

## City of Alexandria, Virginia

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# Year 5 VSMP MS4 Annual Report Permit No. VAR040057

For compliance with 4VAC50-60 "General Virginia Stormwater Management Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems"



Department of Transportation and Environmental Services  
Office of Environmental Quality  
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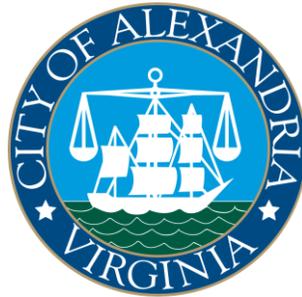
**September 30, 2013**



**VSMP General Permit for  
Small Municipal Separate Storm Sewer Systems  
Permit No. VAR040057**

Year 5 Annual Report  
July 1, 2012 – June 30, 2013

City of Alexandria, Virginia



Submitted by  
City of Alexandria  
Department of Transportation and Environmental Services  
Office of Environmental Quality  
301 King Street, Alexandria, VA 22314



# 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."

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Name

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Title

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Date



# VSMP General Permit for Small Municipal Separate Storm Sewer Systems Permit No. VAR040057

Year 5 Annual Report  
July 1, 2012 – June 30, 2013  
City of Alexandria, Virginia

## TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION .....</b>	<b>1</b>
<b>2</b>	<b>BACKGROUND INFORMATION.....</b>	<b>3</b>
<b>3</b>	<b>COMPLIANCE WITH YEAR 5 PERMIT CONDITIONS.....</b>	<b>4</b>
3.1	PUBLIC EDUCATION AND OUTREACH (MCM #1) .....	4
	<i>BMP 1A</i> General Public Education and Outreach.....	6
	<i>BMP 1B</i> Stream Crossing Signs.....	8
	<i>BMP 1C</i> Text Messages and PSAs for Cable Television .....	8
	<i>BMP 1D</i> Stormwater BMP Signage.....	9
	<i>BMP 1E</i> Storm Drain Inlet Marking.....	9
	<i>BMP1F</i> Water Quality Web Site.....	9
	<i>BMP1G</i> Education Concerning Fecal Coliform Bacteria.....	10
	<i>BMP1I</i> Education Concerning PCBs.....	11
	<i>BMP1J</i> Outreach to Minorities.....	11
3.2	PUBLIC INVOLVEMENT/PARTICIPATION (MCM #2) .....	12
	<i>BMP 2A</i> Public Notice and Participation.....	12
	<i>BMP 2B</i> Staff Support and Annual Water Quality Update to EPC.....	13
	<i>BMP 2C</i> City Sponsorship of Earth Day .....	14
	<i>BMP 2D</i> Promotion of Clean Up Events .....	14
3.3	ILLICIT DISCHARGE DETECTION AND ELIMINATION (MCM #3) .....	15
	<i>BMP 3A</i> Nuisance Abatement Hotline and Web Based Reporting Form.....	16
	<i>BMP 3B</i> Household Hazardous Waste Program.....	17
	<i>BMP 3C</i> Prohibition on Illicit Discharges.....	17
	<i>BMP 3D</i> Illicit Disposal Hazards Education for City Employees .....	18
	<i>BMP 3E</i> Mapping of All Permitted Stormwater Discharges.....	18
	<i>BMP 3F</i> Prohibition of Outdoor Cleaning of Restaurant Equipment .....	18
	<i>BMP 3G</i> Storm Sewer System Map.....	19
	<i>BMP 3H</i> Outfall Reconnaissance .....	19
	<i>BMP 3I</i> High Risk Facility Evaluation for Bacteria and PCBs.....	19
	<i>BMP 3J</i> Estimate of WLA Discharge for Bacteria and PCBs.....	20
3.4	CONSTRUCTION SITE STORMWATER RUNOFF CONTROL (MCM #4) .....	20

<i>BMP 4A</i>	<i>Maintain DCR Erosion and Sediment Control Program Consistency</i> .....	21
<i>BMP 4B</i>	<i>VSMP Permits for Construction Activities</i> .....	21
<i>BMP 4C</i>	<i>Citizen Complaint Reporting Mechanism</i> .....	22
<i>BMP 4D</i>	<i>Land Disturbing Activities Tracking System</i> .....	23
3.5	POST CONSTRUCTION STORMWATER MANAGEMENT (MCM #5) .....	24
<i>BMP 5A</i>	<i>BMP Data Tracking System</i> .....	25
<i>BMP 5B</i>	<i>Implement BMP Maintenance Agreements</i> .....	25
<i>BMP 5C</i>	<i>Implement Environmental Management Ordinance</i> .....	25
<i>BMP 5D</i>	<i>Evaluate BMP Design Guidelines</i> .....	26
<i>BMP 5E</i>	<i>BMP Facility Inspection and Enforcement</i> .....	26
3.6	POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS (MCM #6) ...	27
<i>BMP 6A</i>	<i>Establish Environmental Coordination Group</i> .....	28
<i>BMP 6B</i>	<i>Street Sweeping Program</i> .....	28
<i>BMP 6C</i>	<i>Catch Basin and Inlet Cleaning Program</i> .....	29
<i>BMP 6D</i>	<i>"My City" Program</i> .....	29
<i>BMP 6E</i>	<i>Pollution Prevention Training</i> .....	29
<i>BMP 6F</i>	<i>Pollution Prevention Protocols and Inspection</i> .....	30
<i>BMP 6G</i>	<i>Fertilizer and Pesticide Management</i> .....	30
<b>4</b>	<b>EVALUATION AND ASSESSMENT OF BMPS</b> .....	<b>30</b>
<b>5</b>	<b>RESULTS OF INFORMATION COLLECTED</b> .....	<b>31</b>
<b>6</b>	<b>SUMMARY OF NEW PERMIT YEAR 1 PLANNED ACTIVITIES</b> .....	<b>31</b>
<b>7</b>	<b>CHANGES IN IDENTIFIED BMPS OR MEASURABLE GOALS</b> .....	<b>32</b>
<b>8</b>	<b>RELIANCE ON OTHER GOVERNMENT ENTITIES</b> .....	<b>32</b>
<b>9</b>	<b>APPROVAL STATUS OF QUALIFYING LOCAL PROGRAMS</b> .....	<b>32</b>
<b>10</b>	<b>SPECIAL CONDITIONS ASSOCIATED WITH TMDLS</b> .....	<b>32</b>
<b>11</b>	<b>ILLICIT DISCHARGES</b> .....	<b>35</b>
<b>12</b>	<b>LAND DISTURBING ACTIVITIES</b> .....	<b>48</b>
<b>13</b>	<b>INFORMATION ON STORMWATER MANAGEMENT FACILITIES</b> .....	<b>50</b>
<b>14</b>	<b>NEW OR TERMINATED SIGNED AGREEMENTS</b> .....	<b>53</b>
<b>15</b>	<b>WRITTEN PUBLIC COMMENTS</b> .....	<b>54</b>

# **APPENDICES**

## **APPENDIX A**

Clean Water Partners 2012-2013 Program Summary  
Alexandria eNews Examples  
T&ES Talk Stormwater Article  
Screen Capture of Stormwater Web Page  
Screen Capture of Calendar Widget  
Screen Capture T&ES Facebook  
General Stormwater Education Brochure  
Pet Owner Educational Brochure  
Alternatives to Dumping Brochure  
PCB Educational Brochure for High Risk Property Owners  
Sample Special Use Permit Language for PCB Screening During Development  
Spanish Language Education Brochure

## **APPENDIX B**

FY 2012 Annual Report from the EPC  
Agenda for February 4, 2013 and July 2, 2012 EPC Meetings  
2013 Earth Day Press Release  
2013 Earth Day Poster  
Build Your Own Rain Barrel Flyer  
Stream Clean Up Press Releases, Calendar Entries and Flyers  
Screen Capture Drug Take Back Events

## **APPENDIX C**

Screen Shot of the Service Request Portal – Call, Click, Connect  
Screen Shot of the Permit Plan Program  
Screen Shot of the Cityworks Program  
HHW Brochure  
Alternative to Dumping Brochure  
Trash and Dumping Brochure (English and Spanish versions)  
Whose Job Is It Anyway (Staff Brochure)  
Map and Spreadsheet of State-Permitted Discharges  
Sample Special Use Permit Language Prohibiting Outdoor Cleaning of Kitchen Equipment  
Summary of PY5 Outfall Reconnaissance Efforts

## **APPENDIX D**

No Materials for PY5

## **APPENDIX E**

Stormwater BMP Map  
Sample Properly Executed BMP Monitoring and Maintenance Agreement  
BMP Signage for Above-Ground Facility

Program Consistency Status  
BMP Inspection Spreadsheet  
List of BMPs by Type Requiring More Frequent Inspection

## **APPENDIX F**

EIU Agenda  
Mission Statements for Stormwater Steering Committee and Stormwater Workgroup  
Sample Agenda for Stormwater Steering Committee and Stormwater Workgroup  
Sample Agenda for the Environmental Industrial Unit  
Screen Capture of “My City” Program on Intranet  
Stormwater Pollution Prevention Training Workshop Sign-In Sheets  
RP&CA Safety Conference Materials and Sign-In Sheet

## **APPENDIX G**

Program Evaluation Summary

# 1 Introduction

This Permit Year 5 (PY5) Annual Report has been prepared by the City of Alexandria (OEQ) Environmental Quality in accordance with the requirements of the Virginia Stormwater Management Program (VSMP) General Permit for Discharges of Storm Water from Municipal Separate Storm Sewer Systems (4VAC 50-60 *et seq.*). The City was originally issued General Permit VAR040057 on July 8, 2003 and successfully met the requirements over the initial five year permit period. The Department of Conservation and Recreation (DCR) re-issued the permit on July 9, 2008 for an additional five years, which effectively expired on July 1, 2013. A new permit has now been issued effective July 1, 2013 through June 30, 2018. The responsibility of administering the new MS4 permit has been transferred from DCR to the Virginia Department of Environmental Quality (DEQ). This PY5 Annual Report constitutes the last report of the recently expired permit and meets all reporting requirements.

Under the terms of the General Permit, the City has developed a Municipal Separate Storm Sewer System (MS4) Program Plan to implement six minimum control measures aimed at reducing the discharge of pollutants to the “maximum extent practicable.” Minimum control measures include:

1. Public Education and Outreach	4. Construction Site Runoff Control
2. Public Participation and Involvement	5. Post-Construction Stormwater Management
3. Illegal Discharge Detection and Elimination	6. Pollution Prevention and Good Housekeeping

The General Permit requires that the City submit annual reports no later than October 1<sup>st</sup> covering the reporting period of the preceding July 1<sup>st</sup> through June 30<sup>th</sup>. This PY5 Annual Report covers the period of July 1, 2012 through June 30, 2013. Part II E 3 of the General Permit outlines the requirements for the annual report:

- a. Background information, including: (1) the name and permit number of the program submitting the annual report; (2) the annual report permit year; (3) modifications to any operator’s department’s roles and responsibilities; (4) number of new MS4 outfalls and associated acreage by HUC added during the permit year; and, (5) signed certification in accordance with 4VAC50-60-370.
- b. The status of compliance with permit conditions, an assessment of the appropriateness of the identified best management practices, including an assessment of the appropriateness of the identified BMPs in addressing discharges into waters that are identified as impaired in the 2006 305(b)/303(d) Water Quality Assessment Integrated Report, and progress towards achieving the identified measurable goals for each of the minimum control measures.

- c. Results of information collected and analyzed, including monitoring data, if any, during the reporting period.
- d. A summary of the stormwater activities the operator plans to undertake during the next reporting cycle.
- e. Changes in any identified best management practices or measurable goals for any of the minimum control measures, including steps to be taken to address any deficiencies.
- f. Notice that the operator is relying on another government entity to satisfy some or the permit obligations, if applicable.
- g. The approval status of any qualifying local programs pursuant to Section II C of the General Permit, if appropriate, or progress towards achieving full approval of these programs.
- h. Information required pursuant to Section I B 9 of the General Permit regarding special conditions associated with a total maximum daily load (TMDL) approved by the State Water Control Board, if applicable.
- i. The number of illicit discharges identified and the narrative on how they were controlled or eliminated pursuant to Section II B 3 f of the General Permit.
- j. Regulated land-disturbing activities data tracked under Section II 4 c of the General Permit.
- k. All known permanent stormwater management facility data tracked under Section II B 5 b (6) of the General Permit submitted in a database format to be prescribed by the department.
- l. A list of any new or terminated signed agreements between the operator and any applicable third parties where the operator has entered into an agreement in order to implement minimum control measures or portions of minimum control measures.
- m. Copies of any written comments received during a public comment period regarding the MS4 Program Plan or any modifications.

This PY5 Annual Report also addresses Part II E 1 b of the General Permit that requires the Town to conduct a comprehensive program evaluation using the U.S. EPA's "Municipal Stormwater Program Evaluation Guidance."

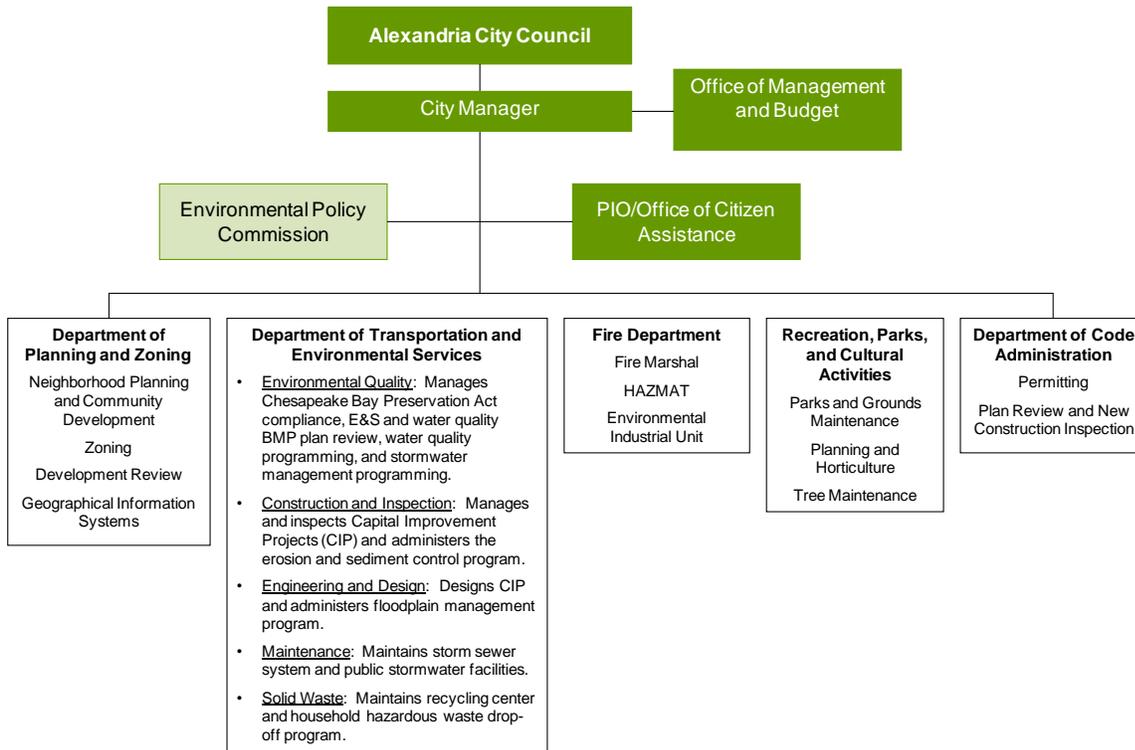
## 2 Background Information

This section provides background information as required in Part II.E.3.a of the General Permit.

