Town of Christiansburg, Virginia

Municipal Separate Storm Sewer System Program Plan

For

General Permit No. VAR040025

From November 1, 2018 until October 31, 2023, in accordance the VAR04 General Permit the Town of Christiansburg is authorized to discharge stormwater and authorized non-stormwater discharges described in 9VAC25-890-20 D from the small municipal separate storm sewer system into surface waters within the boundaries of the Commonwealth of Virginia consistent with 9VAC25-890-30.

Revised: April 30, 2019

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APPENDICES

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ACRONYMS

BMP	Best Management Practice
DCR	Virginia Department of Conservation and Recreation
DEQ	Virginia Department of Environmental Quality.
ESC	Erosion and Sediment Control
HUC	Hydrologic Unit Code
MEP	Maximum Extent Practicable
MCM	Minimum Control Measure
MS4	Municipal Separate Storm Sewer System
NMP	Nutrient Management Plan
POC	Pollutants of Concern
SWM	Stormwater Management
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
VPDES	VAR04 General Virginia Pollutant Discharge Elimination System Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems
VCACS	Virginia Department of Agriculture and Consumer Services
VESCP	Virginia Erosion and Sediment Control Program
VSMA	Virginia Stormwater Management Act
VSMP	Virginia Stormwater Management Program
WLA	Waste Load Allocation

DEFINITIONS

"Best management practice" 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.

"Chesapeake Bay Preservation Act land-disturbing activity" means a land-disturbing activity including clearing, grading, or excavation that results in a land disturbance equal to or greater than 2,500 square feet and less than one acre in all areas of jurisdictions designated as subject to the Chesapeake Bay Preservation Area Designation and Management Regulations (9VAC25-830) adopted pursuant to the Chesapeake Bay Preservation Act.

"Chesapeake Bay Watershed" means all land areas draining to the following Virginia river basins: Potomac River Basin, James River Basin, Rappahannock River Basin, Chesapeake Bay and its small coastal basins, and York River Basin.

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

"Date brought online" means the date when the permittee determines that a new stormwater management facility is properly functioning.

"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.

"High-priority facilities" means facilities owned or operated by the permittee that actively engage in one or more of the following activities: (i) composting, (ii) equipment storage and maintenance, (iii) materials storage, (iv) pesticide storage, (v) storage for public works, (vi) recycling, (vii) salt storage, (viii) solid waste handling and transfer, and (ix) vehicle storage and maintenance.

"Hydrologic Unit Code" 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 (Discharges or flows from fire-fighting activities need only be addressed where they are identified as significant sources of pollutants to surface waters.), 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, street wash water, discharges from noncommercial fundraising car washes if the washing uses only biodegradable, phosphate-free, water-based cleaners, or other activities generating discharges identified by the department as not requiring VPDES authorization, unless identified by the MS4 operator as significant contributors of pollutants.

"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 manmade change to the land surface that potentially changes its runoff characteristics including clearing, grading, excavation, transportation or filling of land, except that the term shall not include the following potential activities:

- Land-disturbing activities that disturb less than 10,000 square feet and are not part of a larger common plan of development or sale that is 10,000 square feet or greater of disturbance (provided that there is no existing or anticipated flooding or erosion problems downstream of the discharge point);
- Routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original construction of the project. The paving of an existing road with a compacted or impervious surface and reestablishment of existing associated ditches and shoulders shall be deemed routine maintenance;
- Land-disturbing activities in response to a public emergency where the related work requires immediate authorization to avoid imminent endangerment to human health or the environment. In such situations, DEQ shall be advised of the disturbance within seven days of commencing the land-disturbing activity, and compliance with the administrative requirements within 30 days of commencing the land-disturbing activity;
- Permitted surface or deep mining operations and projects, or oil and gas operations and projects conducted under the provisions of Title 45.1 of the Act;
- Clearing of lands specifically for agricultural purposes and the management, tilling, planting, or harvesting of agricultural, horticultural, or forest crops, livestock feedlot operations, or as additionally set forth by the state board in regulations, including engineering operations as follows: construction of terraces, terrace outlets, check dams, desilting basins, dikes, ponds, ditches, strip cropping, lister furrowing, contour cultivating, contour furrowing, land drainage, and land irrigation; however this exception shall not apply to harvesting of forest crops unless the area on which harvesting occurs is reforested artificially or naturally in accordance with the provisions of Chapter 11(§ 10.1-1100 et seq.) of Title 10.1 of the Code of Virginia or is converted to bona fide agricultural or improved pasture use as described in subsection B of § 10.1-1163 of Article 9 or Chapter 11 of Title 10.1 of the Code of Virginia;
- Discharges to a sanitary sewer or a combined sewer system; or
- Activities under a state or federal reclamation program to return an abandoned property to an agricultural or open land use.

"Municipal separate storm sewer system" means a conveyance or system of conveyances 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 DEQ.

"MS4 regulated service area" or "service area" means for Phase II permittees, the drainage area served by the permittee's MS4 that is located within an urbanized area as determined by the 2010 decennial

census performed by the Bureau of the Census. MS4 regulated service area may also be referred to as "served by the MS4" as it pertains to the tables in Part II A of this permit.

"Outfall" means, when used in reference to municipal separate storm sewers, a point source at the point where a MS4 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.

"Physically interconnected" means that one MS4 is connected to a second MS4 in such a manner that it allows for direct discharges to the second system.

"Pollutants of concern" means pollutants specifically identified in a U.S. Environmental Protection Agency approved total maximum daily load report as causing a water quality impairment.

“Public” means, for the purpose of this Program Plan, the citizens of the Town of Christiansburg or the population who is employed by the Town of Christiansburg.

"Point of discharge" means a location at which concentrated stormwater runoff is released.

"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" means the sum of the individual wasteload allocations for point sources, load allocations 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.

"Wasteload allocation" or "wasteload" 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 MS4 Program Plan

The Program Plan when implemented constitutes compliance with the standard of reducing pollutants to the maximum extent practicable (MEP) 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.

1.1 Minimum Control Measures

The General Permit requires the Program Plan to include Best Management Practices (BMP) to address the requirements of six minimum control measures (MCMs) described in Part I E 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 3.1 of this Program Plan includes BMPs developed to explicitly address the General Permit requirements for each MCM. The title of each BMP is followed with a reference to the corresponding permit section. Each BMP included in the Program Plan is intended to specifically address permit requirements and includes the following information described in Part I C of the General Permit:

- The roles and responsibilities of each of the Town's divisions and departments in the implementation of the requirements of the permit tasked with ensuring that the permit requirements are met;
- If the Town utilizes another entity to implement portions of the MS4 program, a copy of the written agreement. The description of each party's roles and responsibilities, including any written agreements with third parties, shall be updated as necessary;
- For each MCM in Part I E, the following information shall be included:
    - Each specific requirement as listed in Part I E for each MCM;
    - A description of the BMPs or strategies that the permittee anticipates will be implemented to demonstrate compliance with the permit conditions in Part I E;
    - All standard operating procedures or policies necessary to implement the BMPs;
    - The measurable goal by which each BMP or strategy will be evaluated; and
    - The persons, positions, or departments responsible for implementing each BMP or strategy; and
- A list of documents incorporated by reference including the version and date of the document being incorporated.

1.2 Special Conditions for TMDLs

The Town is not located within the Chesapeake Bay Watershed and therefore is not subject to the Special Conditions for the Chesapeake Bay TMDL.

The Town of Christiansburg is currently subject to several Local TMDLs which include the Roanoke (Staunton) River Watershed PCB TMDL, the Upper Roanoke River Watershed E. Coli TMDL, the Upper Roanoke River Watershed Sediment TMDL, the New River PCB TMDL, the Little River Watershed E. Coli TMDL, the Crab Creek Watershed E. Coli TMDL, and the Crab Creek Watershed Sediment TMDL. Where the Town of Christiansburg is assigned a WLA for a Local TMDL, an action plan will be developed and included by reference in this Program Plan and future updates.

The Town of Christiansburg is subject to the Special Conditions of the Roanoke (Staunton) River Watershed PCB TMDL, the Upper Roanoke River Watershed E. Coli TMDL, the Upper Roanoke River Watershed Sediment TMDL, the Little River Watershed E. Coli TMDL, the Crab Creek Watershed E. Coli TMDL, and the Crab Creek Watershed Sediment TMDL. Since these local TMDLs were approved by the EPA prior to July 1, 2013 and WLAs were allocated to this permittee, an update to these previously approved local TMDL Action Plans (to meet conditions of Part II B(3)-B(7), as applicable) is required by May 1, 2020. Continued implementation of the Action Plan will be performed.

No additional TMDLs have been approved by the EPA between July 1, 2013 and June 30, 2018 applicable to the Town of Christiansburg, therefore the Town of Christiansburg is not required to develop are implement any TMDL action plans beyond those previously discussed.

The Lower New River PCB TMDL was approved by the EPA on 3/12/2019. The Town of Christiansburg will develop a TMDL action plan at a future date.

1.3 Roles and Responsibilities (Part I C 1 a & b)

Each BMP lists the individual(s) responsible for implementation. At the Town of Christiansburg, the Engineering Department implements the MS4 Program Plan and the Town Engineer is the signatory authority in accordance with Part III K. The Town of Christiansburg is the VESCP and VSMP plan approving authority.

1.4 Program Modifications (Part I C 4)

Revisions to the MS4 program plan are expected throughout the life of the General Permit as part of the iterative process to reduce pollutant loading and protect water quality to the MEP. As such, revisions made in accordance with the General Permit as a result of the iterative process do not require modification of this permit. The permittee shall summarize revisions to the MS4 program plan as part of the annual report as described in Part I D 2 of the General Permit.

1.5 List of Reference Materials (Part I C 1 d)

The list of documentation below is incorporated into the Program Plan via reference along with any associated maps and forms, where applicable. All necessary documents for implementation not listed here, not provided in the MS4 Program Plan and may or may not be provided in the annual reports are retained on file for a minimum of 3 years and are available upon request.

- *MS4 Permit and Coverage Letter*, November 1, 2018
- *Illicit Discharge Detection and Elimination Manual, September 2015*
- *Illicit Discharge Detection and Elimination Field Guide, September 2015*
- *Illicit Discharge Detection and Elimination Manual Outfall Inspection*
- *Good Housekeeping and Pollution Prevention Manual*, September 2015 (Revised November 2018)
- *Public Education and Outreach Plan,* Revised November 2018
- *Construction Standard Operating Procedures,* March 2019
- *Post-Construction Standard Operating Procedures,* April 2019
- *Nutrient Management Plans,* June 2017
- *PCB TMDL Action Plan (for Roanoke River),* July 2016 (Revised December 2016)
- *Sediment TMDL Action Plan (for Roanoke River & Crab Creek watershed),* July 2015 (Revised December 2015)
- *Bacteria TMDL Action Plan (for Roanoke River & Crab Creek Watershed),* July 2015 (Revised December 2015)

1.6 Annual Reporting (Part I D)

This Program Plan includes requirements to satisfy annual reporting of the General Permit:

- The Town shall submit an annual report to the department no later than October 1 of each year in a format as specified by the department. The report shall cover the previous year from July 1 to June 30.
- The annual report shall include the following general information:
  - The permittee, system name, and permit number;
  - The reporting period for which the annual report is being submitted;
  - A signed certification as per Part III K;
  - Each annual reporting item as specified in an MCM in Part I E; and
  - An evaluation of the MS4 program implementation, including a review of each MCM, to determine the MS4 program's effectiveness and whether or not changes to the MS4 program plan are necessary.
- When applicable, the Town shall include a status report on the implementation of the local TMDL action plans in accordance with Part II B including any revisions to the plan.
- For the purposes of the General Permit, the MS4 program plan and annual report shall be maintained separately and submitted to the department as required by this permit as two separate documents.

2.0 SCHEDULE

Some of the BMPs require program documents or actions to address permit requirements. Table 1 lists some of these documents and actions with dates critical for assuring compliance with the General Permit. Table 1 is intended to assist with Program Plan implementation.

Table 1: Summary of Critical Items and Deadlines for Program Implementation		
BMP/Regulation	**Necessary Action**	**Due date***
9VAC-23-890-30	Submit Registration Statement	Completed
2.1	Post updated version of MS4 Program Plan on Permittee's Website	May 1, 2019
9VAC-23-890-40D	Submit Annual Report	**Annually (October 1)**
1.2	Update Public Education/Outreach Plan	May 1, 2019
2.1	Post Annual Report on Website	**Annually (Within 30 days)**
2.2	Implement Public Participation Activities	**4x annually**
3.1, 3.5	Update MS4 Map and Information Table	**Annually (June 30)**
3.1	Submit GIS Shapefile of MS4 Map	**July 1, 2019**
3.1	Send Notification to Interconnected MS4s	**July 1, 2019**
5.2	Update Post Construction electronic database	**30 days after new facility online**
6.1	Review High Priority Facilities	**Annually (June 30)**
3.4, 6.1, 6.3	Conduct GHPP/IDDE Training	**Once every 24 months**
Part III B 1 a	Update PCB, E. Coli, and Sediment TMDL Action Plans for Roanoke River, North Fork Roanoke River, South Fork Roanoke River, Wilson Creek, Little River and Tributaries, and Crab Creek Watershed (as applicable)/ Public Comment Period	**May 1, 2020/ 15 days**
Part III B 1 b	Develop New Local TMDL Action Plan (if EPA approved between 2013-2018) /Public Comment Period	Not Applicable
*Not bolded text indicates schedule item is complete or not applicable. **Bolded** text indicates the schedule item is not complete or is completed continuously throughout the permit cycle.		

3.0 PROGRAM PLAN BEST MANAGEMENT PRACTICES

This Section 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.

BMP 1.1 Public Education and Outreach Program (Part I E 1)

Description: The Town shall implement a public education and outreach program designed to:

- Increase the public's knowledge of how to reduce stormwater pollution, placing priority on reducing impacts to impaired waters and other local water pollution concerns;
- Increase the public's knowledge of hazards associated with illegal discharges and improper disposal of waste, including pertinent legal implications; and
- Implement a diverse program with strategies that are targeted toward individuals or groups most likely to have significant stormwater impacts.

The Town shall identify no less than three high-priority stormwater issues to meet the goal of educating the public in accordance with Part I E 1 a. High-priority issues may include the following examples: nutrients, pet wastes, local receiving water impairments, TMDLs, high-quality receiving waters, and illicit discharges from commercial sites. The high-priority public education and outreach program, as a whole, shall:

- Clearly identify the high-priority stormwater issues;
- Explain the importance of the high-priority stormwater issues;
- Include measures or actions the public can take to minimize the impact of the high-priority stormwater issues; and
- Provide a contact and telephone number, website, or location where the public can find out more information.

The Town shall use two or more of the strategies listed in Table 2 below per year to communicate to the public the high-priority stormwater issues identified in accordance with Part I E 1 b including how to reduce stormwater pollution.

Table 2: Strategies for Public Education and Outreach

Strategies	**Examples** (not meant to be all inclusive or limiting)
Traditional written materials	Informational brochures, newsletters, fact sheets, utility bill inserts, or recreational guides for targeted groups of citizens
Alternative materials	Bumper stickers, refrigerator magnets, t-shirts, or drink koozies
Signage	Temporary or permanent signage in public places or facilities, vehicle signage, bill boards, or storm drain stenciling
Media materials	Information disseminated through electronic media, radio, televisions, movie theater, or newspaper
Speaking engagements	Presentations to school, church, industry, trade, special interest, or community groups

Table 2: Strategies for Public Education and Outreach	
Strategies	**Examples** (not meant to be all inclusive or limiting)
Curriculum materials	Materials developed for school-aged children, students at local colleges or universities, or extension classes offered to local citizens
Training materials	Materials developed to disseminate during workshops offered to local citizens, trade organization, or industrial officials

Water Quality Issue No. 1: Education on special water quality concerns (PCBs)

Rationale: The Town has been assigned wasteload allocations for PCBs as part of several TMDLs. The public survey did not include questions about PCBs, so no conclusion about knowledge can be reached. Since there are several receiving waterbodies with PCB wasteload allocations, PCB education will continue to be addressed.

Public Audience: The Town conducts a Spring and a Fall clean up when all residents may put out extra items for special trash pick-up. Some of these items may contain PCBs. Since all residents may participate, the target audience will include all households. The Town's public audience is approximately 9,400 households.

Strategy to Communicate High Priority Stormwater Message: Media materials and traditional written materials will be used to disseminate information for this BMP. The topic will be addressed with articles in The Christiansburg Connection newsletter and/or posted on the Town's Facebook page and Town website. The Christiansburg Connection is included as an insert in all mailed utility bills six times per year. It is also available as an electronic subscription and is promoted on the Town's website and Facebook page. Facebook will be preferred as an electronic media as documentation indicates it reaches more people. The town also can "push" Facebook posts which puts the post in front of more users. However, it cannot be determined if those people are residents of the Town. The Town will also use the outreach to the Montgomery County School System as an education and outreach strategy across all three of the identified water quality issues.

Relevant Message: To address goals of the Program and concerns stemming from the survey results, the relevant message will include:

- Information regarding the Town's stormwater program
- Steps that can be taken to reduce stormwater pollution
- Knowledge of hazards associated with illegal discharges and improper disposal of waste
- Information regarding TMDL pollutants of concern, specifically polychlorinated biphenyls (PCBs). Inform town residents of possible household sources of PCBs and inform residents how to properly dispose of waste that may contain PCBs.

Time Period: The newsletter article or media post will be distributed a minimum of once a year to at least 20% of the public audience during the permit year.

Measurable Goal: Provide PCB concerns message to the target audience via Christiansburg Connection newsletter, Facebook posts and/or Town website posts once per permit year to the public audience.

Water Quality Issue No. 2: Education on special water quality concerns (E. Coli)

Rationale: The Town has been assigned wasteload allocations for bacteria as part of several approved TMDLs. Survey results indicate little to no increase in the knowledge about pet waste so continued outreach efforts are needed.

Public Audience: The Town estimates approximately 5,040 households to have pets based on the estimate of 56% of households owning at least one pet according to the 2010 United States Census. However, since the specific pet-owning households are unknown, the target audience will include all households. There are approximately 9,400 households in the Town.

Strategy to Communicate High Priority Stormwater Message: Media and traditional written materials will be used to disseminate information for this BMP. The topic will be addressed with articles in The Christiansburg Connection newsletter and/or posted on the Town's website or Facebook page. The Christiansburg Connection is included as an insert in all mailed utility bills six times per year. It is also available as an electronic subscription and is promoted on the Town's website and Facebook page. Facebook will be preferred as an electronic media as documentation indicates it reaches more people. The town also can "push" Facebook posts which puts the post in front of more users. However, it cannot be determined if those people are residents of the Town. The Town will also use the outreach to the Montgomery County School System as an education and outreach strategy across all three of the identified water quality issues. Additionally, dog leash waste bag dispensers have been purchased to distribute at Public Participation events as a take home message on the importance of cleaning up after pets.

Relevant Message: To address goals of the Program and concerns stemming from the survey results, the relevant message will include:

- General information about stormwater runoff (where it drains, pollutants, etc.)
- Explanation of the E. Coli TMDLs and the Town's Action Plans
- The effects of pet waste on E. Coli concentrations in the water quality of local waterways.
- The role dog owners play when they pick up and properly dispose of pet waste.
- Include information on location of pet waste stations.

Time Period: Outreach material for each special water quality concern will be distributed a minimum of once a year to at least 20% of each target audience. The topic addressed will be staggered with Water Quality Issues #2 and #3 to ensure outreach to the entirety of the target audience. Dog leash waste bag dispensers will be distributed during at least one spring Public Participation events.

Measurable Goal: Provide E. coli concerns message to the target audience via Christiansburg Connection newsletter, Facebook posts and/or Town website posts once each permit year. Distribute dog leash waste bag dispensers.

Water Quality Issue No. 3: Education on Stream Health (Stream restorations, lawn care/sediment)

Rationale: The Town has invested in stream restorations to improve stream health. The reissued Stormwater Survey showed a high interest in the improvement of water quality. The Town has also been assigned wasteload allocations for sediment as part of several approved TMDLs. Poor vegetative cover is a potential contributor of pollutants causing the benthic and bacterial impairments in the Crab Creek and Roanoke River basins. The re-issued Stormwater Survey indicated that residents did not view sediment as a top water pollutant. Therefore, the role of poor vegetative cover on residential sites as a source of sediment pollution will continue to be addressed.

Public Audience: The target audience includes all residents within the Town along with homeowner associations and property management companies which includes 9,400 households.

Strategy to Communicate High Priority Stormwater Message: Media and traditional written materials will be used to disseminate information for this BMP. Both topics will be addressed with separate articles in The Christiansburg Connection newsletter and/or posted on the Town's website or Facebook page. The Christiansburg Connection is included as an insert in all mailed utility bills six times per year. It is also available as an electronic subscription and is promoted on the Town's website and Facebook page. Facebook will be preferred as an electronic media as documentation indicates it reaches more people. However, it cannot be determined if those people are residents of the Town. The Town will also use the outreach to the Montgomery County School System as an education and outreach strategy across all three of the identified water quality issues.

