



Town of Christiansburg



Municipal Separate Storm Sewer System Program Plan & Annual Report

For

General Permit No. VAR040025

And

Annual Reporting

July 1, 2016 through June 30, 2017

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, 2017

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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: Wayne O. Nelson Title: Engineering Director

Signature: Wayne O. Nelson Date: 9/29/17

DEFINITIONS

Definitions provided herein do not supersede those within the Town of Christiansburg's Town Code, but are solely intended to supplement interpretation of the Town'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 Town of Christiansburg'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 Town'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 Town of Christiansburg'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 therefore may change from time to time. Modifications will occur per Section 1.5 of this Plan. The Program's effectiveness will be measured with "Measure(s) of effectiveness" that are incorporated into each BMP's annual reporting form in Section 3.

1.1 Minimum Control Measures

The General Permit requires the Town'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 requirement 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 Town of Christiansburg is subject to Special Conditions for the following approved TMDLs where a waste load allocation (WLA) has been assigned to the Town:

- Crab Creek Watershed for E. Coli, approved December 2, 2004
- Crab Creek Watershed for Sediment, approved December 2, 2004
- Upper Roanoke River Watershed for Sediment, September 7, 2006
- Upper Roanoke River Watershed for E. Coli, approved June 27, 2007
- Roanoke (Staunton) River Watershed for PCB, approved December 9, 2010

The Special Conditions require the Town to update its 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. Additional BMPs will be added for implementation of the Action Plans, once they are developed, in accordance with the schedules prescribed in each BMP in Section 3.2.

1.3 Annual Reporting

The Town of Christiansburg 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 requirements to satisfy the General Permit and are incorporated into 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 by the appropriate signatory. Certification is required by a principle executive officer or a duly authorized representative. The duly authorized representative must have overall responsibility of the Town operations and written authorization must be provided to the Department. ;
- “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.” Modifications to the Program made by the Town will be done in accordance with the General Permit requirements described in Section 1.4.

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 Town of Christiansburg plans to undertake during the remainder of the permit cycle.
- The Town 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.
- The updated Outfall Inventory in Appendix B includes any MS4 outfalls that came online or were identified during the reporting year. Note that associated drainage areas will be provided per the schedule in BMP 3.1.

➤ 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): BMP 1.2 and 2.2 have been modified. The Public Education and Outreach Plan Water Quality issues have been revised. The distribution and form of the materials created to address special water quality concerns was changed. Actual events were adjusted based on site issues. The annual reporting form and Appendix A detail the actual education and outreach events and documents.

BMP 6.2 and 6.4: Specific Public Works Staff are now responsible for Good Housekeeping inspections of two sites; the Operations Center and the Town Landfill. Parks and Recreation Department personnel and a contracted landscaper are now keeping nutrient management plan records.

BMP 5.3 was modified. The formal Town of Christiansburg Post-Construction Stormwater Management Program Manual was not completed as previously reported. The latest edition of the Virginia Stormwater Management Handbook, Chapter 9, appendix 9C, is being used as a reference inspection and maintenance guide. This will continue to be used in the 17-18 permit year in conjunction with Aseta software online inspections. This will replace a formal Town of Christiansburg Post-Construction Stormwater Management Program Manual.

BMP 5.3 was modified. The Stormwater Management Facility Inspection Record was amended to include the type and date necessary maintenance was performed or inspected.

BMP 3.4 and 6.1: The Good Housekeeping manual was modified to include a section related to PCBs as pollutants of concern.

➤ Based on a review of the reporting forms completed for the reporting year within Section 3 of this Program Plan, does the Town find itself compliant with the permit conditions (yes/no):

Yes, the Town 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 Town finds itself compliant.

<p>➤ Does the Town'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)</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>If yes, list the impaired waters and pollutant impairment: <u>Crab Creek, VAW-N18R CBC04A00, Sediment, E. Coli.; tributaries of Slate Branch, VAW-N22R XEJ01A08 and VAW-N22R XEH01A08: Aquatic Life impairment, no TMDL; Wilson Creek, VAW-L02R WLN03A00, E. Coli, VAW-L02R WLN02A00, E. Coli.</u></p>	
<p>➤ 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)</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>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: <u>BMPs are effective as they address all required aspects of the General permit, including BMP 1.2. since they incorporate education and practices to address the pollutants of concern for the impairments (i.e. sediment and bacteria).</u></p>	

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 Town 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 Town’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 Town follows the public involvement requirements identified in the General Permit.

3.0 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 Plan implementation.

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

BMP	Necessary Action	Due date
2.2	Public participation activities	Downtown Park Community tree planting; 8/19/17 Bioretention Replanting: TBD Stormwater Education Days: BMS 11/17, SMS & AMS 4/18, CMS 4/18 Stream Cleanup: Location & Date TBD NRV Home Builders Expo: 3/2018 Christiansburg Aquatic Center Summer Camp session: 6/2018 Others as opportunity arises
2.1	Post Annual Report on website	30 days after submittal annually
6.3a	Staff training on pollution prevention	Biennial, required in 2017-2018, 5/17/17
1.1, 1.2	Provide for public participation for education and outreach plan	Complete for 16-17 Permit Year Survey to be re-distributed spring 2018
1.2	Public Education/Outreach Plan	Modified 9/2017
3.1	Notification of MS4 Interconnections	Update as necessary, Reported for 16-17 Permit Year
3.3	Develop IDDE Program Manual	Complete
6.3a	Written Training Program (see BMP 6.3a)	Complete
6.2	Identify high priority areas (see BMP 6.2)	Complete
5.3	Post-Construction Stormwater Management Program Manual	Modified 16-17 Permit Year
3.4, 6.1	Good Housekeeping/Pollution Prevention Program Manual	Complete
1.2, 3.4, 4.2	Website/Facebook postings (see BMPs for details)	Update as necessary
6.3b, 6.5	Good housekeeping contract language for municipal contractors	
SC.1 & 2	Crab Creek E. Coli & Sediment Action Plan	Complete
SC.4 & 5	Upper Roanoke River E.coli & Sediment Action Plan	

3.3	Methodology for prioritizing outfalls	Complete
SC.3	Roanoke (Staunton) River PCBs Action Plan	Complete
3.1	Storm sewer mapping/information table	Continuing Updates
5.2	Update BMP database attributes	Continuing Updates
6.2	High-priority facility SWPPP implementation	Complete

4.0 PROGRAM PLAN BEST MANAGEMENT PRACTICES

Section 3 includes the BMPs that the Town 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)
<p>Description: The current Public Education and Outreach Plan (PEOP) was limited to comment from Town staff and information from other MS4 public surveys. The Town will provide for participation from the Christiansburg public with a survey distributed to households. The survey will be developed to assess the Town’s knowledge regarding stormwater issues with the intent of assisting with the selection, or confirmation, of high priority water quality issues in the PEOP. Opportunity to provide written comment will be provided with the survey.</p> <p>Necessary documentation for implementation: (1) Public Survey; (2) Public Survey results</p> <p>Responsible individuals for implementation: Town Engineer</p> <p>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 Town’s PEOP.</p> <p>Implementation schedule: The public survey was distributed in the Spring of 2016. A second survey will be distributed in Spring of 2018. Results will be used to examine MS4 efforts for the 16-17 and 17-18 permit years.</p> <p>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 PEOP.</p>

BMP 1.1 Annual Reporting Form (Completed once during the development of the Public Education and Outreach Plan)	
Dates that survey was distributed:	6/16/16 – 7/31/16
Number of survey responses:	314
<p>Description of how survey results and responses were incorporated into the Program: The survey spanned the 15-16 and 16-17 permit years. The survey responses were weighted towards an older demographic, leading in part to the Public Education and Outreach Plan water quality issue #1 being modified to target sixth grade students at public schools. The survey responses indicated that there is understanding of the storm drain marking program but more outreach and education that inlets drain to streams is warranted. There is indication that citizens are willing to participate in events. 2018 survey will be used to examine MS4 efforts for the 16-17 and 17-18 permit years.</p>	

All necessary documents for implementation may not be 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 PEOP describing the rationale of the selection of each water quality issue, identification of target audience and estimated population, and relevant message; (3) Materials described in the Public Education and Outreach Plan such as pamphlets and training materials.

Responsible individual for implementation: Town Engineer

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. A public survey will be distributed in the Spring of 2016 and again in 2018 with questions to gauge the public's knowledge on stormwater issues.

Method to determine effectiveness: Results from the two public surveys will be assessed to determine the effectiveness of the message delivered for each water quality issue. The first survey will occur near the start of implementation of the PEOP and the second 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?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If no, explain, is yes, summarize below: <u>N/A - Plan completed and provided with this report</u>				
Water quality Issue #	List of educational and outreach activities identified in Public Education and Outreach Plan Update	Target Audience	# people reached for reporting year	% of target audience to be reached in reporting year
1	Public education on stormwater impacts	± 300 Sixth Grade Students	320	100
2	Education on special water quality concerns (E.coli)	±9,400 households	8922 households	95
3	Stormwater Sensitive Lawn Care	±9,400 households	3839 Facebook accounts/web-page hits	41
Water quality Issue #	List of educational and outreach activities that will be conducted during the <i>next</i> reporting year	Target Audience	# people to be reached for reporting year	Minimum % of target audience to be reached
1	Youth education on stormwater impacts	± 250 sixth grade students	+ - 150	50
2	Education on special water quality concerns (E.coli, PCBs)	±9,400 households	> 1,880 households	20
3	Education on Stream Health (Role of Stream Restorations, Role of lawn care.)	±9,400 households	> 1,880 households	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 2015-2016 survey:	44%
Average "knowledge" score from latest survey:	TBD 2018 - see BMP Schedule
Has the "knowledge" score gone up over the permit cycle?	<input type="checkbox"/> Yes (BMP effective) <input type="checkbox"/> No (See below) <input checked="" type="checkbox"/> N/A
If no, discuss potential ineffectiveness of the BMP (outreach materials, training approach, etc.). <u>TBD - see BMP Schedule.</u>	
If no, Suggest BMP modifications to the Program Plan with rationale to increase effectiveness: <u>TBD - see BMP Schedule. However, reply demographic was basis for modifying water quality issue #1 demographic to middle school students in the 2016-2017 permit year.</u>	

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 Town’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) Town of Christiansburg MS4 Program Plan; (2) Town of Christiansburg MS4 Annual Reports; (3) Web address of posted materials; (4) Educational and outreach material from BMP 1.2

Responsible individual for implementation: Town Engineer

Objectives and expected results in meeting measurable goals: Objectives are to provide an opportunity to the public to review the Town’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 Town to improve water quality from stormwater runoff.

Implementation schedule: The Town’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 Town’s Program Plan/Annual Report is provided below:

<http://www.christiansburg.org/index.aspx?NID=481>

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 Town of Christiansburg 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: Town Engineer

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 1.2 2.2 Annual Reporting Form

Local activity	Type of education, outreach, participation (e.g. education materials, promotion, sponsorship, other)	Estimated # of people reached	Summary of documentation* that demonstrates participation
Montgomery County Public Schools (MCPS) Stormwater Education Day	MCM 1 & 2. 9/23/16 Shawsville Middle School sixth grade students attended an educational event at the Izaak Walton League of America Christiansburg – Montgomery Chapter Property	80 6 th grade students and 24 adults	11/14/2016 email in Appendix A
New River Valley Homebuilders Association Show	MCM 1 & 2. March 9-11, 2017. Stormwater information booth.	1,426 adults, children not a part of official count.	3/23/2017 email in Appendix A
Aquatic Center Summer Camp “Our Town” week	MCM 1 & 2. 6/28/17 Class and stream visit to discuss stream health and macroinvertebrates	60	Attendance # from Aquatic Center staff, email in Appendix A

BMP 2.2 Annual Reporting Form (continued)			
Potable Water Quality Report Hazardous Waste Message	MCM 1. June 2017. Page 7 "Public Stewardship: Do our part!" addressed hazardous waste disposal	250 printed copies distributed. Link to web version provided on 8,922 water bills.	Report pages provided in Appendix A, website hit numbers in Appendix A
MCPS Stormwater Education Day	MCM 1 & 2. 4/12/17 Christiansburg Middle School sixth grade students attended an educational event at the Izaak Walton League of America Christiansburg – Montgomery Chapter Property	240 6 th grade students and 55 adults	5/4/2017 email in Appendix A
Virginia Water Resources Research Center – Virginia Water Radio Posting	MCM 1. 4/28/17 Website posting of audio, photographs, and transcript from the MCPS Stormwater Education Day	133 views	8/22/17 email in Appendix A http://www.virginiawaterradio.org/2017/04/episode-365-4-24-17-where-
Crab Creek/Diamond Hills Park Stream Cleanup	MCM 1 & 2. 4/15/17. Stream Cleanup	14	Group photo in Appendix A
Bacteria Education Brochure (WQ issue #2)	MCM 1. Christiansburg Connection May/June 2017 Newsletter pet waste article http://www.christiansburg.org/DocumentCenter/View/6480	8,922 paper copies sent with utility billing plus website posting.	8/22/17 email summary of billing statements
Villas at Peppers Ferry Stormwater Open House	MCM 1. 4/17/2017. Met to discuss current maintenance needs on post-construction BMP	14	Head count from TOC attendee. HOA landscape committee, two landscapers, HOA property maintenance representative, one additional resident
Public Works Training	MCM 1 and 6. IDDE Field Guide distribution to Public Works storm crew and storm crew supervisor	8	Signed acknowledgement of IDDE Field Guide receipt in Appendix A

BMP 2.2 Annual Reporting Form (continued)			
Stormwater Sensitive Lawn Care (WQ Issue #3)	MCM 1. Lawn care tips web page and Facebook posting http://www.christiansburg.org/index.aspx?nid=1016	Facebook: 3,827 accounts reached, 87 accounts accessed the article information, 12 webpage hits.	Facebook posting details in Appendix A
Sturgill Estates Annual Homeowner's Association Meeting	MCM 1. 6/24/2017. Review MS4 program, Stormwater utility fee, and private BMP maintenance requirements	20	Approximate head count at HOA meeting
New River PCB TMDL Development TAC Committee Participation	MCM 2. Participation. 5/26/16, 1/19/17, 5/9/17 DEQ meetings	2 Town employees on Technical Advisory Committee	DEQ New River PCB TMDL webpage. Meeting summaries include attendee lists.
Illicit stormwater discharge reporting link	MCM 1, 2, and 3. Webpage. http://www.christiansburg.org/index.aspx?NID=1017	15 webpage views, no reports filed.	Email summarizing webpage hits in Appendix A.

* Documentation is attached in Appendix A

Measure of Effectiveness Form	
Local Activity (same as above)	Rationalization of effectiveness or ineffectiveness
Montgomery County Public Schools (MCPS) Stormwater Education Day 9/23/17. Shawsville Middle School Sixth Grade. (WQ issue #1)	Effective – Positive feedback from school personnel, volunteers, and students for this initial school outreach. 80 students attending, >95% Shawsville Middle School 6 th grade student participation. MODIFICATION: Improve outreach by attempting to include all four middle schools in outreach annually
New River Valley Homebuilders Association Show (WQ issues #1, #2, #3)	Effective – 1,426 adults attending. 33% of persons responding to a query of residence responded as Christiansburg residents.
Aquatic Center Summer Camp “Our Town” week (WQ issue #1)	Effective – 60 attendees engaged in classroom discussion and macroinvertebrate identification in Town Branch.
Potable Water Quality Report Hazardous Waste Message (WQ issues #1, #2, #3)	Ineffective – 40 hits registered on the website. MODIFICATION: Use the Christiansburg Connection and Facebook to provide education and outreach on Hazardous Waste Disposal and educational outreach on PCB sources.
MCPS Stormwater Education Day Stormwater Education Day 4/12/17. Christiansburg Middle School Sixth Grade (WQ issue #1)	Effective – Positive feedback from school personnel, volunteers, and students for this initial school outreach. 240 students attending, >95% Christiansburg Middle School 6 th grade student participation. MODIFICATION: Improve outreach by attempting to include all four middle schools in outreach annually
Virginia Water Resources Research Center – Virginia Water Radio Posting (WQ issue #1)	Effective. 100-133 hits on website, plus student participation in recording the posting.
Crab Creek/Diamond Hills Park Stream Cleanup (WQ issue #1, #2)	Effective. 14 participants. Based on the lengths of stream reaches where cleanups are feasible the expectation is that the town will keep groups small for safety and organization. MODIFICATION: Bring sign in sheets to all outreach events to document participation. Document Facebook accounts reached and any feedback as additional documentation of outreach.
Bacteria Education Brochure (WQ issue #2)	Effective - All mailed utility billing customers received the newsletter.
Villas at Peppers Ferry Stormwater Open House (WQ issue #1, #2, #3)	Partially Effective - Attendees engaged staff and supplied information on local issues, but attendance was limited. MODIFICATION: Bring sign in sheets to all outreach events to document participation.
Public Works Training	Effective – Stormwater crew personnel were supplied with IDDE field guides for review and biennial training in the 2017-2018 permit year.

Stormwater Sensitive Lawn Care (WQ Issue #3)	Effective – Reached a significant Facebook audience and had active viewing and responses.
Sturgill Estates Annual Homeowner’s Association Meeting (WQ issue #1, #2, #3)	Partially Effective – audience was engaged and embraced responsibility of the HOA to maintain BMPs for the ecological health of the permanent pond as well as obtaining stormwater utility credits. MODIFICATION: Bring sign in sheets to all outreach events to document participation.
New River PCB TMDL Development TAC Committee Participation	Effective – met a proposed PCB Action Plan measurable goal.
Illicit stormwater discharge reporting link	Not effective – only 15 hits and no reports filed MODIFICATION: Promote on Town Facebook page or include web link in Christiansburg Connection.
For an ineffective activity identified above, describe modifications to be made for next reporting year (e.g. different activity or different approach): Modifications are included with the rationalization of effectiveness for each local activity in the above table.	

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

Description: The Town of Christiansburg 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 Town'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 Town will notify downstream MS4s where applicable and in writing of any new or newly discovered interconnections that occur with new development. Interconnections include VDOT and Montgomery County.

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

Responsible individual for implementation: Town Engineer

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 Town'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 will be updated in accordance with the current general permit and as described above by June 30, 2017.

