City of Salem

Municipal Separate Storm Sewer System Program Plan & Annual Report

For

General Permit No. VAR040010

And

Annual Reporting through

July 1, 2015 through June 30, 2016

This plan and annual report is submitted in accordance with 9VAC25-890-30 and 9VAC25-890-40 as part of registration statement for permit coverage to discharge stormwater to surface waters of the Commonwealth of Virginia consistent with the VAR04 General Permit, effective July 1, 2013.

Submitted: September 29, 2016

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Attachments: Supporting Materials Incorporate by Reference

Attachment 1 - Public Education & Outreach Plan (BMP 1.2)
Attachment 2 - Illicit Discharge Detection & Elimination Manual (BMP 3.3)
Attachment 3 - Outfall Prioritization Methodology (BMP 3.3)
Attachment 4 - Guidance for Land Disturbance Activities *(BMP 4.1 & 5.1 enhancement; placeholder)*
Attachment 5 - BMP Post-Construction Stormwater Management Program Manual (BMP 5.3a)
Attachment 6 - Good Housekeeping/Pollution Prevention Manual (BMP 6.1)
Attachment 7 - Identification of High Priority Facilities (BMP 6.2)

Regularly Updated Supporting Documents Available Upon Request (Incorporated by Reference)

Outreach Materials (BMP 1.2)
Outfall Mapping and Information Table (BMP 3.1)
Stormwater Management Facility Tracking Database (BMP 5.2)
Nutrient Management Plans (BMP 6.4)
Roanoke (Staunton) River Watershed PCB TMDL Action Plan (BMP SC.1a)
Upper Roanoke River Watershed E. coli TMDL Action Plan (BMP SC.2a)
Upper Roanoke River Watershed Sediment TMDL Action Plan (BMP SC.3a)

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 ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name: JAMES E. TOLIAFERRO Title: ASST. CITY MANAGER

Signature: _____ Date: 9/29/16

DEFINITIONS

Definitions provided herein do not supersede those within the City of Salem's City Code, but are solely intended to supplement interpretation of the City's MS4 Program Plan and Annual Report.

"Best management practice" or "BMP" means schedules of activities, prohibitions of practices, including both structural and nonstructural practices, maintenance procedures, and other management practices to prevent or reduce the pollution of surface waters and groundwater systems from the impacts of land-disturbing activities.

"Construction activity" means any clearing, grading or excavation associated with large construction activity or associated with small construction activity.

"Department" means the Department of Environmental Quality.

"Discharge," when used without qualification, means the discharge of a pollutant.

"Drainage area" means a land area, water area, or both from which runoff flows to a common point.

"Hydrologic Unit Code" or "HUC" means a watershed unit established in the most recent version of Virginia's 6th Order National Watershed Boundary Dataset.

"Illicit discharge" means any discharge to a municipal separate storm sewer that is not composed entirely of stormwater, except discharges resulting from firefighting activities, and discharges identified by and the following, unless identified by the MS4 operator as significant contributors of pollutants: water line flushing, landscape irrigation, diverted stream flows, rising groundwaters, uncontaminated groundwater infiltration, uncontaminated pumped groundwater, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water.

"Impervious cover" means a surface composed of material that significantly impedes or prevents natural infiltration of water into soil.

"Land disturbance" or "land-disturbing activity" means a man-made change to the land surface that potentially changes its runoff characteristics including clearing, grading, or excavation except that the term shall not include those exemptions specified in Section 30-133(B) of the City of Salem's Stormwater Management Ordinance.

"Municipal separate storm sewer" or "MS4" means a conveyance or system of conveyances otherwise known as a municipal separate storm sewer system, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains

"MS4 Program Plan" means the completed registration statement and all approved additions, changes and modifications detailing the comprehensive program implemented by the operator under this state permit to reduce the pollutants in the stormwater discharged from its municipal separate storm sewer system (MS4) that has been submitted and accepted by the department.

"Outfall" means, when used in reference to municipal separate storm sewers, a point source at the point where a municipal separate storm sewer discharges to surface waters and does not include open

conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other surface waters and are used to convey surface waters.

“Public” means, for the purpose of this Program Plan, the general population who work and/or live within the City’s limits

"State waters" means all water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands.

"Stormwater" means precipitation that is discharged across the land surface or through conveyances to one or more waterways and that may include stormwater runoff, snow melt runoff, and surface runoff and drainage.

"Stormwater management plan" means a document(s) containing material for describing methods for complying with the requirements of the Virginia Stormwater Management Program

"Total maximum daily load" or "TMDL" means the sum of the individual wasteload allocations for point sources, load allocations (LAs) for nonpoint sources, natural background loading and a margin of safety. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. The TMDL process provides for point versus nonpoint source trade-offs.

"Virginia Stormwater Management Handbook" means a collection of pertinent information that provides general guidance for compliance with the Act and associated regulations and is developed by the department with advice from a stakeholder advisory committee.

"Wasteload allocation" or "wasteload" or "WLA" means the portion of receiving surface water's loading or assimilative capacity allocated to one of its existing or future point sources of pollution. WLAs are a type of water quality-based effluent limitation.

"Watershed" means a defined land area drained by a river or stream, karst system, or system of connecting rivers or streams such that all surface water within the area flows through a single outlet.

1.0 PROGRAM PLAN STRUCTURE

The City of Salem's Program Plan is structured to serve as a stand-alone document that, when implemented, meets the requirements of the VAR04 *General Virginia Pollutant Discharge Elimination System (VPDES) Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4s)*, referred to in the remainder of this Plan as the General Permit. The Plan is intended to be subject to modifications as part of an iterative process that seeks to improve the effectiveness of best management practices (BMPs) and may be modified from time to time. Measure(s) of effectiveness are incorporated in each BMP and annual reporting form in Section 3.

1.1 Minimum Control Measures

The General Permit requires the City's Program Plan to include BMPs to address the requirements of six minimum control measures (MCMs) described in Section II of the General Permit. The MCMs are summarized as:

- MCM 1: Public Education and Outreach on Stormwater Impacts
- MCM 2: Public Involvement and Participation
- MCM 3: Illicit Discharge Detection and Elimination
- MCM 4: Construction Site Stormwater Runoff Control
- MCM 5: Post-construction Stormwater Management
- MCM 6: Pollution Prevention/Good Housekeeping for Operations

Section 3.0 of this Program Plan provides BMPs developed to explicitly address each General Permit requirements for each MCM. The title of each BMP is followed with a reference to the corresponding permit section. Each BMP included in the Program Plan includes the following information:

- A description of the BMP.
- A list of the necessary documentation to implement the BMP. This information is considered part of the Program and is readily available and updated, as necessary, and developed consistent with the BMP's implementation schedule.
- The identification of the individual(s) responsible for implementation of the BMP.
- The objective of the BMP and the result expected from implementation of the BMP.
- An implementation schedule consistent with the General Permit.
- A description of the method(s) to be used to assess the effectiveness of the BMP.

1.2 Special Conditions for TMDLs

The City of Salem is subject to Special Conditions for the following approved TMDLs where a waste load allocation (WLA) has been assigned to the City:

- Roanoke (Staunton) River Watershed for PCBs, approved December 9, 2010
- Upper Roanoke River Watershed for E. coli, approved June 27, 2007
- Upper Roanoke River Watershed for Sediment, approved September 7, 2006

The Special Conditions require the City to update this Program Plan to incorporate implementation of TMDL Action Plans that identify best management practices and milestones to be implemented during the remaining term of this permit which concludes July 1, 2018. BMPs are provided in Section 3.2 for development of Action Plans for the TMDLs listed above. BMPs are also included for implementation of the Action Plans in accordance with the schedules prescribed in each Action Plan.

1.3 Annual Reporting

The City of Salem will submit an Annual Report to the Department of Environmental Quality (DEQ) by October 1st of each year with the reporting period spanning from July 1st through June 30th. This Program Plan includes annual reporting forms in "fillable form" format. The completion of these forms provides all of the reporting information to satisfy the reporting requirements of the General Permit and include the:

- Cover sheet, which will be updated with the specific reporting year;
- Certification, that follows the table of contents and will be signed each year;
- "Annual Reporting – General Information Form" on the following page, completed annually;
- The "Annual Reporting Form" following each BMP in Section 3, completed annually; and
- The Measure(s) of Effectiveness Form following each BMP in Section 3.

Information compiled for effectiveness for each BMP in Section 3.0 will be utilized to evaluate and, if necessary, modify the respective BMP. Any modifications will be reported in the "Annual Reporting – General Information Form" on the following page. Modifications to the Program made by the City will be done in accordance with the General Permit requirements described in Section 1.5.

The General Permit requires certification of the annual report which is provided immediately after the table of contents of this document. Certification is required by a principle executive officer or a duly authorized representative. The duly authorized representative must have overall responsibility of the City operations and written authorization must be provided to the Department.

1.4 Annual Reporting – General Information Form

- ✓ The BMPs described in Section 3 of this Program Plan/Annual Report are the stormwater activities that the City of Salem plans to undertake during the remainder of the permit cycle.
- ✓ The City does not rely on another entity to implement portions of their MS4 Program Plan
- ✓ Completed Annual Reporting Forms for each BMP in Section 3 provide an assessment of the appropriateness of each BMP, progress towards achieving each measurable goal, and results of collected information analyzed for appropriate assessments and effectiveness of the BMP.
- ✓ See the updated Outfall Inventory in Appendix B for new MS4 outfalls that came online during the reporting year and their associated drainage area by HUC.

➢ Did modifications to the responsible individual of any program role or responsibility or specific BMP included in the Program occur during the reporting year? (yes/no)	☒ Yes ☐ No

If yes, list modifications (provide BMP # to reference modification rationale): Although responsibilities for individual have remained the same, position titles have changed. The City Engineer from previous reporting is now the Director of Community Development.

➢ Based on a review of the reporting forms completed for the reporting year within Section 3 of this Program Plan, does the City finds itself compliant with the permit conditions (yes/no):	☒ Yes, the City is compliant ☐ No (see below)

If no, listed below are additional BMPs and/or changes made to BMPs or measurable goals for any of the MCMs, including steps to address any deficiencies (Refer to Section 1.5):
N/A - The City finds itself compliant based on a review of this report.

➢ Does the City's MS4 directly discharge to waters that are identified as impaired in the 2010 § 305(b)/303(d) Water Quality Assessment Integrated Report? (yes/no)	☒ Yes ☐ No

If yes, list the impaired waters and pollutant impairment:
1) Mason Creek - Impairment: Benthic-Macroinvertebrate Bioassessments, E. coli
2) Roanoke River - Impairment: Benthic-Macroinvertebrate Bioassessments, E. coli, Temperature, PCB in Fish Tissue

➢ Based on the water quality issues identified in BMP 1.2 and impairments identified above, does a review of the effectiveness of the BMPs listed in the program indicate they are appropriate? (yes/no)	☒ Yes ☐ No

Explain why they are effective for the water quality issues identified in BMP 1.2 and listed impairments or identify potential modifications if not effective: BMPs are effective because they address potential pollutants into the MS4. Over time, measures of effectiveness for each BMP will be assessed and modifications made if necessary. Water quality issue #2 in BMP 1.2 addresses E. coli, the pollutant of concern.

1.5 Program Modifications

Modifications to the MS4 Program may occur throughout the life of this Program Plan as part of an iterative process to reduce the pollutant loadings and to protect water quality. Modifications will most often be made when a BMP is deemed ineffective, based on reporting for the "Measure of Effectiveness Forms" for each BMP in Section 3. When a BMP is determined ineffective, updates and modifications to the MS4 Program must be made in accordance with the following procedures:

- Adding (but not eliminating or replacing) BMPs may be made by the City at any time. Additions shall be reported as part of the annual report in the "Annual Reporting – General Information Form" in Section 1.4.
- Updates and modifications to specific standards and specifications, schedules, operating procedures, manuals, checklists, and other documents routinely evaluated and modified are permitted provided that the updates and modifications are done in a manner that:
    - Is consistent with the conditions of the General Permit;
    - Follow any public notice and participation requirements established in the General Permit; and
    - Are documented in the annual report in the "Annual Reporting – General Information Form" in Section 1.4.
- Replacing, or eliminating without replacement, any ineffective or infeasible strategies, policies, and BMPs with alternate strategies, policies, and BMPs may be requested at any time. Such requests must include the following:
    - An analysis of how or why the BMPs, strategies, or policies are ineffective or infeasible, including cost prohibitive;
    - Expectations on the effectiveness of the replacement BMPs, strategies, or policies;
    - An analysis of how the replacement BMPs are expected to achieve the goals of the BMP's to be replaced;
    - A schedule for implementing the replacement BMPs, strategies, and policies;
    - An analysis of how the replacement strategies and policies are expected to improve the City's ability to meet the goals of the strategies and policies being replaced; and
    - Requests or notifications made in writing to the Department and signed by a principle executive officer or a duly authorized representative; and
    - The City follows the public involvement requirements identified in the General Permit.

2.0 SCHEDULE

As discussed in Section 1, each BMP described in Section 3 of the Program Plan includes an implementation schedule. Some of the BMPs require supplemental actions to be taken to assist in the development or implementation of the BMP. Table 1 lists some of these actions with a summary of dates critical for assuring compliance with the permit. The Table is not intended to provide schedules for Program BMP implementation; but only to assist with Program implementation.

Table 1. Summary of critical items and deadlines for program implementation.

BMP	Necessary Action	Due date
1.1	Second Public Outreach Survey	Spring 2018
2.2	Public participation activities	4x annually
2.1	Post Annual Report on website	30 days after submittal annually
6.3a	Staff training on pollution prevention	Annually
1.1, 1.2	Provide for public participation for education and outreach plan	**Complete**
1.2	Public Education/Outreach Plan	**Complete**
3.1	Notification of MS4 Interconnections	Annually, as needed
3.3	Develop IDDE Program Manual	**Complete**
6.3a	Written Training Program (see IDDE and Good Housekeeping/Pollution Prevention Manuals)	**Complete**
6.2	Identify high priority areas (see BMP 6.2)	**Complete**
5.3	Post-construction SWM Inspection/Maintenance Program Manual	**Complete**
3.4, 6.1	Good Housekeeping/Pollution Prevention Program Manual	**Complete**
1.2, 3.4, 4.2	Update website postings (see BMPs for details)	Annually
6.3b, 6.5	Good housekeeping contract language for municipal contractors	**Complete**
SC.1	Upper Roanoke River Sediment Action Plan	**Complete**
SC.1	Upper Roanoke River E. coli Action Plan	**Complete**
3.3	Methodology for prioritizing outfalls	**Complete**
SC.1	Roanoke (Staunton) River PCBs Action Plan	**Complete**
3.1	Update storm sewer mapping/information table	Annually
5.2	Update BMP database attributes	Annually
6.2	High-priority facility SWPPP implementation	July 1, 2017

3.0 PROGRAM PLAN BEST MANAGEMENT PRACTICES

Section 3 includes the BMPs that the City will implement to meet the requirements for each MCM and the applicable Special Conditions described in the General Permit.

3.1 Minimum Control Measure BMPs

BMP 1.1 Public Participation for Public Education and Outreach Plan (Section II B.1.c.4)
Description: Provide for public participation during public education and outreach program development using results from a survey distributed to the public. The survey will be developed to assess the City's public knowledge regarding stormwater with the intent of assisting with the selection of high priority water quality issues. Opportunity to provide written comment will also be available with the survey. **Necessary documentation for implementation:** (1) Public Survey; (2) Public Survey results **Responsible individuals for implementation:** Director of Community Development; City Engineer I **Objectives and expected results in meeting measurable goals:** The objective is to include the public in the selection of water quality issues identified in the City's Public Education and Outreach Plan. **Implementation schedule**: An opportunity for public participation was provided via a survey distributed in the spring of 2014. Survey results were incorporated into the Public Education and Outreach Plan (BMP 1.2) to meet the General Permit's July 1, 2014 deadline. A public survey will be distributed again in the spring of 2018 before the end of the permit cycle and the Public Education and Outreach Plan revised as necessary. **Method to determine effectiveness:** Effectiveness will be measured by the number of individuals responding to the survey and the incorporation of survey results into the Public Education and Outreach Plan.

BMP 1.1 Annual Reporting Form (Completed once during the development of the Public Education and Outreach Plan)	
Dates that survey was distributed:	Spring of 2014
Number of surveys completed:	2,159
Description of how survey results and responses were incorporated into the Program: Survey results were used to identify two of the the three high priority water quality issues in the City's Public Education and outreach Plan (See BMP 1.2). Survey results were also used to determine the relevant messages and appropriate outreach material to our target audience for two of the issues. The survey is considered effective based on the number of respondents indicated above and the ability to incorporate results into the identification of water quality issues. However, in response to a DEQ Audit Report this reporting year, water quality issue #3 will be modified in the subsequent reporting year.	

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

BMP 1.2 Develop Public Education and Outreach Program (Section II B.1.c.1-6)

Description: Identify three (3) high priority water quality issues contributed to by the discharge of stormwater. For each issue identified, provide

- Rationale for the selection of each issue;
- An identification and estimate of population size of the target audience who is most likely to have significant impacts on the water quality issue; and
- A relevant message and educational and outreach materials to convey the message for distribution to the target audience.

Necessary documentation for implementation: (1) Survey results from BMP 1.1; (2) Written Public Education and Outreach Plan (PEOP) describing the rationale of the selection of each water quality issue, identification of target audience and estimated population, and relevant message (Attachment 1); (3) Materials described in the PEOP such as pamphlets and training materials (available upon request).

Responsible individual for implementation: Director of Community Development and City Engineer I

Objectives and expected results in meeting measurable goals: Objectives are to convey relevant information to target audiences regarding water quality issues. The expected result is that the target audiences will have an increased knowledge of the water quality issues over time.

Implementation schedule: Outreach will be conducted a minimum of once a year to at least 20% of each target audience for each water quality issue identified in the PEOP, latest version. A public survey to measure knowledge on the identified issues was conducted in the spring of 2014 and will be distributed again in the spring of 2018 to measure effectiveness of the PEOP for the permit cycle.

Method to determine effectiveness: Two public surveys will be distributed to assess the effectiveness of the message delivered for each water quality issue, as noted in the implementation schedule. The first survey was conducted as described in BMP 1.1. The second survey will occur, as described in BMP 1.1, in the final year of the permit cycle. Effectiveness will be measured by using a scoring system to compare results of the two surveys to determine if public knowledge regarding each water quality issue has increased.