Relevant Message: Inform households, homeowner associations, and property management companies of the expected improvements in stream health from the stream restoration projects. Communicate the positive environmental effects of good vegetative cover, as well cost savings of stream friendly lawn care.

Time Period: Outreach material for each topic will be distributed a minimum of once a year to the target audience. The topics addressed will be staggered with Water Quality Issue # 1 and #2 to ensure outreach to the entirety of the target audience.

Measurable Goal: Provide stream restoration and sediment reducing yard care message to the public audience once per permit year.

Necessary documentation for implementation: (1) Copies of distributed media messages posted, emailed, or sent for Water Quality Issue No. 1, 2, and 3 including content, date, and number of people emailed, liked, or viewed each message.

Responsible individual for implementation: Engineering Department, Public Relations Department

Implementation schedule: Outreach will be conducted a minimum of once a year to the public audience for each water quality issue identified.

Measurable goal: Effectiveness of the BMP will be determined by the communication of the two selected strategies to convey the three water quality issues.

Table 3: Summary of Anticipated Public Education and Outreach Activities			
#	**Water quality Issue**	**Strategy**	**Communication**
1	Education on special water quality concerns (PCBs)	Media & Traditional Written Materials	Articles in The Christiansburg Connection newsletter and/or posted on the Town's website or Facebook page
2	Education on special water quality concerns (E. Coli)	Media & Traditional Written Materials	Articles in The Christiansburg Connection newsletter and/or posted on the Town's website or Facebook page
3	Education on Stream Health (Stream restorations, lawn care/sediment)	Media & Traditional Written Materials	Articles in The Christiansburg Connection newsletter and/or posted on the Town's website or Facebook page

BMP 2.1 Webpage Dedicated to MS4 Program & Stormwater Pollution Prevention (Part 1 E 2 a & b)

Description: The Town shall develop and implement procedures for the following:

- The public to report potential illicit discharges, improper disposal, or spills to the MS4, complaints regarding land disturbing activities, or other potential stormwater pollution concerns;
- The public to provide input on the Town's MS4 program plan;
- Receiving public input or complaints;
- Responding to public input received on the MS4 program plan or complaints; and
- Maintaining documentation of public input received on the MS4 program and associated MS4 program plan and the Town's response.

No later than three months after November 1, 2019, the permittee shall develop and maintain a webpage dedicated to the MS4 program and stormwater pollution prevention. The following will be maintained on the Town's Stormwater Information webpage:

- The effective MS4 permit and coverage letter;
- The most current MS4 program plan or location where the MS4 program plan can be obtained;
- The annual report for each year of the term covered by this permit no later than 30 days after submittal to the department;
- A mechanism for the public to report potential illicit discharges, improper disposal, or spills to the MS4, complaints regarding land disturbing activities, or other potential stormwater pollution concerns in accordance with Part I E 2 a (1); and
- Methods for how the public can provide input on the permittee's MS4 program plan in accordance with Part I E 2 a (2).

Webpage address: https://www.christiansburg.org/250/Stormwater-Information-and-Education

Necessary documentation for implementation: (1) Public input received on the MS4 Program and associated the Town responses; (2) Effective MS4 Permit and coverage letter; (3) Most current the Town MS4 Program Plan; and (4) the Town MS4 Annual Reports within permit cycle

Responsible individual for implementation: Engineering Department, Public Relations Department

Implementation schedule: The Town shall provide mechanisms on the Town website for public input, reporting illicit discharges or complaints by January 31, 2019. The Program Plan will be posted on the Town website within by May 1, 2019. Annual reports will be posted on the webpage within 30 days of submittal to DEQ, or by November 1st of each year.

Measurable goal: Effectiveness will be determined by the webpage including: (1) effective MS4 permit and coverage letter;(2) most current MS4 Program Plan; (3) each of the annual reports developed within the permit cycle no later than 30 days after submittal to the department; (4) a mechanism for the public to report potential illicit discharges, improper disposal, or spills to the Town, complaints regarding land disturbing activities, or other potential pollution concerns; (5) methods for how the public can provide input on the Town's MS4 Program Plan and other documents that have a required public comment period; (6) responding to public input; and (7) maintaining public input received and the Town responses.

BMP 2.2 Public Involvement and Participation (Part 1 E 2 c)

Description: The Town will implement no less than four activities per year for two or more of the categories listed in Table 3 below to provide an opportunity for public involvement to improve water quality and support local restoration and clean-up projects. The Town may coordinate the public involvement opportunities listed in Table 3 with other MS4 permittees; however, each permittee shall be individually responsible for meeting all of the permit requirements.

Table 4 below provides the anticipated activities for the permit reporting year including:

- A description of the public involvement activities to be implemented by the permittee,
- The anticipated time period the activities will occur, and
- A metric for each activity to determine if the activity is beneficial to water quality. An example of metrics may include the weight of trash collected from a stream cleanup, the number of participants in a hazardous waste collection event, etc.

Table 4: Public Involvement Opportunities

Public Involvement Opportunity Categories	Examples (provided as example & are not meant to be all inclusive or limiting)
Monitoring	Establish or support citizen monitoring group
Restoration	Stream or watershed clean-up day, adopt-a-water way program,
Educational events	Booth at community fair, demonstration of stormwater control projects, presentation of stormwater materials to schools to meet applicable education Standards of Learning or curriculum requirements, watershed walks, participation on environmental advisory committees
Disposal or collection events	Household hazardous chemicals collection, vehicle fluids collection
Pollution prevention	Adopt-a-storm drain program, implement a storm drain marking program, promote use of residential stormwater BMPs, implement pet waste stations in public areas, adopt-a-street program.

Table 5: Anticipated Public Involvement Activities for 2018 – 2019 Permit Reporting Year

Category	Activity Description	Time Period Activity to Occur	Metric to Determine Benefit
Restoration	Stream Clean-up	Fall 2018	Number of people attended
Restoration	Stream Clean-up	Spring 2019	Number of people attended
Educational	Stormwater Education Days for School	Fall 2018, Spring 2019	Number of people attended
Educational	Stormwater Information Booth at local event	Spring 2019	Number of educational materials distributed

Necessary documentation for implementation: (1) A description of public involvement activities implemented; (2) Anticipated time period the activities occur; (3) Metric/documentation of participation for each activity to determine if the activity is beneficial to water quality.

Responsible individual for implementation: Engineering, Public Works, and Public Relations departments

Implementation schedule: Public participation will be conducted a minimum of four times a year.

Measurable goal: Effectiveness will be determined by the selected metric for each activity. 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 3.1 Storm Sewer Map and Outfall Information Table (Part 1 E 3 a)

Description: The Town shall develop and maintain an accurate MS4 map and information table as follows:

- A map of the storm sewer system owned or operated by the permittee within the census urbanized area identified by the 2010 decennial census that includes, at a minimum:
    - MS4 outfalls discharging to surface waters, except as follows:
        - In cases where the outfall is located outside of the MS4 permittee's legal responsibility, the permittee may elect to map the known point of discharge location closest to the actual outfall; and
        - In cases where the MS4 outfall discharges to receiving water channelized underground, the permittee may elect to map the point downstream at which the receiving water emerges above ground as an outfall discharge location. If there are multiple outfalls discharging to an underground channelized receiving water, the map shall identify that an outfall discharge location represents more than one outfall. This is an option a permittee may choose to use and recognizes the difficulties in accessing outfalls to underground channelized stream conveyances for purposes of mapping, screening, or monitoring.
    - A unique identifier for each mapped item required in Part I E 3;
    - The name and location of receiving waters to which the MS4 outfall or point of discharge discharges;
    - MS4 regulated service area; and
    - Stormwater management facilities owned or operated by the permittee.
- The permittee shall maintain an information table associated with the storm sewer system map that includes the following information for each outfall or point of discharge for those cases in which the permittee elects to map the known point of discharge in accordance with Part I E 3 a (1) (a):
    - A unique identifier as specified on the storm sewer system map;
    - The latitude and longitude of the outfall or point of discharge;
    - The estimated regulated acreage draining to the outfall or point of discharge;
    - The name of the receiving water;
    - The 6th Order Hydrologic Unit Code of the receiving water;
    - An indication as to whether the receiving water is listed as impaired in the Virginia 2016 305(b)/303(d) Water Quality Assessment Integrated Report;
    - The predominant land use for each outfall discharging to an impaired water; and
    - The name of any EPA approved TMDLs for which the permittee is assigned a wasteload allocation.
- No later than July 1, 2019, the permittee shall submit to DEQ a GIS-compatible shapefile of the permittee's MS4 map as described in Part I E 3 a. If the permittee does not have an MS4 map in a GIS format, the permittee shall provide the map as a PDF document.
- No later than October 1 of each year, the permittee shall update the storm sewer system map and outfall information table to include any new outfalls constructed or TMDLs approved or both during the immediately preceding reporting period.
- The permittee shall provide written notification to any downstream adjacent MS4 of any known physical interconnection established or discovered after the effective date of this permit.

Table 6: List of Interconnected MS4 Regulated Area(s)
VDOT
Montgomery County

*The Town will notify any new or newly found MS4 interconnections in writing that might occur with new development or be found while performing other work.

Necessary documentation for implementation: (1) Storm sewer system map; (2) Outfall Information Table in Appendix B; and (3) GIS compatible shapefile of MS4 map; and (4) If applicable, written notification of physical interconnections to the downstream MS4 in Appendix C;

Responsible individual for implementation: Engineering Department

Implementation schedule: The map and information table will be updated annually at the end of each reporting year. Any new MS4 interconnections will be notified upon discovery.

Measurable goals: Effectiveness will be determined by maintaining an up-to-date map of the storm sewer map and outfall information table and by submitting the GIS-compatible shapefile of the storm sewer map; and notifying any discovered interconnected MS4s.

BMP 3.2 Prohibit Non-Stormwater Discharges (Part 1 E 3 b)

Description: The Town shall prohibit, through ordinance, policy, standard operating procedures, or other legal mechanism, to the extent allowable under federal, state, or local law, regulations, or ordinances, unauthorized non-stormwater discharges into the storm sewer system. Non-stormwater discharges or flows identified in 9VAC25-890-20 D 3 shall only be addressed if they are identified by the permittee as a significant contributor of pollutants discharging to the MS4. Flows that have been identified by the department as de minimis discharges are not significant sources of pollutants to surface water.

The Town will prohibit non-stormwater discharges into the storm sewer system through language provided within the Town's Stormwater Ordinance and reiterated in documents incorporated by reference including Standard Operating Procedures for Construction and Post-Construction and the IDDE Manual, each of which provide methods and procedures for reporting and corrective and disciplinary action.

For effective prohibition of non-stormwater discharges from contractors operating within the jurisdictional boundaries, refer to BMP 6.4.

Necessary documentation for implementation: 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 Follow-up information.

Responsible individual for implementation: Town Manager, Engineering Department

Implementation schedule: Implementation of Chapter 16, Article IV of the Town Code and Standard Operating Procedures will continue.

Measurable goal: 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 3.3 Implement Illicit Discharge Detection and Elimination Procedures (Part 1 E 3 c)

Description: The Town shall maintain, implement, and enforce illicit discharge detection and elimination (IDDE) written procedures designed to detect, identify, and address unauthorized non-stormwater discharges, including illegal dumping, to the small MS4 to effectively eliminate the unauthorized discharge. Written procedures shall include:

- A description of the legal authorities, policies, standard operating procedures or other legal mechanisms available to the permittee to eliminate identified sources of ongoing illicit discharges including procedures for using legal enforcement authorities.
- Dry weather field screening protocols to detect, identify, and eliminate illicit discharges to the MS4. The protocol shall include:
    - A prioritized schedule of field screening activities and rationale for prioritization determined by the permittee based on such criteria as age of the infrastructure, land use, historical illegal discharges, dumping or cross connections;
    - If the total number of MS4 outfalls is equal to or less than 50, a schedule to screen all outfalls annually;
    - If the total number of MS4 outfalls is greater than 50, a schedule to screen a minimum of 50 outfalls annually such that no more than 50% are screened in the previous 12-month period. The 50% criteria is not applicable if all outfalls have been screened in the previous three years; and
    - A mechanism to track the following information:
        - The unique outfall identifier;
        - Time since the last precipitation event;
        - The estimated quantity of the last precipitation event;
        - Site descriptions (e.g., conveyance type and dominant watershed land uses);
        - Whether or not a discharge was observed; and
        - If a discharge was observed, the estimated discharge rate (e.g., width and depth of discharge flow rate) and visual characteristics of the discharge (e.g., odor, color, clarity, floatables, deposits or stains, vegetation condition, structural condition, and biology).
- A timeframe upon which to investigate to identify and locate the source of any observed unauthorized non-stormwater discharge. Priority of investigations shall be given to discharges of sanitary sewage and those believed to be a risk to human health and public safety. Discharges authorized under a separate VPDES or state permit require no further action under this permit.
- Methodologies to determine the source of all illicit discharges. If the permittee is unable to identify the source of an illicit discharge within six months of beginning the investigation, then the permittee shall document that the source remains unidentified. If the observed discharge is intermittent, the permittee shall document that attempts to observe the discharge flowing were unsuccessful.
- Methodologies for conducting a follow-up investigation for illicit discharges that are continuous or that permittees expect to occur more frequently than a one-time discharge to verify that the discharge has been eliminated except as provided for in Part I E 3 c (4);

- A mechanism to track all illicit discharge investigations to document the following:
    - The dates that the illicit discharge was initially observed, reported, or both;
    - The results of the investigation, including the source, if identified;
    - Any follow-up to the investigation;
    - Resolution of the investigation; and
    - The date that the investigation was closed.

The IDDE procedures described in Part I E 3 c., the storm sewer map and outfall information table are incorporated into the MS4 program plan by reference. The map shall be made available to the department within 14 days upon request.

Necessary documentation for implementation: (1) Illicit Discharge Detection and Elimination (IDDE) Manual; (2) Outfall Prioritization Methodology; (3) Outfall information table; (4) Storm sewer map; (5) Outfall screening field forms; and (6) IDDE Follow-up Information.

Responsible individual for implementation: Engineering & Public Works departments, Town Manager, Fire Cheif

Implementation schedule: Annual outfall screening, as described in the Town's IDDE Program Manual that includes the schedules, mechanisms, and procedures described in this BMP and the General Permit.

Measurable goals: Effectiveness will be determined by maintaining, implementing, and enforcing illicit discharge detection and elimination (IDDE) written procedures and screening of at least 50 outfalls each year.

BMP 4.1 ESC Compliance for Land Disturbing Activities (Part 1 E 4)

Description: The Town shall use its legal authority, such as ordinances, permits, orders, specific contract language, and interjurisdictional agreements, to address discharges entering the MS4 from regulated construction site stormwater runoff. the Town shall control construction site stormwater runoff as follows:

- The Town has adopted a Virginia Erosion and Sediment Control Program (VESCP) and shall implement the VESCP consistent with the Virginia Erosion and Sediment Control Law (§ 62.1-44.15:51 et seq. of the Code of Virginia) and Virginia Erosion and Sediment Control Regulations (9VAC25-840).

  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.

  The Town's Construction Standard Operating Procedures document (available upon request) describes the documentation and inspection procedures used to perform land disturbance inspections. Documentation used during inspections include the VESP-approved ESC Plans and Town inspection checklists.

  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. Orders that the Town uses to ensure compliance include "Notice of Inspection", "Notice to Comply" and "Stop-Work" Letters. If the non-compliance is not resolved, or escalates, then the Town's ordinance specifies that legal action and conditions that the Town may pursue including civil penalties, court orders, or misdemeanor charges and the ability to revoke the land disturbance permit.

The Town shall require implementation of appropriate controls to prevent non-stormwater discharges to the MS4, such as wastewater, concrete washout, fuels and oils, and other illicit discharges identified during land disturbing activity inspections of the MS4. The discharge of non-stormwater discharges other than those identified in 9VAC25-890-20 D through the MS4 is not authorized by this state permit.

Necessary documentation for implementation: (1) Chapter 16, Article II of the Town Code; (2) ESC Plan(s) approved by the Town, include 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; and (5) Total number of inspections conducted, number of enforcement actions implemented, and the type of enforcement actions implemented.

Roles and responsible individual for implementation: Engineering Department & Town Manager

Implementation schedule: The implementation of this BMP will be on-going with all regulated land disturbing activities that disturb greater than 10,000 square feet within the jurisdiction.

Measurable goals: Effectiveness will be determined by the implementation of the procedures, review, inspection, and enforcement described in the Town Code. A measurable component is the number of enforcement actions (notice to comply or stop-work orders).

BMP 5.1 Compliance to Post-Construction Stormwater Management Regulation (Part 1 E 5)

Description: The Town shall address post-construction stormwater runoff that enters the MS4 from the following land disturbing activities by implementing a post-construction stormwater runoff management program as follows:

- The Town shall implement the VSMP consistent with the Virginia Stormwater Management Act (§ 62.1-44.15:24 et seq. of the Code of Virginia) and VSMP Regulations (9VAC25-870) as well as develop an inspection and maintenance program in accordance with Parts I E 5 b and c.

  The Town shall implement an inspection and maintenance program for those stormwater management facilities owned or operated by the Town that discharges to the MS4 as follows:

  - The Town shall develop and maintain written inspection and maintenance procedures in order to ensure adequate long-term operation and maintenance of its stormwater management facilities;
  - The Town shall inspect stormwater management facilities owned or operated by the permittee no less than once per year. the Town may choose to implement an alternative schedule to inspect these stormwater management facilities based on facility type and expected maintenance needs provided that the alternative schedule and rationale is included in the MS4 program plan. The alternative inspection frequency shall be no less than once per five years; and
  - If during the inspection of the stormwater management facility conducted in accordance with Part I E 5 b (2), it is determined that maintenance is required, the permittee shall conduct the maintenance in accordance with the written procedures developed under Part I E 5 b (1).

Implement an inspection and enforcement program for stormwater management facilities not owned by the permittee (i.e., privately owned) that includes:

- An inspection frequency of no less than once per five years for all privately- owned stormwater management facilities that discharge into the MS4; and
- Adequate long-term operation and maintenance by the owner of the stormwater management facility by requiring the owner to develop and record a maintenance agreement, including an inspection schedule to the extent allowable under state or local law or other legal mechanism;
- Utilize its legal authority for enforcement of the maintenance responsibilities if maintenance is neglected by the owner; and
- The Town may develop and implement a progressive compliance and enforcement strategy provided that the strategy is included in the MS4 program plan.

The Town will ensure post-construction stormwater management (SWM) for all regulated land disturbing activities over 10,000 square feet through plan approval in accordance with the Town Ordinances for Erosion and Sediment Control and Stormwater Management. 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.

The Town will extract and retain a copy of SWM facility inspection and maintenance plans from the approved stormwater management plan for proposed stormwater management facilities to be used with the implementation of BMP 5.3.

The Town enforces stormwater maintenance and inspections as outlined in their Standard Operating Procedures (available upon request) and as specified in the Town Ordinance Section 16-60 through 16-65. Written procedures and all associated documents used in the inspection of stormwater management facilities, and for compliance and enforcement of inspection and maintenance requirements for privately owned BMPs.

The Town will perform long-term operations and maintenance of all Town-owned stormwater facilities utilizing the inspection and maintenance plans obtained from implementation of BMP 5.1. Where inspection and maintenance plans are not available from approved SWM plans, the Town will utilize BMP-specific inspection and maintenance instruction from the Virginia Stormwater Management Handbook or the Town Post-Construction Stormwater Manual. Inspections will be performed either:

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

Inspections will be performed using the best management practice (BMP) inspection and maintenance checklist, corresponding with the type of BMP, as provided in either the Town Post-Construction Standard Operating Procedures or the latest edition of the Virginia Stormwater Management Handbook. The checklists provide lists of potential issues and methods to address the issue. Necessary maintenance identified during inspections will be conducted in a timely manner or depending on the complexity of the maintenance which may result in an alternative schedule indicated on the SWM Facility Tracking Database.

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 records for inspection and maintenance agreements and easements.

Responsible individual for implementation: Engineering and Public Works departments

Implementation schedule: The implementation of this BMP will be on-going with all regulated land disturbing activities.

Measurable goal: Effectiveness will be measured by the implementation of the Inspection and maintenance program on post-construction stormwater management facilities. Quantifiable goal may 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 5.2 Stormwater Management Facility Tracking and Reporting (Part I E 5 d)

Description: The Town shall maintain an electronic database or spreadsheet of all known the Town-owned or permittee-operated and privately-owned stormwater management facilities that discharge into the MS4. The database shall also include all BMPs implemented by the permittee to meet TMDL load reductions as required. A database shall include the following information as applicable:

- The stormwater management facility or BMP type;
- The stormwater management facility or BMPs location as latitude and longitude;
- The acres treated by the stormwater management facility or BMP, including total acres, pervious acres, and impervious acres;
- The date the facility was brought online (MM/YYYY). If the date brought online is not known, the permittee shall use June 30, 2005;
- The 6th Order Hydrologic Unit Code in which the stormwater management facility is located;
- Whether the stormwater management facility or BMP is owned or operated by the Town or privately owned;
- Whether or not the stormwater management facility or BMP is part of the Town's Chesapeake Bay TMDL action plan required in Part II A or local TMDL action plan required in Part II B, or both; and
- If the stormwater management facility or BMP is privately owned, whether a maintenance agreement exists; and
- The date of the Town's most recent inspection of the stormwater management facility or BMP.