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

Storm 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: The Storm Sewer Information Table completion date was September 29, 2017. Outfalls were reexamined based on DEQ guidance provided through the MS4 permit TAC meetings and new outfalls are identified and some existing outfalls were determined to not be owned by the town and were deleted from the table. The data base was revised based on the evaluation and is continually being revised.

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 Town 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):
 Montgomery County (VAR040134), June 30, 2017. Existing interconnections were listed after County documentation was received indicating that the school system was a part of the MS4. Grass Ditch, 37.1254 N, -80.3708 W, NW of the Parkway Drive and White Oak Lane intersection. 15 inch HDPE Pipe, 37.1311 N, -80.3937 W, SE of the Roanoke Street and Chinquapin

If an interconnected MS4 was not notified of a new interconnection, please explain why and indicate when the notification will be provided: N/A – Notice was provided.

Estimated drainage acreage to each HUC and impaired water

RU07 = 1020 acres (Wilson Creek)	NE59 = 1525 acres (Stroubles Creek)	RU05 = 63 acres (Brake Branch)
NE58 = 5343 acres (Crab Creek)	RU04 = 989 acres (Elliott Creek)	NE56 = 0.40 acres (Mill Creek)

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: N/A - Mapping was not necessary to identify the source of an illicit discharge during the reporting year. However, the outfall mapping BMP is expected to be effective in the case an illicit discharge source is unknown and must be tracked.

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

Description: The Town of Christiansburg prohibits non-stormwater discharges, including illegal dumping, into the storm sewer system through Chapter 16, Article IV of the Town Code (Illicit Discharges). Article IV 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 Town the authority to initiate enforcement actions and establishes enforcement penalties and for violations.

Necessary documentation for implementation: (1) Chapter 16, Article IV of the Town Code; (2) A list of any instances of violation and summary of actions taken by the Town; (3) Completed IDDE Tracking Forms, as provided in Appendix D of the Town's IDDE Program Manual.

Responsible individual for implementation: Town Engineer

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 16, Article IV of the Town Code will continue with implementation consistent with the methods described in BMP 3.3.

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

* Note that subsequent reporting will utilize the IDDE Tracking Form in Appendix D of the Town’s IDDE Program Manual instead of the memo format provided in Appendix C of this annual report.

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:	11
Number of potential illicit non-stormwater discharges resolved, as described in Appendix C:	10
➤ Is the number in the two boxes above is the same? (yes/no)	<input type="checkbox"/> Yes (BMP effective) <input checked="" type="checkbox"/> 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: The BMP is effective. The unresolved non-stormwater discharge was the result of soil eroding into a storm drain pipe failure. The discharge is considered unresolved because the town had not executed a contract to complete the repairs within the permit year. All other reported actual or potential illicit discharges are resolved.

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

Description: The Town of Christiansburg 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;
- 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; (2) Outfall information table; (3) Completed outfall screening field forms, (4) Completed IDDE Tracking Forms, as provided in Appendix D of the Town's IDDE Program Manual.

Responsible individual for implementation: Town Engineer

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 Town will screen at least 50 outfalls each year. Starting July 1, 2015, methods in the Town's IDDE Program Manual will be used to identify and follow-up from screening results, as necessary per the Town'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):	137
Total number of outfalls screened during the reporting year:	55
Were at least 50 outfalls screened during the reporting year? (yes/no)	<input checked="" type="checkbox"/> Yes (Objective achieved) <input type="checkbox"/> 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: <u>N/A</u>	
Were the outfalls screened selected based on prioritization criteria (land use, age of infrastructure, historical issues, etc.)? (yes/no)	<input type="checkbox"/> Yes (Objective achieved) <input checked="" type="checkbox"/> No (Objective not achieved)
If no, explain why with a schedule for prioritizing outfalls: <u>A numerical prioritization methodology that can be utilized with The Town of Christiansburg IDDE Manual Program Manual Inspection Form is proposed and will be utilized in the 17-18 permit year.</u>	
Were follow up investigations performed for all outfalls where screening characterized the outfall as potential, suspected or obviously having an illicit discharge? (yes/no)	<input type="checkbox"/> Yes (Objective achieved) <input type="checkbox"/> No (See below) <input checked="" type="checkbox"/> 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: <u>There were no potential, suspect, or obvious illicit discharge characterizations for the outfalls inspected in the permit year.</u>	
Screening results are summarized in Appendix D.	
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:	<u>0</u>
Number of investigations that were closed:	<u>0</u>
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: <u>There were no potential, suspect, or obvious illicit discharge characterizations for the outfalls inspected in the permit year.</u>	

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

Description: The Town will promote, publicize, and facilitate public reporting of illicit discharges into or from the Town’s MS4 with information describing an illicit discharge and contact information on the Town’s stormwater website and with inclusion of educational material described in BMP 1.2. The Town will investigate all reports using methods and procedures described in the Town’s IDDE Program Manual described in BMP 3.3. Tracking of reports will be recorded in the IDDE Tracking form in Appendix D of the IDDE Program Manual.

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: Town Engineer

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 placed on the website by July 1, 2015. 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:	1
Total # of potential illicit discharge reported by the public for the reporting year that have been resolved:	1
Percentage of reported illicit discharge instances that have been resolved:	100
Were all potential illicit discharge reports generated by public reporting resolved? (yes/no)	<input checked="" type="checkbox"/> Yes (BMP Effective) <input type="checkbox"/> No (See below)
<p>If no, provide explanation of why reports were not resolved and, if necessary, modifications needed for the BMP to improve effectiveness: <u>One potential illicit discharge was reported by phone and the investigation was resolved. However the website reporting did not result in any reports.</u> <u>MODIFICATION: Publish the webpage link on all appropriate outreach materials and simplify the path to the website reporting page from the Town of Christiansburg home page.</u></p>	

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 Town of Christiansburg is subject to Chapter 16, Article II of the Town 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 10,000 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 10,000 square feet or greater. The Town 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 16-25 of Article II requires a land disturbance permit from the Town 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 16-27 of Article II provides legal authority for the Town 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 16-24 of Article II also provides legal authority for the Town 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 16, Article II of the Town Code; (2) ESC Plan(s) approved by the Town, 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: Town 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 Town.

Implementation schedule: The implementation of this BMP will be on-going with all regulated land disturbance activities in the Town that disturb greater than 10,000 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 for reporting year subject to Chapter 16, Article II of the Town Code (Erosion and Sediment Control) and equal to or greater than 10,000 sf, including those issued an agreement in lieu of a plan.	132
Did the Town implement and enforce Article II of the Town Code (Erosion and Sediment Control), requiring an approved plan or agreement in lieu of plan, where appropriate, prior to commencement of land disturbance for all sites included in the number above? (yes/no)	yes
If no, explain: N/A - The Town implements and enforces the ESC Program as a VESCP Authority.	
Did the Town inspect land-disturbing activities for compliance with an approved erosion and sediment control plan or agreement in lieu of a plan in accordance with the ESC Laws and Regulations minimum standards? (yes/no)	yes
If no, explain specific instances per project: <u>N/A - The Town implements and enforces the ESC Program as a VESCP Authority.</u>	
If yes, summarize enforcement actions taken: <u>During the reporting year: 3 notices to comply were issued, 1 stop work order was issued. These actions are listed by enforcement type in Appendix F.</u>	
If yes, were the Town's Inspector's DEQ Certified ESC Inspectors? (yes/no)	yes

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

Measure of Effectiveness Form	
For the sites subject to Chapter 16, Article II of the Town Code (Erosion and Sediment Control), do the number of enforcement actions (notice to comply or stop work orders) seem excessive?	<input checked="" type="checkbox"/> No (BMP effective) <input type="checkbox"/> Yes (See below) <input type="checkbox"/> 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? <u>The Town's ESC Program is implemented and enforced and effective at minimizing sediment transport from construction sites.</u>	

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

Description: The Town 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 Town 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 Town will utilize its current ESC tracking software for documentation).

Responsible individual for implementation: Town Engineer

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 placed on the website by June 1, 2016.

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:			7
Complaint address/ Project Name	Date of complaint	Description of complaint	Resolution of the investigation
Kensington Estates, Phase IV	6/28/2017	Citizen called and complained about Dump trucks driving too fast and tracking material in the road.	C Webster went and investigated. Called the contractor and they were finishing up for the day. He said they were finished hauling and would come through the next day with a street sweeper. C Webster contacted the citizen and reported the findings.
25 Siena Drive NW	12/29/2016	Construction Debris blowing around the neighborhood.	C Webster investigated and called Fralin. Fralin sent Jason Simpkins out that day.
5 Siena Drive NW	12/29/2016	Trash and debris blowing around neighborhood	
15 Siena Drive NW	12/29/2016	Construction debris blowing around neighborhood.	
Akers Street	8/16/2016	Disturbance at end of Akers St. A. Shaw went and requested that he be accompanied by law enforcement.	Investigation continued on 8/17/2016.
Akers Street	8/17/2016	A. Shaw went back out to Akers St with an officer.	They met with the property owner and determined that it is a logging operation. No action was taken.
Kensington Estates, Phase II	7/22/2016	Met with Mrs. Donathon and Mrs. Stout at the ponds on Bishop's Gate Rd. They live immediately behind the ponds and were complaining about the frogs and mosquitos. Need to go back out on Monday.	C Webster and J Burke met with Developer staff to discuss pond maintenance. Ponds were repaired and have continually been monitored.

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: N/A – 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 16, Article III of the Town Code (Stormwater Management Ordinance). Chapter 16 of the Town Code 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 16-54 of Article III 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 16, Article III of the Town 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: Town Engineer

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 Town 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).	35
Did the Town ensure <u>each</u> regulated land disturbance activity secured coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR 10 General Permit)? (yes/no)	yes
If no for any of the activities, explain: N/A - The Town verifies regulated activities have VAR10 coverage.	
Did the Town verify that project-specific SWPPPs were developed and maintained on-site for <u>each</u> activity? (yes/no)	no
If no, for any activity, explain: <u>The Town verifies SWPPPs are developed during preconstruction meetings prior to town permit issuance, and during inspections. Some current permit holders that were granted permits by DEQ as reissuances at the 2014 permit rollover have yet to seek Town Land Disturbance Permits and initiate land disturbance.</u>	
Did any illicit discharge reports stem from any of the regulated activities? (also see reporting for BMPs 3.2, 3.3, 3.4, and 4.2) (yes/no)	Yes
If yes, for any activity, explain: An upset resulted from the failure of a sediment basin embankment at Oak Tree Phases 11-13, VAR10F705. This upset is detailed in IDDE report 11 as described in Appendix C.	

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

Measure of Effectiveness Form	
Do all regulated activities have VAR10 permit coverage and SWPPP?	<input type="checkbox"/> Yes (BMP effective) <input checked="" type="checkbox"/> No (See below) <input type="checkbox"/> N/A (No activities)
Were any instances of an illicit discharges from any regulated activity resolved? (also see reporting for BMPs 3.2, 3.3, 3.4, and 4.2)	<input checked="" type="checkbox"/> Yes (BMP effective) <input type="checkbox"/> No (See below) <input type="checkbox"/> N/A (No incidents)
If no was answered for either effectiveness question, explain any necessary BMP modifications to improve implementation of the goals of the BMP? <u>See BMP 4.3 explanation of sites that received CGP permits through DEQ prior to Christiansburg assuming VSMP authority. SWPPPs are not required for projects with CGP coverage obtained directly from DEQ that have not applied for and received Christiansburg Land Disturbance Permit coverage.</u>	

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 Town of Christiansburg is subject to Chapter 16, Article III of the Town Code (Stormwater Management Ordinance) that ensure post-construction stormwater management (SWM) for all regulated land disturbance activities over 10,000 square feet through plan approval by the Town. Approval from the Town 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 Town 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) Town 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: Town Engineer

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 Town 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 16, Article III of the Town Code.

Method to determine effectiveness: Effectiveness will be measured by: (1) all regulated land disturbance activities having a Town 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	
Total sites for reporting year subject to Chapter 16, Article III of the Town Code (Stormwater Management Ordinance) and equal to or greater than 10,000 sf, including those issued an agreement in lieu of a plan.	35
Does <u>each</u> activity have an approved SWM plan per the BMP? (yes/no)	yes
If no, explain specific instances per project: N/A - The Town implements and enforces the SWM Program as a VSMP Authority.	
Does the Town have written internal policies and procedures to implement and enforce Chapter 16, Article III of the Town Code (Stormwater Management Ordinance)? (yes/no)	yes
If no, explain: N/A - The Town implements and enforces the SWM Program as a VSMP Authority.	
Was a BMP inspection and maintenance plan recorded at the local courthouse for <u>each</u> project that included a SWM BMP? (yes/no)	no
<p>If no, explain specific instances per project: Panda Express, TOC project number 2030, was a 0.81 acre disturbance project that was required to address stormwater management under Town Code Chapter 16. The Montgomery County courthouse would not record the notarized agreement because the landowner provided a copy, rather than the original notarization. An original notarization will be obtained and recorded.</p> <p>The Town agreed to allow the sand filter installed as a part of the Corning Nitrogen Facility, TOC project number 2019, to be inspected and maintained as a part of the facility's VPDES industrial permit requirements. This was a 0.58 acre land disturbance project that was required to address stormwater management under Town Code Chapter 16.</p> <p>The AEP substation at Kirby Drive was permitted through DEQ as a part of a larger AEP power transmission line installation. The 0.70 acre project area at the station was required to address stormwater management under Town Code Chapter 16. A maintenance agreement will be sent to AEP for notarization.</p> <p>A maintenance agreement is being sought for Regent Plaza, TOC Project Number 2039. The 1.88 acre land disturbance project was required to address stormwater management under Town Code Chapter 16.</p>	

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

Measure of Effectiveness Form	
Do all sites subject to the Stormwater Management Ordinance have an approved plan?	<input checked="" type="checkbox"/> Yes (BMP effective) <input type="checkbox"/> No (See below)
Do all sites subject to the Stormwater Management Ordinance have a recorded inspection and maintenance agreement?	<input type="checkbox"/> Yes (BMP effective) <input checked="" type="checkbox"/> No (See below)
If no was answered for either effectiveness question, explain any necessary BMP modifications to improve implementation of the goals of the BMP? <u>Maintenance Agreements issues are described in the section above.</u>	

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

Description: The Town 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); (June 30, 2005 will be default date if no date is known)
- 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; (2) Completed inspection checklist forms (see BMP 5.3)

Responsible individual for implementation: Town Engineer

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, 2018.

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

BMP 5.2 Annual Reporting Form	
<p>➤ The Stormwater Management Facility database is maintained electronically in Excel and enclosed in pdf format in Appendix E. Facilities brought online in the reporting year are also listed in a separate table. The electronic database will be submitted in conjunction with the Annual Report submittal.</p>	
<p>Did any new SWM facilities come online during the reporting year? (yes/no)</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>If yes, was the electronic database updated? (yes/no)</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A (No new facilities)</p>
<p>If the database was not updated, explain why and describe any necessary modification to ensure the database is update when new facilities come online: <u>New facilities came online during the reporting year and are updated.</u></p>	

Measure of Effectiveness Form	
<p>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?</p>	<p><input checked="" type="checkbox"/> Yes (BMP effective) <input type="checkbox"/> No (See below) <input type="checkbox"/> N/A (No facilities)</p>
<p>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: <u>Required data including drainage area, % impervious, and "impaired waters discharge to" information continues to be updated on BMPs from previous years.</u></p>	

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

Description: The Town will perform long-term inspections and maintenance on all Town-owned or maintained 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 Town will utilize the inspection and maintenance guidelines in appendix 9C of the DEQ Stormwater Handbook as a reference in conjunction with Aseta software online inspection forms. 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 Aseta online inspection forms. BMP-type specific inspection and maintenance checklists provided in the Stormwater Handbook lists potential issues and methods to address each issue. Necessary maintenance identified during inspections will be conducted in a timely manner 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 Virginia Stormwater Handbook, latest edition, Chapter 9; (4) Completed BMP Inspection Forms; (5) Documentation of maintenance performed, where necessary

Responsible individual for implementation: Town Engineer

Objectives and expected results in meeting measurable goals: The objective is to ensure the intended function of all Town-owned or maintained SWM facilities are 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.

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 5.3 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
- Aseta Inspection Schedule (e.g. monthly, quarterly, annually) (to be implemented in the 2017-2018 permit year)
- 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 or inspected

* 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 Town-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 Town-owned BMPs and provide rationale that determines whether or not the BMP needs to be modified to ensure completion of inspections: N/A - Inspections performed

- Do dates in the database indicate that maintenance was performed, where necessary and in a timely manner? Yes (BMP effective)
 No (See below)

Describe the reason maintenance was not performed on Town-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:

Routine and non-routine maintenance occurs on Town owned BMPs based on inspections as needed but the database has not been fully utilized to document maintenance.

Modification: Public Works will provide documentation in the future. A database has been created that itemizes maintenance needs for each BMP. An online inspection and notification system (Aseta) is being utilized in the current permit year.

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

Description: The Town 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 Town will utilize the inspection and maintenance guidelines in appendix 9C of the DEQ Stormwater Handbook as a reference in conjunction with Aseta software online inspection forms. Inspections of all privately owner stormwater BMPs will be performed by the Town 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 Town using the inspection and maintenance guidelines in appendix 9C of the DEQ Stormwater Handbook as a reference in conjunction with Aseta software online inspection forms ; or
- Documentation of an inspection conducted by the Owner or designee, provided the inspection was performed by a DEQ Certified SWM Inspector.

Chapter 16, Article III of the Town 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 Virginia Stormwater Handbook, latest edition, Chapter 9; (4) Documentation of inspections and maintenance performed, where necessary.

Responsible individual for implementation: Town Engineer

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.

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 5.3 Annual Reporting Form	
Stormwater Management Facility Inspection Record*	
The following information is provided in SWM Facility database described in BMP 5.2:	
<ul style="list-style-type: none"> • SWM Facility ID • Aseta Inspection Schedule (e.g. monthly, quarterly, annually) (to be implemented in the 2017-2018 permit year) • 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 or inspected. 	