<b>Name of Operator:</b>		<b>Permit Year:</b>		<b>Permit Number:</b>		
City of Alexandria		Permit Year 5		VAR040057		
<b>Modifications to Roles and Responsibilities:</b> None.						
<b>New MS4 Outfalls:</b>	<b>Potomac River (PL28)</b>		<b>Cameron Run (PL26)</b>		<b>Four Mile Run (PL25)</b>	
	Outfalls	Drainage	Outfalls	Drainage	Outfalls	Drainage
	None	None	None	None	None	None

The organizational chart below outlines City departments with major stormwater management functions or responsibilities. An Environmental Industrial Unit within the Office of Building and Fire Code Administration was established in 2009 and reported in the PY1 Annual Report. Additional information about each department is found in the MS4 Program Plan.

### Stormwater Management Organizational Chart



While stormwater activities and functions are divided among several different departments and divisions, the Office of Environmental Quality (OEQ) has primary responsibility for coordinating compliance with the permit.

### 3 Compliance with Year 5 Permit Conditions

The following provides the status of PY5 conditions for each of the six minimum control measures (MCMs). This includes all ongoing BMPs. One-time BMPs implemented in PY1, PY2, PY3, and PY4 are not included, and may be found in previously submitted annual reports. Each section begins with a summary table describing the task, the implementation year, the measurable goal as described in the City’s adopted MS4 Program Plan, and task status. Following the summary table is a more detailed discussion of the implementation status of each task. Additional support materials are located in the appendices.

#### 3.1 Public Education and Outreach (MCM #1)

The following table is a summary of activities for Minimum Control Measure #1 and their completion status. Additional detail is provided after the table and in Appendix A.

BMP	Year	Measurable Goal	Status
<b>1A General Public Education and Outreach</b>			
Distribute brochure at community events.	All	Document efforts to engage and educate citizens, including the number of events attended and an estimate of the number of individuals reached.	✓ Complete
Include environmental/water quality article in FYI Alexandria.	2-On	Document publication of an environmental/water quality article in FYI Alexandria.	✓ Complete. Note that the format for these messages has shifted from FYI Alexandria to Alexandria eNews.
Continue participation in regional education programs.	All	Summarize activities of the Clean Water Partners program and the results of any assessments of the program’s effectiveness.	✓ Complete
<b>1B Stream Crossing Signs</b>			
Maintain stream crossing signs.	All	Document maintenance of the signs for the annual report.	✓ Complete
<b>1C Text Messages and PSAs for Cable TV</b>			

<b>BMP</b>	<b>Year</b>	<b>Measurable Goal</b>	<b>Status</b>
Implement cable TV text message and PSAs.	All	Document the PSAs and scrolling text message.	✓ Complete
<b>1D Stormwater BMP Signage</b>			
Implement stormwater BMP signage.	All	Provide examples of signage and labeling that has occurred, if any.	✓ Complete
<b>1E Storm Drain Inlet Marking</b>			
Implement storm drain inlet marking.	All	Provide the number of storm drain markers installed and the number of groups involved in storm drain marking projects.	✓ Complete
<b>1F Water Quality Website</b>			
Host water quality website.	All	Provide information on the website and a snapshot of the page.	✓ Complete
Conduct comprehensive website assessment and update accordingly.	5	Provide description of the assessment process and changes, if any, made to the website	✓ Complete
<b>1G Education Concerning Fecal Coliform Bacteria</b>			
Distribute pet waste brochure and post cards at appropriate events.	All	Summarize activities and report the number of brochures and post cards distributed to City residents.	✓ Complete
Distribute pet waste brochure at the animal shelter.	All	Report the number of brochures distributed at the animal shelter.	✓ Complete
<b>1H Letter to Lawn Care, Carpet and Duct Cleaning, and Painting Businesses</b>			
No new or ongoing BMPs for PY5.	NA	NA	NA
<b>1I Education Concerning PCBs</b>			
No new or ongoing BMPs for PY5	NA	NA	NA
<b>1J Outreach to Minorities</b>			
Distribute bi-lingual brochures at appropriate events.	All	Summarize outreach activities where City staff distributed bi-lingual education information.	✓ Complete

## BMP 1A General Public Education and Outreach

The City implemented the following BMPs during PY5 in accordance with the MS4 Program Plan:

- The City updated the general education brochure in PY1 and continued to distribute it at community events and meetings. See below for a table of events and meetings.
- Previously, the City included a water quality related article in the City's *FYI Alexandria* newsletter. That newsletter is no longer published regularly. Instead, Alexandria eNews is used to reach a larger audience on a more frequent basis. Alexandria eNews sent out on October 19, 2012, November 1, 2012, March 29, 2013, and April 1, 3, 18, and 27 included information on upcoming watershed and stream cleanup opportunities, Alexandria Earth Day activities, spring cleanup, and recycling tips. The eNews alerts are included in Appendix A.
- The City continues to participate in the Northern Virginia Regional Commission's Clean Water Partners program through its online and radio campaign. The website, Only Rain, can be found at [www.onlyrain.org](http://www.onlyrain.org). In 2013, the Northern Virginia Clean Water Partners used television, print, internet advertising and the Only Rain website to distribute messages linked to specific stormwater problems, such as proper pet waste disposal, over fertilization of lawns and gardens and proper disposal of motor oil. Starting April 2013, four commercials featuring messages on the importance of picking up pet waste and general household stormwater pollution reduction measures aired on twelve cable TV channels, including three Spanish speaking channels a total of 1,530 times. These TV ads reached approximately 3,768,412 Northern Virginia residents and resulted in over 400 visits to the [www.onlyrain.org](http://www.onlyrain.org) website. The campaign also featured banner ads on the Comcast website that promote the same messages as the cable TV ads.

### Measure of Effectiveness

The goal of this BMP is to reach a wide audience with a general pollution prevention message as well as specific actions that can be taken to reduce pollution. The following table summarizes the City's public education and outreach activities and events where information on pollution prevention and water quality were distributed. Appendix A contains examples from the City's general education program.

Activity	Description	Date	Participants (Approx.)
Bamboo Removal	Students from St. Stephens/St. Agnes Home Room Kids	9/4/2012	11
John Adams Elem. School Open House	Distributed water quality and watershed related materials, to include water bottles and pet waste bag dispenser giveaways.	9/18-19/2012	268 parents signed in
Capital Bikeshare Launch	Distributed water quality and watershed related materials, to include water bottles and pet waste	9/19/2012	85

<b>Activity</b>	<b>Description</b>	<b>Date</b>	<b>Participants (Approx.)</b>
	bag dispenser giveaways.		
Green Building Workshop	“Greening Your Congregation” (held at a church)	9/23/2012	15
Two Stormwater Presentations	T.C. Williams ESL Environmental Science Class	10/4/2012	50
Aqua-Shield Presentation	Organized a presentation on stormwater quality practice	10/12/2012	10
Mentoring	Two T.C. Williams H.S. students for Science Fair project on macro-invertebrates in streams	10/2012 - 12/2012	2
Stewards of Clean Water	Stormwater pollution and the Bay (2 <sup>nd</sup> grade)	11/19/2012	70
Science Fair	Acted as judge	1/8/2013	10
Making Your Yard Sustainable Workshop Series	Capturing Stormwater for Irrigation and Reducing Runoff (presentation)	2/2/2013	40-50
Presentation at EPC Meeting	New State Stormwater Regulations, Water Resources, Chesapeake Bay	2/4/2013	13
Presentation to Federation of Civic Associations	“Stormwater Changes” related to revised Environmental Management Ordinance and retrofits to meet the Chesapeake Bay TMDL	2/27/2013	20
Amphibian Program at Jerome “Buddie” Ford Nature Center	Amphibians and their role as bioindicators: used Enviroscape nonpoint source table-top model to describe contaminants that enter into amphibian habitats	3/20/2013	7
RPCA After School Program	Nonpoint source pollution discussion and use of Enviroscape table-top model	3/21/2013	9
Conference Presentation	Society for Ecological Restoration: “Strawberry Run Stream Restoration – The Good, Bad and Downright Ugly”	3/29/2013	50
Field Trip	Strawberry Run Stream Restoration	3/30/2013	20
Citizens Academy	Session 5 included information on stormwater quality, entitled “Environmental Quality Controls”	4/4/2013	22
Presentation to the Brookville-Seminary Valley Civic Assn.	“Stormwater Changes” related to revised Environmental Management Ordinance and retrofits to meet the Chesapeake Bay TMDL	4/8/2013	30
Community Forum	“Home Ownership: It’s All About the Green”	4/18/2013	80
Alexandria Earth Day	Annual event sponsored by the City of Alexandria and supported by a wide range of local community groups with a focus on environmental stewardship, including stormwater pollution prevention.	4/20/2013	2,300
Earth Force Environmental Action Showcase	Focused on what youth can do to protect water quality and the environment.	4/24/2013	125

Activity	Description	Date	Participants (Approx.)
Bike to Work Day	Booth at the event that provided water quality and Eco-City Alexandria information	5/17/2013	576 registrants
Maury Elem. School Science Night	Nonpoint source water pollution and water resources	5/22/2013	70
Rain Barrel Workshop	As a partner in the Northern Virginia Rain Barrel Program, the City sponsored build your own rain barrel workshop at the Lee Center in Alexandria	6/8/2013	18

Also included in Appendix A is a report from the Clean Water Partners with information on the effectiveness of the program. Specifically, the program conducted an online poll survey of 500 Northern Virginia residents to determine the effectiveness of on-line efforts and a series of TV ads to reveal any changes in behavior, and to aid in directing the future efforts of the campaign. Approximately 20% of the 500 respondents recalled hearing or seeing advertisements on the internet or on TV about reduction water pollution. The effectiveness of the messaging in changing behavior depended on the pollutant in question with 3% saying they changed behavior with regard to dog waste, 4% are more careful with motor oil, and 13% saying they changed behavior with regard to fertilizers. Approximately 80% of respondents said that they were already doing what was necessary to protect water quality with regard to pet waste as opposed to 30% in previous surveys. Finally, over half of the respondents recognized the Only Rain Down the Storm Drain logo.

### **BMP 1B Stream Crossing Signs**

The City previously installed 33 signs at 18 locations where roads cross major waterways. In addition, the City installed nine signs at major stream crossings on hike/bike trails. The signs promote awareness of Alexandria’s surface water resources, water bodies, and drainage basins.

#### Measure of Effectiveness

The City continues to actively maintain these signs so that they are in good condition.

### **BMP 1C Text Messages and PSAs for Cable Television**

The City continued to run a pollution-prevention message throughout the year on the Alexandria government channel (Channel 70) similar to that documented in previous years, as part of comprehensive City information. The message provides information on the importance of water quality protection efforts and where residents can obtain additional information.

#### Measure of Effectiveness

During PY5 the Channel 70 pollution prevention message continued to run approximately 10-30 times a day, seven days a week.

## BMP 1D Stormwater BMP Signage

This task requires the City to implement, as a condition on new and redevelopment projects, a program to provide signage or labeling identifying new surface structural stormwater BMPs.

### Measure of Effectiveness

One new surface structural stormwater BMP was installed during PY5 and a photo of the BMP sign can be found in Appendix A. See Section 13 for a list of all stormwater BMPs installed in PY5.



## BMP 1E Storm Drain Inlet Marking

The City continues to require new development and redevelopment to mark storm drain inlets within the development and located within 50 feet of the project with information on the drainage destination of waters entering the structures. In addition, City staff continues to promote the storm drain marking program at community events and to work with interested residents to implement storm drain marking.

### Measure of Effectiveness

In addition to those installed as a requirement of development or redevelopment, storm drain marking projects completed in PY5 included the following:

Group	Date	Watershed	Markers
McGovern Eagle Scout Project / Boy Scout Troop	5/25/2013	Backlick Run/Holmes Run/Cameron Run	273
Volunteers / Residents	6/2/2013	Four Mile Run	182
		<b>Total</b>	<b>455</b>

## BMP1F Water Quality Web Site

The City continues to host a stormwater quality web page with updates provided frequently. The page is located at <http://alexandriava.gov/tes/oeq/info/default.aspx?id=3844>. Staff continues to add new content to the site and update existing content. In addition, the Office of Environmental Quality web page (<http://alexandriava.gov/Environment>) has a calendar for upcoming environmental events and a “Check This Out!” section that are updated by OEQ staff to highlight upcoming events or important information. These tools are used to promote volunteer stream clean-ups, green building workshops; “build your own” rain barrel workshops, pre-made rain barrel sales events, and other water quality related topics. Users may also sign up for *Alexandria eNews* email alerts with a specific focus on environmental and water quality issues, as well as information on volunteer opportunities, tips, and workshops.

During this reporting period, OEQ created a new separate page under the office’s main page entitled “Water Quality Regulations and Permitting.” This page has information and external links for the Clean Water Act, Virginia stormwater permitting programs (MS4 and CSS permits), and Chesapeake Bay Preservation Act. It also contains information and links for the City’s Environmental Management and Erosion and Sediment Control ordinances.

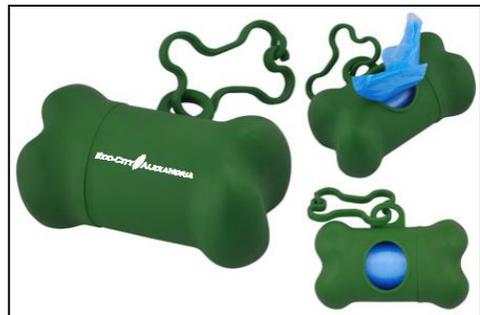
Finally, the City updated its online resident reporting capabilities (See BMP 3A). The City’s new “Call, Click, Connect” Customer Relations Management (CRM) initiative is prominent on the City’s main page, and subordinate pages.

### Measure of Effectiveness

A snapshot of the web site is found in Appendix A.

### **BMP1G Education Concerning Fecal Coliform Bacteria**

The City distributed its pet owner education brochure at all events in BMP 1A and also made the brochure available at Duncan Library, Show of Hands Crafts, and St. Elmo’s Coffee. In addition, the City animal shelter distributes this information to anyone adopting a pet. According to the Animal Welfare League of Alexandria, there were 1,082 adoptions in Alexandria during PY 5 and each new owner went home with a brochure in the adoption package. In addition to the brochures, the City distributed “dog bone” pet waste bag dispensers at a number of events.