The electronic database or spreadsheet shall be updated no later than 30 days after a new stormwater management facility is brought online, a new BMP is implemented to meet a TMDL load reduction as required in Part II or discovered if it is an existing stormwater management facility.

The Town shall use the DEQ Construction Stormwater Database or other application as specified by the department to report each stormwater management facility installed after July 1, 2014, to address the control of post-construction runoff from land disturbing activities for which the permittee is required to obtain a General VPDES Permit for Discharges of Stormwater from Construction Activities.

No later than October 1 of each year, the Town shall electronically report the stormwater management facilities and BMPs implemented between July 1 and June 30 of each year using the DEQ BMP Warehouse and associated reporting template for any practices not reported in accordance with Part I E 5 f including stormwater management facilities installed to control post-development stormwater runoff from land disturbing activities less than one acre in accordance with the Chesapeake Bay Preservation Act regulations (9VAC25-830) and for which a General VPDES Permit for Discharges of Stormwater from Construction Activities was not required.

Necessary documentation for implementation: (1) SWM Facility Tracking Database in Appendix E

Responsible individual for implementation: Engineering Department

Implementation schedule: The implementation of this BMP will be on-going as inspections are performed as specified for each BMP in the SWM Facility Tracking Database.

Measurable goal: Effectiveness will be measured by the completeness of the annually reported database by October 1 each year.

BMP 6.1 Pollution Prevention Procedures for Operations & Maintenance Activities (Part 1 E 6)

Description: The Town shall maintain and implement written procedures for those activities at facilities owned or operated by the permittee, such as road, street, and parking lot maintenance; equipment maintenance; and the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers designed to:

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

Necessary documentation for implementation: (1) the Town Good Housekeeping/Pollution Prevention Program Manual; (2) Site-specific SWPPPs; (3) Training documentation; (4) Completed Comprehensive Site Evaluation forms.

Responsible individual for implementation: Engineering, Public Works, and Parks and Recreation departments

Objectives and expected results in meeting measurable goals: The objective is to minimize or prevent pollutant discharges from operations and maintenance activities. The expected result is staff adherence to the Town Good Housekeeping/Pollution Prevention Manual during daily activities.

Implementation schedule: Training will be provided once every 24 months, and facility evaluations will be performed with the schedule described in BMP 6.2. No later than June 30 of each year, the Town will annually review any high-priority facility owned or operated by the Town for which a SWPPP has not been developed to determine if the facility has a high potential to discharge potential pollutants. If the facility is determined to be a high priority facility with a high potential to discharge pollutants, the Town will develop a SWPPP no later than December 31 of that same year.

Measurable goals: Effectiveness will be measured the implementation of Facility-specific Stormwater Pollution Prevention Plans (SWPPPs) as described in BMP 6.2, evaluated with a Facility compliance evaluation as described for the measure of effectiveness for BMP 3.4, and the Pollution Prevention training described in BMP 6.3.

BMP 6.2 Stormwater Pollution Prevention Plans (Part 1 E 6 c)

Description: The Town shall identify which of the high-priority facilities have a high potential of discharging pollutants. the Town shall maintain and implement a site-specific stormwater pollution prevention plan (SWPPP) for each facility identified. High priority facilities that have a high potential for discharging pollutants are those facilities that are not covered under a separate VPDES permit and which any of the following materials or activities occur and are expected to have exposure to stormwater resulting from rain, snow, snowmelt or runoff:

- Areas where residuals from using, storing or cleaning machinery or equipment remain and are exposed to stormwater;
- Materials or residuals on the ground or in stormwater inlets from spills or leaks;
- Material handling equipment;
- Materials or products that would be expected to be mobilized in stormwater runoff during loading or unloading or transporting activities (e.g., rock, salt, fill dirt);
- Materials or products stored outdoors (except final products intended for outside use where exposure to stormwater does not result in the discharge of pollutants);
- Materials or products that would be expected to be mobilized in stormwater runoff contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;
- Waste material except waste in covered, nonleaking containers (e.g., dumpsters);
- Application or disposal of process wastewater (unless otherwise permitted); or
- Particulate matter or visible deposits of residuals from roof stacks, vents or both not otherwise regulated (i.e., under an air quality control permit) and evident in the stormwater runoff.

Each SWPPP as required in Part I E 6 c shall include the following:

- A site description that includes a site map identifying all outfalls, direction of stormwater flows, existing source controls, and receiving water bodies;
- A description and checklist of the potential pollutants and pollutant sources;
- A description of all potential non-stormwater discharges;
- Written procedures designed to reduce and prevent pollutant discharge;
- A description of the applicable training as required in Part I E 6 m;
- Procedures to conduct an annual comprehensive site compliance evaluation;
- An inspection frequency of no less than once per year and maintenance requirements for site specific source controls. The date of each inspection and associated findings and follow-up shall be logged in each SWPPP; and
- A log of each unauthorized discharge, release, or spill incident reported in accordance with Part III G including the following information:
    - Date of incident;
    - Material discharged, released, or spilled; and
    - Estimated quantity discharged, released or spilled.

No later than June 30 of each year, the Town shall annually review any high-priority facility owned or operated by the Town for which a SWPPP has not been developed to determine if the facility has a high potential to discharge pollutants as described in Part I E 6 c. If the facility is determined to be a high-priority facility with a high potential to discharge pollutants, the Town shall develop a SWPPP meeting the requirements of Part I E 6 d no later than December 31 of that same year.

The Town shall review the contents of any site specific SWPPP no later than 30 days after any unauthorized discharge, release, or spill reported in accordance with Part III G to determine if additional measures are necessary to prevent future unauthorized discharges, releases, or spills. If necessary, the SWPPP shall be updated no later than 90 days after the unauthorized discharge.

The SWPPP shall be kept at the high-priority facility with a high potential to discharge and utilized as part of staff training required in Part I E 6 m. The SWPPP and associated documents may be maintained as a hard copy or electronically as long as the documents are available to employees at the applicable site.

If activities change at a facility such that the facility no longer meets the criteria of a high-priority facility with a high potential to discharge pollutants as described in Part I E 6 c, the permittee may remove the facility from the list of high-priority facilities with a high potential to discharge pollutants.

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 in accordance with Part I E 6 k. The ingredients of deicers used on site will be maintained.

The SWPPP will provide instruction for updates, as necessary, to reflect changes at facilities, modifications to operations and maintenance procedures, or short-comings resulting in a reportable spill. Inspection forms will be completed in accordance with the prescribed schedule within the SWPPP and maintained on file with the Facilities Director.

The Town shall provide a list of all high-priority facilities owned or operated by the permittee required in accordance with Part I E 6 c, and whether or not the facility has a high potential to discharge.

Table 7: List of High Priority Facilities	
High Priority Facility	**Address**
Public Works Operation Center	300 Scattergood Drive
Wades Lane Landfill Staging and Stockpile Area	Wades Lane

Necessary documentation for implementation: (1) Good Housekeeping & Pollution Prevention Manual; (2) SWPPPs; (3) Annual comprehensive site compliance evaluation forms; and (4) Identification of High Priority Facilities report.

Responsible individual for implementation: Engineering, Public Works, and Parks and Recreation departments

Implementation schedule: By June 30th every year the Town will review its properties to determine if the facilities meet the criteria of a high priority facility and develop SWPPPs by December 31 of the same permit year. The Town will also review its properties to determine if the properties no longer meet the criteria of a high priority facility. The Town will review the Facility SWPPPs no later than 30 days after an unauthorized discharge, release or spill reported in accordance with Part III G to determine if additional measures are necessary to prevent future unauthorized discharges, releases or spills. The SWPPP shall be updated no later than 90 days after the unauthorized discharge. The annual comprehensive compliance evaluation will be completed once per year.

Measurable goals: Effectiveness will be measured by the completed annual comprehensive compliance evaluation once per year; a review of a SWPPP within 30 days after an unauthorized discharge, release or spill reported; and an update to the SWPPP within 90 days after an unauthorized discharge. In addition, effectiveness will be measured by the review of the Town's properties to determine if the properties meet the criteria of a high priority facility and a SWPPP is developed, or no longer meet the criteria of a high priority facility.

BMP 6.3 Turf and Landscape Management (Part I E 6 j)

Description: The Town applies nutrients to lands regulated under § 10.1-104.4 of the Code of Virginia; and therefore, shall continue to implement turf and landscape nutrient management plans in accordance with this statutory requirement.

The Town shall implement a Department of Conservation and Recreation (DCR) approved and Nutrient Management Plans (NMP) prepared by a Certified Nutrient Management Planner. Fertilizer application records will be maintained with each application using the application record provided in the NMP.

The Town shall provide a list of lands for which turf and landscape nutrient management plans are required in accordance with Part I E 6 i and j, including the following information:

- The total acreage on which nutrients are applied;
- The date of the most recently approved nutrient management plan for the property; and
- The location in which the individual turf and landscape nutrient management plan is located.

Table 8: List of Lands where Nutrient Management Plans are Required

Property Name	Application Area (ac.)	NMP Date	Location of NMP Area
Christiansburg Aquatic Center	4.0	7/1/2017	All surrounding unirrigated turf
Depot Park	1.3	7/1/2017	Field inside of track
Harkrader Sports Complex-Outfield	4.6	7/1/2017	Irrigated outfield areas
Harkrader Sports Complex-Infield	0.5	7/1/2017	Infield and apron areas

Necessary documentation for implementation: (1) the Town Nutrient Management Plans; and (2) Completed Fertilizer Application Records.

Responsible individual for implementation: Engineering, Public Works, and Parks and Recreation departments

Implementation schedule: The NMPs will continue to be updated and modified as needed. Fertilizer application records will be maintained with each application.

Measurable goals: Effectiveness will be measured by the implementation of the NMPs through completion of the application record and periodic updates to the NMPs to make necessary adjustments based on soil conditions.

BMP 6.4 Contractor Certification for Pesticide Application (Part I E 6 m 4)

Description: Contractors hired by the Town who apply pesticides and herbicides are trained or certified in accordance with the Virginia Pesticide Control Act (§ 3.2-3900 et seq. of the Code of Virginia). Certification by the Virginia Department of Agriculture and Consumer Services (VCACS) Pesticide and Herbicide Applicator program shall constitute compliance with this requirement.

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

Responsible individual for implementation: Engineering, Finance, & Public Works departments

Implementation schedule: The Town will continue to obtain proof of certifications from contractors applying pesticide and herbicide.

Measurable goal: Effectiveness will be measured by all signed contracts executed for pesticide and herbicide application maintain proof of certifications on file.

BMP 6.5 Employee Good Housekeeping/Pollution Prevention Training Plan (Part 1 E 6 m)

Description: The Town shall develop a training plan in writing for applicable staff that ensures the following:

- Field personnel receive training in the recognition and reporting of illicit discharges no less than once per 24 months;
- Employees performing road, street, and parking lot maintenance receive training in pollution prevention and good housekeeping associated with those activities no less than once per 24 months;
- Employees working in and around maintenance, public works, or recreational facilities receive training in good housekeeping and pollution prevention practices associated with those facilities no less than once per 24 months;
- Employees who apply pesticides and herbicides are trained or certified in accordance with the Virginia Pesticide Control Act (§ 3.2-3900 et seq. of the Code of Virginia). Certification by the Virginia Department of Agriculture and Consumer Services (VCACS) Pesticide and Herbicide Applicator program shall constitute compliance with this requirement;
- Employees serving as plan reviewers, inspectors, program administrators, and construction site operators obtain the appropriate certifications as required under the Virginia Erosion and Sediment Control Law and its attendant regulations;
- Employees and contractors implementing the stormwater program obtain the appropriate certifications as required under the Virginia Stormwater Management Act and its attendant regulations; and
- Employees whose duties include emergency response have been trained in spill response. Training of emergency responders such as firefighters and law-enforcement officers on the handling of spill releases as part of a larger emergency response training shall satisfy this training requirement and be documented in the training plan.

The Town shall maintain documentation of each training event conducted by the permittee to fulfill the requirements of Part I E 6 m for a minimum of three years after the training event. The documentation shall include the following information:

- The date of the training event;
- The number of employees attending the training event; and
- The objective of the training event.

The Town may fulfill the training requirements in Part I E 6 m, in total or in part, through regional training programs involving two or more MS4 permittees; however, the permittee shall remain responsible for ensuring compliance with the training requirements.

The Town will incorporate 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:

- Training once every 24 months to relevant field personnel in the recognition and reporting of illicit discharges. Training will utilize the IDDE Manual described in BMP 3.3.
- Training once every 24 months to relevant employees in good housekeeping and pollution prevention practices that are to be employed during road and parking lot maintenance and around maintenance and operations facilities. Training will utilize the Town 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 Virginia Pesticide Control Act (§ 3.1-249.27 et seq. of the Code of Virginia) for employees performing applications.

Necessary documentation for implementation: (1) Training documentation or appropriate certifications for employees; (2) the Town IDDE Manual; and (3) the Town Good Housekeeping/Pollution Prevention Program Manual.

Responsible individual for implementation: Engineering, Public Works, and Parks and Recreation departments; Fire Chief

Implementation schedule: Training for illicit discharge and good housekeeping will occur no less than every 24 months. Certifications will be maintained, and proof of certification updated as appropriate.

Measurable goals: Effectiveness will be determined by the training occurring no less than every 24 months, and proof of certifications updated as appropriate.

BMP 6.6 Contractor Safeguards to Ensure Program Consistent Measures and Procedures (Part I E 6 l)

Description: The Town shall require through the use of contract language, training, standard operating procedures, ordinances or other measures within the Town's legal authority that contractors employed by the Town and engaging in activities with the potential to discharge pollutants use appropriate control measures to minimize the discharge of pollutants to the MS4.

The Town will use contract language that references the Town Good Housekeeping and Pollution Prevention Manual to require contractors to use appropriate control measures and procedures for stormwater discharges, when applicable. Oversight will be provided by the Town through periodic inspections. Contract language will require contractors to address items identified during inspections within a time period appropriate to prevent the potential of non-stormwater discharges. The contract language will also allow the Town to stop-work, address the problem, and recoup cost for the remedy from the contractor.

Contractors implementing the stormwater program shall obtain the appropriate certifications as required under the Virginia Stormwater Management Act (VSMA) and its attendant regulations.

A summary of mechanisms the Town uses to ensure contractors working on behalf of the permittees implement the necessary good housekeeping and pollution prevention procedures, and stormwater pollution plans as appropriate:

- the Town incorporates contract language that includes a reference to the Good Housekeeping and Pollution Prevention Manual located on the Town's website.

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

Necessary documentation for implementation: (1) Contract language; (2) Inspection Forms; and (3) Good Housekeeping and Pollution Prevention Manual

Responsible individual for implementation: Engineering and Finance departments

Implementation schedule: The Town will continue to incorporate language into contracts to ensure contractors engaging in activities with the potential to discharge pollutants use appropriate control measures to minimize the discharge of pollutants to the MS4.

Measurable goals: Effectiveness will be measured by all signed contracts executed with contract good housekeeping and pollution prevention language.

3.1 SPECIAL CONDITIONS FOR THE CHESAPEAKE BAY TMDL

The Town of Christiansburg is not within the Chesapeake Bay Watershed and therefore, is not subject to the Chesapeake Bay TMDL Special Conditions.

3.2 SPECIAL CONDITIONS FOR LOCAL TMDLS

Description: The permittee shall develop a local TMDL action plan designed to reduce loadings for pollutants of concern if the permittee discharges the pollutants of concern to an impaired water for which a TMDL has been approved by the U.S. Environmental Protection Agency (EPA) as described below:

- For TMDLs approved by the EPA prior to July 1, 2013, and in which an individual or aggregate wasteload has been allocated to the permittee, the permittee shall update the previously approved local TMDL action plans to meet the conditions of Part II B 3, B 4, B 5, B 6, and B 7 as applicable, no later than 18 months after the permit effective date and continue implementation of the action plan; and
- For TMDLs approved by EPA on or after July 1, 2013, and prior to June 30, 2018, and in which an individual or aggregate wasteload has been allocated to the permittee, the permittee shall develop and initiate implementation of action plans to meet the conditions of Part II B 3, B 4, B 5, B 6, and B 7 as applicable for each pollutant for which wasteloads have been allocated to the permittee's MS4 no later than 30 months after the permit effective date.

The permittee shall complete implementation of the TMDL action plans as soon as practicable. TMDL action plans may be implemented in multiple phases over more than one permit cycle using the adaptive iterative approach provided adequate progress is achieved in the implementation of BMPs designed to reduce pollutant discharges in a manner that is consistent with the assumptions and requirements of the applicable TMDL.

Each local TMDL action plan developed by the permittee shall include the following:

- The TMDL project name;
- The EPA approval date of the TMDL;
- The wasteload allocated to the permittee (individually or in aggregate), and the corresponding percent reduction, if applicable;
- Identification of the significant sources of the pollutants of concern discharging to the permittee's MS4 and that are not covered under a separate VPDES permit. For the purposes of this requirement, a significant source of pollutants means a discharge where the expected pollutant loading is greater than the average pollutant loading for the land use identified in the TMDL;
- The BMPs designed to reduce the pollutants of concern in accordance with Parts II B 4, B 5, and B 6;
- Any calculations required in accordance with Part II B 4, B 5, or B 6;
- For action plans developed in accordance with Part II B 4 and B 5, an outreach strategy to enhance the public's education (including employees) on methods to eliminate and reduce discharges of the pollutants; and
- A schedule of anticipated actions planned for implementation during this permit term.

BMP SC.1.a Bacteria TMDL Action Plans (Part II B)

Bacteria TMDLs:

If the permittee is an approved VSMP authority, they shall select and implement at least 3 of the strategies listed below designed to reduce the load of bacteria to the MS4. If they are not an approved VSMP authority, the permittee shall select and implement at least 1 of the strategies listed below. Selection of the strategies shall correspond to sources identified in Part II B 3 d.

Table 9: Strategies for Bacteria Reduction Stormwater Control/Management Strategy	
Source	**Strategy Examples** (not meant to be all inclusive or limiting)
Domestic pets (dogs and cats)	Provide signage to pick up dog waste, providing pet waste bags and disposal containers. Adopt and enforce pet waste ordinances or policies, or leash laws or policies. Place dog parks away from environmentally sensitive areas. Maintain dog parks by removing disposed of pet waste bags and cleaning up other sources of bacteria. Protect riparian buffers and provide unmanicured vegetative buffers along streams to dissuade stream access.
Urban Wildlife	Educate the public on how to reduce food sources accessible to urban wildlife (e.g., manage restaurant dumpsters and grease traps, residential garbage, feed pets indoors). Install storm drain inlet or outlet controls. Clean out storm drains to remove waste from wildlife. Implement and enforce urban trash management practices. Implement rooftop disconnection programs or site designs that minimize connections to reduce bacteria from rooftops Implement a program for removing animal carcasses from roadways and properly disposing of the same (either through proper storage or through transport to a licensed facility).
Illicit connections or illicit discharges to the MS4	Implement an enhanced dry weather screening and illicit discharge, detection, and elimination program beyond the requirements of Part I E 3 to identify and remove illicit connections and identify leaking sanitary sewer lines infiltrating to the MS4 and implement repairs. Implement a program to identify potentially failing septic systems. Educate the public on how to determine whether their septic system is failing. Implement septic tank inspection and maintenance program. Implement an educational program beyond any requirements in Part I E 1 though E 6 to explain to citizens why they should not dump materials into the MS4.

Table 9: Strategies for Bacteria Reduction Stormwater Control/Management Strategy	
Source	**Strategy Examples** (not meant to be all inclusive or limiting)
Dry weather urban flows (irrigations, car washing, powerwashing, etc.)	Implement public education programs to reduce dry weather flows from storm sewers related to lawn and park irrigation practices, car washing, powerwashing and other nonstormwater flows. Provide irrigation controller rebates. Implement and enforce ordinances or policies related to outdoor water waste. Inspect commercial trash areas, grease traps, washdown practices, and enforce corresponding ordinances or policies.
Birds (Canadian geese, gulls, pigeons, etc.)	Identify areas with high bird populations and evaluate deterrents, population controls, habitat modifications and other measures that may reduce bird-associated bacteria loading. Prohibit feeding of birds.
Other sources	Enhance maintenance of stormwater management facilities owned or operated by the permittee. Enhance requirements for third parties to maintain stormwater management facilities. Develop BMPs for locating, transporting, and maintaining portable toilets used on permittee-owned sites. Educate third parties that use portable toilets on BMPs for use. Provide public education on appropriate recreational vehicle dumping practices.
Training materials	Materials developed to disseminate during workshops offered to local citizens, trade organization, or industrial officials

Necessary documentation for implementation: (1) Upper Roanoke River E. Coli TMDL Action Plan; (2) Crab Creek E. Coli TMDL Action Plan; and (3) Program Plan Updates, as necessary.