* Maintained as electronic database with 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?	<input checked="" type="checkbox"/> Yes (BMP effective) <input type="checkbox"/> 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): <u>N/A - Inspections performed</u>	
➤ Where inspection resulted in the identification of required maintenance, has the Town notified the entity responsible of the maintenance needs with reference to the Stormwater Management Ordinance and a specified timeframe for completing the maintenance?	<input checked="" type="checkbox"/> Yes (BMP effective) <input type="checkbox"/> No (See below)
If the entity responsible for maintenance has not been notified, explain: <u>N/A SWM BMP owners were notified, with a few exceptions due to incomplete or inaccurate contact information.</u>	
Have notified entities performed maintenance within the time period specified by the Town?	<input type="checkbox"/> Yes (BMP effective) <input checked="" type="checkbox"/> No (See below) <input type="checkbox"/> N/A (No instances)
If no to the previous question, was enforcement action taken?	<input type="checkbox"/> Yes (BMP effective) <input checked="" type="checkbox"/> No (See below) <input type="checkbox"/> N/A (No instances)
If enforcement action was taken, did it resolve the issue?	<input type="checkbox"/> Yes (BMP effective) <input type="checkbox"/> No (See below) <input checked="" type="checkbox"/> N/A (No instances)
If the issue was not resolved from enforcement action, described necessary modifications to the BMP to improve effectiveness: <u>Many notified entities did perform maintenance. The Town continues to use the SWM BMP inspection reports to notify private SWM BMP Owners of maintenance needs and follow up as needed.</u>	

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

Description: The Town will develop and implement comprehensive written procedures for good housekeeping and pollution prevention for daily operations and equipment maintenance as described within the Town'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 Town of Christiansburg Good Housekeeping/Pollution Prevention Program Manual; (2) Site-specific SWPPPs; (3) Training documentation; (4) Completed SWPPP Site Evaluation forms (see BMP 6.2).

Responsible individual for implementation: Town Engineer

Objectives and expected results in meeting measurable goals: The objective is to minimize or prevent pollutant discharges from Town operations and maintenance activities. The expected result is Town staff's adherence to the Town'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 Town will implement site-specific Stormwater Pollution Prevention Plans (SWPPPs) for Town owned properties that have been identified as “high-priority” facilities according to Section II B.6.b.2 of the General Permit.

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 SWPPP 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 Town’s Good Housekeeping/Pollution Program Manual. Inspection forms will be completed in accordance with the prescribed schedule within the SWPPP and maintained on file with the on-site SWPPP.

Necessary documentation for implementation: (1) The Town’s Good Housekeeping/Pollution Prevention Manual; (2) Site-Specific SWPPPs for high-priority facilities; (3) Completed annual comprehensive site compliance evaluation.

Responsible individual for implementation: Town Engineer

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

Implementation schedule: The Town has identified high priority facilities that require SWPPPs. SWPPPs will be completed by July 1, 2015, prior to the General Permit requirement schedule so that the annual comprehensive site compliance evaluation can begin being completed in the spring of each year beginning in 2016.

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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If no, explain: SWPPP inspections at the Town Public Works Station and Town Landfill/Stockpile site will be initiated in Fall 2016. Roles and responsibilities as listed in section 1.4 will be updated in the 2016-2017 permit year to include the public works personnel maintaining the SWPPPs.	
➤ Did any changes on high priority facilities that could potentially affect stormwater runoff occur during the reporting year (e.g. new outfalls,	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If yes, are the changes reflected in the SWPPP? (yes/no)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
If no, explain why: N/A - Outfalls were located and added to the SWPPP mapping.	

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*:	3
Total number of recurring items originating from site-specific activities identified Spring 2018:	TBD Per BMP Schedule
Total number of recurring items originating from site-specific activities identified Spring 2019:	TBD Per BMP Schedule
Has the # of recurring items trended downward or remained at zero from year to year?	<input type="checkbox"/> Yes (BMP effective) <input checked="" type="checkbox"/> No (See below)
<p>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: <u>Since this is the first year there can be no trend in # of recurring items from year to year. Two recurring items were at the Town Landfill/Stockpile Site. These were labelling a barrel and putting absorbent pads under the spreaders at the Indoor Chemical Storage. These items were corrected in August 2017. A year of monthly SWPPP inspections for the Town Public Works Station was not completed. Based on the completed site-specific inspections at the Town Public Works Station various pieces of equipment and vehicles in various site-specific activities repeatedly needed drip pads.</u> Modification: <u>Continue monthly SWPPP inspections instead of yearly inspections to ensure follow-up on site-specific activities. Improve training for appropriate Public Works personnel on the recurring items.</u></p>	
* 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?	<input checked="" type="checkbox"/> Yes (See below) <input type="checkbox"/> No (BMP effective)
<p>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: <u>BMP is effective. To date one potential illicit discharge was reported, incident number 4 listed in Appendix C</u></p>	

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

Description: The Town 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 Town'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 Town'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 Town's IDDE Manual; (3) The Town's Good Housekeeping/Pollution Prevention Program Manual.

Responsible individual for implementation: Town Engineer

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 Town's Good Housekeeping/Pollution Prevention and IDDE Program Manuals. Training and certification requirements will occur 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 is provided in the Appendix of the Program Manuals.

BMP 6.3a Annual Reporting Form	
Training Plan	
Has the Town's Written Training Plan been developed? (yes/no)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Training & Certifications	
Has employee training been provided? (yes/no)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If no, explain: <u>Training is required to be biennial per the permit and all public works staff were trained in 15-16 and will receive training again in 17-18. Stormwater crew staff was provided with the IDDE Manual and Field Guide in the current permit year. Appendix G contains the employee distribution.</u>	
Date of latest training to relevant field personnel in the recognition and reporting of illicit discharges:	6/30/2017
Number of employees that participated in the latest training in the recognition and reporting of illicit discharges:	8
Date of last training to relevant employees in good housekeeping and pollution prevention practices:	6/30/2017
Number of employees that participated in the latest training in good housekeeping and pollution prevention practices:	8
Do the number of individuals reported above that participated in training represent all employees that conduct daily activities that could potentially affect stormwater runoff? (yes/no)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If no, explain: <u>Stormwater crew personnel and the engineering department technician were provided IDDE manuals during this "off" year of biennial training. The entire public works staff will participate in the 17-18 reporting year.</u>	
Did any employees apply pesticides and herbicides? (yes/no)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If yes, identify the employee and their certification: <u>Public Works provided four certifications that were provided to DEQ during review of the 2014-2015 permit year report and are available upon request.</u>	
Provide a summary of the training or certification program provided to emergency response employees that includes training in spill response: <u>38 Hazmat Operations level certification were provided to DEQ during review of the 2014-2015 permit year report and are available upon request.</u>	

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)	<input type="checkbox"/> Yes (BMP effective) <input type="checkbox"/> No (See below) <input checked="" type="checkbox"/> N/A
If no, describe modifications to the BMP to increase effectiveness (e.g. training frequency, training material, etc.): <u>The "Knowledge Check quiz" will be distributed during biennial training sessions in 17-18. The measure of effectiveness will be completed per the BMP schedule.</u>	

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

Description: The Town 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: Town Engineer

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 Town will have appropriate certifications for application of pesticides and herbicides.

Implementation schedule: The Town 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?	0
Was proof of certification provided for each contract that includes the application of pesticides and herbicides? (yes/no)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A (no contracts)
If no, explain:	Our current contract language requires certifications. Language explicitly requiring proof of appropriate certification will be implemented when contracts are rebid and for any new contracts.

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 herbicides and pesticides application by contractors reported or identified in the reporting forms for BMPs 3.2 and 3.3?	<input type="checkbox"/> Yes (See below) <input checked="" type="checkbox"/> 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: <u>No illicit discharges reported related to herbicide and pesticide application.</u>	

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

Description: The Town 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 Town where nutrients are applied to a contiguous area greater than one acre.

In addition, the Town 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) Town of Christiansburg Nutrient Management Plan; (2) Completed Fertilizer Application Record; (3) Ingredients of deicers used.

Responsible individual for implementation: Town Engineer

Objectives and expected results in meeting measurable goals: The objective is to avoid excessive application of nutrients where applied on Town 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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If no, no further reporting necessary for this BMP
Total acreage of lands where nutrient management plans are required:	10.4	
Acreage of lands upon which nutrient management plans have been implemented:	0	
Date of last NMP update:	July 1, 2017	
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)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A (No application)	
<p>If no, explain and provide a schedule for achieving the require implementation requirement: <u>Nutrient Management Plans were developed in the 2016-2017 permit year for all three NMP required locations comprising 10.4 acres in the Crab Creek watershed (NE58). This includes 4 acres at the Christiansburg Aquatic Center, 1.3 acres at Depot Park, and 5.1 acres at the Harkrader Sports Complex. Town staff and a landscaping contractor were trained by a Certified Nutrient Management Planner on June 22, 2017.</u></p>		

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)	<input type="checkbox"/> Yes (BMP effective) <input checked="" type="checkbox"/> No (See below) <input type="checkbox"/> N/A (No application)
<p>If no, describe how the BMP can be modified to improve effectiveness. Provide rationalization for modification or if modification is deemed unnecessary: <u>NMP and record keeping have been developed, training has occurred and NMP has been initiated in the current 17-18 permit year.</u></p>	

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

Description: The Town’s current contract language will be enhanced to incorporate references to sections within the Town’s Good Housekeeping and Pollution Prevention Manual to require Town contractors to use appropriate control measures and procedures for stormwater discharges, when applicable. Oversight will be provided by the Town 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 to 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 Town, the Town 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) Town of Christiansburg Good Housekeeping and Pollution Prevention Manual; (2) Completed inspection forms; (3) Contract language.

Responsible individual for implementation: Town Engineer

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, 2017, the Town will have developed and begun execution of the enhanced contract language to require contractors to use appropriate control measures and procedures for stormwater discharges. The language will be incorporated into contracts the 2017-2018 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 Town.

BMP 6.5 Annual Reporting Form	
Contractor Safeguards	
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? This does not include regulated land disturbance activity addressed with BMPs 4.1, 4.2, and 4.3 (yes/no)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If no, explain: <u>Contract language has been developed for insertion into contracts in the 17-18 permit year. A short version for contracts such as landscaping, painting, plumbing, electrical, heating work, sidewalk or other small scale installation, routine maintenance, or repair work, and a longer version for capital projects and extended or large scale work will be employed. The Town's Good Housekeeping/Pollution Prevention manual in use by municipal employees is referenced as a guidance document. Recurring contracts, such as landscaping services, will have the language added at the next contract renewal.</u>	
Were bi-weekly inspections performed to ensure oversight? (yes/no)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A (no contracts)
If no, explain: <u>The development of a full SWPPP with self-inspections and Town oversight inspections will be required for capital projects. Bi-weekly inspections will be employed for small scale installation or repair work. Routine maintenance such as landscaping will employ periodic review and inspection.</u>	

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?	<input type="checkbox"/> Yes (See below) <input checked="" type="checkbox"/> 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: <u>N/A, no illicit discharges related to contracted work were reported in the permit year.</u>	

3.2 Special Conditions for Approved TMDL BMPs

BMP SC.1 Crab Creek and Upper Roanoke River *E. Coli* TMDL Action Plan (Section I B)

Description: Christiansburg has been assigned a waste load allocation (WLA) for *E. coli* in the following TMDLs:

- Crab Creek Watershed TMDL approved on December 2, 2004
- Upper Roanoke River Watershed TMDL approved on June 27, 2007

Christiansburg 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) *E. coli* TMDL Action Plan; (2) Christiansburg Program Plan Updates, as necessary.

Responsible individual for implementation: Town Engineer

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

Implementation schedule: The *E. Coli* Action Plan will be 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 implementation of programmatic BMPs.

BMP SC.1 Annual Reporting Form	
<i>E. coli</i> Action Plan	
Has the <i>E. Coli</i> Action Plan been developed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If no, please explain and provide expected date of completion: _____	

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

Measure of Effectiveness Form	
Are programmatic BMPs implemented per the Action Plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the implemented programmatic BMPs effective?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>BMP Summary:</p> <ul style="list-style-type: none"> • <u>Legal authorities outlined in the plan remain in place</u> • <u>MCM BMPs listed in the plan were implemented</u> • <u>FOG program authority was moved to Wastewater Treatment Plant (WWTP) personnel</u> • <u>Pet waste disposal was addressed as a water quality issue in the May/June Christiansburg Connection and effectiveness is discussed in the BMP 1.2, 2.2 Annual Reporting Form</u> • <u>The Crab Creek Interceptor Study identified the Arrowhead Sewershed, College Street Sewershed, and the Bank Street Area as focus areas. The Arrowhead Basin is the basin identified as being the highest priority in the collection system in terms of normalized I&I based on diameter and length of pipe. Additionally, we are currently finishing design on the College Street Rehabilitation and Replacement project. Phase I will go to bid this fall and will include pipe bursting and replacement to increase capacity and limit the number of SSOs in the lower part of the basin. This is the area from Crab Creek up to Hickok St. Phase II will go from Hickok upstream addressing other areas identified in the study. Addressing these issues will reduce SSOs.</u> <p>If BMPs were not effective, explain how the Action Plan can be modified to achieve the required reductions in the required time frames: <u>N/A</u></p>	

BMP SC.2 Crab Creek and Upper Roanoke River Sediment TMDL Action Plan (Section I B)

Description: Christiansburg has been assigned a waste load allocation (WLA) for sediment in the following TMDLs:

- Crab Creek Watershed TMDL approved on December 2, 2004, includes a required reduction of 27.57 Tons of sediment for VAR040025 (Christiansburg) and VAR040016 (VDOT) combined. The published WLA of 27.57 Tons of sediment represents a 50% reduction in the calculated sediment loading.
- Upper Roanoke River Watershed TMDL approved on September 7, 2006, includes a required reduction of 159.3 Tons of sediment for VAR040025 (Christiansburg). The WLA of 69.90 tons of sediment represents a 69.5% reduction in the calculated sediment loading. This MS4 load includes an instream erosion component using an area weighted method (page E-5, 2006 TMDL Study), however, the instream sediment loading for each MS4 is not provided in the TMDL study.

Christiansburg 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) Sediment TMDL Action Plan; (2) Christiansburg Program Plan Updates, as necessary.

Responsible individual for implementation: Town Engineer

Objectives and expected results in meeting measurable goals: The objective is to achieve reductions required by the TMDs. The expected result is the development of a TMDL Action Plan.

Implementation schedule: The Sediment Action Plan will be 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 pollutant load reduction quantification to achieve the required pollutant reductions.

BMP SC.2 Annual Reporting Form	
Sediment Action Plan	
Has the Christiansburg Sediment Action Plan been developed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If no, please explain and provide expected date of completion: _____	

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 load reduction quantification demonstrate the selected means and methods in the completed Action Plan can achieve the required reductions in the required time frames?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the implemented programmatic BMPs effective?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>BMP Summary:</p> <p><u>The sediment reductions reported below show that the street sweeping and stream restoration practices are effective. Stream restoration projects targeted to the Roanoke River watershed will be planned and scheduled as DEQ Stormwater Local Assistance Funding is made available and the Town Stormwater Capital Improvement Plan is developed.</u></p> <p><u>A total of 153.3 tons by dry weight of street sweeping were collected and sent to the Sisson Ryan Quarry in Shawsville, VA for gravel reclamation and residuals disposal in the permit year. The wet weight of sweepings were recorded on truck scales at the quarry and the Town WWTP laboratory calculated dry weight percentages of the sweepings.</u></p> <p><u>The Blue Leaf Stream Restoration Project consists of 880 linear feet of restoration of an unnamed tributary to Crab Creek near Blue Leaf Drive. The calculated annual pollutant reductions for this project are 18.45 tons of sediment, 529.2 pounds of total nitrogen, and 63.2 pounds of total phosphorous. The Town has provisions for the long-term responsibility and maintenance of the project site. The calculated sediment reductions will be credited annually. A five year recertification cycle is scheduled to recertify the pollutant load reductions.</u></p> <p><u>The Diamond Hills Park Stream restoration is a 2,322 linear foot stream restoration on an unnamed tributary to Crab Creek. 822 tons per year of sediment reduction is calculated in the November 15, 2013 Christiansburg Stream restoration and Stormwater BMP Assessment Technical Memorandum.</u></p> <p><u>The MCM standards provide in the Action Plan and the 10,000 square foot threshold for SWM regulation continue to be implemented.</u></p> <p>If BMPs were not effective, explain how the Action Plan can be modified to achieve the required reductions in the required time frames:</p>	

BMP SC.3 Roanoke (Staunton) River PCBs TMDL Action Plan (Section I B)

Description: Christiansburg has been assigned a waste load allocation (WLA) for PCBs in the Roanoke (Staunton) River Watershed TMDL approved on December 9, 2010. Christiansburg 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; (2) Christiansburg Program Plan Updates, as necessary.

Responsible individual for implementation: Town Engineer

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 implementation of programmatic BMPs.

BMP SC.3 Annual Reporting Form

Roanoke (Staunton) River Watershed Action Plan

Has the Christiansburg Roanoke (Staunton) River Watershed Action Plan been developed?