BMP 1.2 Annual Reporting Form				
Has a written Public Education and Outreach Plan been developed?				☒ Yes ☐ No
If no, explain, is yes, summarize below: N/A				
Water quality Issue #	List of educational and outreach activities identified in Public Education and Outreach Plan Update	Target Audience	# people reached	% of target audience reached
1	Improve public education on stormwater impacts	General public	±6,440 (2,800 households)	26
2	Improve education on dog waste impacts and clean-up	Licensed dog owners	±1,380 (600 households)	38
3	Increased Stormwater Pollution Prevention Training	Relevant staff	49	100
Water quality Issue #	List of educational and outreach activities that will be conducted during the ***next*** reporting year	Target Audience	# people to be reached ***next*** reporting year	Minimum % of target audience reached
1	Improve public education on stormwater impacts	General public	±5,000	20
2	Education on dog waste impacts and clean-up	Licensed dog owners	±600	20
3	Educational effort focused on prevention of non-stormwater discharges to storm sewers, as recommended by the DEQ audit.	General public	±6,440	20

Necessary documents for implementation are not provided in the annual report, but will be retained for a minimum of 3 years and are available upon request.

Measure of Effectiveness Form	
Average "knowledge" score from previous survey:	TBD
Average "knowledge" score from latest survey:	TBD
Has the "knowledge" score gone up over the permit cycle?	☐ Yes (BMP effective) ☐ No (See below) ☒ N/A
If no, discuss potential ineffectiveness of the BMP (outreach materials, training approach, etc.): Effectiveness will be evaluated over time with a comparison of scoring from the 2014 survey and results from distribution of the public survey in 2018. Comparisons of results will be based on survey questions related to the PEOP.	
If no, Suggest BMP modifications to the Program Plan with rationale to increase effectiveness: N/A	

BMP 2.1 Public Involvement through web posting of MS4 Program information (Section II B.2.a.1-2)
Description: The following documentation will be maintained on the City's stormwater website: • The latest version of this MS4 Program Plan • The latest MS4 Annual Reports. Public education and outreach materials developed for BMP 1.2 will include links to the Program Plan and Annual Reports. **Necessary documentation for implementation:** (1) City of Salem MS4 Program Plan; (2) City of Salem MS4 Annual Reports; (3) Web address of posted materials; (4) Educational and outreach material from BMP 1.2 **Responsible individual for implementation:** Director of Community Development, Communication Director and City Engineer I **Objectives and expected results in meeting measurable goals:** Objectives are to provide an opportunity to the public to review the City's MS4 Program documentation. Expected results are an increase in public knowledge of the effects of stormwater runoff on water quality and BMPs implemented by the City to improve water quality from stormwater runoff. **Implementation schedule**: The City's Program Plan and Annual Report are included in this single document. This document will be posted on the web page within 30 days of submittal to DEQ, or by November 1st of each year. **Method to determine effectiveness:** Same as BMP 1.2.

BMP 2.1 Annual Reporting Form
Web link to the City's Program Plan/Annual Report, along with all materials incorporated by reference, are provided at the web link below:
http://www.salemva.gov/departments/engineering/EngineeringandInspections/StormWaterInformation/ResourceLinks.aspx

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

BMP 2.2 Public participation (Section II B.1.b)
Description: The City of Salem will participate, through promotion, sponsorship, or other involvement, in a minimum of four local activities annually. **Necessary documentation for implementation:** (1) A list of public participation opportunities; (2) Documentation of participation for each activity. **Responsible individual for implementation:** Director of Community Development, Communication Director and City Engineer I **Objectives and expected results in meeting measurable goals:** The objective is to increase public participation to reduce stormwater pollutant loads; improve water quality; and support local restoration and clean-up projects, programs, groups, meetings, or other opportunities for public involvement. Measurable goals include a measure or estimation of the number of people that participate in each local activity. **Implementation schedule**: Public participation will be conducted a minimum of four times a year. **Method to determine effectiveness:** Effectiveness will be determined by successful public turn-out or exposure to each event. Selection of specific events may be modified from year to year based on opportunity, the potential impact of the audience that can be reached, and anticipated public turn-out.

BMP 2.2 Annual Reporting Form			
Local activity & Type of participation (e.g. promotion, sponsorship, other)	Role of City staff and connection to promoting public participation in activities to improve water quality	Estimated # of people reached	Participation documentation*
Dog Waste Video Presentation (promotion & sponsorship)	Presentation/Video shown at beginning of 4 park movies during summer - video created by communications and engineering, presented by Salem Parks & Recreation (4 x summer)	1,100	Online at: https://youtu.be/d_3k1UFriKk
Spring Home Show (promotion)	Promotion - flyers handed out along with Q&A by Engineering staff (4/1/2016)	60	Flyer
Rain Barrel Workshop (promotion & sponsorship)	Interactive workshop put on by the City of Salem, library and engineering staff (6/4/2016)	34	PowerPoint, flyer and photo
Visitations to pet grooming and veterinarian businesses (sponsorship)	City staff targeted pet-related business to educate and provide brochures for distribution (August 2015)	150	Brochure

* Documentation is attached in Appendix A unless otherwise noted.

Measure of Effectiveness Form	
Local Activity (same as above)	Rationalization of effectiveness or ineffectiveness
Dog Waste Video	Effective due to size of the audience reached and information conveyed
Spring Home Show	Effective since audience targeted to address sediment from construction sites and the benthic TMDL.
Rain Barrel Workshop	Effective since targets unregulated single family homes while increasing knowledge of stormwater impacts from impervious surfaces.
Visitations to pet grooming and veterinarian businesses	Effective due to targeting of audience.
For an ineffective activity identified above, describe modifications to be made for next reporting year (e.g. different activity or different approach): N/A	

BMP 3.1 Storm Sewer Map and Outfall Information Table (Section II B.3.a.1-5)

Description: The City of Salem will maintain an accurate storm sewer system map and update the associated information table per Section II.B.3.a (1-5) of the General Permit. The map, at a minimum, will:

- Continue to Include the mapped location of all MS4 outfalls with a unique identifier that corresponds to the information table;
- Continue to include the name and location of all waters receiving discharges from City's MS4 outfalls and the associated sixth order hydrologic unit code (HUC) from Virginia's 6th Order National Watershed Boundary Dataset; and
- Continue to be updated in the case of installation of new outfalls.

The information table, at a minimum, will continue to:

- Include a unique identifier for each outfall;
- Be updated to estimate acreage served by each outfall;
- Be updated to include the name of the receiving surface water and indication as to whether the receiving water is listed as impaired on the Virginia 2010 303(d)/305(b) list; and
- Be updated to name any applicable TMDL or TMDLs into which the outfall discharges.

The information table will be updated as new outfalls come on-line. The City will notify downstream MS4s where applicable and in writing of any new or newly discovered interconnections that occur with new development. The City has previously notified the Veteran's Administration, Roanoke City and Roanoke County of interconnections.

Necessary documentation for implementation: (1) Storm sewer system map (available upon request); (2) Outfall information table (available upon request); (3) Written notification of new physical interconnections to the downstream MS4, where applicable.

Responsible individual for implementation: Director of Community Development and City Engineer I

Objectives and expected results in meeting measurable goals: The objective is to maintain an up-to-date map of the storm sewer outfalls that provides a tool for the City's Illicit Discharge Detection and Elimination Program (see BMP 3.3). Expected results are that the mapping and the information table serves as a useful tool for tracking potential illicit discharges.

Implementation schedule: The storm sewer mapping and information table has been completed consistent with the previous General Permit. The information table will be updated in accordance with the current general permit and as described above by July 1, 2016.

Method to determine effectiveness: Effectiveness will be determined based on its use as a tool for identifying illicit discharges.

BMP 3.1 Annual Reporting Form		
Outfall Inventory (Sewer System) Information Table is available in Appendix B		
Has the Information Table been updated per the current General Permit and as described in this BMP? (yes/no)		☒ Yes ☐ No
If no, explain: N/A since information table has been updated.		
Notifications to interconnected MS4s		
➢ During the reporting year, were any new outfalls installed or identified that physically interconnect to another MS4? (yes/no)		☐ Yes ☒ No
If yes, has the interconnected MS4 received written notification from the City regarding the interconnection? (yes/no or not applicable)		☐ Yes ☐ No ☒ N/A
If yes, list the notified MS4 written notifications by providing the MS4 entity notified, date of notification, and location information of the interconnection): N/A since no new interconnections. Salem Veterans Affairs Medical Centre, Roanoke City, and Roanoke County were notified of interconnect of our MS4 systems earlier in the permit cycle.		
If an interconnected MS4 was not notified of a new interconnection, please explain why and indicate when the notification will be provided: N/A since no new connections.		
Estimated drainage acreage to each HUC and impaired water		
RU09 = 6,278 acres (Roanoke River)	RU10 = 2,608 acres (Mason Creek)	RU14 = 476 acres (Roanoke River)

Necessary documents for implementation, including the outfall mapping, are not provided in the annual report, but will be retained for a minimum of 3 years and are available upon request.

Measure of Effectiveness Form
If any potential illicit discharges were identified or reported (refer to reporting for BMP 3.2 and 3.3), was outfall mapping used to address the issue: Yes, the existing system map is used as a tool in conjunction with field investigation to assist with tracing any illicit discharges back to a source.

BMP 3.2 Prohibit non-stormwater discharges (Section II B.3.b)

Description: The City of Salem prohibits non-stormwater discharges, including illegal dumping, into the storm sewer system through Chapter 30, Article V of the City Code (Illicit Storm Sewer Discharges). Article V prohibits illicit connections and discharges to the storm sewer system and establishes legal authority to inspect, conduct surveillance, and monitor to ensure compliance. The Article also gives the City the authority to initiate enforcement actions and establishes enforcement penalties and for violations.

Necessary documentation for implementation: (1) Chapter 30, Article V of the City Code; (2) A list of any instances of violation and summary of actions taken by the City; (3) Completed IDDE Follow-up Information, as provided in Appendix C.

Responsible individual for implementation: Director of Community Development and Fire Chief

Objectives and expected results in meeting measurable goals: The objective is to effectively prohibit non-stormwater discharge to the extent allowable under federal, state, or local law, regulation, or ordinance. Expected result is the appropriate use of enforcement actions to eliminate an illicit discharge, when necessary.

Implementation schedule: Implementation of Chapter 30, Article V of the City Code will continue with implementation consistent with the methods described in BMP 3.3. Standardized IDDE Tracking forms began being used as of July 1, 2014.

Method to determine effectiveness: Effectiveness will be determined based on the elimination of reported or observed non-stormwater discharges. Effectiveness will also be based on implementation of the inspections, surveillance, monitoring, and enforcement procedures in response to reports.

BMP 3.2 Annual Reporting Form
Reported or observed non-stormwater discharges are provided in Appendix C. Information in Appendix C includes a memo for each reported or observed discharge, including: • Date of violation the potential illicit non-stormwater discharge • Location of the potential illicit non-stormwater discharge • Description of the potential illicit non-stormwater discharge • Necessary corrective or disciplinary action taken

Necessary documents for implementation are not provided in the annual report, but will be retained for a minimum of 3 years and are available upon request.

Measure of Effectiveness Form	
Number of potential illicit non-stormwater discharges reported or observed, as described in Appendix C:	14
Number of potential illicit non-stormwater discharges resolved, as described in Appendix C:	14
➢ Is the number in the two boxes above the same? (yes/no)	☒ Yes (BMP effective) ☐ No (See below)
If no, based on information provided for non-resolved potential illicit non-stormwater discharges, describe any necessary modifications to the BMP to improve effectiveness in resolving potential illicit non-stormwater discharges: N/A - See Appendic C for description of each instance of potential illicit discharge.	

BMP 3.3 Develop Illicit Discharge Detection and Elimination Procedures (Section II B.3.c, e)

Description: The City of Salem will develop and implement an Illicit Discharge Detection and Elimination (IDDE) Program Manual that includes written procedures to detect, identify, and address non-stormwater discharges, including illegal dumping, to the small MS4. Procedures will include written dry weather field screening methodologies that incorporate field monitoring that provide:

- A schedule of field screening activities to ensure at least 50 outfalls are screened annually with outfalls selected for screening based on a prioritization based on land use, age of infrastructure, historical issues, or other appropriate characterization (see Attachment 3 for prioritization);
- Methodologies to collect information such as time since the last rain, the quantity of the last rain, site descriptions (e.g., conveyance type and dominant watershed land uses), estimated discharge, and visual observations (e.g., order, color, clarity, floatables, deposits or stains, vegetation condition, structural condition, and biology;
- A time frame upon which to conduct an investigation to identify and locate the source of any observed continuous or intermittent non-stormwater discharge prioritized based on potential hazard to human health;
- Methodologies to determine the source of all illicit discharges;
- Mechanisms to eliminate identified sources of illicit discharges including a description of the policies and procedures for when and how to use legal authorities;
- Methods for conducting a follow-up investigation in order to verify that the discharge has been eliminated; and
- A mechanism to track all investigations to document, at a minimum, the date(s) that the illicit discharge was observed and reported; the results of the investigation; any follow-up of the investigation; resolution of the investigation; and the date that the investigation was closed.

Necessary documentation for implementation: (1) Illicit Discharge Detection and Elimination (IDDE) Manual (Attachment 2); (2) Outfall Prioritization Methodology (Attachment 3); (3) Outfall information table; (4) Completed outfall screening field forms, (5) Completed IDDE Follow-up Information, as provided in Appendix C.

Responsible individual for implementation: Director of Community Development and City Engineer I

Objectives and expected results in meeting measurable goals: The objective is to establish effective methods and procedures for detecting, identifying, and addressing non-stormwater discharges, including illegal dumping, into the storm sewer. Expected results are effective identification and response to illicit discharges identified during screening activities and those reported by the public.

Implementation schedule: The City will screen at least 50 outfalls each year. Since July 1, 2014, the City uses methods in its IDDE Program Manual to identify and follow-up on screening results, as necessary per the City's IDDE Manual. Methodology for prioritizing outfalls will be developed and implemented by July 1, 2016.

Method to determine effectiveness: Effectiveness will be determined based on the percentage of the reported and identified non-stormwater discharges that are eliminated.

BMP 3.3 Annual Reporting Form	
Outfall Screening Record Summary	
Total number of outfalls (refer to BMP 3.1):	276*
*The total number of outfalls varies from the 2014-2015 annual reporting quantity due to a recent field assessment of regulated and unregulated outfalls in Salem, as part of an iterative program.	
Total number of outfalls screened during the reporting year:	50
Were at least 50 outfalls screened during the reporting year? (yes/no)	☒ Yes (Objective achieved) ☐ No (Objective not achieved)
If 50 outfalls were not screened during the reporting year, explain why with a schedule to screen additional outfalls the following reporting year: N/A	
Were the outfalls screened selected based on prioritization criteria (land use, age of infrastructure, historical issues, etc.)? (yes/no)	☐ Yes (Objective achieved) ☒ No (Objective not achieved)
If no, explain: The City developed an outfall prioritization screening methodology during the reporting year. The methodology will be used for selection of outfalls for screening in subsequent reporting years.	
Were follow up investigations performed for all outfalls where screening characterized the outfall as potential, suspected or obviously having an illicit discharge? (yes/no/partially)	☐ Yes (Objective achieved) ☐ No (See below) ☒ Partially (See below)
If no, explain why with a schedule for investigating outfalls characterized as potential, suspect or obvious for being subject to an illicit discharge: One outfall was identified as potential (Outfall 177-01), but was determined to be a past event, not recurring and was determined no further action needed. A second outfall (Outfall 183-05) was characterized as suspect. Follow-up is scheduled to occur to track the source od suspicious flow.	
Screening results are summarized in Appendix B. **Refer to Appendix C for detail of any follow-up actions necessary based on screening results.**	

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

Measure of Effectiveness Form	
Number of outfalls characterized as potential, suspect or obvious for an illicit discharge that received a follow up investigations:	0
Number of investigations that were closed:	0
Based on the percentage of investigations closed, provide rationale for the effectiveness or ineffectiveness of the BMP. If ineffective, describe modifications to the BMP to improve efficiency: The City's new IDDE Program Manual, developed to address requirements of the new general permit, began implementation July 1, 2014. Methods in the IDDE Manual require a follow-up investigation for outfalls characterized as potential, suspect or obvious during screening. The IDDE tracking forms and methods in the Manual will be used in the follow-up and reported in subsequent reporting years. No modifications to the BMP are required.	

BMP 3.4 Facilitate public reporting of illicit discharges and provide response (Section II B.3.d)

Description: The City will promote, publicize, and facilitate public reporting of illicit discharges into or from the City's MS4 with information describing an illicit discharge and contact information on the City's stormwater website and with inclusion of educational material described in BMP 1.2. The City will investigate all reports using methods and procedures described in the City's IDDE Program Manual described in BMP 3.3. Tracking of reports will be recorded in the IDDE Follow-up Information, as provided in Appendix C.

Necessary documentation for implementation: (1) Web address of posted material; (2) Educational material with illicit discharge reporting information; (3) Completed IDDE Tracking Form for each incident.

Responsible individual for implementation: Director of Community Development and Fire Chief

Objectives and expected results in meeting measurable goals: The objective is to first educate the public to recognize an illicit discharge and provide contact information that allows for the reporting of an observed illicit discharge. The ultimate objective is to investigate and eliminate reported illicit discharges.

Implementation schedule: Illicit discharge material and contact information will be made available on the website in the 2015-2016 reporting year. Response to illicit discharge reports will be on-going, occurring in response to reports per the IDDE Manual.

Method to determine effectiveness: Effectiveness will be measured by the percentage of illicit discharge reports that are closed (as will be documented in the IDDE Tracking Forms).

BMP 3.4 Annual Reporting Form
Illicit Discharge Reports
Refer to reporting for BMP 3.2 for follow-up actions necessary based on reported illicit discharges.

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

Measure of Effectiveness Form	
Total # of potential illicit discharges reported by the public for the reporting year:	4
Total # of potential illicit discharge reported by the public for the reporting year:	4
Percentage of reported illicit discharge instances that have been closed:	100
Were all potential illicit discharge reports resolved? (yes/no)	☒ Yes (BMP Effective) ☐ No (See below) ☐ N/A (No reports)
If no, provide explanation of why reports were not resolved and, if necessary, modifications needed for the BMP to improve effectiveness: N/A since all reports were resolved as indicated in Appendix C.	

BMP 4.1 ESC compliance for land disturbance activities (Section II B.4.a-c3, c5 c6, e1-6)

Description: Regulated land disturbance activity in the City of Salem is subject to Chapter 30, Article III of the City Code (Erosion and Sediment Control). Regulated land disturbance activities are those defined in §62.1-44.15:51 of the Code of Virginia that result in the disturbance of 5,000 square feet or greater and those on individual residential lots or sections of residential developments being developed by different property owners and where the total land disturbance of the residential development is 5,000 square feet or greater. The City utilizes an agreement in lieu of a plan as provided in §62.1-44.15:55 of the Code of Virginia for this category of land disturbances.

Section 30-92 of Article III requires a land disturbance permit from the City prior to engaging in land disturbance activity that is conditioned on an approved erosion and sediment control plan or an agreement in lieu of a plan in accordance with the Erosion and Sediment Control Law (§62.1-44.15:51 et seq. of the Code of Virginia). Plans shall be compliant with the minimum standards identified in 9VAC25-840-40 of the Erosion and Sediment Control Regulations.