Responsible individual for implementation: Engineering Department & Waste Water Treatment Facility

Implementation schedule: The Bacteria TMDL Action Plan has been completed and will be updated by May 1, 2020 for DEQ's review and approval. The Town's Bacteria TMDL Action Plan addresses the Bacteria WLA for Crab Creek Watershed as well as the Upper Roanoke River Watershed. Updates will add Wilson Creek E. Coli TMDL Action Plan and Little River Watershed E. Coli Action Plan items in addition to other required updates.

Measurable goal: Effectiveness will be determined by the consideration of public comments; and the selection of cost effective BMPs supported by model quantification to achieve the required pollutant reductions and outreach strategies to enhance the public's education.

BMP SC.1.b Sediment TMDL Action Plans (Part II B)

Local sediment, phosphorous, and nitrogen TMDLs:

The permittee shall reduce the loads associated with sediment, phosphorus, or nitrogen through implementation of one or more of the following:

- One or more of the BMPs from the Virginia Stormwater BMP Clearinghouse listed in 9VAC25-870-65 or other approved BMPs found on the Virginia Stormwater BMP Clearinghouse website;
- One or more BMPs approved by the Chesapeake Bay Program; or
- Land disturbance thresholds lower than Virginia's regulatory requirements for ESC and post-development SWM.

The permittee may meet the local TMDL requirements for sediment, phosphorus, or nitrogen through BMPs implemented to meet the requirements of the Chesapeake Bay TMDL in Part II A as long as the BMPs are implemented in the watershed for which local water quality is impaired. The permittee shall calculate the anticipated load reduction achieved from each BMP and include the calculations in the action plan required in Part II B 3 f. No later than 36 months after the effective date of this permit, the permittee shall submit to the department the anticipated end dates by which the permittee will meet each WLA for sediment, phosphorus, or nitrogen. The proposed end date may be developed in accordance with Part II B 2.

Necessary documentation for implementation: (1) Upper Roanoke River Watershed Sediment TMDL Action Plan; (2) Crab Creek Watershed Sediment TMDL Action Plan; (3) Program Plan Updates, as necessary.

Responsible individual for implementation: Engineering and Public Works departments

Implementation schedule: The Sediment TMDL Action Plan has been completed and will be updated by May 1, 2020 for DEQ's review and approval. The Town's Sediment TMDL Action Plan addresses the Bacteria WLA for Crab Creek Watershed as well as the Upper Roanoke River Watershed.

Measurable goal: Effectiveness will be determined by the consideration of public comments; and the selection of cost effective BMPs supported by model quantification to achieve the required pollutant reductions and outreach strategies to enhance the public's education.

BMP SC.1.c Polychlorinated biphenyl (PCB) TMDL Action Plans (Part II B)

Local Polychlorinated biphenyl (PCB TMDLs):

For each PCB TMDL action plan, the permittee shall include an inventory of potentially significant sources of PCBs owned or operated by the permittee that drains to the MS4 that includes the following information:

(1) Location of the potential source;
(2) Whether or not the potential source is from current site activities or activities previously conducted at the site that have been terminated (i.e. legacy activities); and
(3) A description of any measures being implemented or to be implemented to prevent exposure to stormwater and discharge of PCBs from the site.

If at any time during the permit term, the permittee discovers a previously unidentified significant source of PCBs within the MS4 regulated service area, they shall notify DEQ in writing within 30 days of discovery.

Necessary documentation for implementation: (1) Roanoke (Staunton) River PCB TMDL Action Plan (includes North Fork Roanoke River, and South Fork Roanoke River); (2) Program Plan Updates, as necessary.

Responsible individual for implementation: Engineering Department

Implementation schedule: The PCB TMDL Action Plan has been completed and will be updated by May 1, 2020 for DEQ's review and approval. The PCB TMDL Action Plan addresses the Roanoke (Staunton) River PCB WLAs.

Measurable goal: Effectiveness will be determined by the consideration of public comments; and the selection of cost effective BMPs supported by model quantification to achieve the required pollutant reductions and outreach strategies to enhance the public's education.

BMP SC.2.a Bacteria TMDL Action Plans - Implementation (Part II B)

Description: On an annual basis, the Town will report progress on the implementation of each of the Bacteria TMDL Action Plans. As described in the Action Plans, BMPs implemented to address several minimum control measures (MCMs) in the Town's MS4 Program BMPs are applicable to the reduction of these pollutants. In addition, and to reduce these pollutants to the maximum extent practicable, the Town's Action Plans list pollutant-specific BMPs to address the TMDLs. The BMPs are listed, along with measurable goals and an implementation schedule in the TMDL Action Plans. The Action plans are available on the Town's Website.

Necessary documentation for implementation: (1) Upper Roanoke River E. Coli TMDL Action Plan; (2) Crab Creek E. Coli TMDL Action Plan; (3) Program Plan Updates, as necessary; and (4) Measurable goal documentation, as necessary.

Responsible individual for implementation: Engineering Department & Waste Water Treatment Facility

Implementation schedule: The implementation schedules in the Bacteria TMDL Action Plan Updates will be incorporated in the MS4 Program Plan after May 1, 2020 submittal to DEQ.

Table 10: 2013 – 2018 Implementation Schedule for Local Bacteria TMDL Action Plans

Local TMDLs*	Action Plan BMP	Implementation Schedule
Upper Roanoke River & Crab Creek E. Coli TMDL Action Plan	Legal authorities outlined in plan in place	Completed
Upper Roanoke River & Crab Creek E. Coli TMDL Action Plan	MCM BMPs listed in plan were implemented or are under review	Ongoing
Upper Roanoke River & Crab Creek E. Coli TMDL Action Plan	FOG Ordinance (authority under WWTP personnel)	Completed
Upper Roanoke River & Crab Creek E. Coli TMDL Action Plan	Stormwater Website FOG Information Page (WWTP)	Completed, but Removed April 2018
Upper Roanoke River & Crab Creek E. Coli TMDL Action Plan	Pet waste disposal public education	Completed
Upper Roanoke River & Crab Creek E. Coli TMDL Action Plan	Stormwater Website IDDE Reporting	Completed
Upper Roanoke River & Crab Creek E. Coli TMDL Action Plan	Crab Creek Interceptor Study	Completed

*Note: The Town created a Bacteria TMDL Action Plan that addresses Crab Creek and Upper Roanoke River E. Coli TMDLs.

Measurable goal: Effectiveness will be determined by the implementation of the actions in the Action Plan schedule.

BMP SC.2.b Sediment TMDL Action Plans - Implementation (Part II B)

Description: On an annual basis, the Town will report progress on the implementation of the Sediment Action Plans. As described in the Action Plans, BMPs implemented to address several minimum control measures (MCMs) in the Town's MS4 Program are applicable to the reduction of these pollutants. In addition, and to reduce these pollutants to the maximum extent practicable, the Town's Action Plans also list pollutant-specific BMPs to address the TMDLs. The BMPs are listed, along with measurable goals and an implementation schedule in the TMDL Action Plans. The Action plans are available on the Town's Website.

Necessary documentation for implementation: (1) Upper Roanoke River Watershed Sediment TMDL Action Plan; (2) Crab Creek Watershed Sediment TMDL Action Plan; and (3) Measurable goal documentation, as necessary.

Responsible individual for implementation: Engineering and Public Works departments

Implementation schedule: The implementation schedules in the Sediment TMDL Action Plan Updates will be incorporated in the MS4 Program Plan after May 1, 2020 submittal to DEQ.

Table 11: 2013 – 2018 Implementation Schedule for Local Sediment TMDL Action Plans

Local TMDLs*	Action Plan BMP	Implementation Schedule
Upper Roanoke River & Crab Creek Sediment TMDL Action Plan	MCM BMPs listed in plan were implemented or are under review	Ongoing
Upper Roanoke River & Crab Creek Sediment TMDL Action Plan	Street Sweeping measurable goals determined	Ongoing
Upper Roanoke River & Crab Creek Sediment TMDL Action Plan	Stream Restoration projects implemented, but not yet complete	Ongoing
Upper Roanoke River & Crab Creek Sediment TMDL Action Plan	Neighboring MS4 coordination efforts	Ongoing
Upper Roanoke River & Crab Creek Sediment TMDL Action Plan	Railroad coordination effort for stream restoration funding and project.	Ongoing

*Note: The Town created a Sediment TMDL Action Plan that addresses Crab Creek and Upper Roanoke River Sediment TMDLs.

Measurable goal: Effectiveness will be determined by the implementation of the actions in the Action Plan schedule.

BMP SC.2.c PCB TMDL Action Plans - Implementation (Part II B)

Description: On an annual basis, the Town will report progress on the implementation of the PCB TMDL Action Plans. As described in the Action Plans, BMPs implemented to address several minimum control measures (MCMs) in the Town's MS4 Program are applicable to the reduction of these pollutants. In addition, and to reduce these pollutants to the maximum extent practicable, the Town's Action Plans also list pollutant-specific BMPs to address the TMDLs. The BMPs are listed, along with measurable goals and an implementation schedule in the TMDL Action Plans. The Action plans are available on the Town's Website.

Necessary documentation for implementation: (1) Roanoke (Staunton) River PCB TMDL Action Plan (includes North Fork Roanoke River, and South Fork Roanoke River); and (2) Measurable goal documentation, as necessary.

Responsible individual for implementation: Engineering Department

Implementation schedule: The implementation schedules in the PCB TMDL Action Plan Updates will be incorporated in the MS4 Program Plan after May 1, 2020 submittal to DEQ.

Table 12: 2013 – 2018 Implementation Schedule for Local PCB TMDL Action Plans

Local TMDLs*	Action Plan BMP	Implementation Schedule
Roanoke (Staunton) River PCB TMDL Action Plan	MCM BMPs listed in plan were implemented or are under review	Ongoing
Roanoke (Staunton) River PCB TMDL Action Plan	Evaluate PCB public education for 2017-2018 permit year	Completed
Roanoke (Staunton) River PCB TMDL Action Plan	Include PCB education mailers in 2017-2018 annual drinking water quality information	Completed
Roanoke (Staunton) River PCB TMDL Action Plan	Continue New River TAC participation	Completed
Roanoke (Staunton) River PCB TMDL Action Plan	Coordinate with WWTP on potential PCB sources	Ongoing
Roanoke (Staunton) River PCB TMDL Action Plan	Research IDDE ordinance language	Completed
Roanoke (Staunton) River PCB TMDL Action Plan	Research and evaluate potential to add PCB-free purchasing ordinance language to Town Code.	Completed
Roanoke (Staunton) River PCB TMDL Action Plan	Examine methods to determine historical land uses to identify potential legacy sources of PCBs.	Ongoing
Roanoke (Staunton) River PCB TMDL Action Plan	Contact MRSWA regarding disposal of PCB-products and discuss partnerships.	Completed
Roanoke (Staunton) River PCB TMDL Action Plan	Review Good Housekeeping SWPPP materials for potential revisions to more specifically address PCBs.	Completed

Measurable goal: Effectiveness will be determined by the implementation of the actions in the Action Plan schedule.

Appendix A - BMP 1.1 Public Education and Outreach Plan & Survey

The Town of Christiansburg MS4 Public Education and Outreach Plan

Revised November 2018

(Incorporated into the Town's MS4 Program Plan)

The Town of Christiansburg (Town) operates a Stormwater Management Program in compliance with the Virginia General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 General Permit). The Town strives to improve local surface water quality and environmental stewardship through Program implementation, and sound technical guidelines, criteria and practices for stormwater management. Engaging the public is critical to achieving these goals. In accordance with Section II.B.1 of the MS4 General Permit, the Town implements a Public Education and Outreach Program (PEOP) on stormwater impacts. The PEOP aims to:

- Increase the knowledge of the Town's public audience about steps that can be taken to reduce stormwater pollution, placing priority on reducing impacts to impaired waters and other local water pollution concerns;
- Increase the Town's public knowledge of hazards associated with illegal discharges and improper disposal of waste, including pertinent legal implications; and
- Implement a diverse program with strategies that target audiences most likely to have significant stormwater impacts.

These goals are intended to be met as part of an iterative program that will measure effectiveness of the Program by assessing the level of knowledge, over time, of the Town's Public that is defined as Town residents and staff. The Program is designed consistent with the MS4 General Permit to:

- Identify three high-priority water quality issues and provide rationale for the selection of each issue;
- Identify and estimate the population size of the target audience who is most likely to have significant impacts on each water quality issue;
- Identify the relevant message and associated educational and outreach materials for distribution to the target audiences.

Selection of high-priority water quality issues was based on feedback derived from Town Engineering Staff, suggestions from MS4 Consultants with their experience from public education surveys taken from other MS4s, local Total Maximum Daily Loads (TMDLs), the Towns' reissue of the Public Education and Outreach Stormwater survey results, and general knowledge of Town operations. The Town's high-priority water quality issues for the PEOP are provided below. Based on measures of effectiveness for each, any may be replaced or refined with approval of the Department of Environmental Quality (DEQ) as part of an iterative stormwater program.

Representative outreach materials are contained at the end of this plan. The materials include a Christiansburg Connection issue with a stream restoration article, and a Facebook post on pet waste.

Water Quality Issue No. 1: Education on special water quality concerns (PCBs)
Rationale: The Town has been assigned wasteload allocations for PCBs as part of the *December 2009 Roanoke River PCB TMDL Development (Virginia)*. The survey did not include questions about PCBs, so no conclusion about knowledge can be reached. Since there is a PCB TMDL in the approval process for the New River and Crab Creek, PCB education will continue to be addressed.

Target Audience:
The Town conducts a Spring and a Fall clean up when all residents may put out extra items for special trash pick-up. Some of these items may contain PCBs. Since all residents may participate, the target audience will include all households.

- ±9,400 households

Relevant Message: Inform town residents of possible household sources of PCBs and inform residents how to properly dispose of waste that may contain PCBs.

Outreach Methods to Convey the Relevant Message: The topic will be addressed with articles in The Christiansburg Connection newsletter and/or posted on the Town's Facebook page and Town website. The Christiansburg Connection is included as an insert in all mailed utility bills six times per year. It is also available as an electronic subscription and is promoted on the Town's website and Facebook page. Facebook will be preferred as an electronic media as documentation indicates it reaches more people. The town also can "push" Facebook posts which puts the post in front of more users. However, it cannot be determined if those people are residents of the Town. The Town will also use the outreach to the Montgomery County School System as an education and outreach strategy across all three of the identified water quality issues.

Schedule: Outreach material for each special water quality concern will be distributed a minimum of once a year to at least 20% of each target audience. The spring 2019 article will be timed to facilitate references to Spring Clean-up. The topic addressed will be staggered with Water Quality Issues #2 and #3 to ensure outreach to the entirety of the target audience.

Method to Determine Effectiveness: Provide PCB concerns message to a minimum of 20% of the target audience via Christiansburg Connection newsletter, Facebook posts and/or Town website posts.

Water Quality Issue No. 2: Education on special water quality concerns (*E. coli*)

Rationale: The Town has been assigned wasteload allocations for bacteria as part of two DEQ-approved TMDLs, the *Bacteria TMDLs for Wilson Creek, Ore Branch and Roanoke River Watersheds, Virginia* and the *Fecal Bacteria and General Standard Total Maximum Daily Load Development for Crab Creek*. Survey results indicate little to no increase in the knowledge about pet waste so continued outreach efforts are needed.

Target Audience:
The Town estimates approximately 5,040 households to have pets based on the estimate of 56% of households owning at least one pet according to the 2010 United States Census. However, since the specific pet-owning households are unknown, the target audience will include all households.

- ±9,400 households

Relevant Message: Inform pet owners about the effects of pet waste on water quality and encourage pet owners to pick up and properly dispose of pet waste. Include information on location of pet waste stations.

Outreach Methods to Convey the Relevant Message: The topic will be addressed with articles in The Christiansburg Connection newsletter and/or posted on the Town's website or Facebook page. The Christiansburg Connection is included as an insert in all mailed utility bills six times per year. It is also available as an electronic subscription and is promoted on the Town's website and Facebook page. Facebook will be preferred as an electronic media as documentation indicates it reaches more people. The town also can "push" Facebook posts which puts the post in front of more users. However, it cannot be determined if those people are residents of the Town. The Town will also use the outreach to the Montgomery County School System as an education and outreach strategy across all three of the identified water quality issues. Additionally, dog leash waste bag dispensers have been purchased to distribute at Public Participation events as a take home message on the importance of cleaning up after pets.

Schedule: Outreach material for each special water quality concern will be distributed a minimum of once a year to at least 20% of each target audience. The topic addressed will be staggered with Water Quality Issues #2 and #3 to ensure outreach to the entirety of the target audience. Dog leash waste bag dispensers will be distributed at at least two spring Public Participation events.

Method to Determine Effectiveness: Provide E. coli concerns message to a minimum of 20% of the target audience via Christiansburg Connection newsletter, Facebook posts and/or Town website posts. Distribute dog leash waste bag dispensers.

Water Quality Issue No. 3: Education on Stream Health (Stream restorations, lawn care/sediment)

Rationale: The Town has invested in three stream restorations to improve stream health. The re-issued Stormwater Survey again showed a high interest in the improvement of water quality. The Town has also been assigned wasteload allocations for sediment as part of two DEQ-approved TMDLs, the *Benthic TMDL Development for the Roanoke River, Virginia* and the *Fecal Bacteria and General Standard Total Maximum Daily Load Development for Crab Creek*. Poor vegetative cover is a potential contributor of pollutants causing the benthic and bacterial impairments in the Crab Creek and Roanoke River basins. The re-issued Stormwater Survey indicated that residents did not view sediment as a top water pollutant. Therefore, the role of poor vegetative cover on residential sites as a source of sediment pollution will continue to be addressed.

Target Audience: The target audience includes all residents within the Town along with homeowner associations and property management companies.

- 9,400 households

Relevant Message:
Inform households, homeowner associations, and property management companies of the expected improvements in stream health from the stream restoration projects. Communicate the positive environmental effects of good vegetative cover, as well cost savings of stream friendly lawn care.

Outreach Methods to Convey the Relevant Message: Both topics will be addressed with separate articles in The Christiansburg Connection newsletter and/or posted on the Town's website or Facebook page. The Christiansburg Connection is included as an insert in all mailed utility bills six times per year. It is also available as an electronic subscription and is promoted on the Town's website and Facebook page. Facebook will be preferred as an electronic media as documentation indicates it reaches more people. However, it cannot be determined if those people are residents of the Town. The Town will also use the outreach to the Montgomery County School System as an education and outreach strategy across all three of the identified water quality issues.

Schedule: Outreach material for each topic will be distributed a minimum of once a year to at least 20% of each target audience. The topics addressed will be staggered with Water Quality Issue # 1 and #2 to ensure outreach to the entirety of the target audience.

Method to Determine Effectiveness: Provide stream restoration and sediment reducing yard care message to a minimum of 20% of the target audience.

Representative outreach material #1: article in The Christiansburg Connection:

The Christiansburg Connection

July/August 2018

Events Calendar

Christiansburg Farmers' Market
Every Thursday through Oct., 3-7 p.m.
Hickok Street NW

Fourth of July Celebration
July 4, 10 a.m. - 4 p.m.; downtown Main Street
Fireworks show begins at 9:15 p.m., view from the NRV Mall or Walmart parking lot

Movies in the Park: "The Sandlot"
July 27, movie begins at sundown
Downtown Park

SW VA 811 8-Mile Race & 5k Run/Walk
Aug. 11, race begins at 6:30 a.m.
Christiansburg Recreation Center

Movies in the Park: "The Greatest Showman"
Aug. 24, movie begins at sundown
Downtown Park

Stillborn Speak 5k Run/Walk
Aug. 25, race begins at 8:30 a.m.
Christiansburg Recreation Center

Heritage Day
Aug. 25, 10 a.m. - 3 p.m.
Montgomery Museum

To find out more information on events and programs, visit www.christiansburg.org/events or our Facebook page.

Upcoming Meetings

Town Council Meetings

Held at Town Hall, 100 East Main St.
- Tuesday, July 10, 7 p.m.
- Tuesday, July 24, 7 p.m.
- Tuesday, August 14, 7 p.m.
- Tuesday, August 28, 7 p.m.

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

Closures

Independence Day, July 4
- The Aquatic Center will be closed.
- Town Hall will be closed.
- The Recreation Center will be closed.
- Garbage and recycling normally collected on Wednesdays will be collected on Tuesday, July 3, with Tuesday's regular collection.

Aquatic Center Information

July 13-15, Summer Awards Meet
July 20-21, RVAA City County Meet
July 26-29, Age Group Champs Meet
Aug. 13-24, CAC closed for annual maintenance

Stream restoration improving habitat for native wildlife

If you've been to Depot Park recently, you've probably noticed some changes. These changes are part of the Towne Branch stream restoration project, which will prevent approximately 160 tons of sediment from moving downstream every year. This puts Christiansburg closer to achieving a required reduction in the amount of sediment entering our waterways.