Yes
 No

If no, please explain and provide expected date of completion: _____

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

Measure of Effectiveness Form	
Are programmatic BMPs implemented per the Action Plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the implemented programmatic BMPs effective?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>BMP Summary:</p> <p><u>The measurable goals of the Action Plan have been addressed as follows:</u></p> <ul style="list-style-type: none"> • <u>The “Draft PCB Potential Strategies” document supplied to Town staff by DEQ was selected as the reference for social media and residential outreach strategies.</u> • <u>Information on hazardous waste disposal in general was included in the annual potable water quality report. This document was made available online instead of mailed as a hard copy in the permit year. This represents a change from the plan to physically mail the report along with PCB information.</u> • <u>The Crab Creek PCB TMDL Implementation Plan is under development and is currently in a public comment period. Employees Ryan Hendrix and John Burke served on the TAC committee as a part of the indicated Roanoke River Action Plan goals. Upon completion of the Crab Creek TMDL the Town will develop a plan compatible with both TMDLs.</u> • <u>The WWTP Discharger Survey short form was revised to include the following question- “ Does the business operation include the potential for continued or inadvertent environmental release of Polychlorinated Biphenyls or PCBs (e.g. recycling, chlorinated solvents, paints, printing inks, agricultural chemicals, plastic materials, etc.)? “. SIC code information continues to be required, which may assist in identifying potential new PCB sources.</u> • <u>Potential IDDE ordinance revisions to Chapter 16 were documented for discussion, as referenced from the city ordinance of Laredo, Texas, for Christiansburg Town Code Chapter 16, Article IV Sec. 16-109. “Prohibited discharges or connections to the storm sewer system. Polychlorinated biphenyls (PCB) elimination. It is the purpose of this section to reduce the possibility of contamination of stormwater by PCB's (polychlorinated biphenyls). No person shall discharge, introduce, cause or permit any PCB or any substance known or suspected of containing PCB's, or technical products classified as PCB's, or derivatives of PCB's into the MS4 and/or water bodies, or any location that is susceptible to stormwater runoff within the city limits. Implications: This subsection implies that no PCB's, substance containing PCB's, or substance suspected of containing PCBs shall be introduced into any water body and/or MS4. The public utility companies such as power, gas, telephone, shall notify the city's engineering department of any such spills, leaks, overflows from sources including, but not limited to, transformers and capacitors within six (6) hours of such upset.”</u> • <u>Potential PCB-free purchasing ordinance language was researched: No effective ordinance language was located.</u> • <u>Any potential investigations into historical land uses that may have generated legacy PCBs will be researched through access to databases typically used in Phase 1 Environmental Assessments.</u> 	

- Montgomery County Solid Waste Authority was contacted and the access to MRSWA website information and outreach events will be made a part of the MCM 1 and MCM 2 outreach, education, and participation.
- The Good Housekeeping SWPPP was updated to include reference to potential PCB sources.

If BMPs were not effective, explain how the Action Plan can be modified to achieve the required reductions in the required time frames: N/A, Measurable goals were achieved and MCMs 1 and 2 will be revised to best address PCB outreach and education.

Appendix A – BMP 1.2 and 2.2 Documentation of Public Participation and Outreach Activities

John W. Burke

From: Patricia Colatosti
Sent: Monday, November 14, 2016 10:41 AM
To: Gwaltney, Wesley; Orndorff, Wil (DCR); cynthia.skylineswcd@verizon.net; Dickerson, Michelle; Stephanie Houston (houstons@vt.edu); Llyn Sharp
Cc: Patricia Gaudreau (pgaudreau@mcps.org); Patrick Burton; Pete Jobst; Douglas Burton (burtonde@montgomerycountyva.gov); John W. Burke
Subject: Sept 23 MCPS Stormwater Day numbers

Thank you again for presenting an activity at our first Stormwater Education Day for Shawsville Middle School 6th graders. We were not able to get any written feedback from them, but I do have event numbers for you.

There were 80 6th grade students and 24 adults. The adult count includes all 10 presenters, 4 teachers, and 10 additional people (school board staff, organizers, IWLA people) some of whom did not stay for the whole event.

We are working on replicating this event with modifications in mid-April for the Christiansburg Middle School 6th grade. That will be a much larger group and I will send out more details later this week so you can decide if you would like to participate again.

- Patricia
+++++

Patricia Colatosti
GIS / Environmental Program Technician
Engineering Dept.
Town of Christiansburg
100 E. Main St.
Christiansburg, VA 24073
(540) 382-6120 x 1157

John W. Burke

From: Heather Conner <Heather@nrvhba.com>
Sent: Thursday, March 23, 2017 11:35 AM
To: John W. Burke; 'Lauren Keim'; 'Kafi Howard'; 'Scott Woodrum'; 'Jay Eanes'; 'Neal Thompson'
Cc: Patricia Colatosti; 'Chuck Dietz'
Subject: RE: NRVHBA Home Expo 2018 Update

Good Morning All, thank you for your patience. The attendance for the weekend was 1462 adults.

Please let me know if you need anything else.

Thank you,

Heather

Executive Officer - NRVHBA
540.443.0090 office



From: John W. Burke [mailto:jburke@christiansburg.org]
Sent: Tuesday, March 21, 2017 8:49 AM
To: Lauren Keim (lgrimes@exchange.vt.edu) <lgrimes@exchange.vt.edu>; Kafi Howard (khoward@blacksburg.gov) <khoward@blacksburg.gov>; Scott Woodrum (woodrumsa@montgomerycountyva.gov) <woodrumsa@montgomerycountyva.gov>; Jay Eanes (jay.eanes@radfordva.gov) <jay.eanes@radfordva.gov>; Neal Thompson (lthompson@radford.edu) <lthompson@radford.edu>
Cc: Patricia Colatosti <pcolatosti@christiansburg.org>; Chuck Dietz (charlid@vt.edu) <charlid@vt.edu>; Heather Conner <Heather@nrvhba.com>
Subject: RE: NRVHBA Home Expo 2018 Update

Here are the percentages for the homebuilder's association show attendees that elected to answer our two question poll:

Where do you live?

Montgomery County	Christiansburg	Blacksburg	City of Radford	Other	Total
20%	33%	25%	5%	16%	100%

Where do you work?

Montgomery County	Christiansburg	Blacksburg	Virginia Tech	Radford University	Other	Total
6%	19%	22%	6%	4%	43%	100%

Somehow I omitted City of Radford as another in the work question. Shame on me.

John W. Burke

From: Olivia Smith
Sent: Monday, August 21, 2017 1:20 PM
To: John W. Burke
Cc: Patricia Colatosti
Subject: RE: CAC Summer Camp - Our Town

Hi John,
We had 60 campers during Our Town week of summer camp.

Olivia Smith
Program Coordinator
Christiansburg Aquatic Center
540-381-7665 ext. 3105



From: John W. Burke
Sent: Monday, August 21, 2017 12:58 PM
To: Olivia Smith
Cc: Patricia Colatosti
Subject: RE: CAC Summer Camp - Our Town

Livia,
Would you please reply to this email with a head count of the Summer Camp children Your response will be included as documentation in our annual report.
Thanks,
John

John W. Burke
Environmental Program Coordinator
Engineering Department
Town of Christiansburg
(540) 382-6120 ext. 1158

From: Olivia Smith
Sent: Monday, February 13, 2017 5:45 PM
To: Steve Biggs; Mike Barber; Brad Epperley; James Lancianese; Mark Sisson; Joe Coyle; John W. Burke; Billy Hanks; Terry Caldwell; Chrystal Jones
Subject: CAC Summer Camp - Our Town

Good evening,

Town of Christiansburg

DRINKING WATER QUALITY REPORT

2016



Treatment Plant Information

The water treatment plant on Peppers Ferry Road supplies water to the Town of Christiansburg, Town of Blacksburg, Montgomery County and Virginia Tech.

The treatment plant, originally built in 1957, will soon undergo major renovations for the first time since 1977.

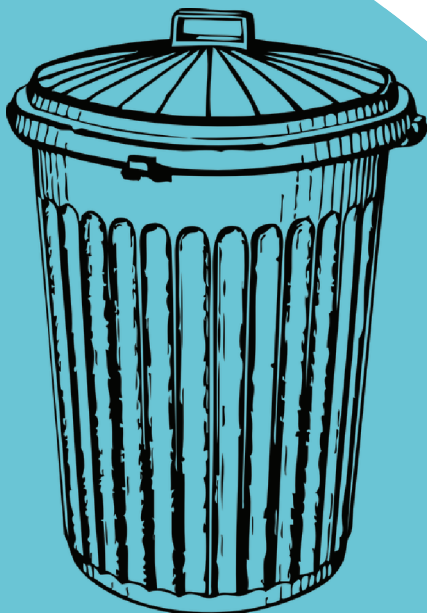
This much-needed upgrade will create a safer work environment, improve efficiency and ensure the treatment plant is able to continue providing its customers with high quality water.



Pictured are two of the plant's water pumps. The pumps draw water from the New River to the treatment plant.

Public Stewardship: Do your part!

The Town of Christiansburg and the New River Valley Regional Water Authority work continually to provide top quality water to every tap. We ask that all of our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.



Remember, all storm drain inlets drain to our creeks and rivers. Please dispose of pesticides, oils and other hazardous wastes properly to avoid contaminating your drinking water. The Montgomery Regional Solid Waste Authority has free Household Hazardous Waste Collection (see p. 8). Please respect the environment.

Resources

- **Attend a Water Authority meeting**

Community members are welcome to attend NRV Regional Water Authority meetings, which are held every third Wednesday of the month at 4 p.m. in Room 4000 at University Gateway Center, 902 Prices Fork Road, Blacksburg, VA 24060.

- **Take a tour of the water plant**

To schedule a tour, please contact Executive Director Caleb Taylor at 540-639-2575.

- **Dispose of household hazardous waste**

A monthly collection day is held from 9 a.m. to noon on the third Saturday of every month for disposal of household hazardous waste materials. You must preregister by calling 540-381-2820 and dial 0 for an attendant. Collection is located at 555 Authority Drive in Christiansburg. For more information, visit www.mrswa.com/household-hazardous-waste.html.

- **Learn more**

If you have questions about this report, please contact the Engineering Department at 540-382-6120.

For more information about water in the New River Valley, please visit www.nrvwater.org.

The EPA (www.epa.gov/Your-Drinking-Water) and the Centers for Disease Control and Prevention (www.cdc.gov/healthywater/drinking) websites offer a substantial amount of information on many issues related to water resources, water conservation and public health.

The Virginia Health Department's Office of Drinking Water (www.vdh.gov/ODW) provides current information on water issues in Virginia, including valuable information about our watershed.

John W. Burke

From: Patricia Colatosti
Sent: Thursday, May 04, 2017 11:12 AM
To: Erin Ling; araflo@vt.edu; Jacob Diamond; Katherine Phetxumphou; cynthia.skylineswcd@verizon.net; Katelyn Kast (katelyn5@vt.edu); Lauren Keim (lgrimes@exchange.vt.edu); Kafi Howard (khoward@blacksburg.gov); Orndorff, Wil (DCR); Rachel Kuprenas; emmatt92@vt.edu; Katherine Olson; Jeremy Smith; Dickerson, Michelle; Jennifer L. Hawthorne
Cc: John W. Burke; Scott Woodrum (woodrum@montgomerycountyva.gov); Vinod K. Lohani; Llyn Sharp; Patricia Gaudreau (pgaudreau@mcps.org); Todd Walters
Subject: MCPS Stormwater Day numbers and student evaluations

Hi all,

You made this a great day for the students. They did not want to leave.

Here are the participation numbers and links to the student evaluations.

Total Christiansburg Middle School 6th grade students –240
Total adult chaperones – 9 in the morning – 9 in the afternoon
Total other adults – 10 (includes MCPS administration and Izaak Walton League members who stopped by)
Total presenters – 27 (there were a lot of VT student volunteers which was great!)

Links to the pre and post evaluation filled out by the students.

Pre evaluation link (you can see the whole form without signing in to Google)

<https://goo.gl/forms/H64CLvUcV9oUex9M2>

Pre evaluation results

https://docs.google.com/forms/d/1AAR8Liw6EZcnkeBBKsZZ8csDG_d4CfkdqCNPcef7HYM/viewanalytics

Post evaluation link

<https://goo.gl/forms/ytPbQfSGU8UNER073>

Post evaluation results

<https://docs.google.com/forms/d/1aMVI83VTIA3uft1-dZl8RI6jRhWCnAFIfNOBIF6LfAc/viewanalytics>

There was a technical issue with the second question on the pre evaluation so I don't know the actual student responses. I'm going to be changing the pre/post evaluations so let me know what you would like to see on them.

Comments from CMS teachers:

For next time: having a few more minutes (5-10) at each station would be good; bigger signs (with number and name of station); perhaps 30-45 minutes longer there to accommodate for the extra time at each station; school chairs at some stations (or wooden benches) - to cut down on moving/fidgeting too much; more hands-on opportunities is always a plus!

Thanks again - overall a great day! I have already shared on Google Classroom and showed in class the link to the radio show!! The kids loved it!!

Allow a few minutes less time for each station, so the students can visit more stations.

It was a great field trip! We want to go back!

Virginia Water Radio episode

Alan Raflo created this episode of Virginia Water Radio with the CMS student voices. It is available online at <http://www.viriniawaterradio.org/2017/04/episode-365-4-24-17-wheres-stormwater.html>. It's 3 min./53 sec. long.

Currently we are planning to do this again next school year with changes based on teacher, student and your feedback. We want to know what worked for you and what did not work for you.

Let Patty Gaudreau know if you need pictures. Please run any pictures you took by her before sharing or publishing. Thanks again. It was a great day, and judging from the evaluations I think the students really learned a lot.

Patricia

Patricia Colatosti

GIS Technician

Engineering Dept.

Town of Christiansburg

100 E. Main St.

Christiansburg, VA 24073

(540) 382-6120 x 1157

John W. Burke

From: Raflo, Alan <araflo@vt.edu>
Sent: Tuesday, August 22, 2017 10:16 AM
To: John W. Burke
Cc: Schoenholtz, Stephen
Subject: RE: Virginia Water Radio Posting

Hi, John.

According to Google Analytics, the stormwater episode has had 133 views since the episode was posted on April 24, 2017, through the morning of August 22, 2017. The total pageviews in that time was 2827.

But another tracker I use—Stat Counter—indicates only 1476 pageviews during that time.

Given that discrepancy, I'd say a reasonable and conservative estimate of the views of the stormwater episode is 75 to 100.

I'm sorry this isn't more precise, but it does give a sense of the viewership; that is, I know viewership of the stormwater episode is on the order of 100, not as low as 10 nor as high as 500 or 1000.

Thank you for your kind comments and please do let me know about the 2018 event.

Best wishes,
Alan

Alan Raflo
Virginia Water Resources Research Center
210 Cheatham Hall (0444)
Blacksburg, VA 24061
(540) 231-5463
araflo@vt.edu

From: John W. Burke [mailto:jburke@christiansburg.org]
Sent: Monday, August 21, 2017 4:16 PM
To: water@vt.edu; Raflo, Alan <araflo@vt.edu>
Cc: Kafi Howard (khoward@blacksburg.gov) <khoward@blacksburg.gov>; Scott Woodrum (woodrum@montgomerycountyva.gov) <woodrum@montgomerycountyva.gov>; Patricia Colatosti <pcolatosti@christiansburg.org>; Patricia Gaudreau (pgaudreau@mcps.org) <pgaudreau@mcps.org>
Subject: Virginia Water Radio Posting

Alan,
Thank you for posting an episode for our MCPS Stormwater Education Day, episode 365. Our two towns and the County will reference this posting in our 2017 MS4 annual reports. I was wondering if you track the number of hits on particular episodes as well as the website as a whole. If you can provide us some traffic numbers we would really appreciate it.
<http://www.virginiawaterradio.org/2017/04/episode-365-4-24-17-wheres-stormwater.html>

We are meeting tomorrow to plan the 2017-2018 school events and we will let you know that schedule.

Thank you again, it was fantastic!

John

John W. Burke
Environmental Program Coordinator
Engineering Department
Town of Christiansburg
(540) 382-6120 ext. 1158





May/June 2017

The Christiansburg Connection

Mayor's Corner: Full speed ahead with interim town manager



In April, Christiansburg Town Council officially appointed Assistant Town Manager Randy Wingfield to the interim town manager post. Council and I are confident in the leadership of Randy, who has been with the town for 19 years, including a stint as our planning director and five years as assistant town manager. In fact, I'm not sure there's anyone who knows Christiansburg better! We had a difficult month in April with the passing of Town Manager Steve Biggs, but we know we'll have a better tomorrow, in part because of the focus and direction of Steve. Randy, Council and staff are prepared to move full speed ahead with the priorities outlined in our Destination 2022 plan - the result of a two-day Council and staff retreat last fall. Stay tuned for more information, and as always, watch our website and social media sites for updates!

Events Calendar

Christiansburg Farmers' Market returns!

Thursday, May 4 from 3-7 p.m.
Hickok Street

Community Yard Sale

Saturday, May 13 from 7 a.m. - noon
Christiansburg Aquatic Center

Senior Care Fair

Tuesday, May 16 from 8:30 a.m. - noon
Christiansburg Recreation Center

Wine & Artisans Event

Friday, May 19 from 5-9 p.m.
Hickok Street

Cruisin' Downtown Christiansburg

Saturday, May 20 from 4-7:30 p.m.
Main Street

Mountains of Music Homecoming

Saturday, June 17 from 3-9 p.m.
Downtown Christiansburg

Movie in the Park

Friday, June 23 after sunset (8:45-9 p.m.)
Downtown Park

Swim Meets

May 19-21:
H2okie Meet

Facility Closures

May 29, Memorial Day:

Town Hall, Aquatic Center, Rec Center closed
(Monday's garbage collected with Tuesday's pickup)

To find information about more events and programs, visit www.christiansburg.org/events

In The Know

It's heating up outside, and we can't wait to get out there and celebrate the arrival of summer! Thankfully, there's a lot going on around town to satisfy our outdoor cravings. Start the season off right on May 13 by turning your unwanted treasures into cash during the Community Yard Sale on the front lawn of the Christiansburg Aquatic Center! Interested vendors can pick up a registration form at the Aquatic Center front desk. Don't want to sell? Come out to shop - you never know what you might find.

Downtown is full of events in May and June. The Christiansburg Farmers' Market returns May 4 and will be open every Thursday through October from 3-7 p.m. on Hickok Street. Make sure to stop by and check out the new - and returning - vendors! Also on Hickok Street, our friends at Downtown Christiansburg Inc. are hosting a Wine and Artisans event on May 19. (Don't worry - there will be food trucks, too!) And you can check out more than 150 vintage cars the next day on May 20 during the Montgomery Museum's Cruisin' event! The popular Mountains of Music Homecoming is back again this year on June 17. Enjoy music on the street from a variety of performers and watch as Round the Mountain crafters demonstrate their skills.

Looking to relax? Join Downtown Christiansburg Inc. on June 23 for a movie in Downtown Park (and check out the Storywalk while you're there). We'll see you outside!

follow us:



Why should you bag it and trash it? Read on.

The health of you and your family is important.

Dog and cat waste can carry disease. Even healthy pets shed bacteria like E. coli. Plus, dog waste can contain Roundworms, Giardia and Leptospirosis - all of which can make YOU sick. Roundworms, Giardia and Leptospirosis may stay active in the soil long after the visible evidence is gone. Fresh dog waste can be less infectious than aged, so scoop daily!

The health of your pet is important.