To help address the bacteria TMDL in non-tidal Four Mile Run, the City installed a pet waste station at the Fort Ward Dog Exercise Area in PY4. This dog park is the only one located within the non-tidal Four Mile Run. Approximately 800 pet waste bags were distributed at this pet waste station. The City will assess the project and determine whether additional stations may be beneficial to address the TMDL in the action plan that must be developed under the new permit.

### Measure of Effectiveness

The City's pet owner education brochure and press release are located in Appendix A. A picture of the pet waste station is located to the right.



### **BMP1I Education Concerning PCBs**

The City is subject to a TMDL for PCBs developed for the tidal portions of the Potomac River. The City has adopted a standard condition in development special use permits (SUPs) requiring the screening for PCBs as part of the site characterization for sites that fall into the Department of Environmental Quality's identified high risk categories for PCBs. In PY2 the City developed a brochure about PCBs and why they are a concern in Alexandria. During PY3, the brochure was posted to the City's web page and continues to be found there.

### Measure of Effectiveness

The City's PCB education brochure and sample of SUP language (DSUP2012-00008, Condition #100, Page 55) are located in Appendix A.

### **BMP1J Outreach to Minorities**

The City continues to distribute bi-lingual brochures that emphasize the importance of not dumping anything into the storm drains. The bi-lingual brochure is distributed at all events in BMP 1A and the City's Annual Earth Day event. Census data for 2010 showed approximately 28% of City residents speak English less than "very well." Of that population, over 50% are Spanish speaking with a wide range of other languages making up the remaining amount. As a result, by focusing on both English and Spanish language materials, the City is able to effectively reach most of the City's population.

### Measure of Effectiveness

The bi-lingual brochure is found at <http://alexandriava.gov/tes/oeq/info/default.aspx?id=3876> and in Appendix A. In PY1, the City developed a map showing high densities of Spanish-speaking residents to help focus minority outreach efforts.

### 3.2 Public Involvement/Participation (MCM #2)

The following table is a summary of activities for Minimum Control Measure #2 and their completion status. Additional detail is provided after the table and in Appendix B.

BMP	Year	Measurable Goal	Status
<b>2A Public Notice and Participation</b>			
Meet all public notice requirements.	All	Document public notices, minutes, and other actions as appropriate.	✓ Complete
Post annual reports on web site.	All	Document that annual reports have been placed on the website.	✓ Complete
<b>2B Staff Support and Annual Water Quality Update to the EPC</b>			
Provide staff support to the Environmental Policy Commission.	All	Provide annual reports of the EPC as available and any relevant meeting minutes.	✓ Complete
Provide annual water quality update to the EPC.	All	Document the annual EPC update and provide a summary of any feedback.	✓ Complete
<b>2C City Sponsorship of Earth Day</b>			
Sponsor annual Alexandria Earth Day.	All	Document sponsorship and participation in Earth Day.	✓ Complete
<b>2D City Promotion of Clean Up Events</b>			
Sponsor, promote, and participate in clean up events by non-profits and the City.	All	Document promotion of events.	✓ Complete

#### BMP 2A Public Notice and Participation

The City implemented the following BMPs during PY5 in accordance with the MS4 Program Plan.

- The City met all requirements with respect to public notice and comments regarding the stormwater management program and permit requirements. There were no changes relating to the City's Code that would require public notice.
- The City has posted the MS4 Program Plan and the PY4 Annual Report on the stormwater web site.

Once the PY5 annual report is finalized and accepted by DEQ, it will be posted to the web site and distributed to the Environmental Policy Commission.

### Measure of Effectiveness

A screen shot of the stormwater web page that shows the on-line link to the MS4 Program Plan and the PY4 Annual Report is shown below.

**Stormwater Management**

**Municipal Separate Storm Sewer System (MS4) Stormwater Program Plan**  
Under the Virginia Stormwater Management Program (VSMP) permit regulations, the City is required to control stormwater pollution to the maximum extent practicable and to develop a pollution prevention plan – known as a Municipal Separate Storm Sewer System (MS4) Program Plan. The City's initial plan was developed in 2003 and was revised in 2008 to reflect changes to the City's latest state permit - effective July 2008. The permit contains Six Minimum Control Measures (MCMs) listed below. The City has developed appropriate and effective Best Management Practices (BMPs) to control stormwater pollution to the maximum extent practicable. The [MS4 Program Plan](#) contains the BMPs that address the MCMs, which are discussed in some detail here.

**MS4 Annual Report for 2011-2012**  
Also under the Virginia Stormwater Management Program (VSMP) permit regulations, the City is required to submit an annual report to the Virginia Department of Conservation and Recreation (DCR). The report provides details of the BMPs the City performs as part of the MS4 Program Plan to meet or exceed the control measures (MCMs) of the MS4 Phase II General Permit. The reporting period covered by this year's annual report is from July 1, 2011 to June 30, 2012.

[Alexandria MS4 Annual Report Main Body](#)  
[Alexandria MS4 Annual Report AppendixA](#)  
[Alexandria MS4 Annual Report AppendixB](#)  
[Alexandria MS4 Annual Report AppendixC](#)  
[Alexandria MS4 Annual Report AppendixD](#)  
[Alexandria MS4 Annual Report AppendixE](#)  
[Alexandria MS4 Annual Report AppendixF](#)

## **BMP 2B Staff Support and Annual Water Quality Update to EPC**

The Office of Environmental Quality continues to provide ongoing staff support to the Environmental Policy Commission. Appointed by City Council, the EPC makes recommendations on environmental issues, including stormwater management. In order to ensure that the EPC provides a balanced perspective, its members represent predetermined stakeholder groups and professional backgrounds.

This BMP requires an annual update to the EPC on water quality programming in the City. This is conducted at the same time as the review of the EPC's annual report, which occurred on July 15, 2013. On February 4, 2013, staff provided a presentation to the EPC entitled "Stormwater Changes," which discussed the new Virginia Stormwater Management Regulations and the Chesapeake Bay TMDL retrofit requirements in the new MS4 permit. The EPC has continued working to implement a strategic collaborative planning process called *Eco-City Alexandria*. This effort includes water quality and had an aggressive public involvement and engagement component.

### Measure of Effectiveness

Appendix B contains the EPC's FY 2012 annual report and the agenda for the July 15, 2013 EPC meeting.

## **BMP 2C City Sponsorship of Earth Day**

The City continues to be an active sponsor of the Alexandria Earth Day event. The City’s support for this event serves to strengthen private environmental stewardship efforts and provides citizens with a broad range of educational opportunities. The website for official Alexandria Earth Day activities is [www.alexearthday.org](http://www.alexearthday.org). Earth Day celebrations were held on April 20, 2013.

### Measure of Effectiveness

Approximately 2,300 people attended the 2013 Alexandria Earth Day event. City staff was on hand to distribute materials and literature to educate residents about water quality and the importance of pollution prevention. They also distributed educational giveaway items, such as Eco-City branded water bottles and individual pet waste dispensers. The City’s press release and the Earth Day 2013 poster are included in Appendix B.

## **BMP 2D Promotion of Clean Up Events**

The City continued to partner with non-profit volunteer organizations to promote, organize, and encourage stream clean-up events.

### Measure of Effectiveness

The City sponsored or helped promote the following stream cleanup events. The efforts resulted in the removal of over 148 bags of trash and 650 pounds of loose debris from City streams and open space.

<b>Activity</b>	<b>Date</b>	<b>Volunteers</b>	<b>Bags Removed</b>
Virginia Clean Waterways Clean Up (International Coastal Clean Up) Oronoco Bay Park	10/20/2012	27	23
Publicize the Annual Holmes Run Fall Cleanup	11/3/2012	Not Counted	Not Counted
2013 Potomac River Watershed Cleanup at Four Mile Run (3700 Commonwealth Avenue location)	4/6/2013	26	48 bags and 300 lbs loose debris
2013 Potomac River Watershed Cleanup at Four Mile Run (Mount Avenue location)	4/6/2013	72	77 bags and 358 lbs loose debris

### 3.3 Illicit Discharge Detection and Elimination (MCM #3)

The following table is a summary of activities for Minimum Control Measure #3 and their completion status. Additional detail is provided after the table and in Appendix C.

BMP	Year	Measurable Goal	Status
<b>3A Nuisance Abatement Hotline and Web Based Reporting Form</b>			
Maintain Nuisance Abatement Hotline and web based reporting form.	All	Provide a snapshot of the Nuisance Abatement Hotline web page and web based reporting form. Document the number and types of incidents handled.	✓ Complete
<b>3B Household Hazardous Waste (HHW) Program</b>			
Provide HHW and used oil collection services.	All	Provide copies of the program web site and brochures. Document program participants and the number of barrels accepted.	✓ Complete
<b>3C Prohibition on Illicit Discharges</b>			
Enforce prohibition on illicit discharges (Chapter 13 of City Code).	All	Report number of discharges and provide a narrative on how they were controlled or eliminated. Review procedures and make recommendations accordingly.	✓ Complete
<b>3D Illicit Disposal Hazards Education for City Employees</b>			
Provide new and existing staff with pollution prevention information through the “My City” program.	All	Provide copy of information given to new employees.	✓ Complete
<b>3E Mapping of All Permitted Stormwater Discharges</b>			
Keep map of permitted discharges up-to-date and distribute to field crews.	All	Provide up-to-date map and list of state-permitted stormwater discharges.	✓ Complete
<b>3F Prohibition of Outdoor Cleaning of Restaurant Equipment</b>			
Enforce prohibition on outdoor cleaning of restaurant equipment.	All	Document example SUP, if one has been done in the reporting period.	✓ Complete

<b>BMP</b>	<b>Year</b>	<b>Measurable Goal</b>	<b>Status</b>
<b>3G Storm Sewer System Map</b>			
Maintain an up-to-date storm sewer map.	All	Provide a summary of annual activities and a copy of the storm sewer outfall map.	✓ Complete
<b>3H Outfall Reconnaissance</b>			
Conduct outfall reconnaissance as required by the permit.	2-On	Summarize outfall reconnaissance activities, including the total number of outfalls inspected.	✓ Complete
<b>3I High Risk Facility Evaluation for Bacteria and PCBs</b>			
Develop and implement schedules for minimizing any discharges discovered at “high risk” facilities.	5	No “high risk” facilities were identified during the assessment conducted in PY2. Therefore, no additional action is required.	✓ Complete
<b>3J Estimate of WLA Discharge for Bacteria and PCBs</b>			
Report WLA discharges to City streams.	All	Provide required discharge estimates.	✓ Complete

### **BMP 3A Nuisance Abatement Hotline and Web Based Reporting Form**

The City continues to maintain a Nuisance Abatement Hotline (703-836-0041), which is prominently displayed in many areas on the City’s web site. In addition, the City has on-line complaint reporting via email or a web-based form, which includes information on stormwater management. Branded as “Call, Click, Connect” and part of a larger customer relations initiative to provide integrated e-governance tools, the reporting form can be accessed through the “Call, Click, Connect” icon found on the City’s homepage. There is also a perpetual tab that displays on every subsequent webpage. Complaints are handled jointly through the Office of Environmental Quality and the Environmental and Industrial Unit (EIU), which is part of the Fire Department (following a reorganization and creation of the Department of Code Administration). “Call, Click, Connect” is the City’s dedicated Customer Relations Management (CRM) portal and integrates Cityworks™ asset management software into the process. In addition to being an integral part of this resident reporting system, the software is implemented throughout the Department of Transportation & Environmental Services to create work orders and track metrics for maintenance and other activities.

#### Measure of Effectiveness

The City (through OEQ and EUI reporting mechanisms) handled 59 water quality and illicit discharge related complaints or incidents in PY5. OEQ receives complaints directly from Cityworks and/or enters the information received via email, phone or other source. The EIU is responsible for entering this information into the Permit Plan database when both OEQ and EIU are actively involved, while EIU and OEQ coordinate on response and follow-up. OEQ receives and enters data into Cityworks for incidents handled solely by their office. Section 11 provides a summary of the complaints and a narrative on how each discharge was controlled or eliminated. Unlike previous years where the most frequent complaints involved petroleum, illicit wash water discharges were the most common complaint/problem in PY5. Screen shots of the Call, Click, Connect web-based reporting form, Permit Plan and Cityworks are provided in Appendix C.

### **BMP 3B Household Hazardous Waste Program**

The City continues to maintain a vigorous HHW program. The barrels of HHW collected increased in FY2013, in line with the overall trend of increased users throughout the permit reporting period. The web site (<http://alexandriava.gov/tes/solidwaste/info/default.aspx?id=19206>) includes information on the types of materials that may be left at the drop-off points and the schedule for drop-offs. The following table provides a snapshot of HHW program statistics:

<b>Year</b>	<b>Users</b>	<b>Barrels of HHW</b>
FY2008	4,987	-
FY2009	6,067	754
FY2010	7,059	875
FY2011	7,920	822
FY2012	7,698	702
FY2013	8,424	759

#### Measure of Effectiveness

By providing citizens with an opportunity to properly dispose of HHW, the City hopes to reduce illegal dumping. The most recent HHW program brochure is provided in Appendix C.

### **BMP 3C Prohibition on Illicit Discharges**

The purpose of this BMP is to ensure that the City has the legal tools necessary to effectively prohibit illicit discharges and to conduct necessary enforcement in the case of an illicit discharge. City Council has already adopted appropriate measures and provided documentation in previous annual reports. The City Attorney has reviewed the City Code and has determined that no additional changes are needed at this time.

#### Measure of Effectiveness

Section 11 provides a summary of illicit discharge complaints and a narrative on how each complaint was handled, including how any actual discharge was controlled or eliminated as appropriate. No pattern of illicit discharges necessitated a review of policies, procedures, or ordinances.

### **BMP 3D Illicit Disposal Hazards Education for City Employees**

The City continues to have a brochure for all City operational employees that is available on the T&ES web page and is provided to them by their supervisor during orientation and is posted in shared areas. The “My City” program is also located on the City’s intranet (available to all employees with work station access), which also includes a bullet point entitled “Illicit Discharges and Dumping to the Storm Drain System.” The “My City” program has been fully automated during PY5 and is now utilizing Cityworks™ software as an internal interface to track reports through this database. This is the same software and database used for the Call, Click, Connect initiative. The incidents are tracked and work orders can be created. Staff may also get notified of the response if requested. Also, pollution prevention and good housekeeping training under BMP 6E includes identifying illicit discharges and properly notifying staff to enter service requests to the Cityworks tracking system. See BMP 6E for more information.

#### Measure of Effectiveness

A snapshot of the “My City” program web page and training provided to T&ES-Maintenance staff and Recreation, Parks, and Cultural Activities staff is found in Appendix F.