One of the benefits of reducing sediment is a better habitat for native aquatic animals and plants. As part of the project, 700 native trees were planted both behind the split rail fence and downstream of the Skate Park. Additionally, 4,700 native shrubs were planted along the stream's bank to control erosion. These areas were also seeded with native plants.

Planting young trees, shrubs and seeds requires a change in mowing practices. The tall grass you can find along the stream today is a "nurse crop." It sprouts and grows very quickly and helps protect the native plant seeds. Some

of the native plant seeds will germinate this summer as the nurse crop dies. Others will take up to a year to sprout. Mowing the nurse crop would damage the young native plants, trees and shrubs. The goal is to create a well-shaded stream with stable banks and a diverse aquatic animal community. With time and proper care, this area will transform into a native meadow and then a streamside forest.

Community Snapshot

Girl Scouts from Troop 51 plant huckleberries along the Huckleberry Trail in June as part of a service project.

Stormwater Survey

As part of the Town's MS4 (Municipal Separate Storm Sewer System) permit, we are gauging the public's perception of stormwater issues and our storm sewer system. If you would like to participate, please visit https://bit.ly/2lhr1A1 by July 31 to take the survey. You may also complete the survey in person at the Christiansburg Aquatic Center, the Christiansburg Recreation Center or Town Hall before the end of July.

The survey does not require any identifying information and is only 11 questions long.

Frequently Asked...

Q: How can I pay my utility bills?

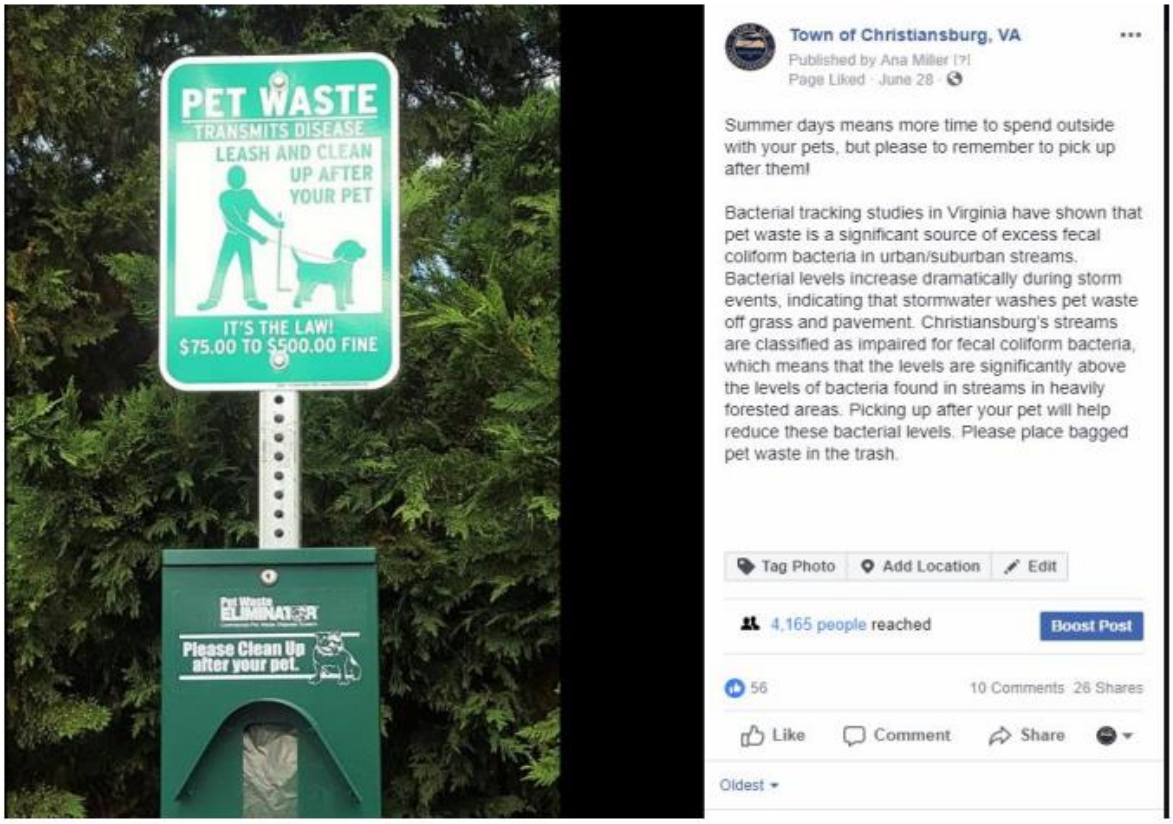
A: You may pay online at https://utilitybilling.christiansburg.org or in person at Town Hall, 100 E. Main St. in Christiansburg. You can also set up payments to be automatically withdrawn from your checking or savings account through the Direct Payment Plan. Visit Town Hall to set up direct payment. Visa, Mastercard and Discover debit/credit cards are accepted for payment, along with cash, checks and money orders.

Q: How can I monitor my water usage?

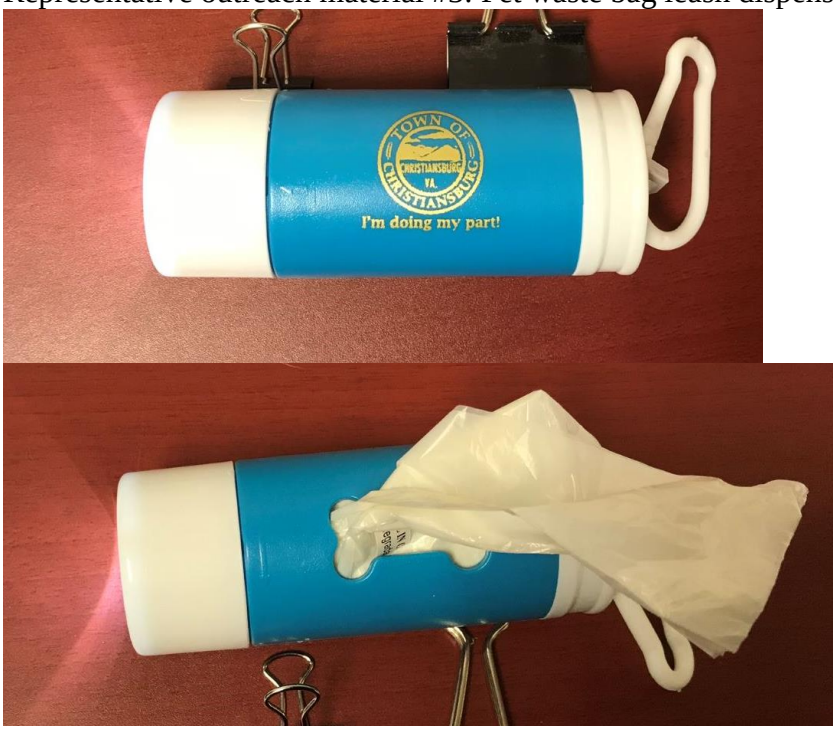
A: Sign up for an account at www.christiansburg.org/monitorwater. The online tool will allow you to monitor your usage and receive alerts if a leak is detected.

Have a question? Let us know!
540-382-6128 ext. 1150
info@christiansburg.org
www.christiansburg.org

Representative outreach material # 2: Facebook post



Representative outreach material #3: Pet waste bag leash dispenser



Appendix B - BMP 3.1 Outfall Information Table

Outfall ID	Impaired ID	Acreage Served	TMDL
NE58BLA01	VAW-N18R_CBC04A00	11.35287	Crab Creek Bacteria and Sediment
NE58BLA02	VAW-N18R_CBC04A00	3.65490	Crab Creek Bacteria and Sediment
NE58BLA03	VAW-N18R_CBC04A00	5.20048	Crab Creek Bacteria and Sediment
NE58BLA04	VAW-N18R_CBC04A00	11.36096	Crab Creek Bacteria and Sediment
NE58BLA05	VAW-N18R_CBC04A00	3.39815	Crab Creek Bacteria and Sediment
NE58BLA06	VAW-N18R_CBC04A00	26.41982	Crab Creek Bacteria and Sediment
NE58BLA07	VAW-N18R_CBC04A00	2.79403	Crab Creek Bacteria and Sediment
NE58BLA08	VAW-N18R_CBC04A00	1.29432	Crab Creek Bacteria and Sediment
NE58BLA09	VAW-N18R_CBC04A00	0.70756	Crab Creek Bacteria and Sediment
NE58BLA10	VAW-N18R_CBC04A00	5.54547	Crab Creek Bacteria and Sediment
NE58BLA13	VAW-N18R_CBC04A00	12.01837	Crab Creek Bacteria and Sediment
NE58BLA14	VAW-N18R_CBC04A00	3.10059	Crab Creek Bacteria and Sediment
NE58BLA16	VAW-N18R_CBC04A00	30.64300	Crab Creek Bacteria and Sediment
NE58BLA18	VAW-N18R_CBC04A00	15.59235	Crab Creek Bacteria and Sediment
NE58BLB01	VAW-N18R_CBC04A00	4.40858	Crab Creek Bacteria and Sediment
NE58BLB02	VAW-N18R_CBC04A00	7.85117	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	47.06294	Crab Creek Bacteria and Sediment
NE58CC08	VAW-N18R_CBC04A00	7.58643	Crab Creek Bacteria and Sediment
NE58CC12	VAW-N18R_CBC04A00	68.86169	Crab Creek Bacteria and Sediment
NE58CC15	VAW-N18R_CBC04A00	8.91743	Crab Creek Bacteria and Sediment
NE58CC19	VAW-N18R_CBC04A00		Crab Creek Bacteria and Sediment
NE58CC21	VAW-N18R_CBC04A00	29.47443	Crab Creek Bacteria and Sediment
NE58CC24	VAW-N18R_CBC04A00	165.42933	Crab Creek Bacteria and Sediment
NE58CC32	VAW-N18R_CBC04A00	3.79718	Crab Creek Bacteria and Sediment
NE58CC36	VAW-N18R_CBC04A00	15.70160	Crab Creek Bacteria and Sediment
NE58CC38	VAW-N18R_CBC04A00	29.61066	Crab Creek Bacteria and Sediment
NE58CC42	VAW-N18R_CBC04A00	3.73463	Crab Creek Bacteria and Sediment
NE58CC45	VAW-N18R_CBC04A00	151.61722	Crab Creek Bacteria and Sediment
NE58CC46	VAW-N18R_CBC04A00	4.33783	Crab Creek Bacteria and Sediment
NE58CC47	VAW-N18R_CBC04A00	0.18514	Crab Creek Bacteria and Sediment
NE58CC48	VAW-N18R_CBC04A00	0.01967	Crab Creek Bacteria and Sediment
NE58CC49	VAW-N18R_CBC04A00	45.14844	Crab Creek Bacteria and Sediment
NE58CC50	VAW-N18R_CBC04A00	0.05303	Crab Creek Bacteria and Sediment
NE58CC52	VAW-N18R_CBC04A00	220.76114	Crab Creek Bacteria and Sediment
NE58CC53	VAW-N18R_CBC04A00	0.30533	Crab Creek Bacteria and Sediment
NE58CC55	VAW-N18R_CBC04A00	0.65295	Crab Creek Bacteria and Sediment
NE58CC57	VAW-N18R_CBC04A00	21.39965	Crab Creek Bacteria and Sediment
NE58CC58	VAW-N18R_CBC04A00	5.32653	Crab Creek Bacteria and Sediment
NE58CC59	VAW-N18R_CBC04A00	0.01216	Crab Creek Bacteria and Sediment
NE58CC60	VAW-N18R_CBC04A00	34.82417	Crab Creek Bacteria and Sediment
NE58CC61	VAW-N18R_CBC04A00	5.30152	Crab Creek Bacteria and Sediment
NE58CC66	VAW-N18R_CBC04A00	18.13243	Crab Creek Bacteria and Sediment
NE58CC67	VAW-N18R_CBC04A00	13.79104	Crab Creek Bacteria and Sediment
NE58CC68	VAW-N18R_CBC04A00	5.71261	Crab Creek Bacteria and Sediment

Outfall ID	Impaired ID	Acreage Served	TMDL
NE58CC76	VAW-N18R_CBC04A00		Crab Creek Bacteria and Sediment
NE58CC77	VAW-N18R_CBC04A00	0.56244	Crab Creek Bacteria and Sediment
NE58CC78	VAW-N18R_CBC04A00	2.74346	Crab Creek Bacteria and Sediment
NE58CC79	VAW-N18R_CBC04A00	0.05060	Crab Creek Bacteria and Sediment
NE58CC80	VAW-N18R_CBC04A00	0.36168	Crab Creek Bacteria and Sediment
NE58CC81	VAW-N18R_CBC04A00	0.03531	Crab Creek Bacteria and Sediment
NE58CC82	VAW-N18R_CBC04A00	0.63521	Crab Creek Bacteria and Sediment
NE58CC83	VAW-N18R_CBC04A00	0.51113	Crab Creek Bacteria and Sediment
NE58CC84	VAW-N18R_CBC04A00	0.06404	Crab Creek Bacteria and Sediment
NE58CC85	VAW-N18R_CBC04A00	0.18493	Crab Creek Bacteria and Sediment
NE58CC89	VAW-N18R_CBC04A00	0.00000	Crab Creek Bacteria and Sediment
NE58CC91	VAW-N18R_CBC04A00	0.03666	Crab Creek Bacteria and Sediment
NE58DH01	VAW-N18R_CBC04A00	19.16298	Crab Creek Bacteria and Sediment
NE58DH06	VAW-N18R_CBC04A00	15.28299	Crab Creek Bacteria and Sediment
NE58DH07	VAW-N18R_CBC04A00	12.36238	Crab Creek Bacteria and Sediment
NE58SH03	VAW-N18R_CBC04A00	7.42475	Crab Creek Bacteria and Sediment
NE58SH04	VAW-N18R_CBC04A00	2.87251	Crab Creek Bacteria and Sediment
NE58SH07	VAW-N18R_CBC04A00	44.00469	Crab Creek Bacteria and Sediment
NE58SL01	VAW-N18R_CBC04A00	130.14517	Crab Creek Bacteria and Sediment
NE58TBA01	VAW-N18R_CBC04A00	3.92803	Crab Creek Bacteria and Sediment
NE58TBA02	VAW-N18R_CBC04A00	0.98021	Crab Creek Bacteria and Sediment
NE58TBA03	VAW-N18R_CBC04A00	5.64405	Crab Creek Bacteria and Sediment
NE58TBA04	VAW-N18R_CBC04A00	31.00289	Crab Creek Bacteria and Sediment
NE58TBA06	VAW-N18R_CBC04A00	5.92848	Crab Creek Bacteria and Sediment
NE58TBA07	VAW-N18R_CBC04A00	103.62074	Crab Creek Bacteria and Sediment
NE58TBA08	VAW-N18R_CBC04A00	0.26848	Crab Creek Bacteria and Sediment
NE58TBA09	VAW-N18R_CBC04A00	38.72770	Crab Creek Bacteria and Sediment
NE58TBA12	VAW-N18R_CBC04A00	8.07492	Crab Creek Bacteria and Sediment
NE58TBA14	VAW-N18R_CBC04A00	1.16760	Crab Creek Bacteria and Sediment
NE58TBA15	VAW-N18R_CBC04A00	0.56798	Crab Creek Bacteria and Sediment
NE58TBA16	VAW-N18R_CBC04A00	0.74342	Crab Creek Bacteria and Sediment
NE58TBA17	VAW-N18R_CBC04A00	167.95345	Crab Creek Bacteria and Sediment
NE58TBA18	VAW-N18R_CBC04A00	14.42600	Crab Creek Bacteria and Sediment
NE58TBA19	VAW-N18R_CBC04A00	0.07338	Crab Creek Bacteria and Sediment
NE58TBA20	VAW-N18R_CBC04A00	0.15651	Crab Creek Bacteria and Sediment
NE58TBA21	VAW-N18R_CBC04A00	0.60430	Crab Creek Bacteria and Sediment
NE58TBA22	VAW-N18R_CBC04A00	0.36119	Crab Creek Bacteria and Sediment
NE58TBA23	VAW-N18R_CBC04A00	0.23351	Crab Creek Bacteria and Sediment
NE58TBA24	VAW-N18R_CBC04A00	0.94634	Crab Creek Bacteria and Sediment
NE58TBA25	VAW-N18R_CBC04A00	1.46404	Crab Creek Bacteria and Sediment
NE58TBA26	VAW-N18R_CBC04A00	0.05741	Crab Creek Bacteria and Sediment
NE58TBA27	VAW-N18R_CBC04A00	0.29643	Crab Creek Bacteria and Sediment
NE58TBA28	VAW-N18R_CBC04A00	4.74613	Crab Creek Bacteria and Sediment
NE58TBA29	VAW-N18R_CBC04A00	2.81878	Crab Creek Bacteria and Sediment
NE58TBA30	VAW-N18R_CBC04A00	245.11679	Crab Creek Bacteria and Sediment
NE58TBA31	VAW-N18R_CBC04A00		Crab Creek Bacteria and Sediment
NE58TBA32	VAW-N18R_CBC04A00	22.05896	Crab Creek Bacteria and Sediment
NE58TBA33	VAW-N18R_CBC04A00	0.97033	Crab Creek Bacteria and Sediment

Outfall ID	Impaired ID	Acreage Served	TMDL
NE58TBA34	VAW-N18R_CBC04A00	2.96755	Crab Creek Bacteria and Sediment
NE58TBA35	VAW-N18R_CBC04A00	0.41989	Crab Creek Bacteria and Sediment
NE58TBA36	VAW-N18R_CBC04A00	0.23320	Crab Creek Bacteria and Sediment
NE58TBA37	VAW-N18R_CBC04A00	0.68675	Crab Creek Bacteria and Sediment
NE58TBB01	VAW-N18R_CBC04A00	0.26613	Crab Creek Bacteria and Sediment
NE58TBB02	VAW-N18R_CBC04A00	12.33156	Crab Creek Bacteria and Sediment
NE58TBB03	VAW-N18R_CBC04A00	0.50652	Crab Creek Bacteria and Sediment
NE58TBB04	VAW-N18R_CBC04A00	0.44950	Crab Creek Bacteria and Sediment
NE58TBB05	VAW-N18R_CBC04A00	1.31769	Crab Creek Bacteria and Sediment
NE58TBB08	VAW-N18R_CBC04A00		Crab Creek Bacteria and Sediment
NE58TBB09	VAW-N18R_CBC04A00	7.77663	Crab Creek Bacteria and Sediment
NE58TBB10	VAW-N18R_CBC04A00	0.39768	Crab Creek Bacteria and Sediment
NE58TBB11	VAW-N18R_CBC04A00	22.48492	Crab Creek Bacteria and Sediment
NE58TBB12	VAW-N18R_CBC04A00	4.72386	Crab Creek Bacteria and Sediment
NE58TBB13	VAW-N18R_CBC04A00	1.39443	Crab Creek Bacteria and Sediment
NE58TBB14	VAW-N18R_CBC04A00	204.67096	Crab Creek Bacteria and Sediment
NE58TBB16	VAW-N18R_CBC04A00	0.47369	Crab Creek Bacteria and Sediment
NE58TBC01	VAW-N18R_CBC04A00	0.41982	Crab Creek Bacteria and Sediment
NE58TBC07	VAW-N18R_CBC04A00	8.73196	Crab Creek Bacteria and Sediment
NE58TBC14	VAW-N18R_CBC04A00	4.83449	Crab Creek Bacteria and Sediment
NE58TBC15	VAW-N18R_CBC04A00	15.67025	Crab Creek Bacteria and Sediment
NE58TBC16	VAW-N18R_CBC04A00	32.36947	Crab Creek Bacteria and Sediment
NE58TBC19	VAW-N18R_CBC04A00	203.08389	Crab Creek Bacteria and Sediment
NE58TBC20	VAW-N18R_CBC04A00	2.24378	Crab Creek Bacteria and Sediment
NE58WB07	VAW-N18R_ZZZ01A00	1.45977	Crab Creek Bacteria and Sediment
NE58WL01	VAW-N18R_CBC04A00	11.25500	Crab Creek Bacteria and Sediment
NE59SBA08	VAW-N22R_XEH01A08	29.21069	NO TMDL Unnamed tributary to Slate Branch
NE59SBA28	VAW-N22R_XEH01A08	159.41717	NO TMDL Unnamed tributary to Slate Branch
NE59SBA29	VAW-N22R_XEH01A08	8.02208	NO TMDL Unnamed tributary to Slate Branch
NE59SBA30	VAW-N22R_XEH01A08	24.25495	NO TMDL Unnamed tributary to Slate Branch
NE59SBA31	VAW-N22R_XEH01A08	0.33343	NO TMDL Unnamed tributary to Slate Branch
NE59SBA32	VAW-N22R_XEH01A08	0.05131	NO TMDL Unnamed tributary to Slate Branch
NE59SBA33	VAW-N22R_XEH01A08	0.06170	NO TMDL Unnamed tributary to Slate Branch
NE59SBA34	VAW-N22R_XEH01A08	0.30798	NO TMDL Unnamed tributary to Slate Branch
NE59SBA35	VAW-N22R_XEH01A08	9.27716	NO TMDL Unnamed tributary to Slate Branch
NE59SBD09	VAW-N22R_XEH01A08	25.19735	NO TMDL Unnamed tributary to Slate Branch
NE59SBD12	VAW-N22R_XEH01A08	27.06815	NO TMDL Unnamed tributary to Slate Branch
NE59SBD20	VAW-N22R_XEH01A08	2.76529	NO TMDL Unnamed tributary to Slate Branch
RU04FB01	VAW-L01R_ZZZ01A00	108.85346	Roanoke River Bacteria and Sediment and PCBs
RU04FB02	VAW-L01R_ZZZ01A00	10.54009	Roanoke River Bacteria and Sediment and PCBs
RU04FB03	VAW-L01R_ZZZ01A00	7.60206	Roanoke River Bacteria and Sediment and PCBs
RU04FB09	VAW-L01R_ZZZ01A00	0.37772	Roanoke River Bacteria and Sediment and PCBs
RU04FB10	VAW-L01R_ZZZ01A00	29.67666	Roanoke River Bacteria and Sediment and PCBs
RU04FB16	VAW-L01R_ZZZ01A00	91.44828	Roanoke River Bacteria and Sediment and PCBs
RU04FB18	VAW-L01R_ZZZ01A00	202.35925	Roanoke River Bacteria and Sediment and PCBs

Appendix C - BMP 3.3 Documentation of Written Notifications of Interconnected MS4s

Town of Christiansburg, Virginia 24073

100 East Main Street ~ Telephone 540-382-6128 ~ Fax 540-382-7338

June 30, 2017

Scott A. Woodrum, P.E.
Director/County Engineer
Environmental Services
Montgomery County
755 Roanoke Street
Christiansburg, VA 24073-3181

RE: Notice of MS4 Interconnection

Mr. Woodrum:

We are providing this notice of new interconnections of our stormwater conveyance system in conformance with the requirements of our Municipal Separate Storm Sewer System (MS4) permit.