Section 30-90 of Article III provides legal authority for the City to conduct inspections with an inspector holding an ESC Inspector's Certification from DCR/DEQ. Inspections will be conducted:

- ✓ Upon initial installation of erosion and sediment controls;
- ✓ At least once during every two-week period;
- ✓ Within 48 hours of any runoff-producing storm event; and
- ✓ Upon completion of the project and prior to the release of any applicable performance bonds.

Section 30-90 of Article III also provides legal authority for the City to require compliance with the approved plan and require changes to an approved plan when an inspection finds that the approved plan is inadequate.

Necessary documentation for implementation: (1) Chapter 30, Article III of the City Code; (2) ESC Plan(s) approved by the City, including procedures and documents used in plan review (e.g. checklists); (3) Documentation of ESC Inspector Certification; (4) Completed ESC Inspection Forms for each regulated project; (5) Notice to Comply and/or Stop Work Orders documentation and documentation of follow-up actions.

Responsible individual for implementation: Director of Community Development and City Engineer

Objectives and expected results in meeting measurable goals: The objective is to ensure ESC plans are prepared and approved according to ESC Laws and Regulations, inspections are performed as specified in the regulations, and that correction or enforcement, when appropriate, occurs when inspections find deficiencies. The expected result is that ESC is effective at all regulated land disturbance activities in the City.

Implementation schedule: The implementation of this BMP will be on-going with all regulated land disturbance activities in the City that disturb greater than 5,000 square feet.

Method to determine effectiveness: Effectiveness will be measured by the number of enforcement actions (notice to comply or stop-work order).

BMP 4.1 Annual Reporting Form	
Total sites subject to ESC Ordinance other than those issues an agreement in lieu of a plan =	21
The total agreements in lieu of a plan:	36

See **Appendix D** for the following information for each applicable land disturbance activity:

- Activity Description. (Column 'a')
- Total disturbed acreage. (Column 'b')
- Indication as to whether an ESC Plan was approved. (Column 'c')
- Number of inspections performed during the reporting year. (Column 'k')
- Total number of enforcement actions taken during the reporting year. (Column 'o')

Necessary documents for implementation are not provided in the annual report, but will be retained for a minimum of 3 years and are available upon request.

Measure of Effectiveness Form	
For the sites listed in Appendix D, do the number of enforcement actions (notice to comply or stop work orders) seem excessive?	☒ No (BMP effective) ☐ Yes (See below) ☐ N/A (No activities)

Discuss the nature of excessive enforcement action issues. Provide rationale that determines if the BMP is effective or ineffective. If ineffective, what modifications could improve effectiveness? The City has taken multiple enforcement actions in regards to Notices of Violations (NOVs). A review of columns 'm' and 'n' (Appendix D) indicate issues are typically addressed as a result of the NOVs and enforcement elevation to notices to comply and stop work orders are limited. However, to improve effectiveness of the BMP, the City is developing tools to be compiled in a Manual entitled, "Guidance for Land Disturbance Activities." Tools in the Manual include a series of standard forms, including revised construction site inspection forms and a defined standard for elevation of enforcement actions to be taken dependent on findings during site inspections. The City anticipates completion of the Manual and implementation of the new inspection forms during the 2016-2017 reporting year.

BMP 4.2 Receive and respond to complaints regarding land disturbing activity (Section II B.4.c4)

Description: The City will promote to the public through the stormwater webpage information on land disturbance erosion and sediment controls and provide a contact number for reporting complaints regarding regulated land disturbing activities. The City will initiate investigation of all reports within 72-hours and address the issue with the construction site operator by requiring maintenance to ESC controls, or plan modifications, as necessary, in accordance with BMP 4.1.

Necessary documentation for implementation: (1) Web address of posted material; (2) Land disturbance complaint/report tracking record with date, description, and resolution for each complaint (the City will utilize the IDDE Tracking Form in Appendix D of the City's IDDE Program Manual for documentation) .

Responsible individual for implementation: Director of Community Development; City Engineer I

Objectives and expected results in meeting measurable goals: The objective is to educate the public to understand the purpose of ESC controls on a land disturbance activity, recognize the off-site impacts resulting from potential failure of ESC controls, and provide contact information that allows for the reporting of an off-site impact and ultimately the resolution of a reported issue.

Implementation schedule: Information regarding ESC controls for land disturbance activities and for reporting complaints will be made available on the website in the 2015-2016 reporting year.

Method to determine effectiveness: Effectiveness will be measured by the percentage of resolved complaints that are reported by the public.

BMP 4.2 Annual Reporting Form			
The total number of complaints from the public related to land disturbance activity during the reporting year:			1
Complaint #	Date of complaint	Description of complaint	Resolution of the investigation
6 (see Appendix C)	2/2/2016	Complaint called in of sediment laden water going into storm drains	Site inspected and no stormwater violations found however job superintendent was contacted and reminded to keep up all E&S control measures

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

Measure of Effectiveness Form	
Were all complaints resolved?	☒ Yes (BMP effective) ☐ No (See below) ☐ N/A (no complaints)
Describe the reason for any unresolved complaint and any necessary program modifications to ensure complaints are resolved in the future. If no modifications are needed, provide rationale: All complaints resolved.	

BMP 4.3 Ensure land disturbance activities secure VSMP General Permit (Section II B.4.c.7, d)

Description: Regulated land disturbance activities are subject to Chapter 30, Article IV of the City Code (Stormwater Management Ordinance). Section 30-138.J of Article VI requires evidence that the General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR 10 General Permit) is obtained prior to the issuance of a land disturbance permit. The VAR10 General Permit and Section 30-142 of Article VI requires a Pollution Prevention Plan for regulated land disturbances equal to or greater than an acre. Through the development and implementation of the Pollution Prevention Plan, appropriate controls to prevent non-stormwater discharges such as wastewater, concrete washout, fuels and oils, and other illicit discharges will be implemented. ESC inspections described in BMP 4.1 will include inspection components that ensure implementation of Pollution Prevention Plans.

Necessary documentation for implementation: (1) Chapter 30, Article IV of the City Code; (2) Project-specific Pollution Prevention Plan (maintained within SWPPPS on construction sites by the site operator); (3) Record of evidence of General Permit coverage for regulated construction activity

Responsible individual for implementation: Director of Community Development; City Engineer I

Objectives and expected results in meeting measurable goals: The objectives are: (1) To provide a mechanism for assuring that VSMP General Permit coverage is obtained for all land disturbances exceeding 1-acre. The expected result is that coverage is obtained for all applicable land disturbances prior to commencement of the activity; (2) Ensure development and implementation of Pollution Prevention Plans through the contractor's requirement to develop and implement the SWPPP per the VAR10.

Implementation schedule: The City will continue verifying regulated land disturbances greater than or equal to 1-acre will obtain a VAR10 General Permit prior to commencement of land disturbance activity.

Method to determine effectiveness: Effectiveness will be determined based on: (1) all regulated land disturbance activity operating under VSMP General Permit coverage and a SWPPP, (2) the number of violations related to pollution prevention from construction activity as identified in the reporting for BMP 3.2, 3.3, 3.4, and 4.2.

BMP 4.3 Annual Reporting Form	
The total number of regulated land disturbance activities during the reporting year requiring a VAR10 General permit (greater than or equal to 1-acre):	9

See **Appendix D** for the following information for each applicable land disturbance activity:

- Activity Description. (Column 'a')
- Indication as to whether VSMP General Permit Coverage was obtained. (Column 'e')
- Indication as to whether a SWPPP is available on-site for the project. (Column 'f')
- Indication as to whether any illicit discharge reports resulted from the activity (Column 'j')

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

Measure of Effectiveness Form	
If no is answered in Column 'e' or 'f' in Appendix D, explain why and actions to be taken to address the issue. Include rationale that describes if they BMP is ineffective, and if so, modification to the BMP to improve effectiveness: N/A since all applicable sites have VSMP Permit coverage and SWPPPs available on-site.	
Is yes answered in any row in Column 'j' of Appendix D? (yes/no)	☐ Yes (See below) ☒ No (Effective BMP) ☐ N/A (No activity)
If yes in the question above, describe the instance(s) and provide rationale if BMP modification is necessary to improve the effectiveness of the BMP? If not necessary, provide rationale for no modification. N/A since no illicit discharges reports were result of regulated land disturbance.	

BMP 5.1 Compliance to post-construction stormwater management regulation (Section II B.5.a, b. d.1,2)

Description: New development and development on prior developed lands in the City of Salem is subject to Chapter 30, Article IV of the City Code (Stormwater Management Ordinance) that ensure post-construction stormwater management (SWM) for all regulated land disturbance activities over 5,000 square feet through plan approval by the City. Approval from the City will ensure the SWM Plan has been prepared per the VSMP Regulations that, in part, require that stormwater runoff controls:

- are designed and installed in accordance with the appropriate water quality and water quantity design criteria as required in Part II (9VAC25-870-40 et seq.) of 9VAC25-870; and
- Have an inspection and maintenance plan recorded at the local courthouse.

The City will retain a copy of each SWM facility inspection and maintenance plan from the approved stormwater management plan for proposed stormwater management facilities to be used with the implementation of BMP 5.3. A stormwater facility maintenance agreement will be required to be recorded prior to plan approval.

Necessary documentation for implementation: (1) City approved SWM Plans and Calculations (maintained on active construction sites); (2) Material used for plan review (e.g. checklists, BMP Clearinghouse Standards and Specifications); (3) SWM Facility Inspection and Maintenance Plans for approved projects with SWM facilities; (4) Proof of recordation of inspection and maintenance agreements.

Responsible individual for implementation: Director of Community Development; City Engineer I

Objectives and expected results in meeting measurable goals: The objective is to ensure regulated projects are in compliance with the VSMP Stormwater Management Regulations. The expected goal is that all regulated projects have City approved SWM Plans with recorded SWM facility inspection and maintenance plans.

Implementation schedule: The implementation of this BMP began July 1, 2014 with the adoption of Chapter 30, Article IV of the City Code.

Method to determine effectiveness: Effectiveness will be measured by: (1) all regulated land disturbance activities having a City approved SWM Plan; and (2) all stormwater management facilities with recorded inspection and maintenance plans and/or agreements, where applicable.

BMP 5.1 Annual Reporting Form	
The total number of land disturbance activities subject to the SW Ordinance other than those issued an agreement in lieu of a plan (>5,000 sf):	21
See **Appendix D** for the following information for each applicable land disturbance activity: • Activity Description. (Column 'a') • Total disturbed acreage. (Column 'b') • Indication as to whether an SWM Plan was approved. (Column 'd') • Indication as to whether an inspection and maintenance plan is approved. (Column 'h') • Indication as to whether a maintenance agreement has been recorded. (Column 'i')	

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

Measure of Effectiveness Form	
➢ Was yes answered for all activities in Column 'd' in Appendix D?	☒ Yes (BMP effective) ☐ No (See below) ☐ N/A (No activity)
Describe the reason for any activity that does not have an approved SWM plan and any necessary program modifications to the BMP to ensure an approved plan is obtained. If no modifications are needed, provide rationale: N/A since all applicable activities have an approved SWM Plan.	
➢ Was "yes" or "no facility" answered for all activities in Columns 'h' or 'i' in Appendix D?	☐ Yes (BMP effective) ☒ No (See below) ☐ N/A (No activity)
Describe the reason for any activity that does not have an approved inspection and maintenance plan or agreement. Provide any necessary program modifications to ensure plans are obtained and agreements are recorded. If no modifications are needed, provide rationale: The BMP database in Appendix D indicates the following sites have a BMP inspection & Maintenance Plan; but not a recorded maintenance agreement. For each, the explanation is given as to why there is not a recorded agreement: (1) Fairfield - There is an agreement, but it has not yet been recorded. The project is under construction and the City will require recordation prior to release of bonds. (2) Mount Regis - A recorded agreement is not applicable since this is a City-owned BMP. (3) Parkway Brewery - The City intends to require a recorded agreement prior to release of bonds for the permeable pavement BMP at the site. (4) Roanoke College: Cregger Center - The City intends to require a recorded agreement prior to release of bonds.	

BMP 5.2 Stormwater management facility tracking and reporting (Section II B.5.e)

Description: The City will maintain an updated electronic database in Excel format of all known stormwater management (SWM) facilities that discharge into the MS4. The database will include:

- The unique SWM facility ID #;
- The stormwater management facility type;
- A general description of the facility's location, including the address or latitude and longitude;
- The acres treated by the facility, including total acres, as well as the breakdown of pervious and impervious acres;
- The date the facility was brought online (MMYYYY);
- The sixth order hydrologic unit code (HUC) in which the stormwater management facility is located;
- The name of any impaired water segments within each HUC listed on the 2010 § 305(b)/303(d) Water Quality Assessment Integrate Report to which the stormwater management facility discharges;
- Whether the stormwater management facility is operator-owned or privately-owned;
- The date of the last inspection.

Upon acceptance of a newly constructed stormwater management facility, the facility will be included within the database.

Necessary documentation for implementation: (1) Updated SWM Tracking and Reporting Excel database (available upon request); (2) Completed inspection checklist forms (see BMP 5.3)

Responsible individual for implementation: Director of Community Development; City Engineer I

Objectives and expected results in meeting measurable goals: The objective is to maintain an updated record of all of the SWM facilities. The expected result is that the list will be utilized to assist with implementation of BMP 5.3 and will be maintained as new SWM facilities come online.

Implementation schedule: The maintenance of a BMP database will be on-going. Additional information required by the current MS4 General Permit, such as the impervious/pervious breakout of the drainage area to each BMP, will be completed by July 1, 2016.

Method to determine effectiveness: Effectiveness will be measured by the completeness of the annually reported database.

BMP 5.2 Annual Reporting Form	
➢ The Stormwater Management Facility database is provided electronically in Excel as an enclosure with this annual report as **Appendix E**.	
Did any new SWM facilities come online during the reporting year? (yes/no)	☒ Yes ☐ No
If yes, was the electronic database updated? (yes/no)	☒ Yes ☐ No ☐ N/A (No new facilities)
If the database was not updated, explain why and describe any necessary modification to ensure the database is updated when new facilities come online: N/A, database was updated for new BMPs that came online during the reporting year.	

Measure of Effectiveness Form	
Is the database complete to include all of the attributes for each new BMP described in this BMP and as required by the MS4 General Permit?	☒ Yes (BMP effective) ☐ No (See below) ☐ N/A (No facilities)
Describe the reason for that the database is incomplete and provide rationale that determines whether or not the BMP needs to be modified to ensure completion of the data base: N/A	

BMP 5.3a Inspection, operation, and maintenance of City-owned SWM facilities (Section II B.5.c.2, d.3, 5)

Description: The City will perform long-term inspections and maintenance on all City-owned stormwater facilities utilizing the inspection and maintenance plans obtained from implementation of BMP 5.1. Where inspection and maintenance plans are not available from approved SWM plans, the City will utilize BMP-specific inspection and maintenance instruction from the City's Post-Construction Stormwater Management Program Manual. Inspections will be performed either:

- As dictated on the schedule provided on the inspection and maintenance plans; or
- A minimum of once annually, whichever are the more frequent criteria.

Inspections will be performed using the written procedures in the City's Post-Construction Stormwater Management Program Manual. BMP-type specific inspection and maintenance checklists provided in the Program Manual lists potential issues and methods to address each issue. Necessary maintenance identified during inspections will be conducted in a timely manner as indicated on the checklist or no later than the next scheduled inspection.

Necessary documentation for implementation: (1) BMP Database described in BMP 5.2; (2) BMP-specific Inspection and Maintenance Plan, if available; (3) The City of Salem Post-Construction Stormwater Management Program Manual (Attachment 5); (4) Completed BMP Inspection Forms; (5) Documentation of maintenance performed, where necessary

Responsible individual for implementation: Director of Community Development; City Engineer I

Objectives and expected results in meeting measurable goals: The objective is to ensure the intended function of all City-owned SWM facilities is maintained through long-term inspections and maintenance. The expected result is completed inspection forms and timely maintenance, when necessary.

Implementation schedule: The implementation of this BMP will be on-going, with the procedures specified in this BMP and the City's Post-Construction Stormwater Management Program Manual beginning July 1, 2014.

Method to determine effectiveness: Effectiveness will be measured by: (1) completion of required inspections, as scheduled, and (2) timely maintenance once a maintenance issue is identified during inspections.

BMP 5.3a Annual Reporting Form
Stormwater Management Facility Inspection Record*
The following information is provided in the SWM Facility database described in BMP 5.2: • SWM Facility ID • Inspection Schedule (e.g. monthly, quarterly, annually) • Dates of inspection(s) for the reporting year • If inspected, any identified necessary maintenance per inspection form • If maintenance is necessary, type and date the maintenance was performed

* Provided as electronic database with annual report in Excel format and hard copy as Appendix E. This BMP applies to those identified as "public" in the database.

Measure of Effectiveness Form	
➢ Do dates in the database indicate that inspections were performed for City-owned (public) BMPs at least once within the reporting year?	☒ Yes (BMP effective) ☐ No (See below)
Describe the reason for inspections that were not performed on City-owned BMPs and provide rationale that determines whether or not the BMP needs to be modified to ensure completion of inspections: All City-owned BMPs were inspected during the reporting year with the exception of one that was inspected on September 7, 2016. The BMP was not inspected during the reporting year because it was not clearly indicated on mapping in a case where two BMPs exist within a larger plan of development. The discrepancy was noted during the DEQ program audit this summer and an inspection was promptly performed.	
➢ Do dates in the database indicate that maintenance was performed, where necessary and in a timely manner?	☐ Yes (BMP effective) ☐ No (See below) ☒ Other (See below)
Describe the reason maintenance was not performed on City-owned BMPs in a timely manner (e.g. minor repair needed that does not affect function of the facility) and provide rationale that determines whether or not the BMP needs to be modified to ensure completion of inspections: Scheduled maintenance will occur during the 2016-2017 reporting year.	

BMP 5.3b Inspection, operation, and maintenance of privately-owned SWM facilities (Section II B.5.c.1, d.3, 5)

Description: The City will ensure long-term operations and maintenance of all privately-owned stormwater facilities utilizing the maintenance agreements and inspection and maintenance plans obtained from implementation of BMP 5.1. Where inspection and maintenance plans are not available from approved SWM plans, the City will utilize BMP-specific inspection and maintenance instruction from the City's Post-Construction Stormwater Management Program Manual. Inspections of all privately owner stormwater BMPs will be performed by the City at least once during every permit cycle (once per 5-years). Inspection for each facility may be satisfied by either:

- A field inspection conducted by the City using the written procedures and checklists in the City's Post Construction Stormwater Management Program Manual; or
- Documentation of an inspection conducted by the Owner or designee, provided the inspection was performed by a DEQ Certified SWM Inspector.

Division 7 of Chapter 30, Article IV of the City Code (Stormwater Management Ordinance) requires maintenance, inspection and repair of stormwater management facilities, where necessary.

