reporting Items

1. Update on City Operational Procedure Development and Implementation
2. Update on SWPPP Development and Implementation for Necessary Facilities
3. Update on Nutrient Management Plan Development and Implementation for Necessary Lands
4. Update on Training Plan Implementation and Associated Documentation
5. Municipal Street Sweeping Performance
6. Storm Sewer System Maintenance
7. Pet Waste Collection Station Program
8. Facility Awards and Recognition

Goals

7.2.1 Operational Procedure Development and Implementation

Responsible Staff / Position: Dwayne D'Ardenne
Stormwater Manager
(540) 853-1756

Description

In accordance with Section II.B.6.a. of the permit, the City will report on the development of SOP's for its daily operations and maintenance activities, which are to be completed by June 30, 2015.

Planned: 2014 2015 2016 2017 2018

Complete: 2014

Activity Date	Name
07/07/2015	FY15 Operation Procedure Update

Description

A detailed series of operationally specific Standard Operating Procedures (SOPs) have been developed and implemented for all activities and operations deemed to present a potential or real threat of pollution. Attached are a list of the SOPs and an example copy of one such document that specifically references our Public Works Service Center.

File Attachment [Pollution Prevention SOPs list.doc](#)

File Attachment [SOP-4.4.6-1.1 PWSC Best Management Practices.doc](#)

7.2.2 SWPPP Development and Implementation

Responsible Staff / Position: Dwayne D'Ardenne
Stormwater Manager
(540) 853-1756

Description

A stormwater pollution prevention plan (SWPPP) must be written for all identified high-priority facilities. Development, implementation, and maintenance of these SWPPP's will be reported on.

Planned: 2014 2015 2016 2017 2018

Complete: 2014

Activity Date	Name
08/03/2015	FY15 SWPPP Update

Description

The City has identified one facility in need of a SWPPP, our Public Works Service Center. Many elements of a fully compliant facility SWPPP are already established for this facility, yet they're not necessarily coordinated within a single document.

Development of that SWPPP is underway, and the City fully commits to implementing a SWPPP for its Public Works Service Center by the required date of July 1, 2017.

7.2.3 Nutrient Management Plan Development and Implementation

Responsible Staff / Position: Dwayne D'Ardenne
Stormwater Manager
(540) 853-1756

Description

For all lands identified in the Program Plan, the City must prepare a nutrient management plan.

Development, implementation, and maintenance of the nutrient management plans will be reported on.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
07/08/2015	FY15 NMP Update

Description

As required by permit Section II,B,6,c,(1), the specific locations of the two parcels identified as needing NMPs are included here.

Entranceway Park (1.8 acres) Lat. 37.275666, Long. -79.936988

Mountain View Open Space (3.5 acres). Lat. 37.250282, Long. -79.934183.

The development of NMPs for these sites is being led by the City's Dept. of Parks and Recreation.

7.2.4 Training Plan Implementation and Documentation

Responsible Staff / Position: Dwayne D'Ardenne
Stormwater Manager
(540) 853-1756

Description

The City intends to train all applicable personnel in accordance with Section II.B.6.d. of the permit. The City will provide annual updates and documentation of this specific training, as well as documentation on the general environmental awareness presentation (which contains a section on stormwater) that all employees must view.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
06/30/2015	FY15 Training Update

Description

Section II,B,6,d compliance: The employee stormwater training plan developed and submitted last year was carried out. A copy of the training schedule and an example of the employee sign in sheets used for documentation and record keeping are attached. The full set of all employee sign in sheets can be provided upon request.

Enhancing our employee training and regional collaboration, the City led a program where a series of temporary stormwater BMPs were exhibited by most Roanoke Valley MS4s. This took place on Earth Day at the Roanoke Regional Public Works Academy's, Industry & Public Works Expo at the Salem Civic center. We estimate that over 250 employees, vendors and guests were reached. A copy of the event flyer is attached and WDBJ Chanel 7 news coverage can be viewed at:

<http://www.wdbj7.com/video/salem-hosts-industry-and-public-works-expo/32459526>

(Note: Alison Parker conducted this interview and it was filmed by Adam Ward. Parker & Ward were both tragically murdered on Aug. 26, 2015. We post this link in their memories and in respect for their professionalism and service to our community).