Physical Description	Grass Ditch
Latitude	37.1254
Longitude	-80.3708
Comments	Northwest of the Parkway Drive and White Oak Lane Intersection at the Falling Branch Elementary School.

Physical Description	15 inch HDPE Pipe
Latitude	37.1311
Longitude	-80.3937
Comments	Southeast of the Roanoke Street and Chinquapin Trail Intersection at the Montgomery County Government Center.

Please contact me with any questions or comments you may have. My staff and I look forward to collaborating with you in addressing the requirements of the MS4 program.

Sincerely,

Wayne O. Nelson

Wayne O. Nelson, P.E.
Director of Engineering
Town of Christiansburg

cc: File
JB/de

MONTGOMERY COUNTY
DEPARTMENT OF ENVIRONMENTAL SERVICES

755 ROANOKE STREET, SUITE 1C, CHRISTIANSBURG, VIRGINIA 24073-3172

January 14, 2019

Patricia Colatosti
Environmental Program Supervisor
Town of Christiansburg
100 E Main Street
Christiansburg, VA 24073

Via Email

RE: Notice of MS4 Interconnections with Montgomery County MS4 Permit VAR040134

Dear Ms. Colatosti,

Attached is the list of known MS4 physical interconnections from the Montgomery County MS4 service area to the Christiansburg MS4 service area. We are providing this list of interconnections to the Christiansburg MS4 system as we update our program in this 2018-2023 General Permit cycle. As such, this notice will supersede all previous notices from Montgomery County.

Please feel free to review the accuracy of the information and provide comments. If necessary, we are able to provide the data in GIS format. It would also be beneficial to our program if you have and can share Christiansburg's known interconnections to the County's MS4 service area. Please contact me with any questions or comment.

Sincerely,

John W. Burke
Stormwater Specialist

Enclosure: List of Interconnections

Montgomery County - MS4 Permit VAR040134 - Downstream Physical Interconnections to Christiansburg January 2019

Outfall_ID	Subwatershed HUC12	HUC12_Code	Latitude	Longitude	MS4 Drainage Acres	Drainage Area Land Use	Drainage Type/Location	Material	Outfall Shape	VAHUC6	x	y
27	Crab Creek	50500011802	37.14425	-80.42184	7.55	Institutional	Open Drainage	earthen	linear	NE58	10922802.77	3581781.291
28	Crab Creek	50500011802	37.14698	-80.42107	4.92	Institutional	Open Drainage	earthen	linear	NE58	10923048.93	3582770.165
29	Crab Creek	50500011802	37.14706	-80.4187	11.92	Institutional	Closed Pipe	HDPE	circular	NE58	10923739.52	3582784.44
30	Crab Creek	50500011802	37.13565	-80.41677	0.43	Institutional	Closed Pipe	PVC	circular	NE58	10924216.51	3578618.626
31	Crab Creek	50500011802	37.14442	-80.41653	9.18	Institutional	Open Drainage	curb & gutter	curb & gutter	NE58	10924351.32	3581808.925
32	Crab Creek	50500011802	37.1285	-80.41641	1.79	Institutional	Open Drainage	curb & gutter	curb & gutter	NE58	10924268.53	3576013.521
33	Crab Creek	50500011802	37.12832	-80.41641	1.22	Institutional	Open Drainage	curb & gutter	curb & gutter	NE58	10924267.84	3575948.243
34	Crab Creek	50500011802	37.13019	-80.41535	2.08	Institutional	Closed Pipe	RCP	circular	NE58	10924591.26	3576621.587
35	Crab Creek	50500011802	37.13029	-80.40813	2.02	Commercial	Closed Pipe	CMP	circular	NE58	10926697.49	3576616.638
36	Crab Creek	50500011802	37.14519	-80.40694	2.45	Commercial	Open Drainage	rip-rap	linear	NE58	10927152.96	3582033.089
43	Crab Creek	50500011802	37.12938	-80.40537	0.81	Commercial	Closed Pipe	RCP	circular	NE58	10927494.97	3576269.474
44	Crab Creek	50500011802	37.12887	-80.40473	0.19	Commercial	Open Drainage	concrete	curb and gutter	NE58	10927677.62	3576081.023
45	Crab Creek	50500011802	37.13006	-80.40235	2.40	Commercial	Closed Pipe	RCP	Circular	NE58	10928379.66	3576498.868
46	Crab Creek	50500011802	37.13159	-80.39265	2.52	Commercial	Closed Pipe	HDPE	circular	NE58	10931219.14	3577000.393
47	Crab Creek	50500011802	37.13117	-80.39167	0.79	Commercial	Closed Pipe	HDPE	Circular	NE58	10931499.91	3576840.353
48	Crab Creek	50500011802	37.13168	-80.39172	0.89	Commercial	Open Drainage	curbside	linear	NE58	10931488.15	3577026.377
49	Crab Creek	50500011802	37.13136	-80.3917	0.86	Commercial	Closed Pipe	HDPE	Circular	NE58	10931492.89	3576908.921
50	Crab Creek	50500011802	37.12992	-80.3915	2.30	Commercial	Closed Pipe	HDPE	Circular	NE58	10931539.41	3576386.297
51	Crab Creek	50500011802	37.12955	-80.39064	0.88	Commercial	Closed Pipe	HDPE	Circular	NE58	10931788.68	3576244.835
52	Crab Creek	50500011802	37.12895	-80.3903	3.84	Commercial	Closed Pipe	RCP	Circular	NE58	10931883.43	3576025.844
56	Crab Creek	50500011802	37.12342	-80.42729	10.83	Institutional	Closed Pipe	HDPE	circular	NE58	10921060.45	3574230.2
58	Crab Creek	50500011802	37.12165	-80.42141	22.44	Institutional	Closed Pipe	HDPE	circular	NE58	10922761.01	3573549.225
34A	Crab Creek	50500011802	37.12997	-80.41498	0.00	Institutional	Closed Pipe	CMP	circular	NE58	10924697.77	3576541.942
44A	Crab Creek	50500011802	37.1289	-80.40478	0.15	Commercial	Closed Pipe	CMP	Circular	NE58	10927663.51	3576091.026

Appendix D - BMP 5.1 VSMP Approval Letter

TO BE PROVIDED

Appendix E - BMP 5.2 SWM Facility Tracking Database

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	TOC Project Number	Parcel Number	Current Land Use	Impervious Acres Treated	Date Brought Online
194	2017-2018	Bioretention	RU04	Elliots Creek	TBD	Harmon/Shelor Parking Lot	2435 Roanoke St	10940972.4	3578557.297	N	N	pre 7/1/2014	01898		Commercial	TBD	2/1/2018
195	2017-2018	Bioretention	NE59	Stroubles Creek	0.66	New River Village Townhomes BR North	Bozeman Trail	10916031.00000	3589751.00000	N	Pending		02008		Residential	TBD	11/7/2017
196	2017-2018	Bioretention	NE59	Stroubles Creek	0.83	New River Village Townhomes BR Middle	Along Village Lane	10916038.21	3589584.217	N	Pending		02008		Residential	TBD	11/7/2017
197	2017-2018	Bioretention	NE59	Stroubles Creek	1.78	New River Village Townhomes BR South	End of Lunaria Lane	10915815.00000	3589612.00000	N	Pending		02008		Residential	TBD	11/7/2017
198	2017-2018	Extended Detention	NE58	Crab Creek	2.40	670 Scattergood	670 Scattergood	10922122.00000	3580164.00000	N	N	pre 7/1/2014	01913		Commercial	TBD	3/3/2017
199	2017-2018	Underground Detention	NE59	Slate Branch	2.32	Aldi	2265 North Franklin St	10923204.00000	3587620.00000	N	Y	6/22/2017	02112		Commercial	2.26	6/25/2018
200	2017-2018	Bioretention	RU07	Wilson Creek	0.98	Siteworks	2264 Prospect Dr	10939368.00000	3580423.00000	N	Y	8/2/2017	02063		Commercial	TBD	5/30/2018
201	2016-2017	Detention	NE59	Slate Branch	7.25	Sturgill East	Florence Dr	10918604.00000	3593668.00000	N	Y	10/10/2008	00824		Residential	1.859498	5/2/2017
202	2016-2017	xtended Detention/Retentic	NE59	Slate Branch	10.43	Sturgill West	End of Siena Dr	10917735.00000	3593421.00000	N	Y	10/10/2008	00824		Residential	1.449797	5/2/2017
203	2017-2018	Bioretention	NE59	Slate Branch	0.18	Red Oak Self Storage	End of Red Oak Dr	10924058.00000	3591752.00000	N	Pending		02002		Commercial	0.18	8/1/2017

	DEQ USE								Town Use												
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ID	MS4 Permit Year	BMP Type	HUC	Impaired Waters	Impervious Area Treated (Acres)	Pervious Area Treated (Acres)	Acres Treated (GIS)	No. of Acres Treated (site plan)	Pond Name	Nearest Address	Easting	Northing	Town Maintained Y/N	Maintenance Agreement Y/N	Maint Agreement date	TOC Project Number	Parcel Number	Current Land Use	Acres Treated (site plan)	Date Brought Online	Most Recent Inspection Date
190	2016-2017	Bioretention Filter	NE58	Crab Creek	2.001977	1.138023	3.14	3.14	200 Scattergood Dr BR 1	200 Scattergood Dr	10923699.26500	3580672.56000	No	Yes	12/16/2016	02015	033540	Commercial	2.04	6/26/2017	
114	2008-2009	Detention	NE59	Slate Branch	2.06831	1.354716	3.423026	0.92	3W Corp Mini Storage	5 Midway Plaza Driv	10923291.52	3593526.526	No	No		00521	030248	Commercial	0	6/30/2002	6/26/2018
198	2016-2017	Extended Detention	NE58	Crab Creek	0.632882	1.767118	2.4	2.40	670 Scattergood	670 Scattergood	10922122.00000	3580164.00000	N	N (approved pre	7/1/2014)	01913		Commercial	TBD	3/3/2017	
111	2008-2009	Detention	RU04	Elliots Creek	1.396808	0.731797	2.128605	2.16	84 Lumber	2245 Roanoke St	10938669.87100	3578093.92100	No	No		00562		Commercial		6/30/2003	4/25/2017
108	2008-2009	Detention	NE59	Slate Branch	1.476931	3.530228	5.007159	4.58	Adventure World	200 Midway Plaza D	10922861.57320	3592770.57968	No	No		00595		Commercial		6/30/2004	6/26/2018
73	2016-2017	Bioretention Filter	RU07	Wilson Creek	0.426573	0.31158	0.738153	0.80	AEP Sub Station Bio-Retention	3785 Kirby Dr	10949202.05700	3579340.13500	No	Yes?		02016	140889	Commercial	0.70	12/1/2016	7/19/2017
172	2008-2009	Bioretention Filter	NE58	Crab Creek	1.140252	0.143933	1.284185	TBD	AEP Tech Drive Station	Falling Branch Indus	10933568.50500	3573717.18200	No	Yes	09/16/08	00822		Commercial		6/30/2009	4/26/2018
124	2008-2009	Detention	NE59	Slate Branch	0.500851	0.134906	0.635757	TBD	Affordable Efficiencies, Inc	1045 Peppers Ferry	10917148.96600	3588810.94500	No	No		00404		Commercial		6/30/1998	6/13/2017
106	2008-2009	Detention	NE59	Slate Branch	0.711255	0.246419	0.957674	0.99	Affordable Self Storage	1035 Peppers Ferry	10917015.30300	3589032.31700	No	No		00621		Commercial		6/30/2006	6/13/2017
136	2009-2010	Water Quality Swale	RU07	Wilson Creek	Not Installed	Not Installed	Not Installed	3.40	Air-Gas (no BMP on site)	2260 Prospect Dr	10939953.99730	3580037.93101	No	No		00666	025838	Commercial		NO BMP	5/31/2016
70	2008-2009	Detention	NE58	Crab Creek	2.003789	7.927084	9.930873	TBD	Alder Lane Pond	260 Alder Lane	10917321.33290	3584842.10176	Yes	N/A		01959	013232	Residential		6/30/2013	6/19/2018
199	2017-2018	Underground Detention	NE59	Slate Branch	2.26	0.06	2.32	2.32	Aldi	2265 North Franklin	10923204.00000	3587620.00000	N	Y	6/22/2017	02112		Commercial	2.32	6/25/2018	
80	2009-2010	Bioretention Filter	NE58	Crab Creek	2.228823	4.620234	6.849057	8.26	Aquatic Center Bioretention East	595 N. Franklin St	10925895.58900	3579241.11546	Yes	N/A		00642	070356	Commercial		7/26/2010	6/19/2018
79	2009-2010	Bioretention Filter	NE58	Crab Creek	1.747842	3.896207	5.644049	1.09	Aquatic Center Bioretention West	595 N. Franklin St	10925178.12210	3579432.82347	Yes	N/A		00642	010896	Commercial		7/26/2010	6/26/2018
130	2008-2009	Detention	NE59	Slate Branch	3.827417	4.085946	7.913363	1.00	Arbor View Phase 5/Burch Property Arbor View Plant	95 Ponderosa Dr	10923699.55000	3591426.78600	Yes	No		00663		Commercial		6/30/1992	6/26/2018
31	2008-2009	Detention	NE58	Crab Creek	0.789699	1.54625	2.335949	2.42	B&B Storage Mini Storage	645 Radford St	10922847.05690	3575775.66549	No	No		00575		Commercial		6/30/2004	6/18/2018
3	2008-2009	Extended Detention	NE58	Crab Creek	0.262966	0.582838	0.845804	0.79	Badger St. Mini-Storage	925 Radford St	10921458.18270	3575737.49096	No	No		00812		Commercial		6/30/2009	6/18/2018
151	2013-2014	Bioretention Filter	RU07	Wilson Creek	2.300788	1.835072	4.13586	5.00	C.C.S., Inc.	2285 Prospect Dr N	10940018.78910	3579454.64015	No	Yes		01065 as	140661	Commercial	2.48	11/12/2009	3/8/2017
4	2008-2009	Underground Detention	NE58	Crab Creek	2.489987	8.117877	10.607864	13.32	Cambria Crossing Phase 1	Welch Circle	10921243.58370	3585033.86402	No	No		00639		Residential		6/30/2006	
74	2008-2009	Bioretention Filter	NE58	Crab Creek	3.29171	1.253732	4.545442	4.25	Cambria Point Self-Storage	Behind 405 Cambria	10922104.64850	3585377.92247	No	Yes	06/09/08	00810	140652	Commercial		8/24/2009	6/9/2017
53	2008-2009	Detention	NE58	Crab Creek	0.519182	0.459399	0.978581	1.22	Cambriatowne	End of Collins St	10928785.42210	3580105.49460	No	No		01815		Residential		6/30/1995	5/10/2017
23	2008-2009	Detention	NE58	Crab Creek	1.558657	2.185378	3.744035	3.46	Charleston Place Townhomes	Republic and Lester	10929685.08500	3579449.87766	No	No		00622		Residential		9/9/2009	11/30/2017
173	2008-2009	Bioretention Filter	RU07	Wilson Creek	0.891345	1.217823	2.109168	TBD	CHP Energy Services Warehouse North	400 Industrial Dr	10940496.28850	3580380.01670	No	Pending		00653		Commercial		6/30/2007	6/29/2017
85	2008-2009	Bioretention Filter	RU07	Wilson Creek	0.24786	0.345003	0.592863	TBD	CHP Energy Services Warehouse South	400 Industrial Dr	10940496.28850	3580380.01670	No	Pending		00653		Commercial		6/30/2007	6/29/2017
88	2008-2009	Detention	RU07	Wilson Creek	2.40236	4.605831	7.008191	6.65	Christiansburg Baptist Church	2895 Roanoke St	10944926.03610	3579134.19075	No	No		00561		Commercial		6/30/2003	2/7/2017
5	2008-2009	Detention	NE58	Crab Creek	4.588902	11.625618	16.21452	16.58	Christiansburg Middle Front	1205 Buffalo Dr.	10922648.69050	3573607.05433	No	No		00517		Commercial		Montgomery County MS4	
6	2008-2009	Detention	NE58	Crab Creek	5.121756	20.428242	25.549998	27.26	Christiansburg Middle Rear	1205 Buffalo Dr.	10921278.64040	3574118.19463	No	No		00517		Commercial		Montgomery County MS4	
105	2008-2009	Detention	NE59	Slate Branch	1.076946	0.406718	1.483664	1.50	Church Of Jesus Christ Apostolic	783 Stafford Dr	10918741.42600	3591842.61100	No	No		00628		Commercial		5/28/2009	5/24/2017
131	2008-2009	Detention	RU07	Wilson Creek	53.526438	120.233562	173.76	173.76	CIP 1 Big Pond	471 Houchins Rd.	10941048.69530	3581185.25456	Yes	N/A		01981	120346	Open Land		no plans in fold	6/20/2018
132	2008-2009	Extended Detention	RU07	Wilson Creek	5.50667	11.340416	16.847086	13.84	CIP 2 Smaller WQ	555 Industrial Dr.	10939323.43490	3581354.52540	Yes	N/A		01054	160190	Open Land		8/13/2008	6/20/2018
49	2008-2009	Detention	NE58	Crab Creek	0.591252	0.289353	0.880605	0.95	Clearview Townhomes	Wimmer and Clearv	10922953.24710	3578212.81479	No	No		00399		Residential		6/30/1997	6/18/2018
59	2008-2009	Detention	NE58	Crab Creek	1.341452	5.39125	6.732702	TBD	College and Depot St Intersection	560 College Street	10924378.52360	3574998.84220	Yes	N/A				Residential		couldn't find in	6/18/2018
24	2008-2009	Detention	NE58	Crab Creek	0.036682	0.040082	0.076764	0.66	College St Apts North	1105-1145 College S	10922781.40450	3573212.65652	No	No		00617		Residential		6/30/2007	6/15/2017
26	2008-2009	Detention	NE58	Crab Creek	0.049735	0.380734	0.430469	2.02	College St Apts South	adjacent to 1145 Co	10922676.72540	3573051.82956	No	No		00617		Residential		6/30/2007	6/15/2017
149	2013-2014	Bioretention Filter	RU07	Wilson Creek	1.196823	0.513177	1.71	1.71	Collins Property North	2340 Roanoke St (re	10939623.28300	3579259.02500	No	Yes		01900	003759	Commercial	1.39	8/20/2013	5/17/2017
148	2013-2014	Bioretention Filter	RU04	Elliots Creek	1.858739	0.251261	2.11	TBD of 2.11	Collins Property South	2340 Roanoke St (bu	10939575.75700	3578789.72200	No	Yes		01900	003759	Commercial	1.75	8/20/2013	5/17/2017
147	2013-2014	Underground Detention	RU04	Elliots Creek	0.271524	0.014629	0.286153	TBD of 2.4	Collins Property Underground	2340 Roanoke St	10939488.16100	3578768.17200	No	Yes		01900	003759	Commercial	1.97	8/20/2013	
35	2008-2009	Detention	NE58	Crab Creek	0.590103	0.535599	1.125702	1.20	Corner Stone Townhouses Ph 1	1422 Scott Street	10934547.82900	3578083.65100	No	No		00549		Residential		6/30/2000	5/17/2017
22	2008-2009	Detention	NE58	Crab Creek	0.337971	0.617018	0.954989	1.78	Corner Stone Townhouses Ph 2	1473 Scott St	10934552.88300	3577695.50930	No	No		00549		Residential		6/30/2002	5/17/2017
181	2016-2017	Sand Filter	NE59	Slate Branch	0.5018247	0.5681753	1.07		Corning Nitrogen Facility	3050 North Franklin	10922147.48900	3591604.62100	No			02019	003993	Commercial		1/5/2017	
126	2008-2009	Detention	RU04	Elliots Creek	4.5685711	10.36108718	14.92965828	TBD	Cracker Barrel	30 Hampton Blvd	10942736.72050	3579563.84649	No	No		00140		Commercial		6/30/1988	1/24/2017
110	2008-2009	Infiltration	RU04	Elliots Creek	0.224558	0.245442	0.47	0.47	Creative Family Solutions	180 Teel St	10938458.77500	3578708.72500	No	No		00580		Commercial		6/30/2004	2/7/2017
182	2016-2017	Bioretention Filter	NE58	Crab Creek	0.578154	0.231846	0.81	0.81	Dairy Queen Bioretention	950 North Franklin S	10924437.45200	3580855.40700	No	Yes	8/2/2016	02036	004583	Commercial	0.59	8/8/2016	
183	2016-2017	Underground Detention	NE58	Crab Creek	0.411181	0.088819	0.5	1.39	Dairy Queen Underground	950 North Franklin S	10924608.00800	3580748.74000	No	Yes	8/2/2016	02036	004583	Commercial	N/A	8/8/2016	
150	2013-2014	Extended Detention	RU07	Wilson Creek	3.442075	3.756123	7.198198	2.40	Davenport Energy	2275 Prospect Dr N	10939609.06690	3579448.56377	No	Yes		01056 as	170126	Commercial		11/12/2009	11/30/2017
29	2008-2009	Underground Detention	NE58	Crab Creek	0.887758	1.96697	2.854728	3.48	Deli-Mart # 22	1250 W Main St	10922948.88680	3572505.73000	No	No		00584		Commercial		6/30/2004	
76	2008-2009	Extended Detention	NE58	Crab Creek	0.21729	0.241373	0.458663	TBD of 7.16	Depot St. Townhomes	Behind 10 - 40 Stati	10928026.33400	3580521.06700	No	Yes		00841		Residential		6/13/2014	6/15/2017
158	2008-2009	Manufactured BMP	NE58	Crab Creek	0.10616	1.227107	1.333267	TBD of 7.16	Depot St. Townhomes Filterra	adjacent to 40 Stati	10928026.33400	3580521.06700	No	Yes		00841		Residential		6/13/2014	6/15/2017
178	2014-2015	Detention	NE58	Crab Creek	31.750564	54.949436	86.7	86.7	Diamond Hills Park SWM Basin	105 Oak Tree Boule	10924313.21	3583579.883	Yes	No		01965	035570	Commercial	11.00	04/14/14	6/27/2018
60	2008-2009	Detention???	NE58	Crab Creek	127.869909	362.230091	490.1	490.10	Edgemont of Diamond Hill	Multiple Addresses	10920015.63120	3581457.19042	Yes	N/A		01965	033160	Residential		5/30/2014	9/20/2017
119	2016-2017	Enhanced Extended Detention	RU04	Elliots Creek	3.209877	2.470123	5.68	3.53?	Fairfield Inn / Homewood Suites	2659 Roanoke St	10943141.57200	3578265.97000	No	Yes	05/28/14	01999	036008	Commercial		7/1/2016	6/20/2017
133	2008-2009	Detention	RU04	Elliots Creek	13.06	2.94		15.99	Falling Branch	Glade Dr & Cullen C	10941899.17280	3577338.24936	Yes	N/A		00931	030406	Residential		6/30/1991	4/26/2018
7	2008-2009	Detention	NE58	Crab Creek	4.44533	15.95467	20.4	TBD	Falling Branch Elementary	735 Falling Branch R	10936410.68200	3574973.71800	No	No				Commercial		Montgomery County MS4	
8	2008-2009	Enhanced Extended Detention	NE58	Crab Creek	30.311596	128.788404	159.1	159.10	Falling Branch Industrial Park	Technology Dr	10935341.94050	3574158.59277	No	Yes	10/19/10	01979		Commercial		9/6/2012	4/26/2018
154	2013-2014	Bioretention Filter	NE58	Crab Creek	0.087515	0.235343	0.322858	0.31	Fisher St Townhomes	115 Fisher Street	10936924.22820	3577977.05048	No	Yes		01899	010610	Residential		4/16/2014	6/22/2017
159	2013-2014	Underground Detention	NE58	Crab Creek	0.000288	0.160041	0.160329	TBD of 0.31	Fisher St Townhomes Underground	115 Fisher Street	10936856.57400	3577963.45500	No	Yes		01899	010610	Residential		4/16/2014	6/22/2017
120	2008-2009	Detention	RU04	Elliots Creek	0.425785	0.168645	0.59443	TBD	Fleetwood Homes	1340 W Main Street	10923173.51400	3571842.82300	No	No		00462		Commercial		6/30/1999	6/21/2017
48	2008-2009	Detention	NE58	Crab Creek	5.625952	2.343087	7.969039	6.00	Food Lion on Roanoke St.	1530 Roanoke St.	10935206.89920	3577374.77586	No	No		00402		Commercial		6/30/1997	6/15/2017
58	2008-2009	Infiltration	NE58	Crab Creek	0.124908	0.027259	0.152167	0.27	Forest Street Townhomes	1015-1045 Forest St	10929286.52830	3578548.40297	No	No		00457		Residential		6/30/1999	5/9/2017
81	2009-2010	Extended Detention	NE58	Crab Creek	0.936313	13.283514	14.219827	14.78	Good Samaritan Hospice	1160 Moose Dr	10922400.88730	3572980.38453	No	Yes		00846	008095	Commercial		7/13/2010	5/16/2017
141	2011-2012	Infiltration	RU07	Wilson Creek	1.16	0.45	1.61	1.36	Good Shepherd Baptist Church	155 Dunlap Drive	10945717.00860	3579398.24421	No	Yes		01076	071134	Commercial		6/30/2012	6/21/2017
191	2016-2017	Bioretention Filter	NE58	Crab Creek	0.98	0.45	1.43	1.43	Graceway Bioretention	135 Scattergood Dr	10924322.07800	3581379.01800	No	Yes	7/14/2017	02000	026162	Commercial	0.98	9/16/2016	
192	2016-2017	Detention	NE58	Crab Creek	1.38	2.3	3.68	3.68	Graceway Detention South	135 Scattergood Dr	10924330.13300	3581314.57400	No	Yes	7/14/2017	02000	026162	Commercial	N/A	9/16/2016	
193	2016-2017	Underground Detention	NE58	Crab Creek	0.35	0.14	0.49	0.49	Graceway Underground	135 Scattergood Dr	10924244.30000	3581253.46200	No	Yes	7/14/2017	02000	026162	Commercial	N/A	9/16/2016	
129	2008-2009	Retention	RU07	Wilson Creek	1.6265631	18.9334369		20.56	Hampton Blvd Pond	95 Hampton Blvd	10943253.55640	3580201.31359	No	No		00082		Commercial		6/30/1985	6/21/2017