Necessary documentation for implementation: (1) BMP Database described in BMP 5.2; (2) BMP-specific Inspection and Maintenance Plan, if available; (3) The City of Salem Post-Construction Stormwater Management Program Manual; (4) Documentation of inspections and maintenance performed, where necessary.

Responsible individual for implementation: Director of Community Development; City Engineer I

Objectives and expected results in meeting measurable goals: The objective is to ensure the intended function of all privately-owned SWM facilities is maintained through long-term inspections and maintenance. The expected result is completed inspection forms and timely maintenance, when necessary, in accordance with the schedule described in the description above.

Implementation schedule: The implementation of this BMP will be on-going, with the procedures specified in this BMP and the City's Post-Construction Stormwater Management Program Manual beginning July 1, 2014.

Method to determine effectiveness: Effectiveness will be measured by: (1) Completion of required inspections, as scheduled, and (2) timely maintenance once a maintenance issue is identified during inspections.

BMP 5.3b Annual Reporting Form
Stormwater Management Facility Inspection Record*
The following information is provided in SWM Facility database described in BMP 5.2: • SWM Facility ID • Inspection Schedule (e.g. monthly, quarterly, annually) • Dates of inspection(s) for the reporting year • If inspected, any identified necessary maintenance per inspection form • If maintenance is necessary, type and date the maintenance was performed

* Provided as electronic database with annual report in Excel format and hard copy as Appendix E. This BMP applies to those identified as "private" in the database.

Measure of Effectiveness Form	
➢ Do dates in the database indicate that inspections were performed for at least 20% of the privately owned BMPs as necessary for each for the reporting year to achieve the 5-year objective?	☐ Yes (BMP effective) ☒ No (See below)
If less than 20% of privately-owned BMPs were inspected during the reporting year, provide a schedule to ensure 100% can be inspected prior to the end of the permit cycle (July 1, 2018): The City is required to inspect privately owned BMPs once a permit cycle. The City did not inspect any privately owned BMPs this reporting year, but will ensure all are inspected before the end of the Permit cycle. The City intends to develop a "Private BMP Inspection & Maintenance Protocol during the 2016-2017 reporting year.	
➢ Where inspection resulted in the identification of required maintenance, has the City notified the entity responsible of the maintenance needs with reference to the Stormwater Management Ordinance and a specified timeframe for completing the maintenance?	☐ Yes (BMP effective) ☒ No (See below)
If the entity responsible for maintenance has not been notified, explain: The City is required to inspect privately owned BMPs once a permit cycle. The City did not inspect any privately owned BMPs this reporting year, but will ensure all are inspected before the end of the Permit cycle. The City intends to develop a "Private BMP Inspection & Maintenance Protocol during the 2016-2017 reporting year.	
Have notified entities performed maintenance within the time period specified by the City?	☐ Yes (BMP effective) ☐ No (See below) ☒ N/A (No instances)
If no to the previous question, was enforcement action taken?	☐ Yes (BMP effective) ☐ No (See below) ☒ N/A (No instances)
If enforcement action was taken, did it resolve the issue?	☐ Yes (BMP effective) ☐ No (See below) ☒ N/A (No instances)
If the issue was not resolved from enforcement action, described necessary modifications to the BMP to improve effectiveness: N/A	

BMP 6.1 Pollution Prevention Procedures for Operations & Maintenance Activities (Section II B.6.a)

Description: The City will develop and implement comprehensive written procedures for good housekeeping and pollution prevention for daily operations and equipment maintenance as described within the City's Good Housekeeping and Pollution Prevention Program Manual. At a minimum the Program Manual includes procedures with the following goals:

- Prevent illicit discharge;
- Ensure the proper disposal of waste materials, including landscape waste;
- Prevent discharge of municipal vehicle wash water to the storm sewer without authorization under a separate VPDES permit;
- Prevent the discharge of wastewater to the storm sewer without authorization under a separate VPDES permit;
- Require BMPs to filter water pumped from utility construction and maintenance activities;
- Require BMPs to prevent pollutants in runoff from stored and stockpiled materials (e.g. soil stockpiles and salt storage);
- Prevent pollution discharge from leaking municipal automobiles and equipment;
- Ensure application of materials, such as pesticides, is conducted in accordance with manufacturer's specifications.

Effective implementation will be supported with site-specific Stormwater Pollution Prevention Plans (SWPPPs) for high-priority areas as described in BMP 6.2 and the employee training described in BMP 6.3.

Necessary documentation for implementation: (1) The City of Salem Good Housekeeping/Pollution Prevention Program Manual (Attachment 6); (2) Site-specific SWPPPs; (3) Training documentation; (4) Completed SWPPP Site Evaluation forms (see BMP 6.2).

Responsible individual for implementation: Director of Community Development

Objectives and expected results in meeting measurable goals: The objective is to minimize or prevent pollutant discharges from City operations and maintenance activities. The expected result is City staff's adherence to the City's Good Housekeeping/Pollution Prevention Manual resulting in minimal or no illicit discharges from municipal facilities and activities.

Implementation schedule: The Good Housekeeping/Pollution Prevention Manual is complete. Training will be provided biennially (annually while water quality issue #3 in BMP 1.2 is in place), with the initial training performed by July 1, 2015. Site-specific evaluations will be performed with the schedule described in BMP 6.2.

Method to determine effectiveness: Effectiveness will be measured by the results of the annual comprehensive site-specific compliance evaluations for high-priority facilities that will begin in the spring of 2016, as described in BMP 6.2. Measure of effectiveness for this BMP will be based on recurring issues identified during the site-specific evaluations.

BMP 6.1 Annual Reporting Form	
Good Housekeeping/Pollution Prevention Manual	
Has a Good Housekeeping/Pollution Prevention Manual been developed? (yes/no)	☒Yes ☐No
*** See BMPs 6.2 and 6.3 for additional reporting. ***	

Measure of Effectiveness Form
*** See BMP 6.2 for measure of effectiveness information. ***

BMP 6.2 Stormwater Pollution Prevention Plans (Section II B.6.b)

Description: The City will implement site-specific Stormwater Pollution Prevention Plans (SWPPPs) for City owned properties that have been identified as "high-priority" facilities according to Section II B.6.b.2 of the General Permit. The City's high priority facilities have been identified as the:

- Street and General Maintenance Facility;
- 1010 Tidewater Street (Stockpiling, vehicle and equipment storage); and
- 1001 Roanoke Blvd. (Area south of baseball field).

For each high-priority facility, a SWPPP will be developed to include:

- Mapping that identifies all outfalls, direction of flows, existing source controls, and receiving water bodies;
- A discussion and checklist of potential pollutants and pollutant sources;
- A discussion of all potential non-stormwater discharges;
- Written procedures, or reference to written procedures, designed to reduce and prevent pollutant discharge;
- A description of the applicable training described in BMP 6.3;
- Procedures to conduct an annual comprehensive site compliance evaluation; and
- An inspection and maintenance schedule for site specific source controls. The date of each inspection and associated findings and follow-up shall be logged in each SWPPP.

The SWPPPs will provide instruction for updates, as necessary, to reflect changes on the respective site, modifications to operations and maintenance procedures, or short-comings resulting in a reportable spill, as defined in the City's Good Housekeeping/Pollution Program Manual. Inspection forms will be completed in accordance with the prescribed schedule within the SWPPPs and maintained on file with the on-site SWPPP.

Necessary documentation for implementation: (1) The City's Good Housekeeping/Pollution Prevention Manual; (2) Site-Specific SWPPPs for high-priority facilities; (3) Completed annual comprehensive site compliance evaluation; (4) Identification of High Priority Facilities report (Attachment 7)

Responsible individual for implementation: Director of Community Development

Objectives and expected results in meeting measurable goals: The objective and expected result is to minimize or prevent pollutant discharges from the City's high-priority facilities through adherence to the site-specific SWPPPs.

Implementation schedule: The City has identified high priority facilities that require SWPPPs. SWPPPs will be completed per the MS4 General Permit schedule so that the annual comprehensive site compliance evaluation can begin in the spring of each year beginning in 2017.

Method to determine effectiveness: Effectiveness will be measured by the results of the annual comprehensive high priority facility compliance evaluation, specifically the number of recurring issues identified in the annual comprehensive site compliance evaluations. Effectiveness will also be evaluated based on the number of illicit discharges observed or reported that originate from high-priority facilities.

BMP 6.2 Annual Reporting Form	
Stormwater Pollution Prevention Plan	
➢ Have SWPPPs been completed for each high priority facility identified in the BMP?	☐ Yes ☒ No
If no, explain: SWPPPs will be completed for all identified high priority facilities, consistent with the General Permit by July 1, 2017.	
➢ Did any changes on high priority facilities that could potentially affect stormwater runoff occur during the reporting year that would require changes to any SWPPPs (e.g. new activities, outfalls or BMPs)? (yes/no)	☐ Yes ☒ No
If yes, are the changes reflected in the SWPPP? (yes/no)	☐ Yes ☐ No ☒ N/A
If the changes were not reflected, explain why: See Schedule.	

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

Measure of Effectiveness Form	
➢ Results from Comprehensive High Priority Site Compliance Evaluations	
Total number of recurring items originating from site-specific activities identified Spring 2017*:	TBD
Total number of recurring items originating from site-specific activities identified Spring 2018:	TBD
Total number of recurring items originating from site-specific activities identified Spring 2019:	TBD
Has the # of recurring items trended downward or remained at zero from year to year?	☐ Yes (BMP effective) ☒ No (See below)
If no, discuss the specific recurring items and describe how the BMP can be modified to improve effectiveness to specifically address recurring items (e.g. improved training, improved inspection form) or describe why modification is not necessary: N/A until implementation of SWPPP inspections begin.	
* Note that measure of effectiveness begins in 2017 since recurring items would not be available in 2016 with the first inspection.	
➢ Were any illicit discharges reported or identified in the reporting forms for BMPs 3.2 and 3.3 found to originate from high-priority facilities activities?	☐ Yes (See below) ☒ No (BMP effective)
If yes, describe how the BMP can be modified to improve effectiveness to specifically address the cause of the illicit discharge(s) or describe why modification is not necessary: N/A	

BMP 6.3a Employee Good Housekeeping/Pollution Prevention Training Plan (Section II B.6.d)

Description: The City has incorporated a written Training Plan into its Good Housekeeping/Pollution Prevention and IDDE Program Manuals, including a schedule of training events. The Program Manuals will serve as the training material and include Appendices to document training and list relevant staff for the following specific training:

- Annual training to relevant field personnel in the recognition and reporting of illicit discharges. Training will utilize the City's IDDE Manual described in BMP 3.3.
- Annual training to relevant employees in good housekeeping and pollution prevention practices that are to be employed during road and parking lot maintenance, around maintenance and operations facilities, and in and around recreational facilities. Training will utilize the City's Good Housekeeping/Pollution Prevention Manual described in BMP 6.1.

The plan will also require the following:

- Training or certification in spill response for emergency response employees.
- Training or certification for applying pesticides and herbicides in accordance with the Virginian Pesticide Control Act (§ 3.1-249.27 et seq. of the Code of Virginia) for employees performing applications.

For certifications as required under the Virginia Erosion & Sediment Control Law, see BMP 4.1.

Necessary documentation for implementation: (1) Training documentation or appropriate certifications for employees; (2) The City's IDDE Manual; (3) The City's Good Housekeeping/Pollution Prevention Program Manual.

Responsible individual for implementation: Director of Community Development

Objectives and expected results in meeting measurable goals: The objective is to ensure effective training on the procedures provided in the Good Housekeeping/Pollution Prevention and IDDE Program Manuals and to have them carried out during employee daily operations. The expected result is well trained employees that minimize pollutant discharge through good housekeeping practices and IDDE screening and source identification and elimination.

Implementation schedule: The written training plan is complete and incorporated in the City's Good Housekeeping/Pollution Prevention and IDDE Program Manuals. Training and certification requirements occurred prior to July 1, 2015, with illicit discharge and good housekeeping training occurring once every two years thereafter.

Method to determine effectiveness: Effectiveness will be measured by the results of a "Knowledge Check" quiz that will be taken by each employee that takes the training. The "Knowledge Check" quiz in provided in the Appendix of the Program Manuals.

BMP 6.3a Annual Reporting Form	
Training Plan	
Has the City's Written Training Plan been developed? (yes/no)	☒Yes ☐No
Good Housekeeping/Pollution Prevention Training & Certifications	
Has annual Good Housekeeping employee training been provided? (yes/no)	☒Yes ☐No
If no, explain: N/A	
Date of latest training to relevant field personnel in the recognition and reporting of illicit discharges:	04/27/2016
Number of employees that participated in the latest training in the recognition and reporting of illicit discharges:	48
Date of last training to relevant employees in good housekeeping and pollution prevention practices:	04/27/2016
Number of employees that participated in the latest training in good housekeeping and pollution prevention practices:	48
Do the number of individuals reported above represent all employees that conduct daily activities that could potentially affect stormwater runoff? (yes/no)	☒Yes ☐No
If no, explain: N/A. However, an 16 additional employees were identified and included in training since the previous year's training.	
Did any employees apply pesticides and herbicides? (yes/no)	☒Yes ☐No
If yes, identify the employee and their certification: Laura Reilly, #84080	
Spill Response Training	
Date of spill response training: TBD	Number of employees trained in spill response: TBD
Provide a summary of the training or certification program provided to emergency response employees that includes training in spill response: Employees are trained on Good Housekeeping procedures which incorporates contact information for emergency response. The fire department receives regular emergency response training for spills.	

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

Measure of Effectiveness Form	
Did scores from the "Knowledge Check" quiz improve from the previous training? (yes/no)	☐ Yes (BMP effective) ☒ No (See below) ☐ N/A
If no, describe modifications to the BMP to increase effectiveness (e.g. training frequency, training material, etc.): The "Knowledge Check" scores decreased from the previous training, falling from an 89 average to 81 average based on questions related to Good Housekeeping and Illicit Discharge. However, since 16 additional employees were included the scores are not considered comparable. However, the City intends to modify training to improve information comprehension using new training approaches in the upcoming year. The City will continue to evaluate "knowledge scores" and the effectiveness of training.	

BMP 6.3b Contractor Certification for Pollution Prevention (Section II B.6.d.4)

Description: The City will require, through contract language, the certification for contractors applying pesticides and herbicides in accordance with the Virginian Pesticide Control Act (§ 3.1-249.27 et seq. of the Code of Virginia). Contract language will require contractors provide proof of the appropriate certification prior to contract execution.

Necessary documentation for implementation: (1) Contract language; (2) Proof of certifications.

Responsible individual for implementation: Director of Community Development

Objectives and expected results in meeting measurable goals: The objective is to ensure the proper application of pesticides and herbicides. The expected result is that contractors used by the City will have appropriate certifications for application of pesticides and herbicides.

Implementation schedule: The City will develop and begin implementation of contract language by July 1, 2016.

Method to determine effectiveness: Effectiveness will be measured by evaluation of trends in confirmed reports of illicit discharge related to herbicides and pesticides.

BMP 6.3b Annual Reporting	
Pesticides and Herbicides	
Number of contracts executed during the reporting year that includes application of pesticides and herbicides?	3
Was proof of certification provided for each contract that includes the application of pesticides and herbicides? (yes/no)	☒ Yes ☐ No ☐ N/A (no contracts)
If no, explain:	N/A

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

Measure of Effectiveness	
Were any illicit discharges related to herbicides and pesticides application by contractors reported or identified in the reporting forms for BMPs 3.2 and 3.3?	☐ Yes (See below) ☒ No (BMP effective)
If yes, describe how the BMP can be modified to improve effectiveness to specifically address the cause of the illicit discharge(s) or describe why modification is not necessary: N/A	

BMP 6.4 Turf and Landscape Management (Section II B.6.c)

Description: The City will implement a turf and landscape nutrient management plan (NMPs) that has been developed by a certified turf and landscape nutrient management planner in accordance with §10.1-104.2 of the Code of Virginia on all lands owned or operated by the City where nutrients are applied to a contiguous area greater than one acre.

In addition, the City will not apply any deicing agent containing urea or other forms of nitrogen or phosphorus to parking lots, roadways, and sidewalks, or other paved surfaces.

Necessary documentation for implementation: (1) City of Salem Nutrient Management Plans (available upon request); (2) Completed Fertilizer Application Record; (3) Ingredients of deicers used.

Responsible individual for implementation: Director of Community Development

Objectives and expected results in meeting measurable goals: The objective is to avoid excessive application of nutrients where applied on City property subject to the NMP. The expected results are reduction of downstream impacts from nutrient loads through documented implementation of the NMP.

Implementation schedule: Applicable lands subject to the NMP, those being a contiguous acre or more, have been identified. Implementation will ensure that 15% of the applicable lands are covered by July 1, 2015, 40% of the applicable lands by July 1, 2016, and 75 % by July 1, 2017 with complete coverage by July 1, 2018.

Method to determine effectiveness: Effectiveness will be measured by the implementation of the NMP through completion of the application record and periodic updates to the NMP to make necessary adjustments based on soils conditions.

BMP 6.4 Annual Reporting Form		
Nutrient Management Plans		
Were nutrients used during the reporting year?	☒ Yes ☐ No	If no, no further reporting necessary for this BMP
Total acreage of lands where nutrient management plans are required:		70.3
Acreage of lands upon which nutrient management plans have been implemented:		0
Date of last NMP update:		4/1/16
Total percentage of land where nutrient management plans are required and being implemented:		0
Does the percentage meet the schedule described in the BMP? (yes/no)		☐ Yes ☒ No
If no, explain and provide a schedule for achieving the required implementation requirement: Due to excessive fertilizer blend requirements, the implementation of the NMP was delayed. With thenewest approved, 3-portion plan, total implementation will be required for all contractors with the new turf maintenance Bid contract, which will begin march 15, 2017.		

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

Measure of Effectiveness Form	
Was the NMP's fertilizer application record maintained and in adherence to the NMP? (yes/no)	☒ Yes (BMP effective) ☐ No (See below)
If no, describe how the BMP can be modified to improve effectiveness. Provide rationalization for modification or if modification is deemed unnecessary: Although the NMP was not implemented, intense fertilizer application records were maintained. With the new NMP, implementation and adherence wil be strictly enforced.	

BMP 6.5 Contractor Safeguards to Ensure Program Consistent Measures and Procedures (Section II B.6.e)

Description: The City's current contract language will be enhanced to incorporate references to sections within the City's Good Housekeeping and Pollution Prevention Manual to require City contractors to use appropriate control measures and procedures for stormwater discharges, when applicable. Oversight will be provided by the City with inspections and generated reports on the measures of adherence to the contract documents; effectiveness of the measures to control illicit discharges; and the Contractor's maintenance of the measures. Contract language will require contractors address items identified during inspections within a time period appropriate to prevent the potential of non-stormwater discharges. When needed, if the Contractor fails to take immediate action or remediate to the satisfaction of the City, the City shall remediate the pollution and receive a credit in the existing contract for the cost of remediation.

Contract language described in this BMP is not intended for regulated land disturbance activity addressed with BMPs 4.1, 4.2, and 4.3.