Additionally, the City of Roanoke continues to provide Environmental Awareness Training as part of its orientation for new employees. Included in this training is a section with a heavy emphasis on stormwater pollution prevention, which helps trainees to understand the impact stormwater pollution can have on our community and provides guidance on how to report real or suspect stormwater pollution issues. A list of training dates and number of attendees is shown below:

<u>Date</u>	<u>Number of Attendees</u>
7/9/14	21
9/9/14	35
11/12/14	24
1/8/15	32
1/25/15	13
4/9/15	17
<u>6/3/15</u>	<u>21</u>
TOTAL	163

File Attachment [Stormwater Training Schedule.doc](#)

File Attachment [Transportation SW Sign-In Sheet.pdf](#)

File Attachment [2015ExpoFlyer.pdf](#)

7.2.5 Municipal Street Sweeping Performance

Responsible Staff / Position: Steve Taylor
Maintenance Supervisor
(540) 853-1254

Description

The City maintains a regular street sweeping schedule for residential and arterial streets, as well as streets in the "Central Business District."

Documentation of this activity will be measurement of the total number of lane miles swept annually. When/where able we will also report the number of cubic yards of debris removed.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
09/11/2015	FY15 Street Sweeping Performance

Description

In the past permit year, the City street sweeping crews cleaned a total of 13,430 lane miles. Those lane miles are spread between residential, arterial, and "central business district" streets, which are swept with correspondingly increased frequency. These operations removed 1,264 tons of debris from the streets, thereby preventing it from getting into the storm sewer system. The attachment shows the break down of street sweeping performance.

Also included on the attachment is the number of storm drains inspected (2,854), which detailed in the next section.
File Attachment [FY2015 Stormwater Impacts Report.doc](#)

7.2.6 Storm Sewer System Maintenance

Responsible Staff / Position: Steve Taylor
Maintenance Supervisor
(540) 853-1254

Description

The City will continue its program of storm sewer inspection, cleaning, and maintenance activity.

Measurement of this activity will be documentation of the number of drains inspected. "Inspected" means the drain inlet was opened and the vault cleaned out or un-clogged as needed. If significant infrastructure damage is found, those drains are scheduled for later repair.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
09/11/2015	FY15 Storm Sewer System Maintenance

Description

A total of 2,854 storm sewer inlets were inspected during the last permit year, resulting in 117 being cleaned and 53 being repaired. Attached is a spreadsheet detailing the location of each inlet and the maintenance activities performed.

File Attachment [FY2015 Stormdrain Maint Locations.xlsx](#)

7.2.7 Pet Waste Collection Station Program

Responsible Staff / Position: Christopher Blakeman
Environmental Administrator
(540) 853-1173

Description

The City's Parks & Recreation Department has implemented a program to provide pet waste collection stations in City Parks and Greenways in an effort to abate a recurring public nuisance as well as minimize bacterial waste loads to our local streams and rivers. These stations are located in the downtown residential district, where grassy and other areas conducive to pet walking are less prevalent, as well as in many City Parks and Greenways frequented by pets and their owners.

Maintenance and expansion of this program will be reported on annually.

Planned: 2014 2015 2016 2017 2018

Complete: 2014

Activity Date	Name
09/04/2015	FY15 Pet Waste Station Update

Description

In the past permit year, the City of Roanoke's Parks and Recreation Department has installed 2 new pet waste stations in Thrasher Park, which previously had none. This park has also been equipped with a fenced off-leash area for dogs.

The Mutt Mit stations offer bags to use in the collection of pet waste, as well as a trash can for disposal. The attachment shows the location of all of the City's 41 pet waste stations, and also indicates which of those are new for this year.

File Attachment [Mutt Mitt Station List-2015.xls](#)

7.2.8 Facility Awards and Recognition

Responsible Staff / Position: Christopher Blakeman
Environmental Administrator
(540) 853-1173

Description

Appropriately related awards, certifications, and accreditations that are secured by the City will be listed and briefly discussed to demonstrate approval of the City's current practices by other outside entities and agencies.