You may not notice your dog has worms until your dog has a LOT of worms. Hookworms can survive in the soil for a week to a few months, while roundworms can survive in the soil for four years. That's a lot of time for your dog to get re-infected. Canine parvovirus is often deadly to unvaccinated puppies and can persist in the soil where waste was forgotten for at least one year.

The health of your neighborhood is important.

Dog and cat excrement left on your yard can wash into your neighbor's yard. Or into the neighborhood park. Or anywhere downhill.

The health of our streams is important.

All that waste washes into the streets, into the storm drains and ditches and then directly into our creeks. Think about how many dogs live on your block - and now visualize all that poop in the creek. Ewww!

Christiansburg's Municipal Separate Storm Sewer System (MS4) Permit requires that we show a reduction in bacteria transported to our streams. Bagging pet waste both on and off your property is a cost-effective way to address this requirement. Your help can reduce the cost of programs that are put in place to reduce bacteria!



Frequently Asked...

Can I pay my utility bill online?

Yes!

Simply go to our website, www.christiansburg.org, and click on the blue "Pay My Utility Bill" button. Once you're redirected, you'll see an option to "Register." After you register, you'll start receiving your bills via email, and you can choose to pay with a credit/debit card or check.

Haven't signed up for our Notify Me system? You're missing out. Not only can you receive news and event updates from the Town, but you can also get a reminder email when bills have been mailed out and when they're due. Visit our website to create your profile.

Online bill pay might not be news to you, but the Town has also rolled out a water usage monitoring tool that might be your new best friend (it's definitely ours)! The tool allows you to set limits to your water usage, monitor your account and receive alerts if a leak is detected or your usage is reaching your set limits. Signing up is easy - just email your name, service street address, account ID, preferred username, email address and preferred display name to monitorwater@christiansburg.org. You'll receive an email with instructions on how to view your account.

The more you know!

Have questions? Please call the Town of Christiansburg's Finance Department at (540) 382-9519.

Upcoming Meetings:

Town Council Meetings

Town Hall, 100 East Main Street
Tuesday, May 9 at 7 p.m.
Tuesday, May 23 at 7 p.m.
Tuesday, June 13 at 7 p.m.
Tuesday, June 27 at 7 p.m.

Never miss a meeting! Sign up for notifications at www.christiansburg.org/notifyme



Have questions? Let us know!
(540) 382-6128 ext. 1150
info@christiansburg.org
www.christiansburg.org



The CAC thanks our town residents!

Coupon for one daily admission for family of four.
Valid during open swim hours.

Christiansburg Aquatic Center, 595 North Franklin Street,
Christiansburg, VA. 24073. 540-381-7665.

www.cacpool.com
Expires Dec. 31, 2017

Christiansburg Aquatic Center: Enjoy this one on us!

You may have noticed the Christiansburg Aquatic Center closes to residents from time to time. That's because our facility is a sought-after location for competitive swim meets, which occur during two seasons – the winter season between February and April and the summer season from July to early August.

In order to support this popular support (plus, don't forget diving!), we've had to close our doors to residents several times since January. Here's a look at what's been going on.

The center has hosted **12 meets** since the first closure in January:

- **6 college meets**
 - 3 Virginia Tech meets
 - 2 Collegiate Conference championships (1 Div. I and 1 Div. II)
 - 1 Division I college diving championship prelim
- **5 high school meets**
 - 2 state-level meets serving the entire commonwealth
 - 1 Conference Championship serving the NRV and Southwest VA
 - 1 Regional Championship serving the NRV and Southwest VA
- **1 state of Virginia USA Swimming Age Group Championship**
- 3,375 athletes total participated in the above
- Approximately 5,577 spectators attended
- \$88,000 in competitive rental fees paid to the Aquatic Center since January
- Estimated \$1.5 million economic impact in our community

All of us here at the Aquatic Center are excited to have a sense of normalcy return to the pool - at least until July - and to see many of you back for a swim. To thank you for your patience on days we've had to close, we hope you will be able to use the coupon above to bring your family to the pool for a free, fun day in the water when your schedule allows! Remember that we maintain a calendar on our website, www.cacpool.com, so that you can plan your fun day accordingly.



Snapshot!

Town photos
& events

On April 15, the Town of Christiansburg's Parks and Recreation Department, in partnership with the Kiwanis Club, hosted the biggest Easter Egg Hunt yet! Hundreds of children searched for more than 10,000 eggs.

IDDE Manual and Field Guide Distribution

Project: SWPPP Training
 Facilitator: John Burke
 Place/Room: Station B

6/30/2017
8:30 AM

	PRINT NAME	ORGANIZATION	TITLE	IDDE Field Guide Rec'd.
1.	CARL B CORRELL	TOC	ENG TECH	YES
2.	Math Gillispiz	TOC	Storm crew	Yes
3.	ERIZ SHEPPARD	TOC	Storm crew	yes
4.	Dewayn Gilmore	TOC	storm crew	yes
5.	Darrell Farmer	TOC	ST. WATER	YES
6.	Joseph Rotella	TOC	storm	yes
7.	KENNY CUSTER	T.O.C	STORM	YES
8.	Justin Shepherd	TOC	Storm crew Supervisor	Yes
9.				
10.				
11.				
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15.				
16.				
17.				
18.				
19.				
20.				
21.				

Lawn Care Tips



Grass clippings stuck in a storm drain.



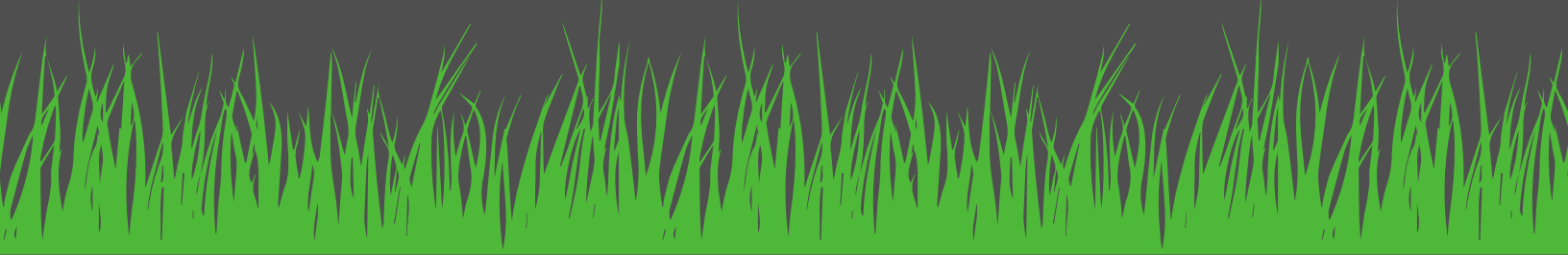
Algae blooms in a creek caused by improper disposal of lawn care materials.

Did you know you can save money by not leaving grass clippings or fertilizer on streets, sidewalks, driveways or ditches? That's because grass clippings and excess fertilizer cause algae blooms in our waterways that reduce the amount of oxygen available for aquatic organisms. Poorly maintained lawns also increase soil erosion which disrupts the natural ecosystem by smothering organisms that live at the bottom of creeks and rivers. Fish and other animals depend on these organisms as a food source. Additionally, grass clippings can clog pipes. Cleaning all of this costs taxpayer money that we don't need to be spending! Plus, smarter lawn care can save you money by decreasing the amount of fertilizer you need to use.

Here are lawn care tips to help keep you from throwing money down the (storm) drain!

- Mow lawns to a grass blade length of 2-3 inches in the spring and fall. Raise the mower deck in the summer to keep the grass blade length longer.
- Only remove 1/3 of the height of the grass blade at any one time. Let the clippings fall and stay on the lawn. This helps build the soil and fosters healthy lawns, which need less watering. You do not need a special mower to do this.
- Have a ditch to mow? Pick a path where the mower distributes clippings on your lawn instead of in the ditch or in the street.
- Sweep grass clippings and any fertilizer or soil back onto the lawn, where it will become mulch. Have extra clippings? They can be composted or applied to shrubs and gardens.
- Test your soil before adding fertilizer. Excess fertilizer runs off when it rains. A soil test through Virginia Cooperative Extension costs \$10, only needs to be done once every three years and can save you from buying unnecessary fertilizer. For more information, visit <http://soiltest.vt.edu/fees-and-forms.html>.

Learn more about responsible lawn care at <http://ext.vt.edu/lawn-garden/urban-nutrient-management.html>.





Town of Christiansburg, VA

Published by Ana Miller [?] · June 23 ·

Like Page

Thinking of mowing your lawn this weekend? Follow these tips from our Engineering Department to help save money and keep our waterways clean!

Lawn Care Tips



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3,827 People Reached

6 Likes, Comments & Shares

4 Likes	4 On Post	0 On Shares
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0 Comments	0 On Post	0 On Shares
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2 Shares	1 On Post	1 On Shares
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110 Post Clicks

87 Photo Views	0 Link Clicks	23 Other Clicks <i>i</i>
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NEGATIVE FEEDBACK

0 Hide Post	0 Hide All Posts
0 Report as Spam	0 Unlike Page

Reported stats may be delayed from what appears on posts

John W. Burke

From: Melissa Powell
Sent: Thursday, August 24, 2017 3:04 PM
To: John W. Burke
Cc: Anaika Miller
Subject: Stormwater page counts

Okay! I was doing the page views wrong. Here's the actual counts of the pages you requested.

Melissa Powell

Public Relations Director
Town of Christiansburg
100 East Main Street
Christiansburg, VA 24073
(540) 382-6128 ext. 1150



From: Curtis Wendling [mailto:wendling@civicplus.com]
Sent: Thursday, August 24, 2017 3:02 PM
To: Melissa Powell <mpowell@christiansburg.org>
Subject: RE: Redesign

Hi Melissa, sorry for the delay!

You'll have to do the date range, it can be a little funky sometimes. I've gone ahead and pulled these for you from the dates you gave me

<http://www.christiansburg.org/index.aspx?NID=995> – 40
<http://www.christiansburg.org/DocumentCenter/View/6522> - 5
<http://www.christiansburg.org/index.aspx?NID=1016> – 12
<http://www.christiansburg.org/index.aspx?NID=1017> – 13

Thanks!

Curtis Wendling | CivicPlus

Account Manager
Phone: 785.323.1507
civicplus.com

THE Integrated Technology Platform

From: Melissa Powell [mailto:mpowell@christiansburg.org]
Sent: Wednesday, August 23, 2017 8:25 AM
To: Curtis Wendling <wendling@civicplus.com>
Subject: RE: Redesign

Drinking Water Quality Report: <http://www.christiansburg.org/index.aspx?NID=995> AND
<http://www.christiansburg.org/DocumentCenter/View/6522> (since June 1)

Lawn Care Tips: <http://www.christiansburg.org/index.aspx?NID=1016> (since May 1)

<http://www.christiansburg.org/index.aspx?NID=1017> (since May 1)

Melissa Powell

Public Relations Director
Town of Christiansburg
100 East Main Street
Christiansburg, VA 24073
(540) 382-6128 ext. 1150



From: Curtis Wendling [<mailto:wendling@civicplus.com>]

Sent: Wednesday, August 23, 2017 9:21 AM

To: Melissa Powell <mpowell@christiansburg.org>

Subject: RE: Redesign

Which pages are you looking for?

Curtis Wendling | **CivicPlus**

Account Manager
Phone: 785.323.1507
civicplus.com

THE Integrated Technology Platform

From: Melissa Powell [<mailto:mpowell@christiansburg.org>]

Sent: Wednesday, August 23, 2017 8:08 AM

To: Curtis Wendling <wendling@civicplus.com>

Subject: RE: Redesign

Hey Curtis – sorry to bother you again about this. I’m trying to search for number of visitors on a couple pages, but every time I change the date range, it just pops back to today and tells me 0 visitors.

Not sure what I’m doing wrong!

Melissa Powell

Public Relations Director
Town of Christiansburg
100 East Main Street
Christiansburg, VA 24073
(540) 382-6128 ext. 1150



Appendix B – BMP 3.1 Outfall Inventory

Appendix B Outfall Reconnaissance Inventory

Friday, September 29, 2017

4:05:56 PM

Outfall ID	Impaired ID	Acreage Served	TMDL
NE58BLA01	VAW-N18R_CBC04A00	11.352867	Crab Creek Bacteria and Sediment
NE58BLA02	VAW-N18R_CBC04A00	3.654896	Crab Creek Bacteria and Sediment
NE58BLA03	VAW-N18R_CBC04A00	5.20048	Crab Creek Bacteria and Sediment
NE58BLA04	VAW-N18R_CBC04A00	11.360957	Crab Creek Bacteria and Sediment
NE58BLA05	VAW-N18R_CBC04A00	3.398149	Crab Creek Bacteria and Sediment
NE58BLA06	VAW-N18R_CBC04A00	26.419819	Crab Creek Bacteria and Sediment
NE58BLA07	VAW-N18R_CBC04A00	2.794031	Crab Creek Bacteria and Sediment
NE58BLA08	VAW-N18R_CBC04A00	1.294321	Crab Creek Bacteria and Sediment
NE58BLA09	VAW-N18R_CBC04A00	0.707561	Crab Creek Bacteria and Sediment
NE58BLA10	VAW-N18R_CBC04A00	5.545468	Crab Creek Bacteria and Sediment
NE58BLA13	VAW-N18R_CBC04A00	12.018371	Crab Creek Bacteria and Sediment
NE58BLA14	VAW-N18R_CBC04A00	3.100591	Crab Creek Bacteria and Sediment
NE58BLA16	VAW-N18R_CBC04A00	30.642995	Crab Creek Bacteria and Sediment
NE58BLA18	VAW-N18R_CBC04A00	15.592346	Crab Creek Bacteria and Sediment
NE58BLB01	VAW-N18R_CBC04A00	4.408579	Crab Creek Bacteria and Sediment
NE58BLB02	VAW-N18R_CBC04A00	7.851166	Crab Creek Bacteria and Sediment
NE58BLB03	VAW-N18R_CBC04A00	26.97995	Crab Creek Bacteria and Sediment
NE58BLB04	VAW-N18R_CBC04A00	0.15029	Crab Creek Bacteria and Sediment
NE58BLB05	VAW-N18R_CBC04A00	28.77883	Crab Creek Bacteria and Sediment
NE58BLB06	VAW-N18R_CBC04A00	2.95039	Crab Creek Bacteria and Sediment
NE58BLB07	VAW-N18R_CBC04A00	47.062944	Crab Creek Bacteria and Sediment
NE58CC08	VAW-N18R_CBC04A00	7.586429	Crab Creek Bacteria and Sediment
NE58CC12	VAW-N18R_CBC04A00	68.86169	Crab Creek Bacteria and Sediment
NE58CC15	VAW-N18R_CBC04A00	8.917426	Crab Creek Bacteria and Sediment
NE58CC19	VAW-N18R_CBC04A00	0.036661	Crab Creek Bacteria and Sediment
NE58CC21	VAW-N18R_CBC04A00	29.474425	Crab Creek Bacteria and Sediment
NE58CC24	VAW-N18R_CBC04A00	165.429331	Crab Creek Bacteria and Sediment
NE58CC32	VAW-N18R_CBC04A00	3.797178	Crab Creek Bacteria and Sediment
NE58CC36	VAW-N18R_CBC04A00	15.701597	Crab Creek Bacteria and Sediment
NE58CC38	VAW-N18R_CBC04A00	29.610662	Crab Creek Bacteria and Sediment
NE58CC42	VAW-N18R_CBC04A00	3.734631	Crab Creek Bacteria and Sediment

Outfall ID	Impaired ID	Acreage Served	TMDL
NE58CC45	VAW-N18R_CBC04A00	151.617215	Crab Creek Bacteria and Sediment
NE58CC46	VAW-N18R_CBC04A00	4.337826	Crab Creek Bacteria and Sediment
NE58CC47	VAW-N18R_CBC04A00	0.185144	Crab Creek Bacteria and Sediment
NE58CC48	VAW-N18R_CBC04A00	0.019668	Crab Creek Bacteria and Sediment
NE58CC49	VAW-N18R_CBC04A00	45.14844	Crab Creek Bacteria and Sediment
NE58CC50	VAW-N18R_CBC04A00	0.053025	Crab Creek Bacteria and Sediment
NE58CC52	VAW-N18R_CBC04A00	220.761143	Crab Creek Bacteria and Sediment
NE58CC53	VAW-N18R_CBC04A00	0.305326	Crab Creek Bacteria and Sediment
NE58CC55	VAW-N18R_CBC04A00	0.652945	Crab Creek Bacteria and Sediment
NE58CC57	VAW-N18R_CBC04A00	21.399651	Crab Creek Bacteria and Sediment
NE58CC58	VAW-N18R_CBC04A00	5.32653	Crab Creek Bacteria and Sediment
NE58CC59	VAW-N18R_CBC04A00	0.012164	Crab Creek Bacteria and Sediment
NE58CC60	VAW-N18R_CBC04A00	34.824171	Crab Creek Bacteria and Sediment
NE58CC61	VAW-N18R_CBC04A00	5.301519	Crab Creek Bacteria and Sediment
NE58CC66	VAW-N18R_CBC04A00	18.132426	Crab Creek Bacteria and Sediment
NE58CC67	VAW-N18R_CBC04A00	13.791036	Crab Creek Bacteria and Sediment
NE58CC68	VAW-N18R_CBC04A00	5.712605	Crab Creek Bacteria and Sediment
NE58CC77	VAW-N18R_CBC04A00	0.562442	Crab Creek Bacteria and Sediment
NE58CC78	VAW-N18R_CBC04A00	2.743456	Crab Creek Bacteria and Sediment
NE58CC79	VAW-N18R_CBC04A00	0.050597	Crab Creek Bacteria and Sediment
NE58CC80	VAW-N18R_CBC04A00	0.361676	Crab Creek Bacteria and Sediment
NE58CC81	VAW-N18R_CBC04A00	0.035306	Crab Creek Bacteria and Sediment
NE58CC82	VAW-N18R_CBC04A00	0.635208	Crab Creek Bacteria and Sediment
NE58CC83	VAW-N18R_CBC04A00	0.511133	Crab Creek Bacteria and Sediment
NE58CC84	VAW-N18R_CBC04A00	0.064035	Crab Creek Bacteria and Sediment
NE58CC85	VAW-N18R_CBC04A00	0.184933	Crab Creek Bacteria and Sediment
NE58DH01	VAW-N18R_CBC04A00	19.162978	Crab Creek Bacteria and Sediment
NE58DH06	VAW-N18R_CBC04A00	15.282994	Crab Creek Bacteria and Sediment
NE58DH07	VAW-N18R_CBC04A00	12.362376	Crab Creek Bacteria and Sediment
NE58SH03	VAW-N18R_CBC04A00	7.424748	Crab Creek Bacteria and Sediment
NE58SH04	VAW-N18R_CBC04A00	2.872506	Crab Creek Bacteria and Sediment
NE58SH07	VAW-N18R_CBC04A00	44.004691	Crab Creek Bacteria and Sediment
NE58SL01	VAW-N18R_CBC04A00	130.145174	Crab Creek Bacteria and Sediment