Necessary documentation for implementation: (1) City of Salem Good Housekeeping and Pollution Prevention Manual; (2) Completed inspection forms; (3) Contract language.

Responsible individual for implementation: Director of Community Development

Objectives and expected results in meeting measurable goals: The objective and expected result is to minimize or prevent pollutant discharges from contractor activities.

Implementation schedule: By July 1, 2016, the City will have developed contract language to require contractors to use appropriate control measures and procedures for stormwater discharges. The language will be incorporated into contracts the 2016-2017 reporting year.

Method to determine effectiveness: Effectiveness will be measured by the inspection results specific to work performed by contractors, the responsiveness of contractors to address observed issues, and reported illicit discharges originating from contracted municipal work in the City.

BMP 6.5 Annual Reporting Form	
Contractor Safeguards	
Has contract language, as described above, been developed? (yes/no)	☒Yes ☐No
Has contract language, as described above, been included in contracts with all contractors where the work performed could require appropriate control measures and procedures for stormwater discharges? (yes/no)	☐Yes ☒No
If no, explain: The contract language has been developed and is in the process of inclusion through the City's procurement offices. Inclusion into the City's standard contract langauage is anticipated during the 2016-2017 reporting year.	
Was oversight necessary for any contracts subject to the contract language described in the BMP? (yes/no)	☐Yes ☐No ☒N/A (no contracts)
If no, explain: See BMP schedule.	

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

Measure of Effectiveness Form	
Were any illicit discharges related to municipal contracted work (other than regulated land disturbance activity) reported or identified in the reporting forms for BMPs 3.2 and 3.3?	☐ Yes (See below) ☒ No (BMP effective)
If yes, describe how the BMP can be modified to improve effectiveness to specifically address the cause of the illicit discharge(s) or describe why modification is not necessary: N/A	

3.2 Special Conditions for Approved TMDL BMPs

BMP SC.1a Roanoke (Staunton) River Watershed PCB TMDL Action Plan (Section I B)

Description: Salem has been assigned a waste load allocation (WLA) for PCBs in the Roanoke (Staunton) River Watershed TMDL approved on December 9, 2010. Salem will develop an action plan to address the WLA that includes:

- A list of legal authorities applicable to reducing PCB;
- Identification and methods for maintaining a list of practices, methods, and controls implemented to reduce the PCB;
- Description of means for incorporation of identified practices, methods, and controls into the public education and outreach and employee training programs;
- Results of an assessment of facilities of concern for significant contribution of PCB;
- Develop methodology for assessing effectiveness of the TMDL Action Plan using modeling tools (in-lieu of water quality monitoring), specifically the Excel spreadsheet based Watershed Treatment Model (WTM). Assessment will also incorporate methodology for evaluation of facilities identified to significantly contribute to the POC;
- An annual reporting worksheet consistent with the TMDL Action Plan and the General Permit.

Additional BMP(s) will be included in this Section of the Program Plan, as necessary, to include implementation of the Action Plan.

Necessary documentation for implementation: (1) Roanoke (Staunton) River Watershed TMDL Action Plan (available upon request); (2) Salem Program Plan Updates, as necessary.

Responsible individual for implementation: Director of Community Development

Objectives and expected results in meeting measurable goals: The objective is to achieve reductions required by the Roanoke (Staunton) River Watershed TMDL for PCB. The expected result is the development of a TMDL Action Plan.

Implementation schedule: The Roanoke (Staunton) River Watershed Action Plan will be developed by July 1, 2016. The schedule developed in the Action Plan will be implemented thereafter.

Method to determine effectiveness: Effectiveness will be determined by the selection of cost effective BMPs supported by model quantification to achieve the required pollutant reductions.

BMP SC.1a Roanoke (Staunton) River Watershed PCB TMDL Action Plan Annual Reporting Form	
Roanoke (Staunton) River Watershed Action Plan	
Has the Salem Roanoke (Staunton) River Watershed PCB Action Plan been developed?	☒ Yes ☐ No

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

Measure of Effectiveness Form	
Does quantification demonstrate the selected means and methods in the completed Action Plan can achieve the required reductions to the maximum extent practicable (MEP) in the required time frames?	☒ Yes ☐ No
If no, explain how the Action Plan can be modified to achieve the required reductions in the required time frames: N/A	

BMP SC.1b Roanoke (Staunton) River Watershed PCB TMDL Action Plan Implementation (Section I B.5.b)

Description: On an annual basis, the City will report progress on the implementation of the Roanoke (Staunton) River Watershed PCB TMDL Action Plan and associated evaluation. As described in Section 4.1 of the Action Plan, BMPs implemented to address several minimum control measures (MCMs) in the City's MS4 Program BMPs are applicable to the reduction of PCBs. In addition, and to reduce PCBs to the maximum extent practicable, the City's PCB Action Plan also lists practices and controls to address PCBs beyond those incorporated into the MCM BMPs summarized as:

Roanoke (Staunton) River Watershed PCB TMDL Action Plan Practices & Controls

BMP General Description	Measurable Goals	Schedule
Review condition of City-owned buildings where electrical equipment and appliances were installed prior to 1979.	Inspection of City-owned buildings and listing of potential PCB sources. If sources identified, maintenance and disposal plans to prevent introduction of PCBs into the environment.	2016-2018
Continued implementation of the Electrical Department SPCC Plans.	Completed SPCC inspection forms and corrective actions, when applicable to address potential sources of PCBs.	Ongoing
Enforcement of applicable City Codes sections described in Section 4.2.2 of the Action plan.	When applicable, enforcement of City Codes regarding illicit discharges and storage/disposal of potential PCB sources.	Ongoing
Enhanced Public Education & Outreach Plan.	Incorporation of information regarding PCBs in public education and outreach materials.	Ongoing

Necessary documentation for implementation: (1) "Roanoke River PCB TMDL Development (Virginia);" (2) Measurable goal documentation, as necessary.

Responsible individual for implementation: Director of Community Development

Objectives and expected results in meeting measurable goals: The objective is to achieve reductions required by the Roanoke River PCB TMDL. The expected result is implementation of the identified measurable goals.

Implementation schedule: As described above, to the maximum extent practicable, or as otherwise identified for applicable BMPs in the City's Program Plan.

Method to determine effectiveness: Effectiveness will be determined based on the achievement of measurable goals described in this BMP.

BMP SC.1b Roanoke (Staunton) River Watershed PCB TMDL Action Plan Implementation Annual Reporting Form

Description: The City's progress on the implementation of the Roanoke (Staunton) River Watershed PCB TMDL Action Plan measurable goals is reported below. Supporting documentation is not provided with the annual report, but can be provided upon request.

Roanoke (Staunton) River Watershed PCB TMDL Action Plan Practices & Controls

BMP General Description	Progress Towards Measurable Goals
Review condition of City-owned buildings where electrical equipment and appliances were installed prior to 1979.	See schedule.
Continued implementation of the Electrical Department SPCC Plans.	Ongoing
Enforcement of applicable City Codes sections described in Section 4.2.2 of the Action Plan.	Ongoing, as applicable
Enhanced Public Education & Outreach Plan.	Information to be incorporated in Public Education and outreach Material in the 2016-2017 reporting year.

Measure of Effectiveness	
Were measurable goals achieved consistent with the Action Plan and schedules defined in the BMP?	☒ Yes ☐ No
If no, explain how the City plans to achieve Action Plan measurable goals for the permit cycle, consistent with the DEQ-approved Action Plan: N/A since measurable goals achieved per the Action Plan schedule.	

BMP SC.2a Upper Roanoke River Watershed E. coli TMDL Action Plan (Section I B)

Description: Salem has been assigned a waste load allocation (WLA) for E. Coli in the Upper Roanoke River Watershed TMDL approved on June 27, 2007. Salem will develop an action plan to address the WLA that includes:

- A list of legal authorities applicable to reducing E. coli;
- Identification and methods for maintaining a list of practices, methods, and controls implemented to reduce the E. Coli;
- Description of means for incorporation of identified practices, methods, and controls into the public education and outreach and employee training programs;
- Results of an assessment of facilities of concern for significant contribution of E. Coli;
- Develop methodology for assessing effectiveness of the TMDL Action Plan using modeling tools (in-lieu of water quality monitoring), specifically the Excel spreadsheet based Watershed Treatment Model (WTM). Assessment will also incorporate methodology for evaluation of facilities identified to significantly contribute to the POC;
- An annual reporting worksheet consistent with the TMDL Action Plan and the General Permit.

Additional BMPs will be included in this Section of the Program Plan, as necessary, to include implementation of the Action Plan.

Necessary documentation for implementation: (1) Upper Roanoke River Watershed TMDL Action Plan (available upon request); (2) Salem Program Plan Updates, as necessary.

Responsible individual for implementation: Director of Community Development

Objectives and expected results in meeting measurable goals: The objective is to achieve reductions required by the Upper Roanoke River Watershed TMDL for E. Coli. The expected result is the development of a TMDL Action Plan.

Implementation schedule: The Upper Roanoke River Watershed Action Plan was developed by July 1, 2015. The schedule developed in the Action Plan will be implemented thereafter.

Method to determine effectiveness: Effectiveness will be determined by the selection of cost effective BMPs supported by model quantification to achieve the required pollutant reductions.

BMP SC.2a Upper Roanoke River Watershed E. coli TMDL Action Plan Annual Reporting Form	
Upper Roanoke River Watershed Action Plan	
Has the Salem Upper Roanoke River Watershed Action Plan been developed?	☒ Yes ☐ No

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

Measure of Effectiveness Form	
Does quantification demonstrate the selected means and methods in the completed Action Plan can achieve the required reductions in the required time frames?	☒ Yes ☐ No

BMP SC.2b Upper Roanoke River Watershed E. coli TMDL Action Plan Implementation (Section I B.5.b)

Description: On an annual basis, the City will report progress on the implementation of the Upper Roanoke River Watershed E. coli TMDL Action Plan and associated evaluation. As described in Section 4.1 of the Action Plan, BMPs implemented to address each minimum control measure (MCM) in the City's MS4 Program BMPs are applicable to the reduction of E. coli. To reduce E. coli to the maximum extent practicable, the City's E. coli Action Plan also lists practices and controls to address E. coli beyond those incorporated into the MCM BMPs summarized as:

Upper Roanoke River Watershed E. coli TMDL Action Plan Action Plan Practices & Controls

BMP General Description	Measurable Goals	Schedule
Pet Waste Controls	(1) Prohibition of pets on City properties; (2) Maintenance of the Salem Rotary Dog Park; (3) Educational outreach to registered dog owners.	Ongoing
Sanitary Sewer System Rehabilitation	Continued rehabilitation and repair of the sanitary sewer system in accordance with I&I Corrective Action Plan described in Section 4.2.2 of the Action Plan.	Ongoing
Identification of Septic Systems	Cross reference Roanoke Health Department records with utility data to confirm the number and location of properties that are not connected to the sanitary sewer system.	Prior to July 1, 2018
Elimination of Straight Pipe Connections	(1) Continued annual outfall screening and mapping (as new outfalls are identified); (2) Continued elimination of illicit discharges, as identified; (3) Recognition of straight pipe concerns in staff training.	Ongoing
Source Controls at City-Owned Properties	Conduct review of approach to pet waste as an E. coli source that includes a review of the code and considers additional pet waste stations.	Prior to July 1, 2018
Enhanced Public Education & Outreach Plan	Inclusion of educational information into: (1) Public Education and Outreach Plan and (2) Employee training.	Ongoing

Necessary documentation for implementation: (1) Upper Roanoke River Watershed E. coli TMDL Action Plan; (2) Measurable goal documentation, as necessary.

Responsible individual for implementation: Director of Community Development

Objectives and expected results in meeting measurable goals: The objective is to achieve reductions required by the Upper Roanoke River Watershed E. coli TMDL. The expected result is implementation of the identified measurable goals.

Implementation schedule: As described above, to the maximum extent practicable, or as otherwise identified for applicable BMPs in the City's Program Plan.

Method to determine effectiveness: Effectiveness will be determined based on the achievement of measurable goals described in this BMP.

BMP SC.2b Upper Roanoke River Watershed E. coli TMDL Action Plan Implementation Annual Reporting Form

Description: The City's progress on the implementation of the Upper Roanoke River Watershed E. coli TMDL Action Plan measurable goals is reported below. Supporting documentation is not provided with the annual report, but can be provided upon request.

Upper Roanoke River Watershed E. coli TMDL Action Plan Practices & Controls

BMP General Description	Progress Towards Measurable Goals
Pet Waste Controls	Signage, pet waste bags, and trash receptacles were maintained at the Salem Rotary Dog park. pet waste stations were maintained at 6 stations along the Roanoke River Greenway. Educational outreach to registered dog owners was provided as described in BMP 1.2.
Sanitary Sewer System Rehabilitation	This City has continued implementation of the I&I Corrective Action Plan. Specific information is available upon request.
Identification of Septic Systems	The City has developed a GIS dataset for parcels suspected to be served by septic systems. Measurable goals will be achieved per the BMP schedule.
Elimination of Straight Pipe Connections	(1) Outfall screening was performed (see reporting for BMPs 3.3). Newly identified outfalls mapped and included in outfall database in Appendix B; (2) Any identified/reported illicit discharge eliminated (see reporting BMPs 3.2 and 3.4); (3) Training conducted as reported in BMP 6.3a.
Source Controls at City-Owned Properties	The City will achieve measurable goals per the BMP schedule.
Enhanced Public Education & Outreach Plan	(1) E. coli as a pollutant of concern is incorporated into the City's PEOP as described in BMP 1.2; (2) E. coli, as a pollutant of concern was incorporated into employee training reported in BMP 6.3a.

Measure of Effectiveness	
Were measurable goals achieved consistent with the Action Plan?	☒ Yes ☐ No
If no, explain how the City plans to achieve Action Plan measurable goals for the permit cycle, consistent with the DEQ-approved Action Plan: N/A since measurable goals achieved per the Action Plan schedule.	

BMP SC.3a Upper Roanoke River Watershed Sediment TMDL Action Plan (Section I B)

Description: Salem has been assigned a waste load allocation (WLA) for sediment in the Upper Roanoke River Watershed Sediment TMDL approved on September 7, 2006. Salem will develop an action plan to address the WLA that includes:

- A list of legal authorities applicable to reducing sediment;
- Identification and methods for maintaining a list of practices, methods, and controls implemented to reduce the sediment;
- Description of means for incorporation of identified practices, methods, and controls into the public education and outreach and employee training programs;
- Results of an assessment of facilities of concern for significant contribution of sediment;
- Develop methodology for assessing effectiveness of the TMDL Action Plan using modeling tools (in-lieu of water quality monitoring), specifically the Excel spreadsheet based Watershed Treatment Model (WTM). Assessment will also incorporate methodology for evaluation of facilities identified to significantly contribute to the POC;
- An annual reporting worksheet consistent with the TMDL Action Plan and the General Permit.

Additional BMPs will be included in this Section of the Program Plan, as necessary, to include implementation of the Action Plan.

Necessary documentation for implementation: (1) Upper Roanoke River Watershed TMDL Action Plan (available upon request); (2) Salem Program Plan Updates, as necessary.

Responsible individual for implementation: Director of Community Development

Objectives and expected results in meeting measurable goals: The objective is to achieve reductions required by the Upper Roanoke River Watershed TMDL for sediment. The expected result is the development of a TMDL Action Plan.

Implementation schedule: The Upper Roanoke River Watershed Action Plan was developed by July 1, 2015. The schedule developed in the Action Plan will be implemented thereafter.

Method to determine effectiveness: Effectiveness will be determined by the selection of cost effective BMPs supported by model quantification to achieve the required pollutant reductions.

BMP SC.3a Upper Roanoke River Watershed Sediment TMDL Action Plan Annual Reporting Form	
Upper Roanoke River Watershed Action Plan	
Has the Salem Upper Roanoke River Watershed Action Plan been developed?	☒ Yes ☐ No

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

Measure of Effectiveness Form	
Does quantification demonstrate the selected means and methods in the completed Action Plan can achieve the required reductions in the required time frames?	☒ Yes ☐ No

BMP SC.3b Upper Roanoke River Watershed Sediment TMDL Action Plan Implementation (Section I B.5.b)

Description: On an annual basis, the City will report progress on the implementation of the Upper Roanoke River Watershed Sediment TMDL Action Plan and associated evaluation. In addition to continued implementation of the City's MS4 Program BMPs, the City's Upper Roanoke River Watershed Sediment TMDL Implementation Schedule is summarized below:

Upper Roanoke River Watershed Sediment TMDL Action Plan Implementation Plan

Step	General Description	Measurable Goal	Target Date
-	Continued sweeping	Continue current sweeping efforts with regenerative/vacuum sweeper per the Implementation Plan described in Section 4.2 of the Action Plan.	Annually
1	Tracking and information on areas swept	Supporting materials for tracking documentation	July. 2016
2	Training for applicable staff	Utilize supporting materials for training sweeper operators for collection of sweeping operations data.	July. 2016
3	Conduct collected material sampling and analysis	Conduct street sweeping material sampling and conduct laboratory analysis. Analysis includes particle size distribution, moisture content, total nitrogen and total phosphorus.	Oct. 2016
4	Target area identification and sediment reduction assessment	Written report building on field collected data from Steps 1 and 3 develop to assist estimating pollutant reductions and target areas for sweeping to maximize POC reduction	July. 2017
5	Sweeper evaluation	Assess effectiveness and appropriateness of the City's sweepers. The assessment will be utilized in the consideration of future sweeper purchases.	Jan. 2018
6	Implementation of targeted areas for sweeping	Implementation of the identified target areas resulting from Step 4.	Annually, begin July 2018

Necessary documentation for implementation: (1) Upper Roanoke River Watershed Sediment TMDL Action Plan; (2) Documentation of Measurable Goals described in the Implementation Plan.

Responsible individual for implementation: Director of Community Development

Objectives and expected results in meeting measurable goals: The objective is to achieve reductions required by the Upper Roanoke River Watershed Sediment TMDL. The expected result is implementation of the identified measurable goals.

Implementation schedule: Per the Implementation Plan summarized in the above Table.

Method to determine effectiveness: Effectiveness will be determined by the quantitative computation of sediment reductions using approved or scientifically supportable methods.

BMP SC.3b Upper Roanoke River Watershed Sediment TMDL Action Plan Implementation Annual Reporting Form

Description of progress towards achieving measurable goals: The City's progress on the implementation of the Upper Roanoke River Watershed Sediment TMDL Action Plan measurable goals is reported below. Supporting documentation is not provided with the annual report, but can be provided upon request.