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61	2008-2009	Detention	NE58	Crab Creek	28.321751	47.000263	75.322014	75.32	Hans Meadow	240 Village Lane	10935422.12140	3579348.62421	Yes	N/A		01405	090607	Residential		6/30/2004	6/20/2018
89	2008-2009	Detention	RU04	Elliots Creek	1.623974	1.310782	2.934756	3.44	Harbor of Hope Church Front	2720 Roanoke St	10943739.69700	3579264.75124	No	No		00590		Commercial		6/30/2005	3/8/2017
90	2008-2009	Detention	RU07	Wilson Creek	1.784136	5.076301	6.860437	5.64	Harbor of Hope Church Rear	2720 Roanoke St	10943695.42620	3579881.93874	No	No		00590		Commercial		6/30/2005	3/8/2017
87	2008-2009	Extended Detention	RU07	Wilson Creek	1.449902	1.500098	2.95	2.95	Harley-Davidson	2700 Roanoke St	10943352.68550	3579753.98241	No	No		00667		Commercial		6/26/2009	6/21/2017
194	2017-2018	Bioretention	RU04	Elliots Creek	1.644618	1.055382	2.7	TBD	Harmon/Shelor Parking Lot	2435 Roanoke St	10940972.4	3578557.297	N	N (approved pre 7/1/2014)		01898		Commercial	TBD	2/1/2018	
33	2008-2009	Detention	NE58	Crab Creek	0.104099	0.533991	0.63809	TBD	Haymaker St Apartments	Haymaker & Liberty	10930449.96010	3577173.29188	No	No		00567		Residential		6/30/2003	5/9/2017
170	2008-2009	Infiltration	NE58	Crab Creek	0.113866	0.246339	0.360205	0.26	Haymaker St Apartments Infiltration A	Next to 143 Haymal	10930773.56800	3577420.48200	No	No		00567		Residential		6/30/2003	5/9/2017
171	2008-2009	Infiltration	NE58	Crab Creek	0.007055	0.056019	0.063074	0.04	Haymaker St Apartments Infiltration B	Next to 131 Haymal	10930710.08500	3577617.72200	No	No		00567		Residential		6/30/2003	5/9/2017
21	2008-2009	Detention	NE58	Crab Creek	3.669807	7.012134	10.681941	TBD	Henley Place	Behind 1650 -1680 '	10921299.22800	3584495.98100	No	No		01061		Residential		6/30/2006	6/9/2017
46	2008-2009	Underground Detention	NE58	Crab Creek	2.11873	0.04127	2.16	2.16	Hokie Honda / Hyundai Front	2040 Roanoke St	10937541.68160	3578210.02247	No	No		00429		Commercial		6/30/1998	
123	2008-2009	Detention	RU04	Elliots Creek	3.422968	1.417032	4.84	4.84	Hokie Honda / Hyundai Rear	2040 Roanoke St	10937425.56620	3578848.73467	No	No		00429		Commercial		6/30/1998	6/22/2017
160	2011-2012	Bioretention Filter	NE59	Slate Branch	0.116814	0.053847	0.170661	TBD of 0.94	Holiday Inn Biofilter Front	99 Bradley Drive	10921413.97800	3588396.07200	No	Yes	04/23/10	01057	032241	Commercial		8/31/2011	6/27/2018
140	2011-2012	Bioretention Filter	NE59	Slate Branch	0.217606	0.094515	0.312121	TBD of 0.94	Holiday Inn Biofilter North	99 Bradley Drive	10921255.47660	3588442.70857	No	Yes	04/23/10	01057	032241	Commercial		8/31/2011	6/27/2018
161	2011-2012	Bioretention Filter	NE59	Slate Branch	0.235579	0.063689	0.299268	TBD of 0.94	Holiday Inn Biofilter South	99 Bradley Drive	10921255.47660	3588442.70857	No	Yes	04/23/10	01057	032241	Commercial		8/31/2011	6/27/2018
116	2008-2009	Detention	RU04	Elliots Creek	0.692461	0.937539	1.63	1.63	Holiday Inn Express	2725 Roanoke St	10943681.22400	3578975.55200	No	No		00513		Commercial		6/30/2001	6/20/2017
16	2008-2009	Detention	NE58	Crab Creek	0.771444	1.566311	2.337755	1.78	Holy Spirit Catholic Church	355 Independence I	10922986.61560	3581326.06184	No	No		00560	032621	Commercial		6/30/2003	6/21/2017
72	2008-2009	Detention	NE58	Crab Creek	3.302856	6.677155	9.980011	10.17	Huff Heritage	Huff Heritage Lane	10935902.45140	3575488.15861	Yes	N/A		00629	121009	Residential		8/27/2009	6/20/2018
37	2008-2009	Detention	NE58	Crab Creek	1.418952	2.642186	4.061138	4.46	Hunters Ridge Phase 2	Behind 230 Hunters	10921787.37790	3584309.18836	No	No		00502		Residential		6/30/2001	6/9/2017
38	2008-2009	Detention	NE58	Crab Creek	0.711295	0.578228	1.289523	1.83	Hunters Ridge Phase 3	Adjacent to 1646 Pr	10921786.02370	3584769.95515	No	No		00502		Residential		6/30/2001	6/9/2017
128	2008-2009	Detention	RU04	Elliots Creek	Never Built	Never Built	Never Built	TBD	Interstate - Falling Branch Interchange	Ever Built?	10939554.11500	3576501.43000	No	No		N/A		Open Land		Not Constructe	VDOT
127	2008-2009	Detention	RU04	Elliots Creek	VDOT	VDOT	VDOT	TBD	Interstate - Near cracker barrel	30 Hampton Blvd	10942309.58510	3579215.98191	No	No				Commercial		VDOT	VDOT
41	2008-2009	Detention	NE58	Crab Creek	0.111921	0.284217	0.396138	0.33	John Cromer Garage	845 E. Main	10928348.65900	3580265.65600	No	No		00484		Commercial		6/30/2000	3/8/2017
62	2008-2009	Detention	NE58	Crab Creek	1.800887	10.17878	11.979667	11.94	Kamran	355 Warren St	10922121.59100	3577544.69772	Yes	N/A		01679	031065	Residential		6/30/1992	6/18/2018
184	2016-2017	Manufactured BMP	NE58	Crab Creek	6.5818	1.463632	8.045432	1.61	Kroger	555 North Frankllin	10925843.07700	3578590.61500	No	Yes	2/22/2016	00471	035647	Commercial	1.39	3/30/2017	
45	2008-2009	Detention	NE58	Crab Creek	0.32865	0.517412	0.846062	TBD	Kyle Manor	College and Buffalo	10922905.29750	3573513.04787	No	No		00451		Residential		6/30/1999	5/16/2017
36	2008-2009	Retention Pond	NE58	Crab Creek	Removed	Removed	Removed	TBD	Larry Martin Site Plan (BMP removed)	2886 Roanoke St	10945051.00000	3579643.31100	No	No		00527		Commercial		Has Been Remc	3/30/2015
13	2008-2009	Detention	NE58	Crab Creek	0.251631	0.336157	0.587788	0.46	Majestic Dr. Townhomes	55 Majestic Dr	10919271.18300	3588278.94718	No	No		00541		Residential		6/30/2002	6/27/2018
179	2007	Detention	NE59	Slate Branch	35.607099	64.535419	100.142518	TBD	Market Place Rt 114 eastmost	Along Rt 114 ext	behind Office Depot		No	No		00990 and 01368		Commercial		NOT A BMP	10/11/2016
180	2007	Detention	NE59	Slate Branch	0.310129	1.201511	1.51164	TBD	Market Place Rt 114 westmost	Along Rt 114 ext	behind Office Depot		No	No		00990 and 01368		Commercial		NOT A BMP	10/11/2016
91	2008-2009	Detention	NE59	Slate Branch	153.956	66.441		220.40	Market Place/Arbor View Pond Modification	Between 2500 and :	10922729.37700	3589509.52500	No	No		00990 and 01371		Commercial		6/30/1990	6/13/2017
47	2008-2009	Detention	NE58	Crab Creek	1.880178	1.738141	3.618319	4.50	Marshall Concrete Batch Plant	700 Block Lane	10928134.59140	3583705.71354	No	No		00415		Commercial		6/30/1998	11/30/2016
77	2009-2010	Manufactured BMP	NE58	Crab Creek	0.479882	0.101396	0.581278	0.59	McDonalds	1595 N. Franklin St	10925038.01170	3583992.49153	No	Yes	06/25/09	00842	013213	Commercial		3/22/2010	6/13/2017
142	2012-2013	Extended Detention	RU04	Smith Creek	2.151566	28.825251	30.976817	8.76	Melinda's Melody / Kensington	450 Thaddeus Ln N\	10919753.69820	3572275.48111	No	Yes	12/16/10	01060	170238	Residential		10/8/2012	3/7/2017
122	2008-2009	Detention	NE59	Slate Branch	3.404886	12.814724	16.21961	15.50	Merchants Tire and Auto / Halberstadt Triangle Plaza	400 Peppers Ferry F	10920366.80200	3588219.85443	No	No		00443 an d 01383		Commercial		6/30/1999	6/27/2018
125	2008-2009	Detention	NE59	Slate Branch	0.563234	0.38286	0.946094	TBD	Midas Muffler (Now Enterprise)	55 Ponderosa Drive	10923396.56000	3591519.31911	No	No		00356 and 00663		Commercial		6/30/1996	6/26/2018
27	2008-2009	Detention	NE58	Crab Creek	0.254649	0.196326	0.450975	TBD	Middle Ct Townhomes	Moose and Buffalo	10922586.25520	3573441.04044	No	No		00599		Residential		6/30/2005	3/7/2017
115	2008-2009	Infiltration	RU07	Wilson Creek	Not Installed	Not Installed	Not Installed	2.00	Midway Discount Center (BMP never built)	215 County Dr	10924182.61400	3592542.02100	No	No		00516		Commercial		NEVER BUILT	5/16/2016
112	2008-2009	Detention	NE59	Slate Branch	0.193928	1.11763	1.311558	1.41	Midway Office Park (AHV Office)	20 Midway Plaza Dr	10923299.77400	3592791.01300	No	No		00538		Commercial		6/30/2002	6/2/2017
157	2008-2009	Bioretention Filter	NE58	Crab Creek	0.215771	0.886979	1.10275	TBD of 4.45	Mink Street Subdivision Ashton Ct East	105 Ashton Ct.	10919592.65840	3575224.94790	No	No		00665		Residential		1/20/2012	6/18/2018
2	2008-2009	Bioretention Filter	NE58	Crab Creek	0.330039	1.585716	1.915755	TBD of 4.45	Mink Street Subdivision Ashton Ct West	100 Ashton Ct.	10919592.65840	3575224.94790	No	No		00665		Residential		1/20/2012	6/18/2018
82	2011-2012	Manufactured BMP	NE58	Crab Creek	0.149618	0.002698	0.152316	2.45	Montgomery County Courthouse	55 E Main St	10926880.34510	3576462.42473	No	Yes		00845	071124	Commercial		Montgomery C	3/30/2017
83	2011-2012	Underground Detention	NE58	Crab Creek	0.647207	0.032956	0.680163	2.45	Montgomery County Courthouse	55 E Main St	10926836.26030	3576436.75746	No	Yes		00845	071124	Commercial		Montgomery C	3/30/2017
51	2008-2009	Infiltration	NE58	Crab Creek	6.1	24.86	30.96	TBD	Mt Zion Holy Church of America	385 Depot St	10926669.41720	3579204.11970	No	No		00194		Commercial		6/30/1992	12/1/2016
113	2008-2009	Detention	RU04	Elliots Creek	0.495276	0.298844	0.79412	TBD	Mud Pike Mini Storage	1335 Mudpike	10922463.40120	3572335.54529	No	No		00526		Commercial		6/30/2002	3/07/2017
52	2008-2009	Detention	NE58	Crab Creek	2.72527	4.135128	6.860398	TBD	New Energy Dist Inc (BMP may be gone)	2300 Prospect Dr	10940425.96350	3580239.57420	No	No		00152		Commercial			6/29/2017
92	2008-2009	Detention	NE59	Slate Branch	0.696094	15.593906	16.29	16.29	New River Village Phase 1 A	Across from Albert	10915579.84800	3589282.70300	No	No		00781		Residential		6/30/2002	6/6/2017
93	2008-2009	Detention	NE59	Slate Branch	26.633716	130.756284	157.39	157.39	New River Village Phase 1 B	Behind 195 Sequoia	10915662.86300	3590295.23200	No	No		00781		Residential		6/30/2002	2/14/2017
94	2008-2009	Detention	NE59	Slate Branch	4.132847	17.570636	21.703483	22.26	New River Village Phase 5	Behind 180 Aster La	10915834.77450	3591596.34196	No	No		00781		Residential		6/30/2005	6/6/2017
196	2017-2018	Bioretention	NE59	troubles Cree	0.252689	0.577311	0.83	0.83	New River Village Townhomes BR Middle	Along Village Lane	10916031.00000	3589751.00000	N	Pending		02008		Residential	TBD	11/7/2017	
195	2017-2018	Bioretention	NE59	troubles Cree	0.092933	0.567067	0.66	0.66	New River Village Townhomes BR North	Bozeman Trail	10916038.21	3589584.217	N	Pending		02008		Residential	TBD	11/7/2017	
197	2017-2018	Bioretention	NE59	troubles Cree	0.315271	1.464729	1.78	1.78	New River Village Townhomes BR South	End of Lunaria Lane	10915815.00000	3589612.00000	N	Pending		02008		Residential	TBD	11/7/2017	
43	2008-2009	Detention	NE58	Crab Creek	Not Installed	Not Installed	Not Installed	TBD	Northgate Village Shopping Center Expansion (BMP r	2025 Cambria St	10925859.89290	3584426.33311	NOT Installed per P	No		00476		Commercial		NEVER BUILT	5/24/2016
186	2016-2017	Bioretention Filter	NE58	Crab Creek	0.328552	0.251448	0.58	1.30	Northwest True Value Bioretention	520 Roanoke St	10930333.41400	3576701.56300	No	Yes	8/19/2016	02037	000814	Commercial	0.32	8/24/2016	
188	2016-2017	Grass Channel	NE58	Crab Creek	0.12959	0.26041	0.39	0.79	Northwest True Value Grass Channel East	520 Roanoke St	10930464.31700	3576806.77100	No	Yes	8/19/2016	02037	000814	Commercial	0.52	8/24/2016	
187	2016-2017	Grass Channel	NE58	Crab Creek	0.375436	0.114564	0.49	0.97	Northwest True Value Grass Channel West	520 Roanoke St	10930151.12200	3576801.21500	No	Yes	8/19/2016	02037	000814	Commercial	0.39	8/24/2016	
162	2008-2009	Manufactured BMP	NE59	Slate Branch	5.0651751	3.919549745	8.984724845	TBD	NRV Mall Aqua-Filters at Shoppers Way Front East	Shoppers Way Park	10922029.01000	3590147.25300	No	Pending		00645		Commercial		6/30/2007	
163	2008-2009	Manufactured BMP	NE59	Slate Branch	2.1166649	0.440363067	2.557027967	TBD	NRV Mall Aqua-Filters at Shoppers Way Front Middle	Shoppers Way Park	10921969.34000	3590166.78400	No	Pending		00645		Commercial		6/30/2007	
164	2008-2009	Manufactured BMP	NE59	Slate Branch	2.9066322	0.408468598	3.315100798	TBD	NRV Mall Aqua-Filters at Shoppers Way Front West	Shoppers Way Park	10921808.75000	3590303.50300	No	Pending		00645		Commercial		6/30/2007	
86	2008-2009	Manufactured BMP	NE59	Slate Branch	9.1139326	12.10962531	21.22355791	TBD	NRV Mall Aqua-Filters at Shoppers Way North	Shoppers Way Park	10921679.62700	3590687.61800	No	Pending		00645		Commercial		6/30/2007	
95	2008-2009	Detention	NE59	Slate Branch	30.024347	14.730694	44.755041	TBD	NRV Mall Pond at Shoppers Way	175 Shoppers Way	10921459.22120	3590514.87541	No	No		00645		Commercial		6/30/2007	5/25/2017
96	2008-2009	Detention	NE59	Slate Branch	20.66	2.67	23.33	TBD	NRV Mall Pond North		10920871.22500	3590346.31000	No	No		01787		Commercial		6/30/1988	1/19/2017
97	2008-2009	Detention	NE59	Slate Branch	24.73	11.88	36.61	TBD	NRV Mall Pond West		10920635.41200	3589675.14000	No	No		01410		Commercial		6/30/2006	6/29/2017
17	2008-2009	Detention	NE58	Crab Creek	0.813726	1.294432	2.108158	2.28	NRV VASAP	175 Independence I	10923783.88000	3581637.97128	No	No		01409	009503	Commercial		6/30/2005	6/22/2017
176	2007	Detention	NE58	Crab Creek	1.452133	3.304557	4.75669	TBD	Nugget Ridge	Nugget Ridge Rd an	10922641.39000	357635.94000	No	No		01324		Residential		6/30/1985	5/16/2017
63	2008-2009	Detention	NE58	Crab Creek	0.469438	10.785084	11.254522	12.51	Old Landfill	Wades Lane	10921766.49060	3579408.07292	Yes	N/A		01804	070357	Open Land		6/30/2002	6/27/2018