Outfall ID	Impaired ID	Acreage Served	TMDL
NE58TBA01	VAW-N18R_CBC04A00	3.928033	Crab Creek Bacteria and Sediment
NE58TBA02	VAW-N18R_CBC04A00	0.980205	Crab Creek Bacteria and Sediment
NE58TBA03	VAW-N18R_CBC04A00	5.644049	Crab Creek Bacteria and Sediment
NE58TBA04	VAW-N18R_CBC04A00	31.002893	Crab Creek Bacteria and Sediment
NE58TBA06	VAW-N18R_CBC04A00	5.928483	Crab Creek Bacteria and Sediment
NE58TBA07	VAW-N18R_CBC04A00	103.620744	Crab Creek Bacteria and Sediment
NE58TBA08	VAW-N18R_CBC04A00	0.268479	Crab Creek Bacteria and Sediment
NE58TBA09	VAW-N18R_CBC04A00	38.727703	Crab Creek Bacteria and Sediment
NE58TBA12	VAW-N18R_CBC04A00	8.074916	Crab Creek Bacteria and Sediment
NE58TBA14	VAW-N18R_CBC04A00	1.1676	Crab Creek Bacteria and Sediment
NE58TBA15	VAW-N18R_CBC04A00	0.567981	Crab Creek Bacteria and Sediment
NE58TBA16	VAW-N18R_CBC04A00	0.743422	Crab Creek Bacteria and Sediment
NE58TBA17	VAW-N18R_CBC04A00	167.953449	Crab Creek Bacteria and Sediment
NE58TBA18	VAW-N18R_CBC04A00	14.426004	Crab Creek Bacteria and Sediment
NE58TBA19	VAW-N18R_CBC04A00	0.073384	Crab Creek Bacteria and Sediment
NE58TBA20	VAW-N18R_CBC04A00	0.156509	Crab Creek Bacteria and Sediment
NE58TBA21	VAW-N18R_CBC04A00	0.6043	Crab Creek Bacteria and Sediment
NE58TBA22	VAW-N18R_CBC04A00	0.361192	Crab Creek Bacteria and Sediment
NE58TBA23	VAW-N18R_CBC04A00	0.23351	Crab Creek Bacteria and Sediment
NE58TBA24	VAW-N18R_CBC04A00	0.946341	Crab Creek Bacteria and Sediment
NE58TBA25	VAW-N18R_CBC04A00	1.464036	Crab Creek Bacteria and Sediment
NE58TBA26	VAW-N18R_CBC04A00	0.05741	Crab Creek Bacteria and Sediment
NE58TBA27	VAW-N18R_CBC04A00	0.296427	Crab Creek Bacteria and Sediment
NE58TBA28	VAW-N18R_CBC04A00	4.746133	Crab Creek Bacteria and Sediment
NE58TBA29	VAW-N18R_CBC04A00	2.818776	Crab Creek Bacteria and Sediment
NE58TBA30	VAW-N18R_CBC04A00	245.116792	Crab Creek Bacteria and Sediment
NE58TBA31	VAW-N18R_CBC04A00		Crab Creek Bacteria and Sediment
NE58TBA32	VAW-N18R_CBC04A00	22.058958	Crab Creek Bacteria and Sediment
NE58TBA33	VAW-N18R_CBC04A00	0.970332	Crab Creek Bacteria and Sediment
NE58TBA34	VAW-N18R_CBC04A00	2.96755	Crab Creek Bacteria and Sediment
NE58TBA35	VAW-N18R_CBC04A00	0.419889	Crab Creek Bacteria and Sediment
NE58TBA36	VAW-N18R_CBC04A00	0.233203	Crab Creek Bacteria and Sediment
NE58TBA37	VAW-N18R_CBC04A00	0.686747	Crab Creek Bacteria and Sediment

Outfall ID	Impaired ID	Acreage Served	TMDL
NE58TBB01	VAW-N18R_CBC04A00	0.266134	Crab Creek Bacteria and Sediment
NE58TBB02	VAW-N18R_CBC04A00	12.331562	Crab Creek Bacteria and Sediment
NE58TBB03	VAW-N18R_CBC04A00	0.506523	Crab Creek Bacteria and Sediment
NE58TBB04	VAW-N18R_CBC04A00	0.449497	Crab Creek Bacteria and Sediment
NE58TBB05	VAW-N18R_CBC04A00	1.31769	Crab Creek Bacteria and Sediment
NE58TBB09	VAW-N18R_CBC04A00	7.776634	Crab Creek Bacteria and Sediment
NE58TBB10	VAW-N18R_CBC04A00	0.39768	Crab Creek Bacteria and Sediment
NE58TBB11	VAW-N18R_CBC04A00	22.484917	Crab Creek Bacteria and Sediment
NE58TBB12	VAW-N18R_CBC04A00	4.723855	Crab Creek Bacteria and Sediment
NE58TBB13	VAW-N18R_CBC04A00	1.394429	Crab Creek Bacteria and Sediment
NE58TBB14	VAW-N18R_CBC04A00	204.670955	Crab Creek Bacteria and Sediment
NE58TBB16	VAW-N18R_CBC04A00	0.473689	Crab Creek Bacteria and Sediment
NE58TBC01	VAW-N18R_CBC04A00	0.419816	Crab Creek Bacteria and Sediment
NE58TBC07	VAW-N18R_CBC04A00	8.731964	Crab Creek Bacteria and Sediment
NE58TBC14	VAW-N18R_CBC04A00	4.834493	Crab Creek Bacteria and Sediment
NE58TBC15	VAW-N18R_CBC04A00	15.670245	Crab Creek Bacteria and Sediment
NE58TBC16	VAW-N18R_CBC04A00	32.369474	Crab Creek Bacteria and Sediment
NE58TBC19	VAW-N18R_CBC04A00	132.345871	Crab Creek Bacteria and Sediment
NE58TBC19	VAW-N18R_CBC04A00	70.738022	Crab Creek Bacteria and Sediment
NE58TBC20	VAW-N18R_CBC04A00	2.243776	Crab Creek Bacteria and Sediment
NE58WB07	VAW-N18R_ZZZ01A00	1.459767	Roanoke River Bacteria and Sediment and PCBs
NE59SBA08	VAW-N22R_XEH01A08	29.210687	NO TMDL
NE59SBA28	VAW-N22R_XEH01A08	159.41717	NO TMDL
NE59SBA29	VAW-N22R_XEH01A08	8.02208	NO TMDL
NE59SBA30	VAW-N22R_XEH01A08	24.254954	NO TMDL
NE59SBA31	VAW-N22R_XEH01A08	0.33343	NO TMDL
NE59SBA32	VAW-N22R_XEH01A08	0.051313	NO TMDL
NE59SBA33	VAW-N22R_XEH01A08	0.061697	NO TMDL
NE59SBA34	VAW-N22R_XEH01A08	0.307978	NO TMDL
NE59SBA35	VAW-N22R_XEH01A08	9.277162	NO TMDL
NE59SBD09	VAW-N22R_XEH01A08	25.197348	NO TMDL
NE59SBD12	VAW-N22R_XEH01A08	27.068147	NO TMDL

Outfall ID	Impaired ID	Acreage Served	TMDL
NE59SBD20	VAW-N22R_XEH01A08	2.765293	NO TMDL
RU04FB01	VAW-L01R_ZZZ01A00	108.853459	Roanoke River Bacteria and Sediment and PCBs
RU04FB02	VAW-L01R_ZZZ01A00	10.540094	Roanoke River Bacteria and Sediment and PCBs
RU04FB03	VAW-L01R_ZZZ01A00	7.602064	Roanoke River Bacteria and Sediment and PCBs
RU04FB09	VAW-L01R_ZZZ01A00	0.377719	Roanoke River Bacteria and Sediment and PCBs
RU04FB10	VAW-L01R_ZZZ01A00	29.676655	Roanoke River Bacteria and Sediment and PCBs
RU04FB16	VAW-L01R_ZZZ01A00	91.44828	Roanoke River Bacteria and Sediment and PCBs
RU04FB18	VAW-L01R_ZZZ01A00	202.359251	Roanoke River Bacteria and Sediment and PCBs

Appendix C – BMP 3.2 IDDE Follow-up Information

IDDE Report 1 - 1392 Dow Street Oil Sheen

The date or dates that the illicit discharge was observed and reported	The results of the investigation	Any follow-up to the investigation	The resolution of the investigation	The date that the investigation was closed
8/5/16	Town engineering staff received a phone call reporting an oil sheen On Dow Street. Staff observed and photographed oil on the street during light rain	The residents of 1392 Dow Street were contacted and reported that engine motor oil had spilled during an automobile oil change. The illicit discharge ordinance and MS4 program in general were discussed.	Public works was notified to request a work order for sorbent to be applied at the site.	8/5/16



Photo 1. August 5, 2016. An oil sheen was traced to a resident who had changed an automobile engine's oil earlier in the day.

IDDE Report 2 – 103 Main Street NE Power Washing

The date or dates that the illicit discharge was observed and reported	The results of the investigation	Any follow-up to the investigation	The resolution of the investigation	The date that the investigation was closed
9/19/16	Town engineering staff observed power washing operations being prepared and consumer grade sodium hypochlorite (bleach) one gallon containers on site	The Town Environmental Program Coordinator directed the contractor to power wash with water only, or to capture any water discharge and direct to the sanitary sewer system or dispose of by other means.	Driver was directed to the existing concrete washout constructed at 405 Roudabush Drive. Driver was unaware of the washout location	9/21/16



Photo 1 and 2. September 19, 2016. Power washing equipment was being set up. After a discussion concerning Town Ordinance against illicit discharge, Contractor suggested the washing would be tried without additives and reported that none were necessary to complete the work.

IDDE Report 3- 2000 Roanoke Street Mulch Storage

The date or dates that the illicit discharge was observed and reported	The results of the investigation	Any follow-up to the investigation	The resolution of the investigation	The date that the investigation was closed
9/19/2016	The Town Manager requested the engineering department to inspect for a possible illicit discharge at 2000 Roanoke Street. The adjacent mulch and landscape material business, NRV Mulch, was visited.	The Town Environmental Program Coordinator entered the property with the owner's permission and interviewed the business owner. No discharge off the site was observed. There appeared to be a potential for mulch to discharge in a storm event.	A suggestion was made to construct a gravel berm to filter mulch and the owner indicated the suggestion would be taken under consideration.	9/19/2016



Photo 1. September 19, 2016. No material observed off the property.



Photo 2. September 19, 2016. The potential for material discharge was observed and discussed with the owner.

IDDE Report 4 - Public Works Operations Center Concrete Washout

The date or dates that the illicit discharge was observed and reported	The results of the investigation	Any follow-up to the investigation	The resolution of the investigation	The date that the investigation was closed
9/12/2016	Concrete washout on a section of asphalt was observed while performing a walk through and SWPPP inspection of the Public Works Operations Center.	No material was observed reaching the storm drain or off the property. An inspection of the public works vehicles found a front end loader with evidence of concrete.	The street and storm supervisor was with the inspection party. The need to perform concrete washout in appropriate areas was discussed. No subsequent violations have been reported or observed.	9/12/2016



Photo 1. September 12, 2016. No material observed to storm drain or off the property.



Photo 2. September 12, 2016. No material observed off the property.

IDDE Report 5 – Marshall Concrete Pond Discharge

The date or dates that the illicit discharge was observed and reported	The results of the investigation	Any follow-up to the investigation	The resolution of the investigation	The date that the investigation was closed
9/29/16, 11/15/16, 12/7/16, 12/21/16	Foam and a cement like residue was observed in a road drainage ditch along King Street. An IDDE Tracking Form dated 11/15/16 was created. No illicit discharge was observed below the King Street and Ellet Drive intersection.	The Chandler Concrete Plant, 700 Block Lane, was suspected as the source of the foam and residue. This plant has a VPDES permit VAG11. Discussions with the plant personnel resulted in operational changes to minimize the potential for future discharges as outlined in 12/21/16 and 3/16/17 BMP proposals.	No subsequent violations have been reported or observed. After discussion with DEQ, any future incidents should be handled by notifying DEQ through the VAR11 VPDES permitting. A maintenance agreement has been recorded for maintenance of the stormwater management pond. The required VPDES inspection protocols have been voluntarily enhanced.	6/30/2017



Photo 1. September 29, 2016. Foam was observed in road drainage ditch across from 1420 King Street.

IDDE Report 6 – 190 North Franklin Street Soil Spill

The date or dates that the illicit discharge was observed and reported	The results of the investigation	Any follow-up to the investigation	The resolution of the investigation	The date that the investigation was closed
10/18/2016	Public works reported that a municipal dump truck had inadvertently spilled soil onto North Franklin Street.	Public works reported that the loose soil had been picked up prior to the engineering Department photographing the location (see below)	Loose soil was picked up and street was swept.	10/19/2016



Photo 1. October 19, 2016. Sediment tracking on North franklin Street south of the Depot Street Intersection.

IDDE Report 7 – 100 Main Street Power Washing

The date or dates that the illicit discharge was observed and reported	The results of the investigation	Any follow-up to the investigation	The resolution of the investigation	The date that the investigation was closed
10/24/2016	A power washing contractor had contacted the town to inquire about IDDE ordinance concerning power washing. After discussion, the work scheduled for the week of October 24 was performed with equipment designed to recycle water.	The power washing operation was inspected. No discharges occurred.	Photographic documentation of the power washing was filed.	10/24/2016



Photo 1. October 24, 2016. Storm drain inlets are protected from possible spills.



Photo 2. October 24, 2016. Suction line with filter sock to collect power washing runoff.



Photo 3. October 24, 2016. Suction line without filter sock.



Photo 4. October 24, 2016. Interior of filtering equipment trailer.



Photo 5. October 24, 2016. Part of filtering process equipment.

IDDE Report 8 – Prospect Drive Hydraulic Line Break

The date or dates that the illicit discharge was observed and reported	The results of the investigation	Any follow-up to the investigation	The resolution of the investigation	The date that the investigation was closed
12/14/2016	Public Works personnel alerted Engineering staff on a spill that with applied sorbent on Prospect Drive. An investigation was started on 12/16 and an IDDE tracking form was created.	Engineering staff called two contractors with businesses in the industrial park. A contractor identified a salt spreader truck hydraulic line break as the cause of the incident.	The contractor acted appropriately to apply a sorbent and then collect the sorbent.	12/16/2016



Photo 1. December 16, 2016. Hydraulic line spill after sorbent application.



Photo 2. December 16, 2016. Close up of hydraulic line spill after sorbent application.

IDDE Report 9 - NRV Mall Ground Subsidence, Storm Drain Failure

The date or dates that the illicit discharge was observed and reported	The results of the investigation	Any follow-up to the investigation	The resolution of the investigation	The date that the investigation was closed
1/24/17	The Public Works department reported ground subsidence adjacent to a storm drain manhole structure located in a grassed area along Route 114.	Public Works personnel determined that a portion of a manhole CMP discharge pipe had collapsed. Soil had entered the storm drain and traveled through the storm drain system.	This inlet is identified as SD-MH-97 in Town GIS. The public works department is seeking an acceptable bid to make permanent repairs on the structure.	Repair work has not been completed therefore the investigation will remain open.



Photo 1. 1/24/17. Excavation to inspect manhole outlet pipe.

IDDE Report 10 – Fluid spill at 594 Depot Street

The date or dates that the illicit discharge was observed and reported	The results of the investigation	Any follow-up to the investigation	The resolution of the investigation	The date that the investigation was closed
3/20/17	A fluid spill was observed by the Environmental Program Coordinator. The fluid had no odor or tactile indicators to suggest a substance other than water. No collectible fluid was ponded for sampling.	No follow up was required	Funding for IDDE spill kits was included in the town FY18 budget. In future incidents similar to this one an attempt to collect or test the spill in place will be made.	3/20/17



Photo 1. 3/20/17. Excavation to inspect manhole outlet pipe.

IDDE Report 11 – Oak Tree Subdivision Phases XI – XIII Sediment Basin Upset

The date or dates that the illicit discharge was observed and reported	The results of the investigation	Any follow-up to the investigation	The resolution of the investigation	The date that the investigation was closed
5/26/17	The Construction Activity Operator for the General VPDES Permit for Discharges of Stormwater from Construction Activities, VAR10F705, notified the town ESC inspector of an embankment failure on the Oak Tree Subdivision sediment basin.	The town environmental program manager informed the Operator of the duty to contact DEQ about the upset and sat in on a phone call from the Operator to DEQ. The town ESC inspector monitored the embankment repair.	The Operator contacted DEQ as required by the General VPDES Permit for Discharges of Stormwater from Construction Activities, including an estimate of the quantity of material discharged.	8/17/17



Photo 1. 5/26/17. Sediment Basin outlet pipe piping failure.