Upper Roanoke River Watershed Sediment TMDL Action Plan Implementation Plan

Step	Measurable Goal(s)	Progress Towards Measurable Goal
-	Continued sweeping	The City's street sweeping schedule continued during the reporting year.
1	Supporting materials for tracking documentation	(1) Sweeping data collection form developed. (2) Sampling protocol developed.
2	Utilize supporting materials for training sweeper operators for collection of sweeping operations data.	To be completed during the 2016-2017 reporting year.
3	Conduct street sweeping material sampling and conduct laboratory analysis.	See BMP Schedule
4	Written report building on field collected data from Steps 1 and 3 develop to assist estimating pollutant reductions and target areas for sweeping to maximize POC reduction	See BMP Schedule
5	Assess effectiveness and appropriateness of the City's sweepers. The assessment will be utilized in the consideration of future sweeper purchases.	See BMP Schedule
6	Implementation of the identified target areas resulting from Step 4.	See BMP Schedule

Measure of Effectiveness	
Were measurable goals achieved consistent with the Action Plan schedule?	☒ Yes ☐ No
If no, explain how the City plans to achieve Action Plan measurable goals for the permit cycle, consistent with the DEQ-approved Action Plan: N/A since measurable goals achieved per the Action Plan schedule.	

Appendix A – Documentation of Public Participation Activities

EROSION & SEDIMENT CONTROL TIPS/REMINDERS

PLEASE REMEMBER SEDIMENT IS A TMDL POLLUTANT OF CONCERN FOR THE ROANOKE RIVER

SILT FENCE

- ☐ STAKES PLACED ON DOWNHILL SIDE
- ☐ TRENCH DUG IN FRONT OF SILT FENCE, FILTER FABRIC EXTENDED INTO TRENCH, TRENCH BACKFILLED & COMPACTED
- ☐ SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT
- ☐ SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED

FOR ADDITIONAL INFORMATION PLEASE SEE VA EROSION AND SEDIMENT CONTROL HANDBOOK SECTION 3.05

CONSTRUCTION ENTRANCE

- ☐ FILTER FABRIC LINER UNDERNEATH
- ☐ VDOT #1 COARSE AGGREGATE (2 TO 3 INCH STONE)
- ☐ AGGREGATE LAYER AT LEAST 6" THICK
- ☐ MUST EXTEND THE FULL WIDTH OF VEHICLE INGRESS/EGRESS AREA AND HAVE A MINIMUM 12 FOOT WIDTH*
- ☐ CONSTRUCTION ENTRANCE LENGTH SHALL BE AT LEAST 70 FEET*

* VARIANCES MAY BE GRANTED IN SPECIAL CIRCUMSTANCES

FOR ADDITIONAL INFORMATION PLEASE SEE VA EROSION AND SEDIMENT CONTROL HANDBOOK SECTION 3.02

INLET PROTECTION

- ☐ ALL STORMWATER INLETS THAT MAY RECIEVE SEDIMENT LADEN WATER FROM YOUR SITE MUST BE PROTECTED
- ☐ SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT
- ☐ SOME DESIGNS ALLOW FOR OVERFLOW TO PREVENT EXCESSIVE PONDING HOWEVER THAT DOESN'T MEAN PULLING THE GUTTER BUDDY AWAY FROM THE CURB INLET JUST TO GET RID OF SOME STANDING WATER, THAT DEFEATS THE PURPOSE OF PROTECTING THE INLET FROM SEDIMENT

FOR ADDITIONAL INFORMATION PLEASE SEE VA EROSION AND SEDIMENT CONTROL HANDBOOK SECTION 3.07

STABILIZATION

- ☐ EXPOSED SOILS NOT TO BE FINE GRADED FOR PERIODS LONGER THAN 14 DAYS SHALL BE TEMPORARILY SEEDED
- ☐ A PERMANENT VEGETATIVE COVER SHALL BE APPLIED TO AREAS LEFT DORMANT FOR OVER 1 YEAR

FOR ADDITIONAL INFORMATION PLEASE SEE VA EROSION AND SEDIMENT CONTROL HANDBOOK SECTIONS 3.31 & 3.32

DUST CONTROL

- ☐ LIMIT SOIL DISTURBANCE AND USE TEMPORARY SEEDING/WATER TRUCKS

FOR ADDITIONAL INFORMATION PLEASE SEE VA EROSION AND SEDIMENT CONTROL HANDBOOK SECTION 3.39

City of Salem Department of Engineering & Inspections
21 South Bruffey Street Salem, VA 24153
Phone: (540) 375-3032, Fax: (540) 375-4042, E-mail: engineering@salemva.gov
Please call or visit www.salemva.gov/departments/engineering for more info

Free Workshop:

Build a Rain Barrel!

Who can come:

- Ages 18+
- One rain barrel per household

What to bring:

- Work/gardening gloves
- Vehicle large enough to transport your 55-gallon rain barrel home

This workshop will teach you:

- Why and how to build a rainbarrel
- Why and how to negate the harmful effects of stormwater runoff
- How to improve your lawn and garden's ability to slow and filter stormwater runoff

Where:

- Salem Public Library Meeting Room
- 28 E. Main Street, Salem VA
- Ph: 540-375-3089

When:

- Saturday, June 4th
- 10:00am-12:00pm

How:

- REGISTRATION IS REQUIRED; only 20 spots available!
- Call 540-375-3089 to register
- We will call before the event to confirm your attendance and provide last-minute details.

This program is a cooperative effort between the Salem Public Library and the City of Salem Engineering Department.

CITY of SALEM VA PUBLIC LIBRARY

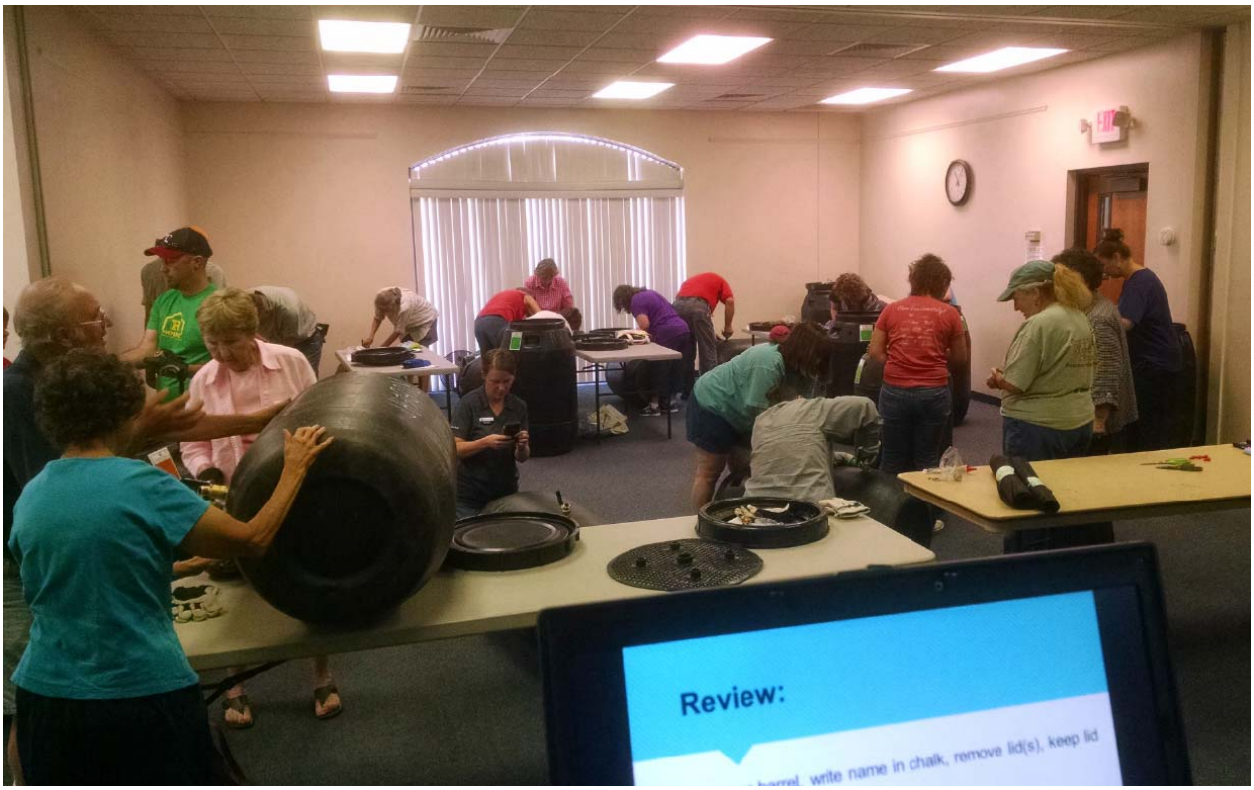
ROANOKE VALLEY GREENWAYS

Clean Valley Council


EXIT
How to Make a
Rain Barrel
from a Food-Grade
Pickle Barrel


Rain Barrels


EXIT


EXIT
Review:

SIMPLE WAYS TO LOVE YOUR PET AND THE ENVIRONMENT!

Always clean up after your pets by properly disposing of their waste in the trash or even in a toilet. The City of Salem has Mutt Mitt dispensers located along the Roanoke Valley Greenway to assist you in this process. Simply slip a mitt or plastic bag on your hand, grab the waste, invert the bag and toss it.

DID YOU KNOW?

The **Salem Rotary Dog Park** is located at 1321 Indiana Street. It is open daily from 6am – 10pm and there are both large and small dog sections Check out **www.salemva.gov** for more information.

SALEM ROTARY DOG PARK

Dogs are not allowed in Salem Parks. Please take advantage of the Salem Rotary Dog Park and your Roanoke River Greenway.

FIVE THINGS YOU CAN DO TO REDUCE PET WASTE POLLUTION

1. Always clean up after your pet.
2. Bag dog waste & place it in the trash.
3. Flush pet waste down the toilet.
4. Never dispose of waste in storm drains.
5. Be a responsible dog owner.

City of Salem, Virginia
Engineering and Inspections Department
21 South Bruffey Street
Salem, VA 24153
Phone: (540) 375-3032
Fax: (540) 375-4042
engineering.salemva.gov

SALEM VA
ENGINEERING DEPARTMENT

Here's the Scoop

PROTECT YOUR FAMILY, YOUR COMMUNITY, YOUR DOG AND THE ROANOKE RIVER

CLEAN UP AFTER YOUR PET

SALEM VA
ENGINEERING DEPARTMENT

CITY OF SALEM STORMWATER MANAGEMENT PROGRAM

PET WASTE DISPOSAL, WATER QUALITY AND YOUR HEALTH

ARE YOU RISKING YOUR HEALTH?

When pet waste is left on the ground or disposed of improperly, water quality suffers and your health may also be at risk. Children who play outside are at the highest risk of infection from bacteria and parasites found in pet waste. Flies may also spread diseases found in pet waste.

Diseases that can be transmitted from pet waste to humans include:

CAMPYLOBACTERIOSIS: A bacterial infection carried by dogs and cats that frequently causes diarrhea in humans.

SALMONELLOSIS: The most common bacteria infection transmitted to humans by other animals. Symptoms include fever, muscle aches, headaches, vomiting and diarrhea.

Dog waste also contains roundworm, e. coli bacteria, tuberculosis, gastroenteritis, giardiasis, and cryptosporidiosis. You can significantly reduce these health risks by picking up after your pet.

ARE YOU POLLUTING OUR WATER?

The Roanoke River flows through the City of Salem. A 2006 George Mason University study conducted for the Virginia Department of Environmental Quality stated that 29% of the samples collected from the Roanoke River, between January 1, 1998 and December 31, 2002, exceeded the fecal coliform bacteria criteria standard. This bacteria is present in the intestinal tracts of all warm-blooded animals. It is an indicator of a potential health risk to anyone exposed to the water.

The nutrients and organic matter in pet waste can also cause significant water quality degradation. Excess nutrients can cause algae blooms that block sunlight and kill underwater vegetation. Decaying pet waste uses up dissolved oxygen in the water that fish and other aquatic life depend on to live.

Be a responsible pet owner and help keep the Roanoke River clean by picking up after your pet.

ARE YOU BEING RESPONSIBLE?

NO POOP ZONE

Pet waste is a significant source of fecal bacteria in Salem. When it is not properly disposed, it can wash into our storm drains. These storm drains do not connect to water treatment facilities and drain directly into Mason Creek and the Roanoke River.

Appendix B – Outfall Inventory

(Attributes to be completed to address General Permit per BMP schedule)

Outfall ID	Latitude	Longitude	Area Drainage to Outfall (Acres)	Name of Receiving Water	Virginia HUC6	Is Receiving Water Impaired?	2010 303b/303d Impairment(s)	Applicable TMDL(s)	Date of last Screening	Summary of Screening Results	Details of Any Necessary Followup	Followup Resolution	# Inspections Completed During Reporting Year
006-01	37° 19' 11.128" N	80° 2' 15.779" W	1.27	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	6/11/2015	Unlikely	None Needed	N/A	0
006-03	37° 19' 4.304" N	80° 2' 6.717" W	1.22	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	6/8/2015	Unlikely	None Needed	N/A	0
012-04	37° 19' 3.313" N	80° 2' 7.180" W	42.33	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	6/8/2015	Apparent Spring Fed Flow	Consider water test	TBD	0
016-01	37° 18' 47.201" N	80° 1' 55.643" W	3.71	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	6/11/2015	Unlikely	None Needed	N/A	0
020-02	37° 18' 44.042" N	80° 3' 11.187" W	0.22	Tributary to Mason Creek	Mason Creek (RU10)	No	N/A	Sediment, E-Coli, PCB	6/17/2015	Unlikely	None Needed	N/A	0
020-04	37° 18' 43.636" N	80° 3' 9.582" W	0.66	Tributary to Mason Creek	Mason Creek (RU10)	No	N/A	Sediment, E-Coli, PCB	6/17/2015	Unlikely	None Needed	N/A	0
020-05	37° 18' 43.483" N	80° 3' 11.064" W	8.86	Tributary to Mason Creek	Mason Creek (RU10)	No	N/A	Sediment, E-Coli, PCB	6/17/2015	Apparent Spring Fed Flow	Consider water test	TBD	0
020-06	37° 18' 45.576" N	80° 3' 11.855" W	4.28	Tributary to Mason Creek	Mason Creek (RU10)	No	N/A	Sediment, E-Coli, PCB	6/17/2015	Unlikely	None Needed	N/A	0
020-07	37° 18' 45.920" N	80° 3' 12.053" W	0.73	Tributary to Mason Creek	Mason Creek (RU10)	No	N/A	Sediment, E-Coli, PCB	6/17/2015	Unlikely	Consider cleanout	N/A	0
025-03	37° 18' 39.277" N	80° 3' 23.321" W	10.24	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/25/2015	Unlikely	None Needed	N/A	0
025-05	37° 18' 36.998" N	80° 3' 21.998" W	1.59	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/25/2015	Unlikely	None Needed	N/A	0
026-02	37° 18' 42.445" N	80° 3' 9.297" W	0.72	Tributary to Mason Creek	Mason Creek (RU10)	No	N/A	Sediment, E-Coli, PCB	6/17/2015	Unlikely	None Needed	N/A	0
026-04	37° 18' 38.937" N	80° 3' 7.244" W	6.87	Tributary to Mason Creek	Mason Creek (RU10)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
030-02	37° 18' 43.919" N	80° 1' 59.217" W	11.64	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	6/8/2015	Apparent Spring Fed Flow	Consider water test	TBD	0
030-06	37° 18' 36.302" N	80° 1' 56.561" W	12.09	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	6/8/2015	Unlikely	None Needed	N/A	0
030-07	37° 18' 36.786" N	80° 1' 56.608" W	3.77	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	6/8/2015	Unlikely	None Needed	N/A	0
030-08	37° 18' 36.507" N	80° 1' 57.716" W	5.49	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	6/8/2015	Unlikely	None Needed	N/A	0
030-09	37° 18' 36.040" N	80° 1' 57.496" W	30.37	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	6/8/2015	Apparent Spring Fed Flow	Consider water test	TBD	0
034-01	37° 18' 31.452" N	80° 1' 53.677" W	6.61	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	6/11/2015	Unlikely	None Needed	N/A	0
034-02	37° 18' 30.346" N	80° 1' 52.998" W	4.97	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	6/11/2015	Unlikely	None Needed	N/A	0
034-03	37° 18' 32.299" N	80° 1' 55.105" W	30.19	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	5/23/2014	Unlikely	None Needed	N/A	0
034-09	37° 18' 25.001" N	80° 1' 50.397" W	3.32	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	5/23/2014	Unlikely	None Needed	N/A	0
039-01	37° 18' 31.374" N	80° 3' 17.661" W	0.71	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/25/2015	Unlikely	None Needed	N/A	0
039-05	37° 18' 26.506" N	80° 3' 15.778" W	3.44	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/17/2015	Unlikely	Consider repair	N/A	0
039-06	37° 18' 26.539" N	80° 3' 15.308" W	5.81	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/17/2015	Unlikely	None Needed	N/A	0
043-01	37° 18' 18.741" N	80° 4' 24.138" W	9.77	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
048-01	37° 18' 19.837" N	80° 2' 42.921" W	44.03	Tributary to Mason Creek	Mason Creek (RU10)	No	N/A	Sediment, E-Coli, PCB	6/11/2015	Unlikely	None Needed	N/A	0
048-04	37° 18' 19.432" N	80° 2' 43.408" W	1.19	Tributary to Mason Creek	Mason Creek (RU10)	No	N/A	Sediment, E-Coli, PCB	6/11/2015	Unlikely	None Needed	N/A	0
051-01	37° 18' 22.522" N	80° 1' 43.976" W	17.13	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
051-04	37° 18' 17.271" N	80° 1' 44.654" W	20.69	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	6/11/2015	Unlikely	Consider cleanout/repair	N/A	0
051-05	37° 18' 17.090" N	80° 1' 44.423" W	24.99	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	6/11/2015	Unlikely	None Needed	N/A	0
051-06	37° 18' 16.631" N	80° 1' 45.411" W	6.16	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	5/23/2014	Unlikely	None Needed	N/A	0
055-04	37° 18' 11.721" N	80° 1' 38.871" W	77.70	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
056-02	37° 18' 7.693" N	80° 1' 53.974" W	3.29	Tributary to Mason Creek	Mason Creek (RU10)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
056-03	37° 18' 7.869" N	80° 1' 53.953" W	38.61	Tributary to Mason Creek	Mason Creek (RU10)	No	N/A	Sediment, E-Coli, PCB	5/23/2014	Unlikely	None Needed	N/A	0
057-02	37° 18' 10.621" N	80° 2' 18.030" W	30.03	Tributary to Mason Creek	Mason Creek (RU10)	No	N/A	Sediment, E-Coli, PCB	6/11/2015	Unlikely	None Needed	N/A	0
057-03	37° 18' 5.479" N	80° 2' 11.198" W	0.68	Tributary to Mason Creek	Mason Creek (RU10)	No	N/A	Sediment, E-Coli, PCB	6/11/2015	Unlikely	None Needed	N/A	0
057-05	37° 18' 5.618" N	80° 2' 8.242" W	23.55	Tributary to Mason Creek	Mason Creek (RU10)	No	N/A	Sediment, E-Coli, PCB	6/11/2015	Unlikely	None Needed	N/A	0
057-06	37° 18' 7.162" N	80° 2' 6.080" W	12.01	Tributary to Mason Creek	Mason Creek (RU10)	No	N/A	Sediment, E-Coli, PCB	6/11/2015	Unlikely	None Needed	N/A	0
057-07	37° 18' 7.137" N	80° 2' 5.587" W	0.69	Tributary to Mason Creek	Mason Creek (RU10)	No	N/A	Sediment, E-Coli, PCB	6/11/2015	Unlikely	None Needed	N/A	0
060-03	37° 18' 12.994" N	80° 3' 7.973" W	2.74	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/17/2015	Unlikely	None Needed	N/A	0
060-05	37° 18' 9.583" N	80° 3' 5.711" W	13.63	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/17/2015	Unlikely	Consider repair	N/A	0
060-08	37° 18' 5.353" N	80° 3' 5.699" W	2.13	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/12/2015	Unlikely	None Needed	N/A	0
060-09	37° 18' 4.449" N	80° 3' 5.668" W	66.42	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/12/2015	Unlikely	None Needed	N/A	0
060-10	37° 18' 4.461" N	80° 3' 5.816" W	3.53	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/12/2015	Unlikely	None Needed	N/A	0
060-11	37° 18' 4.075" N	80° 3' 5.672" W	0.54	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/12/2015	Unlikely	None Needed	N/A	0
060-12	37° 18' 4.081" N	80° 3' 5.784" W	2.07	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/12/2015	Unlikely	None Needed	N/A	0
061-02	37° 18' 9.238" N	80° 3' 24.396" W	20.69	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/25/2015	Unlikely	None Needed	N/A	0
061-07	37° 18' 4.880" N	80° 3' 29.559" W	1.60	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/25/2015	Unlikely	None Needed	N/A	0
062-05	37° 18' 6.329" N	80° 3' 50.461" W	8.41	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/25/2015	Unlikely	None Needed	N/A	0
062-06	37° 18' 5.212" N	80° 3' 49.182" W	6.95	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/25/2015	Unlikely	None Needed	N/A	0
064-01	37° 18' 9.647" N	80° 4' 17.743" W	14.81	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/29/2015	Unlikely	None Needed	N/A	0
068-01	37° 18' 2.974" N	80° 4' 12.313" W	5.17	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/29/2015	Unlikely	None Needed	N/A	0
068-04	37° 17' 57.586" N	80° 4' 11.182" W	24.97	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/25/2015	Unlikely	None Needed	N/A	0
068-05	37° 17' 54.925" N	80° 4' 11.019" W	1.28	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/25/2015	Unlikely	None Needed	N/A	0
068-06	37° 17' 55.164" N	80° 4' 10.879" W	27.41	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
068-07	37° 17' 55.092" N	80° 4' 10.688" W	0.86	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/25/2015	Unlikely	None Needed	N/A	0
070-01	37° 18' 2.555" N	80° 3' 42.814" W	31.90	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
072-01	37° 18' 1.100" N	80° 3' 3.494" W	67.60	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/12/2015	Apparent Spring Fed Flow	Consider water test	TBD	0
072-02	37° 17' 54.948" N	80° 3' 7.886" W	6.64	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/12/2015	Unlikely	None Needed	N/A	0
072-03	37° 18' 2.440" N	80° 3' 5.230" W	1.13	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/12/2015	Unlikely	None Needed	N/A	0
076-01	37° 18' 2.808" N	80° 1' 48.326" W	4.02	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	5/23/2014	Unlikely	None Needed	N/A	0
076-02	37° 18' 0.495" N	80° 1' 49.552" W	1.30	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	5/23/2014	Unlikely	None Needed	N/A	0
076-05	37° 18' 2.092" N	80° 1' 48.110" W	18.34	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	6/18/2014	Unlikely	None Needed	N/A	0
081-01	37° 17' 52.026" N	80° 1' 48.175" W	54.21	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	6/18/2014	Unlikely	None Needed	N/A	0
081-02	37° 17' 50.902" N	80° 1' 47.535" W	0.59	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
081-04	37° 17' 50.842" N	80° 1' 49.346" W	106.14	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	6/18/2014	Unlikely	None Needed	N/A	0
081-05	37° 17' 48.840" N	80° 1' 47.020" W	1.19	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	5/23/2014	Unlikely	None Needed	N/A	0
081-06	37° 17' 45.297" N	80° 1' 46.319" W	82.86	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	5/23/2014	Unlikely	None Needed	N/A	0
081-07	37° 17' 51.713" N	80° 1' 49.584" W	63.32	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	6/18/2014	Unlikely	None Needed	N/A	0
085-01	37° 17' 51.867" N	80° 3' 8.738" W	1.96	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/12/2015	Apparent Spring Fed Flow	Consider water test	TBD	0
085-02	37° 17' 52.517" N	80° 3' 8.938" W	1.51	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/12/2015	Unlikely	None Needed	N/A	0
088-01	37° 17' 45.105" N	80° 4' 6.279" W	3.04	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/25/2015	Apparent Spring Fed Flow	Consider water test	TBD	0
088-02	37° 17' 43.709" N	80° 4' 5.164" W	23.51	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/25/2015	Unlikely	None Needed	N/A	0
089-01	37° 17' 51.117" N	80° 4' 10.401" W	1.49	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/29/2015	Unlikely	None Needed	N/A	0
089-02	37° 17' 48.869" N	80° 4' 9,141" W	2.42	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/29/2015	Unlikely	None Needed	N/A	0
090-03	37° 17' 51.534" N	80° 4' 39.507" W	39.44	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/18/2014	Unlikely	None Needed	N/A	0
090-04	37° 17' 51.869" N	80° 4' 40.045" W	7.07	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/15/2016	Unlikely	None Needed	N/A	1
090-05	37° 17' 48.879" N	80° 4' 38.696" W	0.36	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/18/2014	Unlikely	None Needed	N/A	0
090-06	37° 17' 45.570" N	80° 4' 39.810" W	0.34	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
104-01	37° 17' 42.200" N	80° 4' 3.702" W	3.35	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/29/2015	Unlikely	None Needed	N/A	0