### **BMP 3E Mapping of All Permitted Stormwater Discharges**

The City continues to maintain a map of all state-permitted stormwater discharges within the City limits. The purpose of this BMP is to provide field operations staff with a visual tool for identifying permitted and non-permitted discharges.

#### Measure of Effectiveness

A current map and spreadsheet of state-permitted stormwater discharges, current as of June 2013, is located in Appendix C.

### **BMP 3F Prohibition of Outdoor Cleaning of Restaurant Equipment**

The City continues to include in the Special Use Permit (SUP) issued for restaurant facilities a statement that says: “Kitchen equipment shall not be cleaned outside, nor shall any cooking residue be washed into the streets, alleys, or storm sewers.”

#### Measure of Effectiveness

A sample of a recently approved SUP with the appropriate language regarding restaurant equipment is found in Appendix C (SUP2013-00004: Condition #13, Page 6).

### **BMP 3G Storm Sewer System Map**

The City has developed a storm sewer system map showing all features required in the MS4 permit, including all stormwater outfalls discharging to the waters of the Commonwealth, pipes, catch basins, and inlets. During PY2, the City identified and mapped physical interconnections with MS4s operated by Fairfax County, Arlington County, and the Virginia Department of Transportation (VDOT). Notification to these MS4s of the interconnections was also sent in PY2; ahead of schedule.

#### Measure of Effectiveness

The map of physical interconnections with neighboring MS4s and letters sent to these MS4s were included in the PY2 Annual Report. The City maintains an up-to-date storm sewer system map.

### **BMP 3H Outfall Reconnaissance**

In accordance with the MS4 Program Plan, the City began its outfall monitoring program during PY2 using the prioritization process established in PY1. The City also created an internal IDDE SOP to ensure consistency in all outfall reconnaissance. The following provides a summary of the City's efforts by permit cycle:

Permit Year	PL25 Four Mile Run		PL28 Direct Potomac		PL26 Cameron Run	
	MS4 Plan	Done	MS4 Plan	Done	MS4 Plan	Done
PY2	14	16	2	2	25	37
PY3	26	28	2	2	50	49
PY4	26	31	2	2	50	49
PY5	26	26	2	2	50	50
<b>Total</b>	<b>92</b>	<b>101</b>	<b>8</b>	<b>8</b>	<b>175</b>	<b>185</b>

During PY5 a total of 78 outfalls were inspected. Note that during this permit cycle, nine additional outfalls were inspected in Four Mile Run and ten additional outfalls were inspected in Cameron Run, for a total of 294 outfalls inspected in the City instead of the required 275.

#### Measure of Effectiveness

A detailed report of outfalls inspected, the results of each inspection, and any required follow-up activities can be found in Appendix C.

### **BMP 3I High Risk Facility Evaluation for Bacteria and PCBs**

Under the City's permit, all properties owned or operated by the City were evaluated in PY2 for potential sources of TMDL wasteload allocations, including PCBs City-wide and fecal coliform bacteria in the non-tidal portion of Four Mile Run. Based on a detailed analysis, the City

determined that it does not have any facilities that should be categorized as a “high risk” for PCBs or fecal coliform bacteria.

Measure of Effectiveness

No additional site review and characterization is required under this BMP since the City determined that no facilities are categorized as “high risk” for PCBs or fecal coliform bacteria. Details of the assessment were provided in the PY2 Annual Report. Since no facilities were categorized as “high risk”, there is no development and implementation of schedules required in PY5.

**BMP 3J Estimate of WLA Discharge for Bacteria and PCBs**

In accordance with the requirements of Section I B 9 of the General Permit, the City must conduct an annual characterization that estimates the volume of stormwater discharged in cubic feet, and the quantity of the pollutant identified in any WLA discharged in a unit consistent with any WLA as of the effective date of the permit. For Alexandria, this includes non-tidal Four Mile Run, which is impaired for fecal coliform, and the tidal Potomac River drainage area, which is impaired for PCBs.

Measure of Effectiveness

This requirement is addressed in Section 10.

**3.4 Construction Site Stormwater Runoff Control (MCM #4)**

The following table is a summary of activities for Minimum Control Measure #4 and their completion status. Additional detail is provided after the table and in Appendix D.

BMP	Year	Measurable Goal	Status
<b>4A Maintain DCR Erosion and Sediment Control Program Consistency</b>			
Maintain E&SC program consistency with State regulations.	All	Document the City’s consistent E&SC program, based on VDCR standards.	✓ Complete
<b>4B VSMP Permits for Construction Activities</b>			
Require construction site owners/operators to obtain VSMP stormwater construction permits.	All	Provide copies of modified checklists.	✓ Complete
<b>4C Citizen Complaint Reporting Mechanism</b>			

BMP	Year	Measurable Goal	Status
Maintain citizen complaint tracking system.	All	Report number of discharges and provide a narrative on how they were controlled or eliminated.	✓ Complete
<b>4D Land Disturbing Activities Tracking System</b>			
Collect all required information on land disturbing activities.	All	Summarize annual land disturbing activities.	✓ Complete

#### **BMP 4A Maintain DCR Erosion and Sediment Control Program Consistency**

The City’s Erosion and Sediment Control Program has been determined to be “consistent” with State regulations by the Virginia Soil and Water Conservation Board. Staff from DCR performed a review of the City’s Erosion and Sediment Control Program in December 2006. The City entered into a Corrective Action Agreement (CAA) with DCR to correct minor ordinance-related issues after which the Board found the program to be fully consistent.

##### Measure of Effectiveness

The City of Alexandria’s E&SC program consistency status has been previously documented on DCR’s website. The information was historically contained at [www.dcr.virginia.gov/stormwater\\_management/eslpr.shtml](http://www.dcr.virginia.gov/stormwater_management/eslpr.shtml). That link is no longer active and now redirects to DEQ’s website, given that DEQ has taken over MS4 permitting and administering the local program. At the time of reporting, the information was unavailable while website information is being transitioned.

#### **BMP 4B VSMP Permits for Construction Activities**

This BMP requires the City to ensure that all construction site owners and operators secure and implement a separate VSMP stormwater permit for construction activities. The City continues to include language in the plan review checklist stating that a stormwater permit is required. This language was further modified in PY1 to state that a VSMP permit must be secured prior to release of the final site plan. See below:

*All required permits from Virginia Department of Environmental Quality, Environmental Protection Agency, Army Corps of Engineers, Virginia Marine Resources must be in place for all project construction and mitigation work prior to release of the final site plan. This includes the state requirement for a VSMP permit for land disturbing activities greater than 2500 SF.*

The City’s Erosion and Sediment Control preliminary and final checklists were also modified in PY1 to check for a VSMP stormwater permit while the Construction & Inspection Division conducts the initial field visit for the pre-construction meeting. The City has also included this requirement on its

website (see next page) under “Construction Site Stormwater Runoff Control” at <http://alexandriava.gov/tes/oeq/info/default.aspx?id=3844>.

#### **Construction Site Stormwater Runoff Control**

Due to earth-disturbing operations, construction sites can contribute more sediment to streams than can be deposited naturally during several decades. The resulting sedimentation and the contribution of other pollutants from construction sites can harm the City's streams, the Potomac River and the Chesapeake Bay. Construction site runoff control is key to preventing sediment from earth-disturbing operations, as well as construction debris, from contaminating the City's streams. Developers must keep sediment onsite. They must also control all construction site waste such as litter generated by job site workers and equipment waste materials such as used parts and oils.

Controlling sediment and debris at construction sites is crucial to protecting the environment, mitigating flooding by keeping this material out of our streams and storm drain system and ensuring safer vehicular travel by keeping mud out of the streets. This practice also reduces citizen complaints about mud in the street and loose litter.



The City's efforts to control stormwater runoff from construction sites are derived from the State's Erosion & Sediment Control Program and Chesapeake Bay Preservation Act. Local compliance of these two programs requires any construction project that disturbs at least 2,500 square feet must have an Erosion and Sediment Control Plan. Additionally, the Virginia Department of Conservation and Recreation (DCR) Stormwater Management Program (VSMP) requires the project to have a Stormwater Pollution Prevention Plan (SWPPP) related to the General Permit for Discharges from Construction Activities. Once the SWPPP is prepared, a registration statement for coverage under the VSMP Construction General Permit must be submitted to the Virginia Department of Conservation and Recreation (DCR). Currently the City seeks to ensure that the project has coverage under a VSMP Permit, but DCR administers the VSMP permit.

#### Measure of Effectiveness

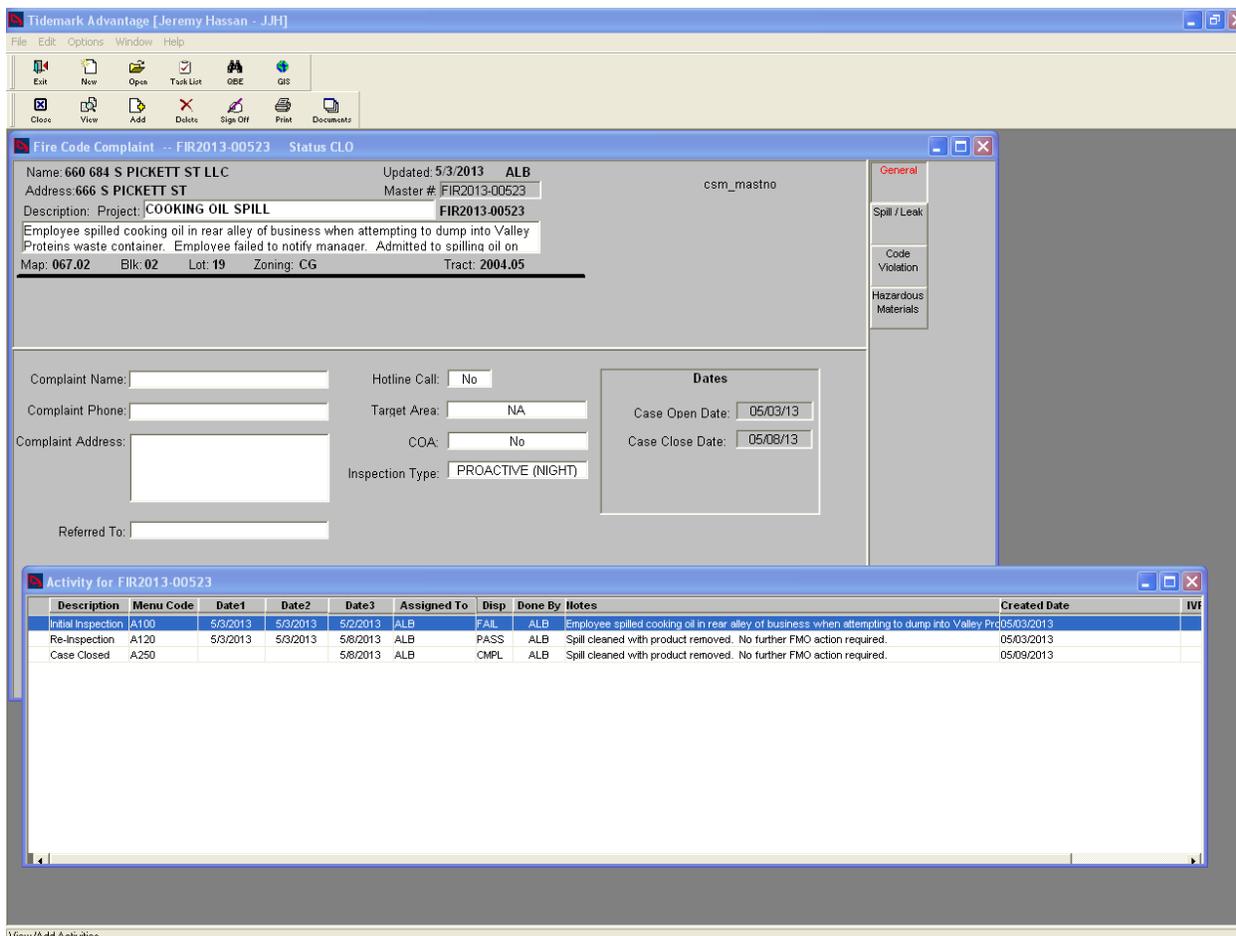
The City's Erosion and Sediment Control checklist and a representative copy of the plan note to meet this requirement were provided in the PY2 Annual Report.

#### **BMP 4C Citizen Complaint Reporting Mechanism**

The City continues to maintain a mechanism to collect and process citizen complaints with regard to E&SC and illicit discharges and dumping (See BMP 3A). Complaints can be reported through the City's 24-hour Nuisance Abatement Hotline or on the City's website using Call, Click, Connect (see BMP3A). Residents may also call or email the Construction, Management & Inspection Division (CM&I), OEQ, or the City's 311 Call Center directly. Complaints are logged into the City's PERMIT-PLAN system (Tidemark Advantage) by CM&I, or into Cityworks™ if received by OEQ. Web-based reporting through Call, Click, Connect is captured via Cityworks and is routed to OEQ. The City has implemented a 311 Call Center which uses Cityworks as an add-on for the Customer Relations Management software. As mentioned earlier, Cityworks is being employed for asset management in the City. Reports for erosion and sediment control issues can be generated out of either system.

#### Measure of Effectiveness

Section 11 provides a summary of these complaints and a narrative on how each discharge was controlled or eliminated. Below is a screen shot of the Cityworks complaint entry form. Tracking and reporting of illicit discharges and dumping are discussed in BMP 3A.



## BMP 4D Land Disturbing Activities Tracking System

The City is required to report the number of regulated land disturbing activities and total disturbed acreage annually. These reports are also filed on a monthly basis with state regulators.

### Measure of Effectiveness

Section 12 provides a summary of annual land disturbing activities and total disturbed acreage.

### 3.5 Post Construction Stormwater Management (MCM #5)

The following table is a summary of activities for Minimum Control Measure #5 and their completion status. Additional detail is provided after the table and in Appendix E.

BMP/Task	Year	Measurable Goal	Status
<b>5A BMP Data Tracking System</b>			
Track BMP information required for reporting.	All	Provide a spreadsheet of all BMPs with information required by DCR.	✓ Complete
<b>5B Implement BMP Maintenance Agreements</b>			
Execute BMP maintenance agreements.	All	Provide a sample of a properly executed BMP agreement.	✓ Complete
<b>5C Implement Environmental Management Ordinance</b>			
Implement the City's Environmental Management Ordinance.	All	Document consistency by the Chesapeake Bay Local Assistance Board.	✓ Complete
<b>5D Evaluate BMP Design Guidelines</b>			
Continue to evaluate BMP guidelines and incorporate into City documents as appropriate.	All	Summarize changes to standards and provide update on incorporating LID into the Northern Virginia BMP Handbook.	✓ Complete
<b>5E BMP Facility Inspection and Enforcement</b>			
Inspect all BMP facilities for proper operation at least once during the permit period.	All	Document the number of BMPs inspected each year and provide statistics on number of facilities requiring follow-up action.	✓ Complete
Create a list of BMPs that should be inspected more frequently and establish an inspection schedule.	5	Provide a spreadsheet of private and public BMPs in the City based on type. Document inspection frequency based on best practices, Virginia BMP Clearinghouse and manufacturers' recommendations.	✓ Complete

### **BMP 5A BMP Data Tracking System**

The City has developed a system to track all permanent structural BMPs installed in the City and to collect information required under Section II B 5 b (6) of the General Permit.