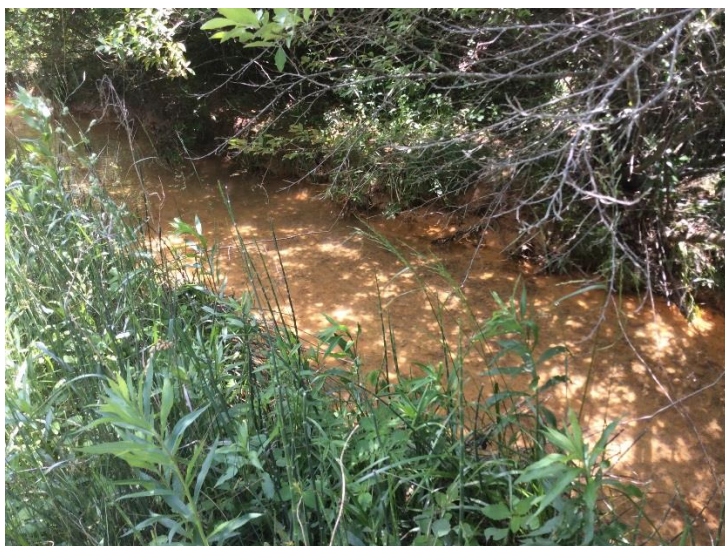


Photo 2. 5/26/17. Evidence of embankment clay in unnamed tributary to Crab Creek.



Photo 3. 6/2/17. Concrete cradle installation



Photo 4. 6/2/17. Concrete cradle installation



Photo 2. 8/17/17. Completed repairs

Appendix D – BMP 3.3 IDDE Screening Summary

3-3 APPENDIX D IDDE Screening Summary

Outfall ID	Impaired ID	No Indication disc	Possible III disc	Almost Certian III	Comments
NE58CC59	VAW-N18R_CBC04A00	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Creek backed up into pipe

Appendix E – BMP 5.2 SWM Facility Tracking Database

New BMP SWM Facility 2016-2017

ID	MS4 Permit Year	BMP Type	HUC	Impaired Waters	No. of Acres Treated	Pond Name	Nearest Address	Easting	Northing	Town Maintained Y/N	Maintenance Agreement Y/N	Maint Agreement date	Site Plan #	TOC Project Number	Parcel Number	Current Land Use	Impervious Acres Treated	Managed turf Acres		Phosphorous Removal	Directly in Series with ID#	Date Brought Online	Most Recent Inspection Date
																		Treated (RR Method)	Phosphorous Removal				
190	2016-2017	Bioretention Filter	NE58	Crab Creek	3.14	200 Scattergood Dr BR 1	200 Scattergood Dr	10923699.26500	3580672.56000	No	Yes	12/16/2016	z-2015	02015	033540	Commercial	2.04	1.10					
73	2016-2017	Bioretention Filter	RU07	Wilson Creek	0.80	AEP Sub Station Bio-Retention	3785 Kirby Dr	10949202.05700	3579340.13500	No	Yes?		Z-2016	02016	140889	Commercial	0.70	0.10	0.44		#####	12/12/2016	
181	2016-2017	Sand Filter	NE59	Slate Branch		Corning Nitrogen Facility	3050 North Franklin St	10922147.48900	3591604.62100	No			z-2019	02019	003993	Commercial		0.00					
182	2016-2017	Bioretention Filter	NE58	Crab Creek	0.81	Dairy Queen Bioretention	950 North Franklin St	10924437.45200	3580855.40700	No	Yes	8/2/2016	z-2036	02036	004583	Commercial	0.59	0.22	1.25	183			
183	2016-2017	Underground Detention	NE58	Crab Creek	1.39	Dairy Queen Underground	950 North Franklin St	10924608.00800	3580748.74000	No	Yes	8/2/2016	z-2036	02036	004583	Commercial	N/A	N/A	N/A	182			
119	2016-2017	Enhanced Extended Detention	RU04	Elliot's Creek	3.53?	Fairfield Inn / Homewood Suites	2659 Roanoke St	10943141.57200	3578265.97000	No	Yes	05/28/14	Z-1999	01999	036008	Commercial						6/20/2017	
191	2016-2017	Bioretention Filter	NE58	Crab Creek	1.43	Graceway Bioretention	135 Scattergood Dr	10924322.07800	3581379.01800	No	Yes	7/14/2017	z-2000	02000	026162	Commercial	0.98	0.45	2.14	192			
192	2016-2017	Detention	NE58	Crab Creek	5.11	Graceway Detention South	135 Scattergood Dr	10924330.13300	3581314.57400	No	Yes	7/14/2017	z-2000	02000	026162	Commercial	N/A	N/A	N/A	191			
193	2016-2017	Underground Detention	NE58	Crab Creek	0.49	Graceway Underground	135 Scattergood Dr	10924244.30000	3581253.46200	No	Yes	7/14/2017	z-2000	02000	026162	Commercial	N/A	N/A	N/A				
184	2016-2017	Manufactured BMP	NE58	Crab Creek	1.61	Kroger	555 North Franklin St	10925843.07700	3578590.61500	No	Yes	2/22/2016	z-471	00471	035647	Commercial	1.39	0.22	1.56				
186	2016-2017	Bioretention Filter	NE58	Crab Creek	1.30	Northwest True Value Bioretention	520 Roanoke St	10930333.41400	3576701.56300	No	Yes	8/19/2016	z-2037	02037	000814	Commercial	0.32	0.19	1.87	188			
188	2016-2017	Grass Channel	NE58	Crab Creek	0.79	Northwest True Value Grass Channel East	520 Roanoke St	10930464.31700	3576806.77100	No	Yes	8/19/2016	z-2037	02037	000814	Commercial	0.52	0.27	included in 186	186			
187	2016-2017	Grass Channel	NE58	Crab Creek	0.97	Northwest True Value Grass Channel West	520 Roanoke St	10930151.12200	3576801.21500	No	Yes	8/19/2016	z-2037	02037	000814	Commercial	0.39	0.58	0.27				
189	2016-2017	Manufactured BMP	NE59	Slate Branch	0.12	Panda Express	250 Peppers Ferry Rd	10921273.91300	3588682.77900	No		z-2030	02030	028825	Commercial	0.12	0.00	0.13					
185	2016-2017	Bioretention Filter	NE59	Slate Branch	0.79	Regent Plaza	3225 North Franklin St	10923657.74000	3592468.11000	No		z-2039	02039	019746	Commercial	0.56	0.23	0.75					
174	2016-2017	Infiltration Basin	NE58	Crab Creek	0.75	The Haven (Hill Street)	Behind 202 A- D Hill St.	10926755.02100	3577598.54900	No	Yes	07/08/16	z-2007	02007	021114	Residential	0.18	0.57	0.32		07/01/16		

BMP SWM Facility Database

DEQ USE					Town Use										Project Information						
ID	MS4 Permit Year	BMP Type	HUC	No. of Acres Treated	Pond Name	Nearest Address	Easting	Northing	Town Maintained Y/N	Manure Agreement date	Manure Agreement Site Plan #	Project Number	Parcel Number	Current Land Use	Impervious Acres Treated	Phosphorous Removal (RR Method)	Date Brought Online	Most Recent Inspection Date	Project Information		
																			Series with ID#	Date Brought Online	Most Recent Inspection Date
Town of Christiansburg Permit No. VAR040025																					
2	2008-2009	Bioretention Filter	NESH	Crab Creek	TBD of 4.45	Mink Street Subdivision	Ashton Ct	W100 Ashton Ct.	10919592.65840	3575224.94790	No	No	2-665	00665		Residential				3/7/2017	
3	2008-2009	Extended Detention	NESH	Crab Creek	0.79	Badger St. Mini-Storage		925 Radford St	10921458.18270	3575737.49096	No	No	2-812	00812		Commercial				5/15/2017	
4	2008-2009	Underground Detention	NESH	Crab Creek	13.32	Cambria Crossing Phase 1		Welch Circle	10921243.58370	3585033.86402	No	No	2-639	00639		Residential					
5	2008-2009	Detention	NESH	Crab Creek	16.58	Christiansburg Middle Front		1205 Buffalo Dr.	10922648.69050	3573607.05433	No	No	2-517	00517		Commercial					
6	2008-2009	Detention	NESH	Crab Creek	27.26	Christiansburg Middle Rear		1205 Buffalo Dr.	10921278.64000	3574118.19463	No	No	2-517	00517		Commercial				Montgomery County MS4	
7	2008-2009	Detention	NESH	Crab Creek	TBD	Falling Branch Elementary		735 Falling Branch Rd	10936410.68200	3574973.71800	No	No				Commercial				Montgomery County MS4	
8	2008-2009	Enhanced Extended Detention	NESH	Crab Creek	159.10	Falling Branch Industrial Park		Technology Dr	10935341.94050	3574158.59277	No	Yes	10/19/10	Z-1979	01979	Commercial				4/28/2017	
9	2008-2009	Detention	NESH	Crab Creek	TBD	VDOT Pond at Bypass / Roanoke St Intersection			10936108.46310	3577712.77389	No	No				Commercial				6/15/2017	
10	2008-2009	Detention	NESH	Crab Creek	TBD	Windsong Heights		Behind 135 Melody Dr	10922561.79410	3574648.58774	No	No	2-784	00784		Residential				3/7/2017	
11	2008-2009	Detention	NESH	Crab Creek	TBD	Windsor Estates Phase 1		395 Windsor Dr	10918996.34270	3585704.36579	No	No	2-792	00792		Residential				6/6/2017	
12	2008-2009	Detention	NESH	Crab Creek	18.05	Windsor Estates Phase 4		490 Windsor Dr	10919369.90410	3586192.97609	No	No	2-792	00792		Residential				6/6/2017	
13	2008-2009	Detention	NESH	Crab Creek	0.46	Majestic Dr. Townhomes		55 Majestic Dr	10919271.18300	3588278.94718	No	No	2-541	00541		Residential				6/14/2017	
16	2008-2009	Detention	NESH	Crab Creek	1.78	Holy Spirit Catholic Church		355 Independence Blvd	10922986.61560	3581326.06184	No	No	2-560	00560	032621	Commercial				6/21/2017	
17	2008-2009	Detention	NESH	Crab Creek	2.28	NRV VASAP		175 Independence Blvd	10923783.88000	3581637.97128	No	No	2-1409	01409	009503	Commercial				6/22/2017	
18	2008-2009	Detention	NESH	Crab Creek	1.08	The Hillside		500 Block Radford St	10923325.31100	3575689.53830	No	No	2-633	00633	000161	Commercial				6/15/2017	
19	2008-2009	Detention	NESH	Crab Creek	TBD	Overlook Court		75 Overlook Dr	10924056.54040	3577722.79345	No	No	2-794	00794		Residential				5/10/2017	
20	2008-2009	Detention	NESH	Crab Creek	4.93	Warren Heights		Behind 670 Warren Ct	10921993.16510	3576414.73457	Yes	N/A	2-763	00763		Residential				5/15/2017	
21	2008-2009	Detention	NESH	Crab Creek	TBD	Henley Place		Behind 1650 -1680 York Dr	10921299.22800	3584495.98100	No	No	2-1061	01061		Residential				6/9/2017	
22	2008-2009	Detention	NESH	Crab Creek	1.78	Corner Stone Townhouses Ph 2		1473 Scott St	10934552.88300	3577695.50930	No	No	2-549	00549		Residential				5/17/2017	
23	2008-2009	Detention	NESH	Crab Creek	3.46	Charleston Place Townhomes		Republic and Lester	10929685.08500	3579449.87766	No	No	2-622	00622		Residential				3/8/2017	
24	2008-2009	Detention	NESH	Crab Creek	0.66	College St Apts North		1105-1145 College St	10922781.40450	3573212.65652	No	No	2-617	00617		Residential				6/15/2017	
26	2008-2009	Detention	NESH	Crab Creek	2.02	College St Apts South		adjacent to 1145 College S	10922676.72540	3573051.82956	No	No	2-617	00617		Residential				6/15/2017	
27	2008-2009	Detention	NESH	Crab Creek	TBD	Middle Ct Townhomes		Moose and Buffalo Dr	10922586.25520	3573441.04044	No	No	2-599	00599		Residential				3/7/2017	
28	2008-2009	Detention	NESH	Crab Creek	TBD	Peppers Crossing Subdivision		85 Johns Ct	10919693.54900	3587446.38800	Yes	N/A	2-593	00593		Residential				6/14/2017	
29	2008-2009	Underground Detention	NESH	Crab Creek	3.48	Deli-Mart # 22		1250 W Main St	10922948.88680	3572505.73000	No	No	2-584	00584		Commercial					
30	2008-2009	Detention	NESH	Crab Creek	5.17	Pilot Homes Mini-Storage		170 Simmons Rd SE	10938404.72300	3577958.60600	No	No	2-577	00577		Commercial				12/1/2016	
31	2008-2009	Detention	NESH	Crab Creek	2.42	B&B Storage Mini Storage		645 Radford St	10922847.05690	3575775.66549	No	No	2-575	00575		Commercial				6/16/2017	
32	2008-2009	Detention	NESH	Crab Creek	TBD	Rice Realty		600 Radford St	10922833.64320	3575680.46971	No	No	2-574	00574		Commercial				6/16/2017	
33	2008-2009	Detention	NESH	Crab Creek	TBD	Haymaker St Apartments		Haymaker & Liberty St	10930449.96010	3577173.29188	No	No	2-567	00567		Residential				5/9/2017	
35	2008-2009	Detention	NESH	Crab Creek	1.20	Corner Stone Townhouses Ph 1		1422 Scott Street	10934547.82900	3578083.65100	No	No	2-549	00549		Residential				5/17/2017	
36	2008-2009	Retention Pond	NESH	Crab Creek	TBD	Larry Martin Site Plan		2886 Roanoke St	10945051.00000	3579643.31100	No	No	2-527	00527		Commercial			Has Been Remo	3/30/2015	
37	2008-2009	Detention	NESH	Crab Creek	4.46	Hunters Ridge Phase 2		Behind 230 Hunters Ridge	10921787.37790	3584309.18836	No	No	2-502	00502		Residential				6/9/2017	
38	2008-2009	Detention	NESH	Crab Creek	1.83	Hunters Ridge Phase 3		Adjacent to 1646 Providen	10921786.02370	3584769.95515	No	No	2-502	00502		Residential				6/9/2017	
39	2008-2009	Detention	NESH	Crab Creek	TBD	Precision Business and Warehouse Fr		806 Radford St	10922056.00700	3575454.29200	No	No	Z-491	00491		Commercial				5/16/2017	
40	2008-2009	Detention	NESH	Crab Creek	TBD	Precision Business and Warehouse M		806 Radford St	10922061.01300	3575299.08100	No	No	Z-491	00491		Commercial				5/16/2017	
41	2008-2009	Detention	NESH	Crab Creek	0.33	John Cromer Garage		845 E. Main	10928348.65900	3580265.65600	No	No	2-484	00484		Commercial				3/8/2017	
42	2008-2009	Detention	NESH	Slate Branch	29.88	Target Pond		195 Conston Ave	10922462.93500	3586200.39900	No	No	2-478	00478		Commercial				2/1/2017	
43	2008-2009	Detention	NESH	Crab Creek	TBD	Northgate Village Shopping Center E		2025 Cambria St	10925859.89290	3584426.33311	NOT Instal	No	2-476	00476		Commercial				5/24/2016	
44	2008-2009	Detention	NESH	Crab Creek	4.81	Twin Oaks Phase 1		Adjacent to 770 Republic F	10929719.98300	3579253.88500	No	No	2-461	00461		Residential				3/8/2017	
45	2008-2009	Detention	NESH	Crab Creek	TBD	Kyle Manor		College and Buffalo	10922905.29750	3573513.04787	No	No	2-451	00451		Residential				5/16/2017	
46	2008-2009	Underground Detention	NESH	Crab Creek	2.16	Hokie Honda / Hyundai Front		2040 Roanoke St	10937541.68160	3578210.02247	No	No	2-429	00429		Commercial					
47	2008-2009	Detention	NESH	Crab Creek	4.50	Marshall Concrete Batch Plant		700 Block Lane	10928134.59140	3583705.71354	No	No	2-415	00415		Commercial				11/30/2016	
48	2008-2009	Detention	NESH	Crab Creek	6.00	Food Lion on Roanoke St.		1530 Roanoke St.	10935206.89920	3577374.77586	No	No	2-402	00402		Commercial				6/15/2017	
49	2008-2009	Detention	NESH	Crab Creek	0.95	Clearview Townhomes		Wimmer and Clearview Dr	10922953.24710	3578212.81479	No	No	2-399	00399		Residential				5/10/2017	
50	2008-2009	Detention	RU07	Wilson Creek	3.67	Super 8 Mini-storage		2840 Roanoke St	10944479.51030	3579605.20088	No	No	2-373	00373		Commercial				2/23/2017	
51	2008-2009	Infiltration	NESH	Crab Creek	TBD	Mt Zion Holy Church of America		385 Depot St	10926669.41720	3579204.11970	No	No	2-194	00194		Commercial				12/1/2016	
52	2008-2009	Detention	NESH	Crab Creek	TBD	New Energy Dist Inc		2300 Prospect Dr	10940425.96350	3580239.57420	No	No	2-152	00152		Commercial				6/29/2017	
53	2008-2009	Detention	NESH	Crab Creek	1.22	Cambriatowne		End of Collins St	10928785.42210	3580105.49460	No	No	2-1815	01815		Residential				5/10/2017	
54	2008-2009	Underground Detention	NESH	Crab Creek	0.99	Park Street Townhouses		702-740 Park Street	10930809.24880	3578560.16491	No	No	2-532	00532		Residential					
55	2008-2009	Underground Detention	NESH	Crab Creek	2.45	Old School Townhouses		School Lane	10926975.01300	3578450.30300	No	No	2-00433	00433		Residential				Installed or just	
56	2008-2009	Infiltration	NESH	Crab Creek	0.17	Valley Propane Infiltration 1		225 Cambria Street Rear	10923465.08390	3585264.40961	No	No	2-309	00309	031939	Commercial				6/9/2017	
57	2008-2009	Infiltration	NESH	Crab Creek	0.85	Valley Propane Infiltration 2		225 Cambria Street Front	10923497.24350	3584906.07496	No	No	2-309	00309	031939	Commercial				6/9/2017	
58	2008-2009	Infiltration	NESH	Crab Creek	0.27	Forest Street Townhomes		1015-1045 Forest St	10929286.52830	3578548.40297	No	No	2-457	00457		Residential				5/9/2017	
59	2008-2009	Detention	NESH	Crab Creek	TBD	College and Depot St Intersection		560 College Street	10924378.52360	3574998.84220	Yes	N/A				Residential				5/16/2017	
60	2008-2009	Detention???	NESH	Crab Creek	490.10	Edgemont of Diamond Hill		Multiple Addresses	10920015.63120	3581457.19042	Yes	N/A	Z-1965	01965	033160	Residential					
61	2008-2009	Detention	NESH	Crab Creek	75.32	Hans Meadow		240 Village Lane	10935422.12140	3579348.62421	Yes	N/A	Z-1405	01405	090607	Residential				6/22/2017	
62	2008-2009	Detention	NESH	Crab Creek	11.94	Kamran		355 Warren St	10922121.59100	3577544.69772	Yes	N/A	Z-1679	01679	031065	Residential				5/10/2017	
63	2008-2009	Detention	NESH	Crab Creek	12.51	Old Landfill		Wades Lane	10921766.49060	3579408.07292	Yes	N/A	Z-1804	01804	0703						