Outfall ID	Latitude	Longitude	Area Drainage to Outfall (Acres)	Name of Receiving Water	Virginia HUC6	Is Receiving Water Impaired?	2010 303b/303d Impairment(s)	Applicable TMDL(s)	Date of last Screening	Summary of Screening Results	Details of Any Necessary Followup	Followup Resolution	# Inspections Completed During Reporting Year
104-02	37° 17' 39.495" N	80° 4' 2.300" W	4.78	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/29/2015	Unlikely	None Needed	N/A	0
104-03	37° 17' 37.884" N	80° 4' 1.196" W	8.13	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/29/2015	Unlikely	None Needed	N/A	0
104-04	37° 17' 37.954" N	80° 3' 59.706" W	17.42	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
106-01	37° 17' 36.911" N	80° 3' 31.014" W	6.52	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/18/2014	Unlikely	None Needed	N/A	0
106-02	37° 17' 39.438" N	80° 3' 29.538" W	1.37	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/18/2014	Unlikely	None Needed	N/A	0
106-03	37° 17' 42.316" N	80° 3' 29.663" W	4.73	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/18/2014	Unlikely	None Needed	N/A	0
107-02	37° 17' 40.906" N	80° 3' 9.577" W	29.55	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/12/2015	Unlikely	None Needed	N/A	0
107-04	37° 17' 40.636" N	80° 3' 9.642" W	7.82	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/30/2015	Unlikely	None Needed	N/A	0
107-05	37° 17' 40.425" N	80° 3' 9.651" W	0.77	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/30/2015	Unlikely	None Needed	N/A	0
107-06	37° 17' 39.963" N	80° 3' 9.786" W	1.42	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/30/2015	Unlikely	None Needed	N/A	0
116-03	37° 17' 34.643" N	80° 1' 43.458" W	42.72	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	5/23/2014	Unlikely	None Needed	N/A	0
116-04	37° 17' 30.273" N	80° 1' 44.263" W	0.46	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
121-05	37° 17' 25.910" N	80° 3' 23.979" W	1.72	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/12/2015	Unlikely	None Needed	N/A	0
122-01	37° 17' 32.563" N	80° 3' 47.765" W	30.49	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/27/2016	Unlikely	None Needed	N/A	1
122-02	37° 17' 30.945" N	80° 3' 47.233" W	6.16	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/27/2016	Unlikely	None Needed	N/A	1
122-03	37° 17' 31.037" N	80° 3' 46.992" W	2.29	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/27/2016	Unlikely	None Needed	N/A	1
122-04	37° 17' 27.089" N	80° 3' 47.214" W	1.70	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/27/2016	Unlikely	None Needed	N/A	1
122-05	37° 17' 26.214" N	80° 3' 47.345" W	3.35	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/27/2016	Apparent Spring Fed Flow	Consider water test	TBD	1
122-06	37° 17' 25.962" N	80° 3' 47.347" W	0.91	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/27/2016	Unlikely	None Needed	N/A	1
122-07	37° 17' 25.917" N	80° 3' 47.121" W	0.40	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/27/2016	Unlikely	None Needed	N/A	1
122-08	37° 17' 25.591" N	80° 3' 47.184" W	5.32	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/27/2016	Unlikely	None Needed	N/A	1
122-09	37° 17' 25.513" N	80° 3' 46.920" W	2.82	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/27/2016	Unlikely	None Needed	N/A	1
125-01	37° 17' 32.983" N	80° 4' 38.295" W	32.33	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/15/2016	Unlikely	None Needed	N/A	1
125-03	37° 17' 32.500" N	80° 4' 36.441" W	6.47	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/15/2016	Unlikely	None Needed	N/A	1
125-05	37° 17' 31.945" N	80° 4' 37.901" W	4.14	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/15/2016	Unlikely	None Needed	N/A	1
130-01	37° 17' 31.208" N	80° 6' 1.137" W	50.40	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/24/2016	Unlikely	None Needed	N/A	1
130-02	37° 17' 31.087" N	80° 6' 0.751" W	0.70	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/24/2016	Unlikely	None Needed	N/A	1
133-01	37° 17' 14.040" N	80° 7' 4.792" W	0.83	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
133-02	37° 17' 14.298" N	80° 7' 3.478" W	3.43	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
133-03	37° 17' 11.597" N	80° 7' 0.022" W	4.52	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
135-01	37° 17' 21.602" N	80° 6' 26.231" W	21.47	Paint Bank Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
135-02	37° 17' 19.736" N	80° 6' 20.679" W	14.91	Paint Bank Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
136-01	37° 17' 16.060" N	80° 6' 13.753" W	8.03	Paint Bank Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
136-02	37° 17' 14.248" N	80° 6' 7.935" W	2.82	Paint Bank Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
137-02	37° 17' 17.191" N	80° 5' 44.278" W	1.32	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/24/2016	Unlikely	None Needed	N/A	1
137-03	37° 17' 15.872" N	80° 5' 42.376" W	30.90	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/24/2016	Unlikely	None Needed	N/A	1
137-04	37° 17' 15.955" N	80° 5' 42.199" W	22.05	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/24/2016	Unlikely	None Needed	N/A	1
137-05	37° 17' 15.078" N	80° 5' 41.945" W	6.23	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/24/2016	Unlikely	None Needed	N/A	1
137-06	37° 17' 15.141" N	80° 5' 41.682" W	1.82	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/24/2016	Unlikely	None Needed	N/A	1
137-07	37° 17' 19.369" N	80° 5' 46.164" W	0.38	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/24/2016	Unlikely	None Needed	N/A	1
139-01	37° 17' 15.140" N	80° 5' 20.673" W	23.97	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/24/2016	Unlikely	None Needed	N/A	1
139-02	37° 17' 15.039" N	80° 5' 20.719" W	0.91	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/24/2016	Unlikely	None Needed	N/A	1
140-10	37° 17' 14.666" N	80° 4' 49.267" W	18.25	Paint Bank Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/18/2014	Unlikely	None Needed	N/A	0
140-12	37° 17' 13.945" N	80° 4' 50.007" W	1.32	Paint Bank Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/25/2016	Unlikely	None Needed	N/A	1
140-13	37° 17' 15.067" N	80° 4' 53.698" W	2.62	Paint Bank Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/25/2016	Unlikely	None Needed	N/A	1
141-02	37° 17' 13.286" N	80° 4' 37.348" W	0.48	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
144-01	37° 17' 19.900" N	80° 3' 48.540" W	6.95	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/27/2016	Unlikely	None Needed	N/A	1
145-01	37° 17' 16.110" N	80° 3' 21.420" W	24.20	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
150-02	37° 17' 24.224" N	80° 1' 41.716" W	22.21	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	4/11/2014	Unlikely	None Needed	N/A	0
150-03	37° 17' 23.630" N	80° 1' 41.655" W	2.95	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	4/11/2014	Unlikely	None Needed	N/A	0
150-04	37° 17' 24.261" N	80° 1' 43.170" W	2.56	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	4/11/2014	Unlikely	None Needed	N/A	0
150-05	37° 17' 23.678" N	80° 1' 43.214" W	107.02	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	4/11/2014	Unlikely	None Needed	N/A	0
160-01	37° 17' 11.596" N	80° 3' 20.930" W	4.30	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/15/2016	Unlikely	None Needed	N/A	1
160-02	37° 17' 11.032" N	80° 3' 20.946" W	1.50	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/15/2016	Unlikely	None Needed	N/A	1
160-03	37° 17' 14.207" N	80° 3' 21.050" W	1.05	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	6/15/2016	Unlikely	None Needed	N/A	1
161-02	37° 17' 11.633" N	80° 3' 49.668" W	11.69	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/27/2016	Apparent Spring Fed Flow	Consider water test	TBD	1
162-01	37° 17' 12.510" N	80° 3' 49.995" W	31.44	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/27/2016	Unlikely	None Needed	N/A	1
162-02	37° 17' 11.780" N	80° 3' 50.175" W	0.50	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/27/2016	Unlikely	None Needed	N/A	1
163-01	37° 17' 5.198" N	80° 4' 20.584" W	8.21	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/29/2011	Unlikely	None Needed	N/A	0
163-04	37° 17' 12.945" N	80° 4' 17.390" W	118.01	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
164-01	37° 17' 8.935" N	80° 4' 29.583" W	31.32	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/29/2011	Unlikely	None Needed	N/A	0
164-02	37° 17' 10.365" N	80° 4' 44.347" W	6.08	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/29/2011	Unlikely	None Needed	N/A	0
164-03	37° 17' 12.748" N	80° 4' 44.389" W	2.69	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
164-04	37° 17' 13.068" N	80° 4' 42.364" W	0.63	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
164-05	37° 17' 13.043" N	80° 4' 40.532" W	2.50	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
164-07	37° 17' 13.270" N	80° 4' 36.971" W	0.67	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
164-08	37° 17' 13.251" N	80° 4' 34.777" W	0.96	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
165-01	37° 17' 8.237" N	80° 4' 59.777" W	5.26	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/29/2011	Unlikely	None Needed	N/A	0
165-03	37° 17' 6.467" N	80° 4' 55.049" W	1.96	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/29/2011	Unlikely	None Needed	N/A	0
165-04	37° 17' 8.279" N	80° 4' 55.531" W	3.92	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/29/2011	Unlikely	None Needed	N/A	0
165-05	37° 17' 8.313" N	80° 4' 54.890" W	1.22	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/29/2011	Unlikely	None Needed	N/A	0
165-06	37° 17' 6.478" N	80° 4' 56.249" W	121.69	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/29/2011	Unlikely	None Needed	N/A	0
166-01	37° 17' 11.080" N	80° 5' 16.608" W	97.52	Paint Bank Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/24/2016	Apparent Spring Fed Flow	Consider water test	TBD	1
168-01	37° 17' 9.967" N	80° 5' 54.587" W	0.73	Paint Bank Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/24/2016	Unlikely	None Needed	N/A	1
168-02	37° 17' 9.277" N	80° 5' 54.126" W	1.22	Paint Bank Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/24/2016	Unlikely	None Needed	N/A	1
168-03	37° 17' 9.852" N	80° 5' 54.668" W	2.89	Paint Bank Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/24/2016	Unlikely	None Needed	N/A	1
169-01	37° 17' 11.443" N	80° 6' 1.788" W	9.17	Paint Bank Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
171-02	37° 17' 2.123" N	80° 6' 36.725" W	16.38	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
173-01	37° 16' 59.918" N	80° 6' 46.072" W	22.49	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
173-02	37° 16' 53.801" N	80° 6' 39.891" W	1.83	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
173-03	37° 16' 53.842" N	80° 6' 39.494" W	0.99	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
173-04	37° 16' 52.224" N	80° 6' 39.179" W	2.72	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0