#### Measure of Effectiveness

All required information for new facilities brought on line in PY5, including the types of BMPs, location, discharging water body, and number of acres treated, is provided in Section 13. A map of the City's BMPs is provided in Appendix E.

### **BMP 5B Implement BMP Maintenance Agreements**

The City continues to require the proper recordation and distribution of executed stormwater BMP maintenance agreements to ensure long term operation and maintenance of new BMPs. In addition, staff has also created a BMP maintenance vendors list for use by facility owners and operators.

#### Measure of Effectiveness

A copy of a properly executed BMP maintenance agreement during PY5 is located in Appendix E.

### **BMP 5C Implement Environmental Management Ordinance**

The Chesapeake Bay Local Assistance Board (now replaced by the Virginia Soil and Water Conservation Board) designated the City's Environmental Management Ordinance and related programs to be fully consistent with Phase I and II of the Chesapeake Bay Preservation Area Designation and Management Regulations during the latest compliance evaluation on September 17, 2007. The City has implemented all actions consistent with Phase III activities. DCR completed their review and the letter of approval is included in Appendix E. The City continues to provide annual data that demonstrates compliance through the Chesapeake Bay Preservation Area Annual Assessment of Activity.

The City is in the process of updating the Environmental Management Ordinance, along with policies, checklist and procedures, to meet the new Virginia Stormwater Management Regulations and administer the VSMP at the local level.

#### Measure of Effectiveness

Specific information on the City's consistency status was previously located at a webpage managed by DCR. Information was downloaded from the website and can be found in Appendix E. At the time of this report, the webpage was inoperative due to information being moved from the DCR to DEQ.

The City provided an on-time submittal of the Local Stormwater Management Program "Substantive Progress" Application to DCR staff for review and determination if a 12-month extension would be

granted from the June 13, 2013 deadline. The City received a satisfactory review and was granted the extension. A draft final Local Stormwater Management Program application is due to DEQ by December 15, 2013 and the final application is due no later than April 1, 2014. The anticipated “go-live” date to implement the changes and administer the program as a local VSMP authority is July 1, 2014.

### **BMP 5D Evaluate BMP Design Guidelines**

No new changes have been made to the City’s design and performance standards. As a result of the new Virginia Stormwater Management Regulations, BMP design has been standardized in the form of the Virginia BMP Clearinghouse. The City will use the Environmental Management Ordinance update process and VSMP Local Program application to assess if local standards should differ from the Clearinghouse, and whether the City wants to request modifications to the design standards. The City has also adopted a Green Building Policy to encourage development to meet green building standards such as LEED certification or equivalent, which includes stormwater management. The policy was included in the PY2 Annual Report.

### **BMP 5E BMP Facility Inspection and Enforcement**

The MS4 Program Plan commits the City to inspecting all stormwater management facilities at least once during the five year permit window. The number of facilities installed at the beginning of the permit cycle was 352. Since that time, additional facilities have been constructed (19 in PY2 and PY3, 61 in PY4, and 17 in PY5). These will be inspected during the next permit cycle. The City inspected 63 stormwater management facilities in PY5. In PY1, PY2, PY3 and PY4, 311 facilities were inspected, meaning that all facilities installed prior to the permit cycle have been inspected. This means the City has met the requirement to inspect all facilities during the five year permit window. The City provides pre- and post-inspection letters as well as a BMP maintenance brochure to each owner.

The City has a new requirement for PY5 to create a list of BMPs that should be inspected more frequently and to establish an inspection schedule. The City used best professional judgment, field observations and experience, manufacturers’ specifications, EPA guidance and information from the Virginia BMP Clearinghouse to determine a routine inspection frequency for BMPs based on type and use. This list will be used as reference to inform the frequency of required inspections for the recorded inspection schedules required to be provided by the owner under the new state stormwater regulations.

#### Measure of Effectiveness

A spreadsheet showing the results of facilities inspected in PY5 is located in Appendix E. Of the 62 facilities inspected, 29 required follow up maintenance.

A spreadsheet showing the number of BMPs per type in the City and the suggested inspection frequency for each type is located in Appendix E.

### 3.6 Pollution Prevention/Good Housekeeping for Municipal Operations (MCM #6)

The following table is a summary of activities for Minimum Control Measure #6 and their completion status. Additional detail is provided after the table and in Appendix F.

BMP	Year	Measurable Goal	Status
<b>6A Environmental Coordinating Group</b>			
Coordinate ECG meetings.	All	Provide ECG meeting agendas.	✓ Complete
<b>6B Street Sweeping Program</b>			
Continue the City's street sweeping program.	All	Document lane miles swept and cubic yards of debris collected.	✓ Complete
<b>6C Catch Basin and Inlet Cleaning Program</b>			
Continue the City's catch basin and inlet cleaning program.	All	Document the number of catch basins and inlets cleaned.	✓ Complete
<b>6D "My City" Program</b>			
Implement the "My City" program.	All	Document ongoing implementation.	✓ Complete
<b>6E Pollution Prevention Training</b>			
Conduct annual training for operational employees.	All	Document all training activities.	✓ Complete
<b>6F Pollution Prevention Protocols and Inspections</b>			
No new or ongoing BMPs for PY5	N/A	N/A	N/A
<b>6G Fertilizer and Pesticide Management</b>			
Investigate and implement certification needed to ensure that fertilizers and pesticides are applied according to manufacturer's recommendations.	2-On	Document how training and/or certification are being met.	✓ Complete

## **BMP 6A Establish Environmental Coordination Group**

The Fire Department's Environmental and Industrial Use Unit (EIU) acted as lead with representatives from all City departments to meet monthly during PY5 to help coordinate environmental issues, including water quality investigation, enforcement, and documentation. The City's Environmental Coordinating Group (ECG) had previously taken the lead to coordinate interdepartmental issues. While there has not been a need to convene the ECG since creation of the EIU, staff is considering reactivating the ECG for broader environmental issues.

### Measure of Effectiveness

Sample EIU meeting agendas for PY5 are included in Appendix F.

The City Manager has established a Stormwater Work Group (Work Group) as an internal stakeholder group comprised of staff from the division chief and supervisory level. The Work Group's mission is to develop and coordinate the City's response across various City departments and Alexandria City Public Schools (ACPS) to the upcoming changes due to the requirement of the Chesapeake Bay TMDL. The Work Group is charged with developing policies, programs and plans to administer the Virginia Stormwater Management Regulations and VSMP Local Program, and the new MS4 permit. Subgroups are formed from the Work Group for specific topics that require more specialized discussions prior to bringing to the full Work Group for consideration and recommendation. The Work Group works under the guidance of the Stormwater Steering Committee, which is comprised of deputy city managers and department directors. The Work Group makes recommendations on topics and brings these to the Steering Committee for approval or revision. The Steering Committee guides the activities of the Work Group to ensure cost efficient compliance with the regulatory framework.

### Measure of Effectiveness

Sample agenda and respective mission statements for these two internal stakeholder groups are included in Appendix F.

## **BMP 6B Street Sweeping Program**

The City continued to implement a City-wide street sweeping program.

### Measure of Effectiveness

The City swept approximately 4,545.2 linear miles in PY5. The amount of street lane miles swept changes slightly each year depending on weather conditions and other factors.

The City's Curbside Leaf Collection program collected approximately 17,532 cubic yards of curbside vacuumed leaves that were recycled and distributed as mulch in spring 2013. An additional approximately 1,372 cubic yards of curbside vacuumed leaves were collected from Community Landscaping (Park Fairfax). Approximately 38,712 biodegradable bags were distributed to various locations throughout City facilities for use by citizens for bagged leaf collection activities. Approximately 19,662 biodegradable bags of leaves were collected for recycling as mulch for later distribution. A total of approximately 18,904 curbside leaves were collected, plus a total of vacuumed and biodegradable bagged leaves of approximately 38,566 cubic yards, for a grand total of approximately 57,470 cubic yards of leaves collected during PY5.

### **BMP 6C Catch Basin and Inlet Cleaning Program**

The City continued to implement a City-wide catch basin and inlet cleaning program.

### Measure of Effectiveness

The City cleaned 2,264 catch basins in PY5. A similar number of inlets and catch basins were inspected during the same period. The City has a total of approximately 2,000 catch basins; therefore some were cleaned more than once during PY5.

### **BMP 6D "My City" Program**

The City continues to implement the "My City" program to empower employees to report problems, to include illicit discharges or issues with the functioning of City assets. In addition, the City continues to distribute a "Whose Job Is It?" brochure to all City staff. The brochure provides a one-page quick reference for reporting problems associated with City infrastructure, including stormwater management. More information on the "My City" program can be found in BMP 3D.

### Measure of Effectiveness

A screen shot of the "My City" program from the City's intranet is found in Appendix F.

### **BMP 6E Pollution Prevention Training**

The City conducted a stormwater pollution prevention training workshop on November 14, 2012 for City maintenance and field crew staff. The training included a pollution prevention DVD along with training on the City's new Sanitary Sewer Overflow Response Plan (SSORP). The City also conducted a training workshop on detecting and reporting illicit discharges, along with erosion and sediment control training, for Code Administration staff on December 19, 2012. The City conducted a pollution prevention workshop as part of the Third Annual RP&CA Safety Conference.

### Measure of Effectiveness

Copies of sign-in sheets for both training workshops are included in Appendix F. The presentation for the RP&CA Safety Conference is also located in Appendix F.

### **BMP 6F Pollution Prevention Protocols and Inspection**

The City's permit requires a focus on inspection procedures and protocols to reduce illicit discharges from municipal sources. During PY2, the City developed an inspection checklist for use at City facilities that have significant materials potentially exposed to stormwater runoff. The City conducted a comprehensive inspection using the checklist in PY4.

### Measure of Effectiveness

No activities were required during PY5 for this BMP.

### **BMP 6G Fertilizer and Pesticide Management**

The City's permit requires that measures be taken to ensure that City staff applies fertilizers and pesticides in accordance with manufacturer's recommendations. At this time, City employees do not perform applications. Contractors, on a limited basis, apply pesticides and fertilizers according to the manufacturer's recommendations.

### Measure of Effectiveness

The City's current contract language requires pesticides and fertilizers to be applied in accordance with all applicable state and federal regulations and requirements. Additional information was included in PY2.

## **4 Evaluation and Assessment of BMPs**

In accordance with Part II E 3 b of the General Permit, the City has reviewed and assessed the BMPs established to meet the requirements of the City's permit and have found them to be appropriate and effective.

In addition to the annual evaluation and assessment of BMPs, during PY5 the City was required to conduct a comprehensive evaluation of the entire program utilizing the U.S. EPA's "Municipal Stormwater Program Evaluation Guidance." A summary of the review and findings is located in Appendix G. The full program evaluation checklist (Appendix B of the U.S. EPA guidance) is located on file at the City and can be provided to DEQ on request.

## 5 Results of Information Collected

No information, including monitoring data, was required to be collected or analyzed under the City's permit in PY5.

## 6 Summary of New Permit Year 1 Planned Activities

Part II E 3 of the General Permit requires a summary of the stormwater activities the City plans to undertake during the next reporting cycle. Since the current MS4 Program Plan based on the now expired permit is fully implemented, the following table summarizes by minimum control measure the planned activities to meet PY1 requirements of the City's new MS4 permit effective July 1, 2013.

BMP/Task	Year	Planned Activity
<b>Minimum Control Measure #1 – Public Education and Outreach</b>		
Permit Section II B 1	1	Develop Public Education and Outreach Plan
<b>Minimum Control Measure #3 – Illicit Discharge Detection and Elimination</b>		
Permit Section II B 3	1	Update Illicit Discharge Procedures
<b>Minimum Control Measure #5 – Post Construction Stormwater Management</b>		
Permit Section II B 5 c (1) (d)	1	Develop and Adopt Individual Residential Lot Special Criteria
Permit Section II B 5	1	Develop and Adopt Operator-Owned Stormwater Management Inspection Procedures
<b>Minimum Control Measure #6 – Pollution Prevention and Good Housekeeping</b>		
Permit Section II B 6 b	1	Identify Locations Requiring SWPPPs
Permit Section II B 6 c (1) (a)	1	Identify Locations Requiring Nutrient Management Plans (NMPs)
Permit Section II B 6	1	Develop and Adopt Training Program and Schedule

There are also required updates associated with the new Virginia Stormwater Management Regulations that are mirrored in the new MS4 permit. These requirements are related to written plan review procedures (MCM #4) and written policies and procedures related to post-construction inspection and enforcement of privately owned stormwater facilities (MCM #5). These items are also required to be addressed during the development of the VSMP Local Stormwater Management Program application and administration of the VSMP.

## **7 Changes in Identified BMPs or Measurable Goals**

The City's MS4 Program Plan is working to the satisfaction of the residents of Alexandria. No changes to identified BMPs or measurable goals are proposed at this time. Updates to the program plan will occur pursuant to the requirements of the new MS4 permit, with the first round of updates occurring at the end of PY1 for the new permit

## **8 Reliance On Other Government Entities**

The City of Alexandria currently provides funding to the Northern Virginia Regional Commission to conduct supplemental public education and outreach activities (the regional Clean Water Partners program) and to maintain and update the Northern Virginia BMP Handbook.

## **9 Approval Status of Qualifying Local Programs**

The City of Alexandria has identified the Erosion and Sediment Control Ordinance, mandated by the Virginia Erosion and Sediment Control Regulations, to help satisfy Minimum Control Measure #4 - Construction Site Stormwater Runoff Control. In addition, the City has identified the Environmental Management Ordinance, mandated by the Virginia Chesapeake Bay Preservation Area Designation and Management Regulations, to help satisfy Minimum Control Measure #5 - Post Construction Stormwater Runoff Control.

The City's Erosion and Sediment Control Program has been reviewed and found consistent by the Virginia Soil and Water Conservation Board. In addition, the Chesapeake Bay Local Assistance Board (now superseded by the Virginia Soil and Water Conservation Board) has also found the City's Environmental Management Ordinance to be fully consistent with state regulations.

The City's VSMP Local Stormwater Management Program "Substantive Progress" Application was found to be complete by DCR. The City is continuing to refine ordinance revisions and the business process to administer the local program. The City is on track to submit the final draft application by the December 15, 2013 and the final application no later than April 1, 2014.

## **10 Special Conditions Associated with TMDLs**

In Alexandria, the non-tidal Four Mile Run has a TMDL for fecal coliform bacteria and the Potomac River drainage area (the entire City) has a TMDL for PCBs. Because the City is subject to TMDL wasteload allocations, Alexandria must comply with the special conditions found in Section I B of the General Permit. For the annual report, this means providing:

- Copies of any updates to the MS4 Program Plan completed during the reporting cycle and any new information regarding the TMDL in order to evaluate its ability to assure the consistency of its discharge with the assumptions of the TMDL WLA.