	DEQ USE								Town Use												
	Town of Christiansburg Permit No. VAR040025																				
ID	MS4 Permit Year	BMP Type	HUC	Impaired Waters	Impervious Area Treated (Acres)	Pervious Area Treated (Acres)	Acres Treated (GIS)	No. of Acres Treated (site plan)	Pond Name	Nearest Address	Easting	Northing	Town Maintained Y/N	Maintenance Agreement Y/N	Maint Agreement date	TOC Project Number	Parcel Number	Current Land Use	Acres Treated (site plan)	Date Brought Online	Most Recent Inspection Date
55	2008-2009	Underground Detention	NE58	Crab Creek	0.972652	1.477348	2.45	2.45	Old School Townhouses (BMP may not exist)	School Lane	10926975.01300	3578450.30300	No	No		00433		Residential		NO BMP?	5/9/2016
166	2009-2010	Detention	NE58	Crab Creek	0.17834	0.128052	0.306392	TBD of 0.8	O'Reilly Auto Parts front	1275 Roanoke St	10933732.18600	3577675.34900	No	Yes		00996	021404	Commercial		7/26/2010	5/18/2017
78	2009-2010	Manufactured BMP	NE58	Crab Creek	0.491312	0.450444	0.941756	TBD of 0.8	O'Reilly Auto Parts Manufactured	1275 Roanoke St	10933682.71970	3577693.71555	No	Yes		00996	021404	Commercial		7/26/2010	5/18/2017
165	2009-2010	Detention	NE58	Crab Creek	0.312957	0.322408	0.635365	TBD of 0.8	O'Reilly Auto Parts Side	1275 Roanoke St	10933616.70000	3577605.37500	No	Yes		00996	021404	Commercial		7/26/2010	5/18/2017
19	2008-2009	Detention	NE58	Crab Creek	0.473315	2.902209	3.375524	TBD	Overlook Court	75 Overlook Dr	10924056.54040	3577722.79345	No	No		00794		Residential		6/30/2005	6/18/2018
189	2015-2016	Manufactured BMP	NE59	Slate Branch	0.511441	0.094941	0.606382	0.12	Panda Express	250 Peppers Ferry F	10921273.91300	3588682.77900	No			02030	028825	Commercial	0.12	2/1/2016	6/26/2018
54	2008-2009	Underground Detention	NE58	Crab Creek	0.592188	0.397812	0.99	0.99	Park Street Townhouses	702-740 Park Street	10930809.24880	3578660.16491	No	No		00532		Residential		6/30/2002	
28	2008-2009	Detention	NE58	Crab Creek	1.19615	5.154292	6.350442	TBD	Peppers Crossing Subdivision	85 Johns Ct	10919693.54900	3587446.38800	Yes	N/A		00593		Residential		6/30/2004	6/19/2018
30	2008-2009	Detention	NE58	Crab Creek	2.500197	2.849958	5.350155	5.17	Pilot Homes Mini-Storage	170 Simmons Rd SE	10938404.72300	3577958.60600	No	No		00577		Commercial		6/30/2004	12/1/2016
39	2008-2009	Detention	NE58	Crab Creek	0.175517	0.50854	0.684057	TBD	Precision Business and Warehouse Front	806 Radford St	10922056.00700	3575454.29200	No	No		00491		Commercial		6/30/2003	6/18/2018
40	2008-2009	Detention	NE58	Crab Creek	0.503993	0.817671	1.321664	TBD	Precision Business and Warehouse Middle	806 Radford St	10922061.01300	3575299.08100	No	No		00491		Commercial		6/30/2003	6/18/2018
64	2008-2009	Detention	NE58	Crab Creek	5.033565	22.810667	27.844232	48.18	R&W Subdivision	Behind 285 Epperly	10929633.71560	3574690.67876	Yes	N/A		01831	032510	Residential		6/30/1995	6/20/2018
75	2008-2009	Extended Detention	NE58	Crab Creek	0.683566	0.80812	1.491686	1.33	R.E. Michels	275 Scattergood Dr	10923302.09210	3581056.97808	No	Yes	11/10/08	00827	036124	Commercial		9/28/2009	6/21/2017
203	2017-2018	Bioretention	NE59	Slate Branch	0.18	0.18		0.18	Red Oak Self Storage	End of Red Oak Dr	10924058.00000	3591752.00000	N	Pending		02002		Commercial	0.18	8/1/2017	
185	2016-2017	Bioretention Filter	NE59	Slate Branch	1.156331	0.640798	1.797129	0.79	Regent Plaza	3225 North Franklin	10923657.74000	3592468.11000	No		8/15/2016	02039	019746	Commercial	0.56	8/14/2016	
155	2013-2014	Bioretention Filter	NE58	Crab Creek	0.092514	0.022562	0.115076	0.09	Rice Maco	1015 Radford Stree	10920807.99300	3575707.23400	No	Yes		01988	010299	Commercial		4/29/2014	6/18/2018
32	2008-2009	Detention	NE58	Crab Creek	0.134929	0.105089	0.240018	TBD	Rice Realty	600 Radford St	10922833.64320	3575680.46971	No	No		00574		Commercial		6/30/2004	6/18/2018
65	2008-2009	Detention	NE58	Crab Creek	25.363824	99.425122	124.788946	121.87	Ridge View Subdivision	1515 Sleepy Hollow	10920788.88820	3583290.90637	Yes	N/A		00753	031232	Residential		6/30/1993	6/19/2018
121	2008-2009	Detention	NE58	Crab Creek	1.995483	3.584872	5.580355	6.70	Rt 114 Mini Storage	710 Peppers Ferry F	10918654.72950	3588099.09703	No	No		00453		Commercial		6/30/1999	12/4/2017
109	2008-2009	Underground Detention	RU04	Elliots Creek	4.399049	2.200951	6.6	6.60	Shelor Dodge	2395 Roanoke St	10940500.71500	3578087.57200	No	No		00581		Commercial		6/30/2004	
117	2008-2009	Underground Detention	RU04	Elliots Creek	0.599994	0.260006	0.86	TBD	Shelor Motor Mile	Across from 240 Jar	10939878.17040	3578004.29023	No	No		00504		Commercial		6/30/2001	
143	2012-2013	Bioretention Filter	RU04	Elliots Creek	0.319748	-0.039748	0.28	0.26	Shelor Service Center Addition East	295 Jarrett Dr SE	10939813.55800	3577623.76900	No	Yes		01902	036084	Commercial			6/20/2017
144	2012-2013	Bioretention Filter	RU04	Elliots Creek	5.158448	2.611552	7.77	0.21	Shelor Service Center Addition West	295 Jarrett Dr SE	10939578.34610	3577566.51355	No	Yes		01902	036084	Commercial			6/20/2017
145	2012-2013	Extended Detention	RU04	Elliots Creek	0.88	0.5	1.38	TBD	Shelor Toyota	2230 Roanoke St	10938867.06580	3578760.88647	No	Yes		01066	020545	Commercial		10/19/2012	6/22/2017
146	2012-2013	Underground Detention	RU04	Elliots Creek	1.5	0.2	1.7	TBD	Shelor Toyota Underground	2230 Roanoke St	10938984.77410	3578740.57397	No	Yes		01066	020545	Commercial		10/19/2012	6/22/2017
107	2008-2009	Infiltration	RU04	Elliots Creek	0.076058	0.206789	0.282847	0.46	Sink's Antiques	2150 Roanoke St	10938270.29000	3578498.77000	No	No		00605		Commercial		6/30/2005	12/1/2016
200	2017-2018	Bioretention	RU07	Wilson Creek	0.66	0.32	0.98	0.98	Siteworks	2264 Prospect Dr	10939368.00000	3580423.00000	N	Y	8/2/2017	02063		Commercial	TBD	5/30/2018	
134	2008-2009	Detention	NE59	Slate Branch	3.982435	10.779105	14.76154	TBD	Slate Creek Commons	Adjacent to 165 Wa	10916829.85600	3589717.88383	Yes	N/A		00589	110420	Residential		12/8/2009	6/27/2018
66	2008-2009	Detention	NE58	Crab Creek	0.455211	2.797978	3.253189	TBD	South Hill Park Addition	360 Auburn Dr.	10923912.97560	3572096.37753	Yes	N/A		00992	030767	Residential		6/30/1991	6/20/2018
152	2013-2014	Bioretention Filter	RU07	Wilson Creek	0.28923	0.24863	0.53786	TBD of 0.79	Southern Refrigeration Bioretention	3235 N Franklin St	10923989.16500	3592671.13900	No	Yes		01915	027584	Commercial		4/29/2014	6/26/2018
169	2013-2014	Detention	RU07	Wilson Creek	0.16556	0.069719	0.235279	TBD of 0.79	Southern Refrigeration Detention	3235 N Franklin St	10924011.57100	3592757.56500	No	Yes		01915	027584	Commercial		4/29/2014	6/26/2018
118	2008-2009	Detention	NE59	Slate Branch	39.383449	40.016551	79.4	79.40	Spradlin Farms	Next to 180 Consto	10921800.20830	3586885.34837	No	No		00488		Commercial		6/30/2000	3/2/2017
98	2008-2009	Detention	NE59	Slate Branch	2.031703	8.694103	10.725806	9.84	Stafford Farms	Adjacent to 225 Me	10917753.27290	3590777.08819	No	No		00788		Residential		6/30/2003	6/29/2017
201	2016-2017	Detention	NE59	Slate Branch	1.859498	21.984315	23.843813	7.25	Sturgill East	Florence Dr	10918604.00000	3593668.00000	N	Y	10/10/2008	00824		Residential	TBD	5/2/2017	5/2/2017
202	2016-2017	Extended Detention/Retention	NE59	Slate Branch	1.449797	14.129203	15.579	10.43	Sturgill West	End of Siena Dr	10917735.00000	3593421.00000	N	Y	10/10/2008	00824		Residential	TBD	5/2/2017	5/2/2017
67	2008-2009	Detention	NE58	Crab Creek	1.372232	5.670913	7.043145	TBD	Sun Village East	470 Wakeman Cour	10927046.78860	3583229.24862	Yes	N/A		01117		Residential		6/30/1984	6/19/2018
68	2008-2009	Detention	NE58	Crab Creek	2.506735	11.793749	14.300484	TBD	Sun Village West	240 Wakeman Cour	10926346.78860	3583119.87362	Yes	N/A		01117		Residential		6/30/1984	6/19/2018
50	2008-2009	Detention	RU07	Wilson Creek	2.924681	1.719017	4.643698	3.67	Super 8 Mini-storage	2840 Roanoke St	10944479.51030	3579605.20088	No	No		00373		Commercial		6/30/1999	2/23/2017
42	2008-2009	Detention	NE59	Slate Branch	7.797561	22.082439	29.88	29.88	Target Pond	195 Conston Ave	10922462.93500	3586200.39900	No	No		00478		Commercial		6/30/2000	2/1/2017
174	2016-2017	Infiltration Basin	NE58	Crab Creek	0.170372	0.579628	0.75	0.75	The Haven (Hill Street)	Behind 202 A- D Hill	10926755.02100	3577598.54900	No	Yes	07/08/16	02007	021114	Residential	0.18	07/01/16	7/19/2017
18	2008-2009	Detention	NE58	Crab Creek	3.316901	3.926097	7.242998	1.08	The Hillside	500 Block Radford S	10923325.31100	3575689.53830	No	No		00633	000161	Residential		6/30/2006	6/18/2018
102	2008-2009	Retention	NE59	Slate Branch	0.427664	34.08352	34.511184	TBD	The Villas at Peppers Ferry Front Pond 1	West of Quin W. St	10920069.69600	3589268.35200	No	No		00588		Residential		6/30/2004	6/26/2018
168	2008-2009	Retention	NE59	Slate Branch	1.255937	8.253102	9.509039	TBD	The Villas at Peppers Ferry Front Pond 2	East of Quin W. Stu	10920317.09200	3589412.08300	No	No		00790		Residential		6/30/2004	6/26/2018
103	2008-2009	Detention	NE59	Slate Branch	4.4	16.19	20.59	TBD	The Villas at Peppers Ferry Middle	East of Patriots Wa	10919975.65900	3590196.96600	No	No		00790		Residential		11/26/2012	5/25/2017
44	2008-2009	Detention	NE58	Crab Creek	0.998692	3.185225	4.183917	4.81	Twin Oaks Phase 1	Adjacent to 770 Re	10929719.98300	3579253.88500	No	No		00461		Residential		6/30/2001	3/8/2017
56	2008-2009	Infiltration	NE58	Crab Creek	0.123267	0.1751	0.298367	0.17	Valley Propane Infiltration 1	225 Cambria Street	10923465.08390	3585264.40961	No	No		00309	031939	Commercial		6/30/1994	6/9/2017
57	2008-2009	Infiltration	NE58	Crab Creek	0.272182	0.927827	1.200009	0.85	Valley Propane Infiltration 2	225 Cambria Street	10923497.24350	3584906.07496	No	No		00309	031939	Commercial		6/30/1994	6/9/2017
9	2008-2009	Detention	NE58	Crab Creek	VDOT	VDOT	VDOT	TBD	VDOT Pond at Bypass / Roanoke St Intersection		10936108.46310	3577712.77389	No	No				Commercial		VDOT	6/15/2017
153	2014-2015	Detention	NE58	Crab Creek	3.6	0.57	4.17	TBD	VDOT pond behind First Church of the Nazarene	860 Peppers Ferry F	10918109.66000	3588454.54800	Yes	Town will assume from VDO		01143		Commercial		10/1/2014	6/27/2018
139	2010-2011	Extended Detention	NE59	Slate Branch	6.85	22.35	29.2	11.88	VDOT Pond for 114	1540 Peppers Ferry	10914222.14110	3589525.23511	Yes	N/A		01034	110869	Open Land		7/1/2010	6/27/2018
138	2010-2011	Detention	NE59	Slate Branch	4.57	0.45	5.02	TBD	VDOT Pond on Quin W Stuart	Quin W. Stuart Blvd	10920369.49240	3588988.08791	Yes	N/A		00790	110093	Commercial		7/1/2010	6/26/2018
69	2008-2009	Detention	NE58	Crab Creek	15.504634	53.395366	68.9	68.90	Vistavia Phase V	George Edward Via	10921941.84840	3580538.57661	Yes	N/A		00725	029844	Residential		6/30/1991	6/19/2018
167	2012-2013	Detention	NE58	Crab Creek	0.01	0.03	0.04	TBD of 0.29	Waffle House Detention	90 Oak Tree Boulev	10924743.69000	3583382.40700	No	Yes	01/12/12	01078	080190	Commercial		11/5/2013	6/14/2017
84	2012-2013	Manufactured BMP	NE58	Crab Creek	0.17884	0.030514	0.209354	TBD of 0.29	Waffle House Filterra	90 Oak Tree Boulev	10924658.40200	3583385.03100	No	Yes	01/12/12	01078	080190	Commercial		11/5/2013	6/14/2017
175	2012-2013	Grass Swale	NE58	Crab Creek	0.094299	0.507707	0.602006	TBD	Waffle House WQ Swale	90 Oak Tree Boulev	10924765.69300	3583285.54900	No	Yes	01/12/12	01078	080190	Commercial		11/5/2013	6/14/2017
99	2008-2009	Detention	NE59	Slate Branch	17.20526	6.919634	24.124894	25.90	Wal-Mart Supercenter Big Pond	Peppers Ferry Rd at	10921276.28300	3588194.33300	No	No		01861		Commercial		6/30/1995	8/11/2017
100	2008-2009	Detention	NE59	Slate Branch	0.769245	4.610189	5.379434	2.70	Wal-Mart Supercenter Small Pond	South of Wal-Mart	10922164.95500	3587553.05700	No	No		01861		Commercial		6/30/1995	6/6/2017
20	2008-2009	Detention	NE58	Crab Creek	1.137415	5.08246	6.219875	4.93	Warren Heights	Behind 670 Warren	10921993.16510	3576414.73457	Yes	N/A		00763		Residential		6/30/1996	6/18/2018
104	2008-2009	Detention	RU07	Wilson Creek	2.566406	3.945679	6.512085	8.24	Wheatland Hills	Behind 222 and 226	10924966.66600	3587070.24000	No	No		00809		Commercial		6/30/1997	10/24/2017
177	2007	Detention	NE58	Crab Creek	1.254752	2.276448	3.5312	TBD	White Oaks	90 Justin Lane	10934652.78	3578431.633	No	No		00550	032256	Residential		6/30/1999	3/22/2017
137	2010-2011	Detention	RU07	Wilson Creek	0.677289	12.177619	12.854908	13.03	White Pine Ct	735 White Pine Dr N	10947763.87380	3581904.13622	Yes	N/A		00923	080053	Open Land		6/30/2001	7/25/2017
10	2008-2009	Detention	NE58	Crab Creek	1.083656	1.928287	3.011943	TBD	Windsong Heights	Behind 135 Melody	10922561.79410	3574648.58774	No	No		00784		Residential		6/30/2003	6/18/2018
11	2008-2009	Detention	NE58	Crab Creek	1.168009	6.065589	7.233598	TBD	Windsor Estates Phase 1	395 Windsor Dr	10918996.34270	3585704.36579	No	No		00792		Residential		6/30/2004	6/6/2017
12	2008-2009	Detention	NE58	Crab Creek	1.731598	15.980915	17.712513	18.05	Windsor Estates Phase 4	490 Windsor Dr	10919369.90410	3586192.97609	No	No		00792		Residential		6/30/2008	6/6/2017