Outfall ID	Latitude	Longitude	Area Drainage to Outfall (Acres)	Name of Receiving Water	Virginia HUC6	Is Receiving Water Impaired?	2010 303b/303d Impairment(s)	Applicable TMDL(s)	Date of last Screening	Summary of Screening Results	Details of Any Necessary Followup	Followup Resolution	# Inspections Completed During Reporting Year
173-05	37° 16' 53.683" N	80° 6' 39.424" W	6.27	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
175-01	37° 17' 0.306" N	80° 6' 8.405" W	74.67	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
177-01	37° 16' 57.455" N	80° 5' 23.404" W	11.35	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	5/24/2016	Potential	None Needed	N/A	1
177-02	37° 16' 57.728" N	80° 5' 27.349" W	1.04	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	5/24/2016	Unlikely	None Needed	N/A	1
178-02	37° 16' 59.954" N	80° 5' 8.230" W	3.51	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/29/2011	Unlikely	None Needed	N/A	0
178-04	37° 16' 55.220" N	80° 5' 17.801" W	7.72	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
181-02	37° 16' 56.357" N	80° 4' 10.161" W	1.06	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/29/2011	Unlikely	None Needed	N/A	0
182-01	37° 16' 54.305" N	80° 4' 7.729" W	2.09	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/29/2011	Unlikely	None Needed	N/A	0
182-03	37° 16' 56.538" N	80° 4' 0.508" W	5.66	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/29/2011	Unlikely	None Needed	N/A	0
182-04	37° 16' 57.039" N	80° 4' 0.355" W	141.87	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/29/2011	Unlikely	None Needed	N/A	0
182-08	37° 16' 55.194" N	80° 4' 4.112" W	5.59	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
183-02	37° 17' 1.484" N	80° 3' 48.622" W	16.28	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/29/2011	Unlikely	None Needed	N/A	0
183-03	37° 17' 1.470" N	80° 3' 48.413" W	0.54	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/29/2011	Unlikely	None Needed	N/A	0
183-04	37° 16' 54.993" N	80° 3' 34.120" W	9.04	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/19/2012	Unlikely	None Needed	N/A	0
183-05	37° 17' 1.623" N	80° 3' 35.028" W	34.40	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	6/15/2016	Suspect	Do Field Investigation	N/A	1
184-06	37° 16' 58.257" N	80° 3' 16.797" W	12.99	Snyders Branch	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
189-03	37° 16' 57.151" N	80° 1' 42.558" W	9.06	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
195-02	37° 16' 52.491" N	80° 1' 45.552" W	57.83	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
200-02	37° 16' 46.762" N	80° 3' 26.345" W	2.42	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/19/2012	Unlikely	None Needed	N/A	0
200-03	37° 16' 48.428" N	80° 3' 29.138" W	3.06	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/19/2012	Unlikely	None Needed	N/A	0
203-01	37° 16' 51.865" N	80° 4' 14.501" W	8.98	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
206-01	37° 16' 47.599" N	80° 5' 4.728" W	17.80	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	6/18/2014	Unlikely	None Needed	N/A	0
206-03	37° 16' 44.815" N	80° 5' 8.802" W	4.52	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	5/24/2016	Unlikely	None Needed	N/A	1
214-01	37° 16' 38.229" N	80° 4' 20.959" W	9.13	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
217-01	37° 16' 40.557" N	80° 3' 25.400" W	2.98	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/19/2012	Unlikely	None Needed	N/A	0
217-02	37° 16' 36.841" N	80° 3' 17.564" W	4.50	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/19/2012	Unlikely	None Needed	N/A	0
217-03	37° 16' 34.887" N	80° 3' 14.758" W	16.85	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/19/2012	Unlikely	None Needed	N/A	0
217-04	37° 16' 41.223" N	80° 3' 27.780" W	33.96	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/19/2012	Unlikely	None Needed	N/A	0
217-05	37° 16' 40.651" N	80° 3' 27.860" W	2.46	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/19/2012	Unlikely	None Needed	N/A	0
217-06	37° 16' 34.933" N	80° 3' 21.602" W	3.18	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/19/2012	Unlikely	None Needed	N/A	0
217-07	37° 16' 36.144" N	80° 3' 14.491" W	2.61	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/19/2012	Unlikely	None Needed	N/A	0
217-09	37° 16' 36.317" N	80° 3' 13.151" W	2.38	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/19/2012	Unlikely	None Needed	N/A	0
218-01	37° 16' 35.738" N	80° 3' 10.934" W	2.22	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/19/2012	Unlikely	None Needed	N/A	0
222-01	37° 16' 40.662" N	80° 1' 51.526" W	128.76	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
231-02	37° 16' 28.626" N	80° 2' 32.829" W	10.02	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/19/2012	Unlikely	None Needed	N/A	0
231-03	37° 16' 29.286" N	80° 2' 29.884" W	259.68	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	4/20/2016	Unlikely	None Needed	N/A	1
231-07	37° 16' 27.598" N	80° 2' 29.141" W	14.14	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/19/2012	Unlikely	None Needed	N/A	0
232-02	37° 16' 29.533" N	80° 2' 36.881" W	0.44	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/28/2011	Unlikely	None Needed	N/A	0
232-03	37° 16' 28.921" N	80° 2' 34.867" W	0.23	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/28/2011	Unlikely	None Needed	N/A	0
233-01	37° 16' 29.160" N	80° 2' 54.161" W	5.02	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/25/2016	Unlikely	None Needed	N/A	1
233-02	37° 16' 31.730" N	80° 2' 58.675" W	3.08	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/28/2011	Unlikely	None Needed	N/A	0
233-03	37° 16' 33.292" N	80° 3' 6.501" W	2.18	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/28/2011	Unlikely	None Needed	N/A	0
233-04	37° 16' 34.262" N	80° 3' 11.811" W	7.92	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/28/2011	Unlikely	None Needed	N/A	0
233-05	37° 16' 34.842" N	80° 3' 7.591" W	11.20	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/19/2012	Unlikely	None Needed	N/A	0
233-06	37° 16' 33.523" N	80° 3' 3.277" W	9.13	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/19/2012	Unlikely	None Needed	N/A	0
234-01	37° 16' 34.557" N	80° 3' 12.351" W	0.42	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/28/2011	Unlikely	None Needed	N/A	0
238-01	37° 16' 32.701" N	80° 4' 34.300" W	3.88	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
238-02	37° 16' 30.050" N	80° 4' 37.081" W	4.63	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
238-03	37° 16' 26.201" N	80° 4' 40.688" W	3.30	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
240-01	37° 16' 20.902" N	80° 4' 44.548" W	3.17	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
240-02	37° 16' 16.511" N	80° 4' 47.120" W	7.62	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
241-01	37° 16' 23.646" N	80° 4' 42.768" W	2.92	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
244-01	37° 16' 16.497" N	80° 3' 39.901" W	7.58	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/25/2016	Unlikely	None Needed	N/A	1
245-01	37° 16' 18.192" N	80° 3' 28.182" W	3.51	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	4/11/2014	Unlikely	None Needed	N/A	0
245-02	37° 16' 19.110" N	80° 3' 22.310" W	34.59	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	4/11/2014	Unlikely	None Needed	N/A	0
248-01	37° 16' 18.679" N	80° 2' 18.713" W	0.59	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/28/2011	Unlikely	None Needed	N/A	0
248-02	37° 16' 17.900" N	80° 2' 18.806" W	7.34	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/28/2011	Unlikely	None Needed	N/A	0
248-04	37° 16' 18.725" N	80° 2' 18.756" W	3.29	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/28/2011	Unlikely	None Needed	N/A	0
248-05	37° 16' 18.197" N	80° 2' 20.927" W	0.39	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/28/2011	Unlikely	None Needed	N/A	0
248-06	37° 16' 17.544" N	80° 2' 20.512" W	3.63	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/28/2011	Unlikely	None Needed	N/A	0
250-01	37° 16' 25.103" N	80° 1' 44.450" W	12.56	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB	10/29/2013	Unlikely	None Needed	N/A	0
255-01	37° 16' 12.526" N	80° 1' 9.607" W	6.70	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/23/2012	Unlikely	None Needed	N/A	0
257-01	37° 16' 16.191" N	80° 1' 44.346" W	10.67	Mason Creek	Mason Creek (RU10)	Yes	Benthic, E. coli	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
259-01	37° 16' 10.436" N	80° 2' 17.372" W	4.70	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/28/2011	Unlikely	None Needed	N/A	0
259-02	37° 16' 11.948" N	80° 2' 19.343" W	4.84	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/28/2011	Unlikely	None Needed	N/A	0
259-03	37° 16' 15.343" N	80° 2' 20.011" W	1.55	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	9/28/2011	Unlikely	None Needed	N/A	0
260-01	37° 16' 8.008" N	80° 2' 42.241" W	9.39	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
261-02	37° 16' 6.481" N	80° 3' 8.329" W	6.19	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
261-03	37° 16' 6.554" N	80° 3' 4.517" W	6.61	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
263-01	37° 16' 14.115" N	80° 3' 46.494" W	1.20	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/25/2016	Unlikely	None Needed	N/A	1
263-02	37° 16' 14.215" N	80° 3' 44.400" W	48.21	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/25/2016	Unlikely	None Needed	N/A	1
264-02	37° 16' 11.901" N	80° 3' 51.521" W	5.63	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/25/2016	Unlikely	None Needed	N/A	1
270-01	37° 16' 0.747" N	80° 4' 7.105" W	4.89	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
270-02	37° 15' 49.544" N	80° 4' 14.777" W	0.67	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
270-03	37° 15' 48.019" N	80° 4' 16.774" W	0.69	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
270-04	37° 15' 48.827" N	80° 4' 21.071" W	1.24	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	8/24/2016	Unlikely	None Needed	N/A	0
271-01	37° 16' 2.209" N	80° 3' 48.326" W	22.62	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/25/2016	Unlikely	None Needed	N/A	1
273-01	37° 16' 4.412" N	80° 3' 15.044" W	57.78	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
274-01	37° 16' 4.715" N	80° 2' 56.534" W	8.53	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
274-02	37° 16' 4.740" N	80° 2' 56.379" W	6.86	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
275-01	37° 16' 4.679" N	80° 2' 50.946" W	2.46	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
275-03	37° 15' 59.231" N	80° 2' 37.938" W	13.18	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0

Outfall ID	Latitude	Longitude	Area Drainage to Outfall (Acres)	Name of Receiving Water	Virginia HUC6	Is Receiving Water Impaired?	2010 303b/303d Impairment(s)	Applicable TMDL(s)	Date of last Screening	Summary of Screening Results	Details of Any Necessary Followup	Followup Resolution	# Inspections Completed During Reporting Year
276-01	37° 16' 1.944" N	80° 2' 16.716" W	3.31	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
276-04	37° 15' 58.065" N	80° 2' 27.219" W	9.31	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
277-01	37° 16' 2.790" N	80° 1' 59.615" W	7.49	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/24/2012	Unlikely	None Needed	N/A	0
277-02	37° 16' 4.220" N	80° 2' 5.302" W	2.90	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/24/2012	Unlikely	None Needed	N/A	0
277-03	37° 15' 59.775" N	80° 1' 57.491" W	62.17	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/29/2013	Unlikely	None Needed	N/A	0
277-07	37° 16' 1.204" N	80° 2' 9.618" W	3.34	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	4/11/2014	Unlikely	None Needed	N/A	0
277-09	37° 16' 1.158" N	80° 2' 6.381" W	1.54	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	4/11/2014	Unlikely	None Needed	N/A	0
277-10	37° 16' 0.173" N	80° 2' 4.573" W	1.88	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	4/11/2014	Unlikely	None Needed	N/A	0
278-01	37° 15' 59.791" N	80° 1' 54.678" W	3.13	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/23/2012	Unlikely	None Needed	N/A	0
278-02	37° 15' 59.179" N	80° 1' 53.100" W	2.58	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/23/2012	Unlikely	None Needed	N/A	0
278-03	37° 15' 59.624" N	80° 1' 48.238" W	10.06	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/23/2012	Unlikely	None Needed	N/A	0
278-04	37° 15' 59.316" N	80° 1' 41.898" W	7.86	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/23/2012	Unlikely	None Needed	N/A	0
278-05	37° 16' 1.490" N	80° 1' 38.484" W	0.86	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/23/2012	Unlikely	None Needed	N/A	0
279-02	37° 16' 2.504" N	80° 1' 32.478" W	3.15	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/23/2012	Unlikely	None Needed	N/A	0
279-03	37° 16' 1.309" N	80° 1' 32.325" W	13.00	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/23/2012	Unlikely	None Needed	N/A	0
279-04	37° 16' 3.846" N	80° 1' 35.202" W	2.39	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/23/2012	Unlikely	None Needed	N/A	0
279-07	37° 15' 56.679" N	80° 1' 35.586" W	10.53	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/29/2013	Unlikely	None Needed	N/A	0
279-10	37° 16' 3.668" N	80° 1' 36.483" W	1.96	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/23/2012	Unlikely	None Needed	N/A	0
280-02	37° 16' 4.737" N	80° 1' 4.787" W	10.73	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/23/2012	Unlikely	None Needed	N/A	0
280-05	37° 16' 1.148" N	80° 1' 7.746" W	3.50	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
280-06	37° 15' 57.100" N	80° 1' 8.073" W	7.05	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/23/2012	Unlikely	None Needed	N/A	0
280-07	37° 15' 56.939" N	80° 1' 8.025" W	4.96	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/23/2012	Unlikely	None Needed	N/A	0
282-01	37° 15' 56.407" N	80° 1' 35.153" W	4.26	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/29/2013	Unlikely	None Needed	N/A	0
283-01	37° 15' 54.989" N	80° 1' 42.514" W	33.11	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB	10/29/2013	Unlikely	None Needed	N/A	0
283-02	37° 15' 55.129" N	80° 1' 48.725" W	13.69	Roanoke River	Roanoke River (RU09)	Yes	Benthic, E. coli, Temperature, PCBs	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
287-03	37° 15' 50.149" N	80° 3' 0.803" W	73.26	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
290-01	37° 15' 48.209" N	80° 3' 52.630" W	3.62	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/25/2016	Unlikely	None Needed	N/A	1
290-02	37° 15' 48.227" N	80° 3' 52.660" W	5.50	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/25/2016	Unlikely	None Needed	N/A	1
290-04	37° 15' 47.238" N	80° 3' 53.787" W	6.79	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB	5/25/2016	Unlikely	None Needed	N/A	1
296-02	37° 15' 41.535" N	80° 3' 53.694" W	5.42	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0
299-01	37° 15' 43.819" N	80° 2' 55.550" W	5.72	Tributary to Roanoke River	Roanoke River (RU09)	No	N/A	Sediment, E-Coli, PCB		Unlikely	None Needed	N/A	0

Appendix C – IDDE Follow-up Information

IDDE Tracker

Findings			Follow-up				
Date	**Location**	**Issue**	**Date**	**Action**	**Resolved**	**Enforcement of Ordinance Necessary**	**Description of Necessary Enforcement**
7/6/2015	100 Diuguids Lane	River turned white from discharge coming from business	-	Inspector went out during next rain event and didn't see this or find a source pollutant, site to be monitored periodically	Yes	No	N/A
7/20/2015	4 Upland Drive	Proactive: Realtor called to ask/inform about washing machine & utility sink draining to back yard	7/20/2015	Building official called him back and let them know that those needed to be hooked to the sanitary sewer system instead - homeowner or contractor to get permit and do that	Yes	No	N/A
7/23/2015	1001 Roanoke Blvd	Unknown spill found	7/23/2015	Hazmat officer notified and spill cleaned up	Yes	No	N/A
9/21/2015	Burwell/White Oak	Fuel Oil spill found	9/21/2015	Oil dry applied and cleaned up by City of Salem Streets department crew	Yes	No	N/A
11/10/2015	315 Rowan St	1-3 Gal new motor oil spilled by PMI Lubricants	11/12/2015	PMI Lubricants cleaned up twice by sweeping up oil absorbents after they soaked up oil	Yes	No	N/A
2/2/2016	Bellevue Ave	Complaint called in of sediment laden water going into storm drains	2/3/2016	Site inspected and no stormwater violations found however job superintendent was contacted and reminded to keep up all E&S control measures	Yes	No	N/A
3/31/2016	Pancake House: 1840 Apperson Dr	Cooking oil spill	4/6/2016	Stay-dri/Oil-water cleaned up by EVO Corporation, see Hazardous Waste manifest	Yes	No	N/A
4/10/16?	Applebees: 1806 W Man St Need original IDDE form	Cooking oil spill	4/14/2016	Professionally cleaned up by LCM Corporation, documentation provided	Yes	No	N/A
4/21/2016	Sheetz: 1340 W Main St	Soapy water/Sediment	4/23/2016	Sediment trap/drain cleaned out so that soapy water doesn't bypass drain and sediment doesn't get into stormdrain	Yes	No	N/A
4/22/2016	Creek by City Hall	Bubbling water possibly due to IDDE (soap) upstream	4/22/2016	No IDDE found, no sheen or foam trails or source pollutants found - water was just bubbling from natural waterfall	Yes	No	N/A
6/7/2016	Sheetz: 1340 W Main St	Cooking oil spill	6/21/2016	Cleaned up by W.E.L., Inc.	Yes	No	N/A
6/14/2016	Comcast: 1320 West Main	Trash	7/13/2016	Trash is being cleaned up routinely by employees/tenants but property owner is being sent letter, they need to talk to WM to get it fixed permanently	Yes	No	N/A
6/26/2016	Sheetz: 1340 W Main St	Gasoline spill	6/26/2016	Employees took measures immediately and WEL, Inc. was called and professionally cleaned up w/ absorbents, etc. WEL also vacuumed out the storm drain	Yes	No	N/A
6/27/2016	Burger King: W Main St	Cooking oil spill	7/8/2016	Cleaned up by W.E.L., Inc.	Yes	No	N/A

Appendix D – ESC/SWM land Disturbance Activity Database

Appendix D - Land Disturbance Activities (Reporting period from July 1, 2015 - June 30, 2016)

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
Project	Disturbed Area (AC)	ESC Plan Approved?	SWM Plan Approved?	VSMP Permit Obtained	SWPPP on site?	SWM BMP included?	SWM BMP inspection/ maintenance plan?	SWM BMP recorded maintenance agreement?	Illicit discharge reports (#)	City Inspections (#)	Notice of Violation (#)	Notice of Comply (#)	Stop Work Order (#)	Total Enforcement Actions (#)
Berglund Ford Mazda	0.500	Yes	Yes	N/A	N/A	No	No Facility	No Facility	0	9	0	0	0	0
Bethel Baptist	0.751	Yes	Yes	N/A	N/A	Yes	Yes	Yes	0	13	3	0	0	3
Cliffview	6.200	Yes	Yes	Yes	Yes	No	No Facility	No Facility	0	22	9	1	1	11
Dunkin Donuts	0.628	Yes	Yes	N/A	N/A	No	No Facility	No Facility	0	4	2	0	0	2
Roanoke College:Elizabeth Campus	2.500	Yes	Yes	Yes	Yes	No	No Facility	No Facility	0	22	1	0	0	1
Fairfield	3.200	Yes	Yes	Yes	Yes	Yes	Yes	No	0	10	3	0	0	3
Heritage Downs	7.640	Yes	Yes	Yes	Yes	Yes	Yes	Yes	0	22	9	1	1	11
Homestay Inn	0.426	Yes	Yes	N/A	N/A	Yes	Yes	Yes	0	22	0	0	0	0
Kroger Fuel Center	0.800	Yes	Yes	N/A	N/A	No	No Facility	No Facility	0	2	0	0	0	0
McDonalds (Apperson)	0.811	Yes	Yes	N/A	N/A	No	No Facility	No Facility	0	7	0	0	0	0
Missile Baits	0.997	Yes	Yes	N/A	N/A	Yes	Yes	Yes	0	11	1	0	0	1
Mount Regis	5.870	Yes	Yes	Yes	Yes	Yes	Yes	No	0	7	1	0	0	1
Parkway Brewery	0.750	Yes	Yes	N/A	N/A	Yes	Yes	No	0	5	0	0	0	0
Roanoke College:Cregger Center	13.500	Yes	Yes	Yes	Yes	Yes	Yes	No	0	22	11	0	0	11
Salem Montessori	1.580	Yes	Yes	Yes	Yes	Yes	Yes	Yes	0	7	1	0	0	1
Salem Specialties	0.560	Yes	Yes	N/A	N/A	Yes	Yes	Yes	0	5	0	0	0	0
Trustpoint Insurance	0.046	Yes	Yes	N/A	N/A	No	No Facility	No Facility	0	6	0	0	0	0
Village atNorth Mill	27.600	Yes	Yes	Yes	Yes	Yes	Yes	Yes	0	22	15	3	1	19
VA Varsity Storage	1.100	Yes	Yes	Yes	Yes	No	No Facility	No Facility	0	5	1	0	0	1
West ClubPump Station	0.950	Yes	Yes	N/A	N/A	No	No Facility	No Facility	0	16	0	0	0	0
2720 W Main St	0.455	Yes	Yes	N/A	N/A	No	No Facility	No Facility	0	10	1	0	0	1

Appendix E – SWM Facility Tracking Database

(Electronic Database Provided as Enclosure)