81	2009-2010	Extended Detention	NE58	Crab Creek	14.78	Good Samaritan Hospice	1160 Moose Dr	10922400.88730	3572980.38453	No	Yes	Z-846	00846	008095	Commercial			5/16/2017	
82	2011-2012	Manufactured BMP	NE58	Crab Creek	2.45	Montgomery County Courthouse	55 E Main St	10926880.34510	3576462.42473	No	Yes	Z-845	00845	071124	Commercial			3/30/2017	
83	2011-2012	Underground Detention	NE58	Crab Creek	2.45	Montgomery County Courthouse	55 E Main St	10926836.26030	3576436.75746	No	Yes	Z-845	00845	071124	Commercial			3/30/2017	
84	2012-2013	Manufactured BMP	NE58	Crab Creek	TBD of 0.29	Waffle House Filtrera	90 Oak Tree Boulevard NW	10924658.40200	3583385.03100	No	Yes	01/12/12 Z-1078	01078	080190	Commercial			6/14/2017	
85	2008-2009	Bioretention Filter	RU07	Wilson Creek	TBD	CHP Energy Services Warehouse	400 Industrial Dr	10940496.28850	3580580.01670	No	Pending	Z-653	00653		Commercial			6/29/2017	
86	2008-2009	Manufactured BMP	NE59	Slate Branch	TBD	NRV Mall Aqua-Filters at Shoppers W	Shoppers Way Parking Lot	10921679.62700	3590687.61800	No	Pending	Z-645	00645		Commercial			86 to 95	
87	2008-2009	Extended Detention	RU07	Wilson Creek	2.95	Harley-Davidson	2700 Roanoke St	10943352.68550	3579753.98241	No	No	Z-667	00667		Commercial			6/21/2017	
88	2008-2009	Detention	RU07	Wilson Creek	6.65	Christiansburg Baptist Church	2895 Roanoke St	10944926.03610	3579134.19075	No	No	Z-561	00561		Commercial			2/7/2017	
89	2008-2009	Detention	RU04	Elliotts Creek	3.44	Harbor of Hope Church Front	2720 Roanoke St	10943739.69700	3579264.75124	No	No	Z-590	00590		Commercial			3/8/2017	
90	2008-2009	Detention	RU07	Wilson Creek	5.64	Harbor of Hope Church Rear	2720 Roanoke St	10943695.42620	3579881.93874	No	No	Z-590	00590		Commercial			3/8/2017	
91	2008-2009	Detention	NE59	Slate Branch	TBD	Market Place/Arbor View Pond Modif	Between 2500 and 2650 M	10922729.37700	3589509.52500	No	No	Z-990 and z	00990 and 01371		Commercial			6/13/2017	
92	2008-2009	Detention	NE59	Slate Branch	16.29	New River Village Phase 1 A	Across from Albert Ln Entr	10915579.84800	3589282.70300	No	No	Z-781	00781		Residential			6/6/2017	
93	2008-2009	Detention	NE59	Slate Branch	157.39	New River Village Phase 1 B	Behind 195 Sequoia Cir	10915662.86300	3590295.23200	No	No	Z-781	00781		Residential			2/14/2017	
94	2008-2009	Detention	NE59	Slate Branch	22.26	New River Village Phase 5	Behind 180 Aster Lane	10915834.77450	3591596.34196	No	No	Z-781	00781		Residential			6/6/2017	
95	2008-2009	Detention	NE59	Slate Branch	TBD	NRV Mall Pond at Shoppers Way	175 Shoppers Way	10921459.22120	3590514.87541	No	No	Z-645	00645		Commercial			5/25/2017	
96	2008-2009	Detention	NE59	Slate Branch	TBD	NRV Mall Pond North		10920871.22500	3590346.31000	No	No	Z-1787	01787		Commercial			1/19/2017	
97	2008-2009	Detention	NE59	Slate Branch	TBD	NRV Mall Pond West		10920635.41200	3589675.14000	No	No	Z-1410	01410		Commercial			6/29/2017	
98	2008-2009	Detention	NE59	Slate Branch	9.84	Stafford Farms	Adjacent to 225 Meadow Dr	10917753.27290	3590777.08819	No	No	Z-788	00788		Residential			6/29/2017	
99	2008-2009	Detention	NE59	Slate Branch	25.90	Wal-Mart Supercenter Big Pond	Peppers Ferry Rd at Huckl	10921276.28300	3588194.33300	No	No	Z-1861	01861		Commercial			6/8/2017	
100	2008-2009	Detention	NE59	Slate Branch	2.70	Wal-Mart Supercenter Small Pond	South of Wal-Mart	10922164.95500	3587553.05700	No	No	Z-1861	01861		Commercial			6/8/2017	
102	2008-2009	Retention	NE59	Slate Branch	TBD	The Villas at Peppers Ferry Front Pond	West of Quin W. Stuart Bld	10920069.69600	3589268.35200	No	No	Z-588	00588		Residential			5/28/2017	
103	2008-2009	Detention	NE59	Slate Branch	TBD	The Villas at Peppers Ferry Middle	East of Patriots Way	10919975.65900	3590196.96600	No	No	Z-790	00790		Residential		102 to 168	5/25/2017	
104	2008-2009	Detention	RU07	Wilson Creek	8.24	Wheatland Hills	Behind 222 and 226 Wheat	10924966.66600	3587070.24000	No	No	Z-809	00809		Commercial			2/10/2017	
105	2008-2009	Detention	NE59	Slate Branch	1.50	Church Of Jesus Christ Apostolic	783 Stafford Dr	10918741.42600	3591842.61100	No	No	Z-628	00628		Commercial			5/24/2017	
106	2008-2009	Detention	NE59	Slate Branch	0.99	Affordable Self Storage	1035 Peppers Ferry Rd	10917015.30300	3589032.31700	No	No	Z-621	00621		Commercial			6/13/2017	
107	2008-2009	Infiltration	RU04	Elliotts Creek	0.46	Sink's Antiques	2150 Roanoke St	10938270.29000	3578498.77000	No	No	Z-605	00605		Commercial			12/1/2016	
108	2008-2009	Detention	NE59	Slate Branch	4.58	Adventure World	200 Midway Plaza Dr	10922861.57320	3592770.57968	No	No	Z-595	00595		Commercial			6/22/2017	
109	2008-2009	Underground Detention	RU04	Elliotts Creek	6.60	Shelor Dodge	2395 Roanoke St	10940500.71500	3578087.57200	No	No	Z-581	00581		Commercial			6/22/2017	
110	2008-2009	Infiltration	RU04	Elliotts Creek	0.47	Creative Family Solutions	180 Teel St	10938458.77500	3578708.72500	No	No	Z-580	00580		Commercial			2/7/2017	
111	2008-2009	Detention	RU04	Elliotts Creek	2.16	84 Lumber	2245 Roanoke St	10938669.87100	3578093.92100	No	No	Z-562	00562		Commercial			4/25/2017	
112	2008-2009	Detention	NE59	Slate Branch	1.41	Midway Office Park (AHV Office)	20 Midway Plaza Drive	10923299.77400	3592791.01300	No	No	Z-538	00538		Commercial			6/22/2017	
113	2008-2009	Detention	RU04	Elliotts Creek	TBD	Mud Pike Mini Storage	1335 Mudpike	10922463.40120	3572335.54529	No	No	Z-526	00526		Commercial			3/07/2017	
114	2008-2009	Detention	NE59	Slate Branch	0.92	3W Corp Mini Storage	5 Midway Plaza Drive	10923291.52	3593526.526	No	No	Z-521	00521	030248	Commercial		0	6/22/2017	
115	2008-2009	Infiltration	RU07	Wilson Creek	2.00	Midway Discount Center	215 County Dr	10924182.61400	3592542.02100	No	No	Z-516	00516		Commercial			5/16/2016	
116	2008-2009	Detention	RU04	Elliotts Creek	1.63	Holiday Inn Express	2725 Roanoke St	10943681.22400	3578975.55200	No	No	Z-513	00513		Commercial			6/20/2017	
117	2008-2009	Underground Detention	RU04	Elliotts Creek	TBD	Shelor Motor Mile	Across from 240 Jarret Lan	10939878.17040	3578004.29023	No	No	Z-504	00504		Commercial			6/20/2017	
118	2008-2009	Detention	NE59	Slate Branch	79.40	Spradlin Farms	Next to 180 Conston Ave	10921800.20830	3586885.34837	No	No	Z-488	00488		Commercial			3/22/2017	
119	2016-2017	hanced Extended Detentic	RU04	Elliotts Creek	3.537	Fairfield Inn / Homewood Suites	2659 Roanoke St	10943141.57200	3578265.97000	No	Yes	05/28/14 Z-1999	01999	036008	Commercial			6/20/2017	
120	2008-2009	Detention	RU04	Elliotts Creek	6.70	Fleetwood Homes	1340 W Main Street	10923173.51400	3571842.82300	No	No	Z-462	00462		Commercial			6/21/2017	
121	2008-2009	Detention	NE58	Crab Creek	TBD	Rt 114 Mini Storage	710 Peppers Ferry Rd	10918654.72950	3588099.09703	No	No	Z-453	00453		Commercial			3/7/2017	
122	2008-2009	Detention	NE59	Slate Branch	15.50	Merchants Tire and Auto / Halbersta	400 Peppers Ferry Rd	10920366.80200	3588219.85443	No	No	Z-443 and z	00443 and 01383		Commercial			5/26/2017	
123	2008-2009	Detention	RU04	Elliotts Creek	4.84	Hokie Honda / Hyundai Rear	2040 Roanoke St	10937425.56620	3578848.73467	No	No	Z-429	00429		Commercial			6/22/2017	
124	2008-2009	Detention	NE59	Slate Branch	TBD	Affordable Efficiencies, Inc	1045 Peppers Ferry Road	10917148.96600	3588810.94500	No	No	Z-404	00404		Commercial			6/13/2017	
125	2008-2009	Detention	NE59	Slate Branch	TBD	Midas Muffler (Now Enterprise)	55 Ponderosa Drive	10923396.50000	3591519.31911	No	No	Z-356 and z	00356 and 00663		Commercial		130 to 125	6/22/2017	
126	2008-2009	Detention	RU04	Elliotts Creek	TBD	Cracker Barrel	30 Hampton Blvd	10942736.72050	3579563.84649	No	No	Z-140	00140		Commercial			1/24/2017	
127	2008-2009	Detention	RU04	Elliotts Creek	TBD	Interstate - Near cracker barrel	30 Hampton Blvd	10942309.58510	3579215.98191	No	No				Commercial				
128	2008-2009	Detention	RU04	Elliotts Creek	TBD	Interstate - Falling Branch Interchang	Ever Built?	10939554.11500	3576501.43000	No	No	N/A	N/A		Open Land		Not Constructed		
129	2008-2009	Retention	RU07	Wilson Creek	20.56	Hampton Blvd Pond	95 Hampton Blvd	10943253.55640	3580201.31359	No	No	Z-82	00082		Open Land			6/21/2017	
130	2008-2009	Detention	NE59	Slate Branch	1.00	Arbor View Phase 5/Burch Property	95 Ponderosa Dr	10923699.55000	3591426.78600	No	No	Z-663	00663		Commercial		130 to 125	6/22/2017	
131	2008-2009	Detention	RU07	Wilson Creek	173.76	CIP 1 Big Pond	471 Houchins Rd.	10941048.69530	3581185.25456	Yes	N/A	Z-1981	01981	120346	Open Land			6/29/2017	
132	2008-2009	Extended Detention	RU07	Wilson Creek	13.84	CIP 2 Smaller WQ	555 Industrial Dr.	10939923.43490	3581354.52540	Yes	N/A	Z-1054	01054	160190	Open Land			3/8/2017	
133	2008-2009	Detention	RU04	Elliotts Creek	15.99	Falling Branch	Glade Dr & Cullen Ct	10941899.17280	3577338.24936	Yes	N/A	Z-931	00931	030406	Open Land			6/20/2017	
134	2008-2009	Detention	NE59	Slate Branch	TBD	Slate Creek Commons	Adjacent to 165 Walters Dr	10916829.85600	3589717.88383	Yes	N/A	Z-589	00589	110420	Residential			6/13/2017	
136	2009-2010	Water Quality Swale	RU07	Wilson Creek	3.40	Air-Gas	2260 Prospect Dr	10939953.99730	3580037.93101	No	No	Z-666	00666	025838	Commercial			5/31/2016	
137	2010-2011	Detention	RU07	Wilson Creek	13.03	White Pine Ct	735 White Pine Dr NE	10947763.87380	3581304.13622	Yes	N/A	Z-923	00923	080053	Open Land			6/20/2017	
138	2010-2011	Detention	NE59	Slate Branch	TBD	VDOT Pond on Quin W Stuart	Quin W. Stuart Blvd	10920369.49240	3588988.08791	Yes	N/A	Z-790	00790	110093	Commercial			6/13/2017	
139	2010-2011	Extended Detention	NE59	Slate Branch	11.88	VDOT Pond for 114	1540 Peppers Ferry Rd	10914222.14110	3589525.23511	Yes	N/A	Z-1034	01034	110869	Open Land			6/13/2017	
140	2011-2012	Bioretention Filter	NE59	Slate Branch	TBD of 0.94	Holiday Inn Biolifter North	99 Bradley Drive	10921255.47660	3588442.70857	No	Yes	04/23/10 Z-1057	01057	032241	Commercial		140 to 99	6/8/2017	
141	2011-2012	Infiltration	RU07	Wilson Creek	1.36	Good Shepherd Baptist Church	155 Dunlap Drive	10945717.00860	3579398.24421	No	Yes	Z-1076	01076	071134	Commercial			6/21/2017	
142	2012-2013	Extended Detention	RU04	Smith Creek	8.76	Melinda's Melody / Kensington	450 Thaddeus Ln NW	10919753.69820	3572275.48111	No	Yes	12/16/10 Z-1060	01060	170238	Residential			3/7/2017	
143	2012-2013	Bioretention Filter	RU04	Elliotts Creek	0.26	Shelor Service Center Addition East	295 Jarrett Dr SE	10939813.55800	3577623.76900	No	Yes	Z-1902	01902	036084	Commercial			6/20/2017	
144	2012-2013	Bioretention Filter	RU04	Elliotts Creek	0.21	Shelor Service Center Addition West	295 Jarrett Dr SE	10939578.34610	3577566.51355	No	Yes	Z-1902	01902	036084	Commercial			6/20/2017	
145	2012-2013	Extended Detention	RU04	Elliotts Creek	TBD	Shelor Toyota	2230 Roanoke St	10938867.06580	3578760.88647	No	Yes	Z-1066	01066	020545	Commercial			6/22/2017	
146	2012-2013	Underground Detention	RU04	Elliotts Creek	TBD	Shelor Toyota Underground	2230 Roanoke St	10938984.77410	3578740.57397	No	Yes	Z-1066	01066	020545	Commercial			6/22/2017	
147	2013-2014	Underground Detention	RU04	Elliotts Creek	TBD of 2.4	Collins Property Underground	2340 Roanoke St	10939488.16100	3578768.17200	No	Yes	Z-1900	01900	003759	Commercial		1.97	n/a	148 to 147
148	2013-2014	Bioretention Filter	RU04	Elliotts Creek	TBD of 2.11	Collins Property South	2340 Roanoke St (behind W	10939575.75700	3578789.72200	No	Yes	Z-1900	01900	003759	Commercial		1.75	n/a	148 to 147
149	2013-2014	Bioretention Filter	RU07	Wilson Creek	1.71	Collins Property North	2340 Roanoke St (rear of pr	10939623.28300	3579259.02500	No	Yes	Z-1900	01900	003759	Commercial		1.39	n/a	2/7/2017
150	2013-2014	Extended Detention	RU07	Wilson Creek	2.40	Davenport Energy	2275 Prospect Dr NE	10939											

Appendix F – BMP 4.1 Summary of Enforcement Actions

Inspection Type	Christiansburg Permit Number	Project Name	Inspection Date	Description	Resolution
E&S Notice to Comply	SFR-00824-002-032	25 Siena Dr NW	12/1/2016	Repairs were attempted, but need to be fixed after the recent storms.	Repairs were completed as requested.
E&S Notice to Comply	TOC-00673-005-000	Kensington Estates, Phase V	11/15/2016	NTC: Reinspect 12/01/2016	Items were addressed.
E&S Notice to Comply	TOC-02002-001-000	Red Oak Self Storage	7/12/2016	NTC for a non-stabilized site that has remained dormant.	Revised plan was submitted and the contractor got back to work.
E&S Stop Work Order	TOC-02063-000-000	Siteworks Office Building	8/22/2016	No Bond Posted. Plan not approved, but started grading the pad due to the delivery of the pre-fab building.	Bond was posted, LDP was issued and Siteworks got back to work.

Appendix G – BMP 6.3a Employee Training Record

IDDE Manual and Field Guide Distribution

Project: SWPPP Training
 Facilitator: John Burke
 Place/Room: Station B

6/30/2017
8:30 AM

	PRINT NAME	ORGANIZATION	TITLE	IDDE Field Guide Rec'd.
1.	CARL B CORRELL	TOC	ENG TECH	YES
2.	Math Gillispiz	TOC	Storm crew	Yes
3.	ERIZ SHEPPARD	TOC	Storm crew	yes
4.	Dewayn Gilmore	TOC	storm crew	yes
5.	Darrell Farmer	TOC	ST. WATER	YES
6.	Joseph Rotella	TOC	storm	yes
7.	KENNY CUSTER	T.O.C	STORM	YES
8.	Justin Shepherd	TOC	Storm Crew Supervisor	Yes
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