Planned: 2014 2015 2016 2017 2018

Complete: 2014 2015

Activity Date	Name
09/08/2015	FY15 Awards & Recognition Update

Description

As in previous years, the City was once again presented with the "The Safe and Sustainable Snowfighting Award" from the Salt Institute, which recognizes exemplary salt storage and snowfighting techniques.

In the past permit year we initiated a program for separately recognizing and rewarding outstanding environmental actions by city employees. Employees are nominated by their peers and each receives a letter from the City Manager that specifically focuses on whatever the action or issue was that is being praised, as well as a certificate suitable for framing. To date we have issued 8 such awards.

The City's Public Works Service Center is still designated as an Exemplary Environmental Enterprise (E3) facility in

the DEQ's Virginia Environmental Excellence Program. The facility's Environmental and Sustainability Management System includes Stormwater Pollution Prevention as one of its "significant aspects," which are the main focal points.

8 MS4 Program Evaluation

Responsible Staff / Position: Dwayne DArdenne
Stormwater Manager
(540) 853-1756

Description

A broad based review and evaluation of the MS4 program as required under Section II,E,1 of the permit.

E. Evaluation and assessment.

1. MS4 Program Evaluation.

The operator must annually evaluate:

a. Program compliance;

b. The appropriateness of the identified BMPs (as part of this evaluation, the operator shall evaluate the effectiveness of BMPs in addressing discharges into waters that are identified as impaired in the 2010 § 305(b)/303(d) Water Quality Assessment Integrated Report); and

c. Progress towards achieving the identified measurable goals.

Best Management Practices

8.1 Evaluation Statement

Responsible Staff / Position: Christopher Blakeman
Environmental Administrator
(540) 853-1173

Required Yes

Description

Broad based review and evaluation of program.

Justification

Required under Section II,E,1 of the permit.

Annual Reporting Items

Summary of program status overall.

Goals

8.1.1 MS4 Program Review and Evaluation

Responsible Staff / Position: Christopher Blakeman
Environmental Administrator
(540) 853-1173

Description

Planned: 2015 2016 2017 2018

Complete: 2015

Activity Date	Name
09/10/2015	FY15 Evaluation

Description

Summary MS4 Program Evaluation:

Any evaluation of the City's MS4 Program must begin with the recognition that over the past year it has entered into a period of substantial transition, brought about due to the development of our Stormwater Utility and the corresponding organizational and administrative changes. The benefits of these changes are virtually innumerable, but of primary advantage are; the availability of dedicated program funding, and additional staff to support and administer the program. As with any organization undergoing such significant changes, we have had some growing pains as we've made adjustments in roles and responsibilities, and in building the capacity to deliver more robust iterative program improvements.

Third party public education and involvement: in the past the City has relied on contracted support services for much of our public education, outreach and involvement activities. Increasingly we find reluctance by our contracted partners to diplomatically, yet assertively aim that work towards high priority target audiences who are not necessarily aligned with that partner's traditional client base. While city staff has taken on a growing share of that work, we've come to recognize the need to internalize virtually all of those duties. Our plans call for continued coordination with our service partners for crafting cohesive education and involvement programs, yet developing improved internal capacities to repackage and deliver those programs to the high priority target audiences.

Performance measurement: with the simultaneous implementation of both our Stormwater Division and our TMDL

Action Plan, we're increasingly focused on developing assessments with sufficient data quality to ensure that we're strategically allocating our resources and tracking our efforts. Chief amongst those improvement plans is our coordination with the Virginia Tech Dept. Civil & Environmental Engineering for the development of a sub-basin Watershed Master Plan, using Lick Run as a pilot model. More tactically, City staff from; Stormwater, Environmental Management, Engineering, Planning, GIS, and Technology are coordinating to develop and implement new processes and procedures for improved coordination and information sharing. This involves aspects as simple as shared spreadsheets and budget development, all the way to revised electronic data collection for field applications and a complex new state of the art asset management IT system.

Our transitional status has brought some challenges in how we best allocate duties and document our performance, yet we're confident that our program is compliant, and that our BMPs are appropriate and will prove to be efficacious.