- The estimate of the volume of stormwater discharged, in cubic feet, and the quantity of the pollutant identified in the WLA discharged, in a unit consistent with the WLA.

The City used the comprehensive update of the MS4 Program Plan, submitted to DCR in December 2008, as an opportunity to establish specific goals, schedules, and strategies to meet the special WLA-related requirements contained in the City’s permit. The City re-evaluated these goals, schedules, and strategies and notified DCR on January 7, 2010 that no modifications were necessary and that the MS4 Program Plan adequately addresses the permit requirements.

The following provides the required estimates for discharges to the non-tidal Four Mile Run and the Potomac River drainage area.

#### Four Mile Run Fecal Coliform TMDL

No change in land use categories occurred in the Four Mile Run watershed during PY5. Therefore, the estimate for total stormwater and fecal coliform bacteria discharged from the MS4 has not changed from the PY3 Annual Report.

Based on guidance from DCR, the City utilized the Basic L-THIA (Long-Term Hydrologic Impact Assessment) model developed by the Purdue Research Foundation and hosted by the Local Government Environmental Network. The City used 2012 land use information generated from its GIS to populate the model. The following land use categories and acreage were used:

Commercial/Office .....	33 acres
Industrial/Utility.....	30 acres
Medium/High Density Residential .....	739 acres
Low Density Residential.....	654 acres
Parks and Open Space.....	145 acres

Based on these inputs, the model estimates a total annual volume of stormwater discharged at 68 million cubic feet.<sup>1</sup> The initial analysis also estimated a total discharge of  $2.98 \times 10^{11}$  fecal coliform bacteria. The City then examined several other factors, but for most of these factors there was insufficient data to justify making changes to the estimate. However, the City has implemented a more aggressive dog owner education and outreach program. Bacteria source tracking analysis from the Four Mile Run TMDL predicts that 12.9% of the WLA is dog related. While there are scattered surveys on the topic, there is little research on the overall effectiveness of dog owner education programs in reducing bacteria and no information on efficiencies is found in the EPA’s Stormwater Menu of BMPs. However, using the Center for Watershed Protection’s Watershed Treatment Model (v. 3.1), the City estimates that the program has reduced fecal coliform bacteria in stormwater by 5%. This uses the land use categories above and an estimate of 45% awareness of the City’s outreach programs (as derived from estimates by

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<sup>1</sup> The Basic L-THIA model run resulted in 68,800,406.4 cubic feet; however, the model is not mean to be accurate to this level. The City’s use of this model for MS4 reporting purposes is based on DCR guidance. Use of the model for this purpose does not infer any claims to the accuracy, reliability, or appropriateness in using this model or the outputs derived from the model in any other way.

the Clean Water Partners program). As a result, the final estimated total discharge is  $2.83 \times 10^{11}$  fecal coliform bacteria. This estimated discharge for only Alexandria is well below the TMDL wasteload allocation (WLA) of  $2.04 \times 10^{13}$  that represents the portion of bacteria attributed to impervious surfaces draining to all permitted MS4s (both phase 1 and 2). While the City has an aggressive education program and has an ordinance against the improper disposal of pet waste, quantifying the impact of these programs remains difficult.

Potomac River PCB TMDL

No change in land use categories occurred in the PCB affected watersheds during PY5 and no PCB remediation projects occurred in PY5.

As with the Four Mile Run TMDL, the City utilized the Basic L-THIA model to generate base information. The following land use categories and acreage were used:

Commercial/Office .....	2,422 acres
Industrial/Utility.....	805 acres
Medium/High Density Residential .....	2,290 acres
Low Density Residential.....	3,317 acres
Parks and Open Space.....	896 acres

Based on these inputs, the model estimated a total annual volume of stormwater discharged at 364,197,319.2 cubic feet. In the absence of a more robust model, such as the one used to actually develop the Potomac River TMDL, it is very difficult to accurately predict the discharge of PCBs from the City of Alexandria.

In determining a PCB discharge, similar to the Potomac River TMDL, the City utilized the correlation between TSS and PCBs. The Basic L-THIA analysis estimated a total discharge of  $1.09 \times 10^{12}$  pounds of TSS. Using the conversion formula developed for the Potomac River PCB TMDL, it is estimated that 1,093,562 pounds of TSS correlates to 26.17 grams of PCB.<sup>2</sup> It is noted that the equation is non-linear and will not produce the same results as if the City were to take actual TSS measurements from discrete storm events. It is also noted that this figure is significantly less than the baseline amount of 115 grams established for the Alexandria MS4 in the TMDL. The City will continue to work with DCR over the next year to refine the estimate methodology.

Summary of TMDL Discharges

Four Mile Run	Potomac River (City-Wide)
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<sup>2</sup> Discussion with Carlton Haywood, ICPRB, September 30, 2009. Mr. Haywood expressed the concern that the equation used ( $PCB_{3+} = 0.329 * TSS$  in  $mg/l^{0.5059}$ ) is non linear. A consequence is that a mean TSS value when plugged into the equation will not generate the same  $PCB_{3+}$  as the sum of  $PCB_{3+}$  values computed from a time series of TSS values from the individual flow events that make up the total stormwater volume. In order to address this concern, the City would need to get actual TSS measurements from discrete storm events. The City will work with DCR and ICPRB to refine the methodology for producing estimates of PCB discharges. Use of the model for this purpose does not infer any claims to the accuracy, reliability, or appropriateness in using this model or the outputs derived from the model in any other way

Stormwater Discharge	Est. Fecal Coliform Discharge	Stormwater Discharge	Est. PCB Discharge
68,800,406.4 CF	2.83 x 10 <sup>11</sup> fecal coliform bacteria	3.64 x 10 <sup>8</sup> CF	26.17 grams

## 11 Illicit Discharges

The City identifies illicit discharges through the web based complaint form, telephone calls and email, and the Nuisance Abatement Hotline. Complaints are handled collaboratively by the Office of Environmental Quality and the Environmental Industrial Unit, with the EIU taking on responsibility for tracking complaints responded to jointly by both in the Permit Plan database. The following provides information on all water pollution related complaints and issues tracked by the City with a narrative on how the illicit discharge was controlled or eliminated, if applicable.

Tracking #	Date and Time Initiated	Problem Address	Incident	Narrative and Result
FIR2012-00529	07/10/12	656 S PICKETT ST	Dumping waste water into parking lot.	Issued an NOV <sup>1</sup> for improperly disposing of waste water.
FIR2012-00531	07/10/12	660 S PICKETT ST	Oil spill in rear of property.	Issued NOV to Chef Chen Restaurant for oil spill in rear of property and called property management company to advise of this issue.
FIR2012-00535	07/12/12	435 FERDINAND DAY DR	Hydraulic spill 5-10 gallons.	Responded for a hydraulic spill in the rear of Samuel Tucker Elementary. City trash truck with a ruptured hydraulic line. Approximately 5-10 gallons spill in loading dock parking lot. T&ES on the scene to do cleanup. Product entered the storm drain but it does not appear to have traveled more than 30 feet. Flush/recover storm drain with degreaser.
OEQ 23577	7/23/2012	108 S FAYETTE ST	Possible paint washwater.	No evidence was physically found at the inlet, EIU will contact the owner give them a warning.

Tracking #	Date and Time Initiated	Problem Address	Incident	Narrative and Result
OEQ 23685	7/24/2012	3045 COLVIN ST	Construction vehicle washing.	Washing construction equipment and wash water into the storm drain. Told to stop washing the equipment and spoke to owner. EIU noted some outdoor drains that the owner stated he had connected to the indoor sanitary drains. Spoke with Code Admin / Plumbing & Mechanical New Construction Supervisor and he said he wouldn't mind sending out one of his staff to meet onsite to take a look. I will try and set up a meeting with EIU and code staff to review outdoor drains.
OEQ 23687	7/24/2012	5875 LOWELL AV	Orange, turbid sediment.	Holmes Run trail, just north of N. Beaugard St. upstream and downstream of the dry weather crossing located just north of N. Beaugard St. Found source of the sediment at outfall. Drove around the neighborhood and observed emergency crews repairing a broken water main upstream. They stated they also had another main break next door the previous day. No pumping was occurring and all sediment was result of the actual break. No further action needed.
FIR2012-00563	07/26/12	1104 QUEEN ST	Goody's carry out - waste water spilling onto storm drain.	Spoke to carry out owner about washing down dumpster and providing a dumpster cover. He will contact trash removal company to get him a proper dumpster cover that does not allow rain water inside dumpster. Neighbor's complaint of noxious odors in this neighborhood.
OEQ 23745	7/26/2012	1104 QUEEN ST	Cooking grease and wash water.	Dark grease trail coming from the grease storage containers and the dumpster. Spoke to an employee that said rainwater gets into the dumpster and when the trash is picked up, some contaminated stormwater falls onto the concrete pad. He washes the pad after every trash pickup, using bleach and other chemicals. He was warned about the chemicals and other discharges. Requested replacing damaged dumpster lids. Owner would call and have the dumpster lids replaced, if not the entire dumpster if possible. Staff warned that if they are caught discharging to the storm drain again that they will be given a NOV.

Tracking #	Date and Time Initiated	Problem Address	Incident	Narrative and Result
OEQ 23789	7/27/2012	2509 GADSBY PL	Dewatering.	Observed higher than normal flow coming from outfalls during stream inspection. Contacted Virginia American Water, but no water main breaks in the area. Sample tested negative for chlorine. During investigation, observed a worker putting away a portable pump with one end of the hose in the recently excavated bio-retention garden, with hose into a filter dewatering bag. The water was discharged properly, and no further action is required.
OEQ 23793	7/27/2012	301 KING STREET	City issue.	General Services was contacted in the morning and they have already responded to the issue. No further follow-up is required.
OEQ 23866	7/31/2012	BUSINESS CENTER DR & ROTH ST	Small oil/hydraulic spill.	No active leak was observed, although a small puddle of fluid observed. Local engineer to put down absorbent or oil-dry, and would make sure to have the fluid cleaned up by the end of the day, as well as moving the truck. Visited site and confirmed that absorbent had been used to properly clean spill. No further action is needed.
FIR2012-00590	08/03/12	2501 DUKE ST	Small antifreeze release.	Small spill abated. No further action required.
FIR2012-00595	08/08/12	4016 MOSS PL	Investigation of a possible leaking tank.	Possible leaking UST in dry flow. Used Chemical strip test to determine the presence of a hazardous material and test was negative. Water company chlorine test was also negative. May be caused by an underground stream. Complainant was advised that runoff water was not a hazard.

Tracking #	Date and Time Initiated	Problem Address	Incident	Narrative and Result
OEQ 24133	8/9/2012	4009 N GARLAND ST	Dry weather flow complaint.	Observed a trickle of water flowing overland into a drain. Observed a dark green / black benthic growth indicative of natural groundwater or perennial flow. Tested negative for any hazardous chemicals or chlorine. Owner obs. heavy flow during rainfall since neighbor installed retention wall upstream. Water is not hazardous and most likely groundwater.
FIR2012-00597	08/10/12	1137 COLONIAL AV	Gasoline odor.	A passerby called in a complaint of an odor of gasoline. A gas can and lawnmower was found in the back yard, but nothing was actively leaking. Rain at the time of the complaint was most likely causing an old spill to be pushed back up to the surface.
FIR2012-00622	08/20/12	5308 EISENHOWER AV	Fire pump problems / dry system activation.	Requested by T208 for a dry system discharging water to the exterior of the building and the fire pump running. Investigation revealed the air pressure line from the pump became disconnected somehow. Building representatives responded and contacted their sprinkler company for service. Follow up by FPS.
OEQ 24491	8/24/2012	718 W. W TIMBER BRANCH PY	Water main break.	High water level is due to water main break reported this morning on Valley Drive immediately adjacent to Timber Branch.
OEQ 24536	8/27/2012	3210 KING ST	Murky stream.	Water running clear from outfall into stream, stream still murky from previous exposure. No way to identify where the contaminant came from.
FIR2012-00640	08/28/12	317 E BRADDOCK RD	Gasoline spill.	Fire code violations not related to the fuel spill were discovered and will be addressed. Follow up on spill cleanup.

Tracking #	Date and Time Initiated	Problem Address	Incident	Narrative and Result
FIR2012-00643	08/29/12	4004 FEATHERSTONE PL	Fuel oil from old tank that was removed is migrating to basement and into other areas of the yard.	Meeting to discuss further migration of product (fuel oil) that was in the ground as a result of a previous leaking UST on this property. The tank has been removed and site cleanup had been previously completed by contractor met all VDEQ requirements, but product that was in soil has now been migrating into basement and is getting into floor drains, which openly drain to stormwater system. Per VDEQ there is a hole in the storm sewer that is allowing product to further migrate into watershed. City will need to explore options on repairs and RP issues. VDEQ states that discharges are within permissible limits. Continue to monitor. VDEQ is working with homeowner under state tank fund to make necessary abatement / repairs. Will follow up in six months for status.
FIR2012-00644	08/30/12	501 S VAN DORN ST	Fuel spill.	Small amount of diesel fuel was located on the ground between three refueling stations and running down the hill. Applied absorbent stopped the spill from spreading and turned everything over to the station manager for cleanup. A NOV was issued to and station was closed until corrections made.
OEQ 25001	9/13/2012	ROBERT'S LA & ROBERT'S CT	Water main break.	Water leaking in catch basin. Conducted a test on the water and found chlorine in the water. Notified VAW to find the leak.
OEQ 25120	9/18/2012	725 S PICKETT ST	White substance in creek.	EIU responded to this location after receiving a call from Mark Miller from DEQ about a citizen complaint. Traced source to ALSCO textiles and discovered that a pump failure overflowed washing machines. Issued a NOV to clean up an area directly behind ALSCO. DEQ has been notified and will be visiting this property Monday.

Tracking #	Date and Time Initiated	Problem Address	Incident	Narrative and Result
OEQ 25349	9/26/2012	600 KING ST	Blue paint at the storm drain inlet and inside.	Observed evidence of blue paint inside and outside inlet. Spoke to owner of painting company and he said that one of his employees used a 5 gallon bucket of water to clean up a small paint spill, and then the wash water was then dumped into storm drain. The paint is acrylic latex paint. The owner was told that he must clean any paint from the storm drain inlet today, and EIU will follow-up with owner and inform him of any fines or court summons regarding this case once he hears back from the Commonwealth Attorney. No further action is required at this time.
FIR2012-00733	10/01/12	903 FOUR MILE RD	Leaking underground tank found.	While riding through the Four Mile area found two excavation sites, and was told by contractor that they had removed two 5,000 gallon tanks of fuel oil. Leaking tank has been reported VDEQ and a Building inspector witnessed the soil sampling.
OEQ 25472	10/1/2012	4309 DUKE ST	Dumping from sanitary tank of RV onto parking lot.	RV dumping the sanitary holding tank onto parking lot. No eyewitnesses. Estimated 20-30 gallons. Most already dried up. The vehicle owners perform some cleanup clean up by using a brush to apply bleach water, making sure to not use too much water to ensure that that no washwater would enter the storm drain. Apt complex rep explained that the RV had been leaking for some time prior to the spill and that a notice to remove the vehicle from the property was given. The vehicle owner had the vehicle towed away at the owner's expense. Classify accidental discharge. No additional action is required at this time.
FIR2012-00730	10/02/12	701 S VAN DORN ST	Joint SUP inspection with Zoning.	Lot is being using for storage of gravel and concrete jersey walls. All old equipment related to the previous use has been abandoned. One AST in a concrete vault located on the property that was abandoned in 2008 with most of the fuel removed. Issued compliance notice to have the tank removed and obtain demolition permit from Code Administration.

Tracking #	Date and Time Initiated	Problem Address	Incident	Narrative and Result
FIR2012-00763	10/20/12	3000 BUSINESS CENTER DR	Fuel oil spill - Approx. 100 gallons.	The following violations shall be corrected: 1. Clean up all areas affected by the fuel oil spill including: Interior of electrical room All storm lines between the DASH building and holding pond Holding pond liquid Any other surfaces affected including roof area around generator 2. Service generator tank sensor and repair so it works properly. 3. Repair generator tank overflow pump so it works properly.
OEQ 26141	10/26/2012	HOLMES RUN PKY	Report of bleach odor.	Went by Holmes Run and did not observe any illicit discharge or detect any odor. Request was received at 11:41 PM on Friday October 26, stating that a bleach odor was observed three days earlier on Tuesday October 23. Due to the delay in reporting, we are unable to trace the source of the problem as the heavy rainfall from Hurricane Sandy would have washed any evidence downstream. Address is also vague, not sure where exactly the odors were observed along Holmes Run Pkwy.
OEQ 26879	11/13/2012	4116 WHEELER AV	Diesel fuel spill.	Ruptured gas tank from a delivery truck, puncturing the 50 gallon diesel fuel tank. The fuel sheet flowed over the asphalt parking approximately 25-30 feet to the nearest storm drain inlet located at the southwest corner of the property. There is a small stream that runs approximately 6 feet behind the warehouse, parallel to the property. The inlet structure outfalls directly into the stream; however, the fire department deployed a boom at the outfall to contain any release but no sheen was observed at this time. Upon opening the storm drain inlet structure, a dark, concentrated diesel solution was coming out of the pipe into the inlet. Initial thoughts were that there are possibly two separate incidents. Hazmat tested the discharge from the 4 in. PVC pipe of the inlet and it matched the results from the diesel fuel. The responsible party and trucking company responsible for the cleanup. Contractor has been contracted to do the cleanup.

Tracking #	Date and Time Initiated	Problem Address	Incident	Narrative and Result
OEQ 27386	12/7/2012	327 N PICKETT ST	Paint spill and wash into storm drain.	Staff spilled paint earlier, and poured water on the paint to try and clean it up. Contacted Hazmat to contain material in creek by installing temp dam. Spill did not make its way to Holmes Run due to raised grade and vegetative blockages. EIU staff contacted VDEM. Found out product was a water based acrylic paint. Fire department opened hydrant upstream and product was diluted. Assistant Fire Marshal contacted ACPS Facilities Supervisor and the Emergency Management Officer about training all school employees. EIU has responded several times for different products at the creek and it was probably coming from the school. Visited site and confirmed that there is no longer any paint in the creek.
OEQ 27594	12/18/2012	2461 EISENHOWER AV	Styrofoam debris in creek.	Observed small amounts of very small sized Styrofoam in the grass along the southern edge of the Metro parking lot (2300 & 2400 Eisenhower Avenue) and the ATA parking lot ( 2200 Eisenhower Avenue), and pieces also observed in a the gutter pans along Eisenhower Avenue. Large pile of Styrofoam debris was observed in the channel bed. Construction company removed the material and disposed of properly, and scheduled his crews to check the area following the next few rainfall events and remove any material as needed. Received warning.
FIR2012-00047	12/20/12	2400 MAIN LINE BV	Hydraulic oil spill.	Issued NOV to properly remove spill.
OEQ 28057	1/11/2013	407 CAMERION STREET	Discharge of kitchen equipment wash water.	Observed pressure washing of kitchen equipment inside of the building. Wash water from the interior washing was being captured inside via trash cans; however the roof exhaust vent cleaning was discharging down the roof, into the downspout and onto the alley. Had contractor place a bucket underneath the downspout. Also need to repair any obvious leaks. No residue observed on front sidewalk. Residue observed in the alley that the owner said he will clean.

Tracking #	Date and Time Initiated	Problem Address	Incident	Narrative and Result
OEQ 28755	2/1/2013	327 N PICKETT ST	Milky discharge.	Ongoing white substance observed in the tributary located between N. Pickett Street and Holmes Run, just north of the Beatley pedestrian bridge. She said that she observed the white substance again this morning. Unable to observe any substance. Observed a very small amount of turbidity near the trail crossing just upstream of the Beatley pedestrian bridge, but with no active flow. This has been reported and investigated several times in the past few years with no source found to date due. This site is high on the City's radar.
OEQ 29046	2/8/2013	5850 SANGER AV	Discharge of water dye.	Large pool of green liquid. Advised caller to immediately call 9-1-1 if he believes the substance to be hazardous, and that OEQ will work with the fire department to investigate. HAZMAT response team applied absorbent. Brought to our attention that Alex Renew has recently performed maintenance nearby. Spill of residual dye. Dye manufacturer stated that there are no human or environmental concerns.
FIR2013-00156	02/12/13	1000 S VAN DORN ST	Ethanol spill - less than 50 gallons.	Assist DFM Perry with follow up and clean-up monitoring for ethanol spill of less than 50 gallons.
OEQ 29619	2/25/2013	110 LYNHAVEN DR	Water main break.	Potential water main break, with water seeping up through asphalt in the roadway and running into storm drain. Carrying up sand with it. Contacted Virginia American Water and they said that they are already aware of this issue and are on the way to investigate. No further action is required from City at this time.
FIR2013-00221	02/27/13	4600 DUKE ST	Waste cooking oil spill; possible sewage spill.	Spoke with property management and advised to maintain exterior grease traps. Identified several areas of waste cooking oil spills on the ground. Spoke to owners to maintain waste cooking oil areas free from spills.

Tracking #	Date and Time Initiated	Problem Address	Incident	Narrative and Result
OEQ 29777	2/27/2013	4600 DUKE ST	Cooking grease and dumpster juice discharge.	Fire Dept. said the product smelled like sewage but also appeared to be waste cooking oil. HazMat 209 deployed a section of booms and collected samples near the outfall and Holmes Run Creek. Due to heavy rainfall, most of the product had been washed down into Holmes Run. A large plume of product could be seen north of the pedestrian footbridge over Holmes Run. T&ES conducted a dye test of the nearby sanitary line, but no leak was found. During investigation EIU staff observed significant amounts of grease/oil near two waste cooking oil containers and a dumpster in the parking lot in the rear Foxchase belonging to La Casa Restaurant (4551 Duke St.) and Hong Kong Express(4545 Duke St.). This area drains to the outfall in question. Deputy Fire Marshall issued both owners a NOV's and requested cleanup of the material within 24 hours.
FIR2013-00225	02/28/13	4551 DUKE ST	Waste cooking oil spill in rear alley.	Issued NOV to clean up area around waste cooking oil container and dumpster. Some cleaning remains to be completed. Spoke to property manager and he advised they would have a crew come out today to handle. They were advised to contain all wastewater and not to let any go down storm drain.
FIR2013-00226	03/01/13	4545 DUKE ST	Waste cooking oil spill in rear alley.	Some cleaning done, but still some ground cleaning around containers that needs to be completed. Spoke to property manager and he advised they would have a crew come out today to handle. They were advised to contain all wastewater and not to let any go down storm drain. Issued NOV to clean up spill.
FIR2013-00301	03/15/13	701 S ROYAL ST	Dumping dirty water onto parking lot.	On duty manager will speak with employees about washing kitchen items and disposing dirty water into parking lot.

Tracking #	Date and Time Initiated	Problem Address	Incident	Narrative and Result
FIR2013-00331	03/19/13	112 KING ST	Clean up waste cooking oil spill around oil containers.	Conducted re-inspection and observed grease spills around the container. Spoke to kitchen manager and advised clean up area without discharging residue water onto storm drain. Would be a summons to appear in court the next time
OEQ 31320	3/25/2013	4320 LOYOLA AV	Pool power wash, concrete fragments.	Reoccurrence of a similar event from 6/12/2012. Unknown blue substance. Investigating upstream stormwater manholes, source was traced to a storm drain curb inlet. Swimming pool located in the back of the property matched the color of the blue substance in the storm drain. Pool company power washing the pool and pumped the water out of the pool into the storm drain. Material is consistent with what was found in the storm drain last time. Standing water was checked for strong acids and the strip test used came back moderately acidic. Pool contractors were contacted and cleanup was scheduled.
OEQ 32083	4/10/2013	2960 EISENHOWER AV	Tires in stream.	Went to site and observed 4 vehicle tires in Cameron Run at the bend, just before it passed under the Beltway. Another tire was also observed just downstream of the first weir. Division Chief for Park Maintenance said that he will have the tires removed.
OEQ 33419	5/2/2013	833 S WASHINGTON ST	Concrete wet saw discharge.	Mixture of water and cement from concrete sawing running down curb and gutter between Green Street and Jefferson Street on S. Washington Street. Upon request, contractor clocked the inlet and no discharge entered the storm drain. A temporary berm was created and they will recover all of the water at the berm with a vacuum truck. Clean-up has begun and no additional follow-up is needed at this time.
FIR2013-00523	05/03/13	666 S PICKETT ST	Cooking oil spill.	Employee spilled cooking oil in rear alley of business when attempting to dump into waste container. Employee failed to notify manager. Admitted to spilling oil on accident. NOV issued under and given 24 hours. Spill cleaned and proof provided. No further FMO action required.

Tracking #	Date and Time Initiated	Problem Address	Incident	Narrative and Result
OEQ 33916	5/10/2013	3400 DUKE ST	Diesel fuel spill.	Remnants of a diesel fuel spill at pumps 3 and 4 for City Fuel Island. Appeared a fuel spill occurred earlier and was partially cleaned up with absorbent material; with the bulk of the contaminated absorbent removed. Fuel pump 3 was observed to have fuel dripping from the hose assembly and had been placed out of service. General Services responded to assess and initiate repairs, and perform additional cleanup. 1. Provide warning signs in fuel pumps 2. Provide documentation for the disposal of waste soil
FIR2013-00549	05/16/13	4938 EISENHOWER AV A	Using regulated paint stripper outside washing residue into street.	Subject using regulated paint stripper outside washing residue into street in contrast to printed disposal directions. Warning and clean-up ordered. No further FMO action required.
FIR2013-00597	05/25/13	5740 EDSALL RD	Diesel spill do to uncontrolled pump release.	Small diesel spill from pump at gas station. Fire Department responded and placed absorbent. Personnel on site did not know about SPCC and was able to find a 2002 edition. Ordered cleanup and no use of pump until checked. Later, spill at the listed address had failed to be cleaned. Additional NOV was issued with the owner of station advised he shall have spill cleaned ASAP or criminal charges would be pursued. Informed manager to 1. Make sure the spill kit is located in one place close to the attendant booth. Will re-inspect in 1 week 2. Conduct monthly training for spill procedures 3. Call the Fire Department for spills. "Petroleum Management" Environmental Services arrived and proceeded to clean the spill site. EIU needs to follow-up regarding lack of training and action by service station staff in event of a spill. SPCC spill is available near the attendant's office.

Tracking #	Date and Time Initiated	Problem Address	Incident	Narrative and Result
OEQ 34887	5/30/2013	413 STANTON PL	Paint residue.	Homeowner dumping paint into gutter. Material in the gutter pan of recent concrete dust from cutting concrete blocks. NOV issued and requested that the owner contact the Fire Marshall's Office immediately. It does not appear that it went into the storm drain but he was advised that any future runoff water containing any chemical residue will be an illegal dumping which will get him a summons to appear in court.
FIR2013-00663	06/03/13	4500 HOLMES RUN PY	Possible dumping of concrete onto storm drain.	Was called out by OEQ to check on a possible illegal dumping but turned to be an unfounded complaint. Construction workers working alongside creek had used concrete to secure rocks.
FIR2013-00677	06/07/13	4368 KING ST	Fuel spill - responsibility for clean up.	Issued NOV to Liberty Gas for cleanup of fuel spill in parking lot.
OEQ 35473	6/10/2013	312 QUEEN ST	Pool water discharge.	Employees order to cease. Company owner stated he tested the water prior and chlorine measured 0. However, the date of the document was 06/07/2013. Once it was pointed out, he stated that he tested the water again prior to release. Fire Marshall tested the discharge water with a test strip and no chlorine was detected. Remaining discharge water was directed to outdoor sink. Owner was given a formal warning and that another incident would lead to a criminal charge. Investigation is closed.
FIR2013-00707	06/13/13	5000 FAIRBANKS AV	Report of an oil spill- received referral from DEQ.	Investigated report of a fuel oil spill and spoke with management but found no spill. DEQ was contacted but they did not have any further details- unfounded
OEQ 36238	6/26/2013	18 E LINDEN ST	Orange discharge, iron bacteria.	Pipe that feeds stream from the east side is full of very bright orange water. Investigation determined that the "orange" in Hooff's Run (and in other local outfalls into streams) is caused by iron-loving bacteria acting on the oxygen deficient organic rich water coming out of the drain pipes. Is a natural occurrence, and generally cannot be prevented without lowering the iron level within the water.

Tracking #	Date and Time Initiated	Problem Address	Incident	Narrative and Result
OEQ 36487	7/1/2013	3105 DUKE ST	Sewage discharge.	Report of a sewage back up and once on the scene discovered that sewage spill had been first reported the day prior. T&ES and the Health Department were called to the scene. Charges for illegal dumping are pending. Backup caused by a blocked grease trap. Grease traps were vacuumed and cleaned. Fire Marshall staff is continuing investigation into delay in reporting. The Fire Marshalls office will continue to work on charges. No additional work is required at this time.

1. Notice of Violation (NOV) may be delivered as a verbal or written notice to comply.

## 12 Land Disturbing Activities

The following table provides an annual summary of land-disturbing activities data tracked under Section II 4 c of the General Permit. During PY5, this data was provided to DCR on a monthly basis.

City Reference #	Project Name	Project Date	Disturbed Acres
DSP2005-00044	South Main Street (Potomac Yard)	7/13/2012	7.48
DSP2011-00025	Landbay G – Bldg C (PY)	7/17/2012	2.74
DSP2008-00022	Potomac Yards, LB I, LB J-West	8/23/2012	10.153
DSP2011-00013	Mark Center Access Gates	9/13/2012	0.26
GRD2012-00029	Ft Wart – Archaeology	7/9/2012	4.96
GRD2012-00007	4016 Taney Ave	7/10/2012	0.2481
GRD2012-00025	3737 Seminary Rd	7/18/2012	0.5
GRD2012-00010	The Oronoco	8/09/12	0.86
GRD2012-00029	3337 King St	8/9/2012	0.21
GRD2012-00024	909 Crestwood	8/17/2012	0.1585
GRD2013-00005	632/634 S. Fairfax St	9/4/2012	0.0787
GRD2013-00003	507 High Street	9/19/2012	0.5261
DSP2011-00001	Partial Landbay L (Multifamily)	11/7/2012	2.523
DSP2012-00001	James Bland – Phase III	11/19/2012	2.24
DSP2012-00005	Partial Landbay L (PY)	11/20/122	8.03
DSP2011-00033	Eisenhower Ave – Fire Station #210	11/20/2012	2.98
DSP2011-00022	James Bland – Phase V	11/20/2012	3.518
DSP2011-00030	Landmark Gateway	11/21/2012	7.24
DSP2011-00015	Safeway	11/27/2012	3.69

City Reference #	Project Name	Project Date	Disturbed Acres
DSP2010-00023	Yates Corner	11/27/2012	1.38
GRD2013-00004	11 E. Oak St	10/3/2012	0.1059
GRD2012-00013	2207-2209 Ivor Ln Roadway Imp.	10/12/2012	0.5293
GRD2012-00027	2270 & 2209 Ivor Lane Dwellings	10/31/2012	0.5519
GRD2013-00012	Jefferson Houston - Archaeology	11/19/2012	0.24
GRD2013-00007	306 E. Howell Ave	11/27/2012	0.1003
GRD2013-00011	Cora Kelly Elem – Playground	12/11/2012	0.533
GRD2012-00022	623 S. Fairfax St	12/19/2012	0.063
GRD2013-00010	514 Janney’s Ln	12/27/2012	0.094
DSP2011-00024	Braddock Metro Place	1/23/2013	1.34
DSP2011-00026	Potomac Yards, Building F	3/5/2013	1.1
DSP2012-00007	Enterprise Rent-A-Car	3/13/2013	3.4683
DSP2009-00019	Alex Renew NMF	3/19/2013	8.02
DSP2011-00014	East Reed Townhomes	6/11/2013	0.4152
GRD2013-00013	Blessed Sacrament	1/2/2013	0.18
GRD2013-00009	Braddock Gateway	1/14/2013	0.66
GRD2013-00011	Cora Kelly Elementary Playground Impr.	1/15/2013	0.538
GRD2013-00016	Reinke Residence	2/22/2013	0.3517
GRD2013-00015	Site Improvements, 632 S. Fairfax St.	2/28/2013	0.1266
GRD2013-00006	Flemming Residence	3/5/2013	0.47
GRD2013-00018	Tauber Demolition	3/26/2013	0.073
GRD2013-00024	Holland Lane Haul Road	4/18/2013	0.95
GRD2013-00017	GenOn	4/22/2013	5.37
GRD2013-00020	Caylor Gardens Apts	4/26/2013	0.439
GRD2013-00014	Melvin Residence	5/9/2013	0.4153
GRD2013-00027	BRT Staging for Transitway	5/15/2013	0.12
GRD2013-00019	11 West Del Ray Ave	5/17/2013	0.1091
GRD2013-00022	Episcopal High School	5/29/2013	3.28
GRD2011-00025	PY Four Mile Run Bridge Demolition	5/30/2013	3.12
GRD2013-00031	Shelley St. E&S	6/17/2013	0.22
GRD2013-00029	Parkwood Pool Demo	6/20/2013	0.3788
<b>Total Sites: 50</b>		<b>Total acres:</b>	<b>93.1378</b>

## 13 Information on Stormwater Management Facilities

The following tables provide a summary of new permanent stormwater management facilities brought on-line in PY5. The PY1, PY2, PY3 and PY4 annual reports contain information on previously installed stormwater management facilities in the City of Alexandria. As required in the General Permit, information for each facility includes BMP type, HUC, impaired water, and number of acres treated. Information for PY5 is also found as an Excel spreadsheet on a CD in the back pocket.

The first table provides information on non-single-family residential facilities constructed in the City. This represents 10.5559 additional acres treated (6.8616 impervious acres). The second table provides information on single-family residential (individual lot) facilities constructed in the City. This represents 0.1777 additional impervious acres treated.

### Non-Single Family Stormwater Management Facilities

BMP ID	BMP Type	Location	HUC	Discharges To	Total Area Treated (Ac)	Impervious Area Treated (Ac)
2003-0013 01	Aqua-Swirl®	830 W. Glebe Rd.	PL25	Four Mile Run	0.28	0.25
2003-0013 02	Aqua-Swirl®	830 W. Glebe Rd.	PL25	Four Mile Run	0.35	0.31
2003-0013 03	Aqua-Swirl®	830 W. Glebe Rd.	PL25	Four Mile Run	1.4	0.54
2003-0037 01	CDS®	5205 Polk Ave.	PL26	Holmes Run	1.83	0.56
2005-0013 01	StormFilter™	601 Holland Ln.	PL26	Hooffs Run	0.62	0.54
2005-0013 02	StormFilter™	601 Holland Ln.	PL26	Hooffs Run	0.85	0.6
2005-0013 03	StormFilter™	601 Holland Ln.	PL26	Hooffs Run	0.54	0.39
2007-0003 PLT 01	Bioretention Filter	6 E. Masonic View Ave.	PL26	Hooffs Run	0.062	0.002
2007-0003 PLT 02	Stormceptor®	6 E. Masonic View Ave.	PL26	Hooffs Run	0.35	0.35
2008-0008 01	Vortechs®	621 N. Payne St.	PL26	Hooffs Run	0.67	0.5624
2008-0008 02	Vortechs®	621 N. Payne St.	PL26	Hooffs Run	0.44	0.2827
2008-0008 03	CDS®	621 N. Payne St.	PL26	Hooffs Run	0.73	0.6996
2009-0009 01	Aqua-Swirl®	5000 Polk Ave.	PL26	Cameron Run	1.5	0.841

BMP ID	BMP Type	Location	HUC	Discharges To	Total Area Treated (Ac)	Impervious Area Treated (Ac)
2009-0009 02	Flow Thru Planter Box	5000 Polk Ave.	PL26	Cameron Run	0.1691	0.1691
2009-0009 04	Green Roof	5000 Polk Ave.	PL26	Cameron Run	0.15	0.15
2009-0009 05	Green Roof	5000 Polk Ave.	PL26	Cameron Run	0.0146	0.0146
2010-0005 01	Flow Thru Planter Box	1115 Martha Custis Dr.	PL25	Four Mile Run	0.0166	0.0166
2010-0005 02	Flow Thru Planter Box	1115 Martha Custis Dr.	PL25	Four Mile Run	0.0166	0.0166
2010-0005 03	Flow Thru Planter Box	1115 Martha Custis Dr.	PL25	Four Mile Run	0.0166	0.0166
2010-0005 04	Flow Thru Planter Box	1115 Martha Custis Dr.	PL25	Four Mile Run	0.0166	0.0166
2010-0005 05	Flow Thru Planter Box	1115 Martha Custis Dr.	PL25	Four Mile Run	0.0166	0.0166
2010-0005 06	Flow Thru Planter Box	1115 Martha Custis Dr.	PL25	Four Mile Run	0.0166	0.0166
2010-0005 07	Flow Thru Planter Box	1115 Martha Custis Dr.	PL25	Four Mile Run	0.0166	0.0166
2010-0005 08	Flow Thru Planter Box	1115 Martha Custis Dr.	PL25	Four Mile Run	0.0135	0.0135
2010-0005 09	Flow Thru Planter Box	1115 Martha Custis Dr.	PL25	Four Mile Run	0.0135	0.0135
2010-0009 01	Flow Thru Planter Box	5000 Polk Ave.	PL26	Cameron Run	0.0316	0.0316
2010-0009 02	Flow Thru Planter Box	5000 Polk Ave.	PL26	Cameron Run	0.0316	0.0316
2010-0009 03	Flow Thru Planter Box	5000 Polk Ave.	PL26	Cameron Run	0.0316	0.0316
2010-0009 04	Flow Thru Planter Box	5000 Polk Ave.	PL26	Cameron Run	0.0316	0.0316
2010-0009 05	Flow Thru Planter Box	5000 Polk Ave.	PL26	Cameron Run	0.0316	0.0316
2010-0010 01	Flow Thru Planter Box	4643 Taney Ave.	PL26	Cameron Run	0.0299	0.0299
2010-0010 02	Flow Thru Planter Box	4643 Taney Ave.	PL26	Cameron Run	0.0299	0.0299
2010-0010 03	Flow Thru Planter Box	4643 Taney Ave.	PL26	Cameron Run	0.0299	0.0299
2010-0010 04	Flow Thru Planter Box	4643 Taney Ave.	PL26	Cameron Run	0.0299	0.0299
2010-0010 05	Flow Thru Planter Box	4643 Taney Ave.	PL26	Cameron Run	0.0299	0.0299

<b>BMP ID</b>	<b>BMP Type</b>	<b>Location</b>	<b>HUC</b>	<b>Discharges To</b>	<b>Total Area Treated (Ac)</b>	<b>Impervious Area Treated (Ac)</b>
2010-0010 06	Flow Thru Planter Box	4643 Taney Ave.	PL26	Cameron Run	0.0299	0.0299
2010-0010 07	Flow Thru Planter Box	4643 Taney Ave.	PL26	Cameron Run	0.0299	0.0299
2010-0010 08	Flow Thru Planter Box	4643 Taney Ave.	PL26	Cameron Run	0.0299	0.0299
2010-0010 09	Flow Thru Planter Box	4643 Taney Ave.	PL26	Cameron Run	0.0299	0.0299
2010-0010 10	Flow Thru Planter Box	4643 Taney Ave.	PL26	Cameron Run	0.0299	0.0299
<b>Total</b>					<b>10.5559</b>	<b>6.8616</b>

Single Family Individual Lot Stormwater Management Facilities

BMP ID	BMP Type	BMP Address	HUC	Discharges To	Impervious Area Treated (Ac)
GRD 2010-0027 01	Trench Sand Filter	5400 Fillmore Ave.	PL25	Four Mile Run	0.0553
GRD 2010-0027 02	Porous Pavers	5400 Fillmore Ave.	PL25	Four Mile Run	0.0438
GRD 2012-0001 01	Rain Barrel	211 North View Ter.	PL26	Timber Branch/Hooffs Run	0.004
GRD 2012-0001 02	Rain Barrel	211 North View Ter.	PL26	Timber Branch/Hooffs Run	0.004
GRD 2012-0001 03	Porous Pavers	211 North View Ter.	PL26	Timber Branch/Hooffs Run	0.0188
GRD 2012-0002 01	Rain Barrel	315 N. Latham St.	PL26	Holmes Run	0.004
GRD 2012-0002 02	Rain Barrel	315 N. Latham St.	PL26	Holmes Run	0.004
GRD 2012-0002 03	Rain Barrel	309 N. Latham St.	PL26	Holmes Run	0.004
GRD 2012-0002 04	Rain Barrel	309 N. Latham St.	PL26	Holmes Run	0.004
GRD 2012-0004 01	Rain Barrel	23 E. Braddock Rd.	PL26	Timber Branch/Hooffs Run	0.004
GRD 2012-0004 02	Rain Barrel	23 E. Braddock Rd.	PL26	Timber Branch/Hooffs Run	0.004
GRD 2012-0005 01	Rain Barrel	105 W. Monroe Ave.	PL26	Timber Branch/Hooffs Run	0.004
GRD 2012-0005 02	Rain Barrel	105 W. Monroe Ave.	PL26	Timber Branch/Hooffs Run	0.004
GRD 2012-0009 01	Vegetated Filter Strip	2306 Valley Dr.	PL26	Timber Branch/Hooffs Run	0.0103
GRD 2012-0012 01	Porous Pavers	115 S. Lee St.	PL28	Potomac River	0.0062
GRD 2012-0012 02	Porous Pavers	115 S. Lee St.	PL28	Potomac River	0.0033
<b>Total:</b>					<b>0.1777</b>

**14 New or Terminated Signed Agreements**

There are no new or terminated signed agreements between the City of Alexandria and any third parties for the purpose of implementing minimum control measures.

## **15 Written Public Comments**

No written comments were received on the PY4 Annual Report or during the public comment period on the MS4 Program Plan.

## **APPENDIX A**

Clean Water Partners 2012-2013 Program Summary

Alexandria eNews Examples

T&ES Talk Stormwater Article

Screen Capture of Stormwater Web Page

Screen Capture of Calendar Widget

Screen Capture T&ES Facebook

General Stormwater Education Brochure

Pet Owner Educational Brochure

Alternatives to Dumping Brochure

PCB Educational Brochure for High Risk Property Owners

Sample Special Use Permit Language for PCB Screening During Development

Spanish Language Education Brochure



## **APPENDIX B**

FY 2012 Annual Report from the EPC

Agenda for February 4, 2013 and July 2, 2012 EPC Meetings

2013 Earth Day Press Release

2013 Earth Day Poster

Build Your Own Rain Barrel Flyer

Stream Clean Up Press Releases, Calendar Entries and Flyers

Screen Capture Drug Take Back Events



## **APPENDIX C**

Screen Shot of the Service Request Portal – Call, Click, Connect

Screen Shot of the Permit Plan Program

Screen Shot of the Cityworks Program

HHW Brochure

Alternative to Dumping Brochure

Trash and Dumping Brochure (English and Spanish versions)

Whose Job Is It Anyway (Staff Brochure)

Map and Spreadsheet of State-Permitted Discharges

Sample Special Use Permit Language Prohibiting Outdoor Cleaning of Kitchen Equipment

Summary of PY5 Outfall Reconnaissance Efforts



## **APPENDIX D**

No Materials for PY5



## **APPENDIX E**

Stormwater BMP Map

Sample Properly Executed BMP Monitoring and Maintenance Agreement

BMP Signage for Above-Ground Facility

Program Consistency Status

BMP Inspection Spreadsheet

List of BMPs by Type Requiring More Frequent Inspection



## **APPENDIX F**

Mission Statements for Stormwater Steering Committee and Stormwater Workgroup

Sample Agenda for Stormwater Steering Committee and Stormwater Workgroup

Sample Agenda for the Environmental Industrial Unit

Screen Capture of “My City” Program on Intranet

Stormwater Pollution Prevention Training Workshop Sign-In Sheets

RP&CA Safety Conference Materials and Sign-In Sheet



# **APPENDIX G**

## Comprehensive Program Evaluation Summary



