Municipal Separate Storm Sewer System (MS4) Program Plan

October 1, 2016

Fairfax County Public Schools
Department of Facilities Management
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Submitted to the Virginia Department of Environmental Quality in compliance with Permit Number VAR040104

Fairfax County Public Schools Municipal Separate Storm Sewer System (MS4) Program Plan

Contents

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A. Introduction

This MS4 Program Plan documents how Fairfax County Public Schools (FCPS) will meet the requirements of their General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4s). FCPS was originally issued an MS4 permit effective July 8, 2003 (Permit No. VAR040104). The permit was re-issued on July 9, 2008 and again on July 1, 2013. The current five-year permit will expire on June 30, 2018.

Mandated by Congress under the Clean Water Act and implemented in Virginia by the Department of Environmental Quality (DEQ), the purpose of the MS4 permit regulations is to protect water quality. The permit requires FCPS to control the discharge of pollutants to the maximum extent practicable (MEP) by addressing the following six minimum control measures (MCMs):

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

While the basic framework of the permit has not changed, the MS4 Program Plan must be updated to reflect new requirements as well as changes to existing requirements. A schedule for completing these updates is contained in the MS4 permit and is also shown in Table 1 below. These updates will be submitted to DEQ with the appropriate annual report.

Table 1: Schedule of MS4 Program Plan Updates

Program Update Requirement	Permit Reference	Update Completed By
Public Education Outreach Plan	Section II B.1.	12 months after permit coverage
Illicit Discharge Procedures	Section B. 3.	12 months after permit coverage
Operator Owned Stormwater Management Inspection Procedures	Section II B.5	12 months after permit coverage
Identification of Locations Requiring a SWPPP	Section II B.6.b.	12 months after permit coverage

Table 1: Schedule of MS4 Program Plan Updates		
Program Update Requirement	**Permit Reference**	**Update Completed By**
Nutrient Management Plan (NMP) Locations	Section II B.6.c.(1)(a)	12 months after permit coverage
Training Schedule and Program	Section II B.6.	12 months after permit coverage
Daily Good Housekeeping Procedures	Section II B.6.a.	24 months after permit coverage
Storm Sewer and Outfall Map Completed	Section II B.3.a.(3)	48 months after permit coverage
SWPPP Implementation	Section II B.6.b.(3)	60 months after permit coverage with internal goals
NMP Implementation	Section II B.6.c.(1)(b)	60 months after permit coverage with intermediate requirements
TMDL Action Plans		**Update Completed By**
Updated TMDL Action Plans (TMDLs approved before July 2008)	Section I B.	24 months after permit coverage
Chesapeake Bay TMDL Action Plan	Section I C.	24 months after permit coverage
Other TMDL Action Plans (TMDLs approved July 2008 - June 2013)	Section I B.5.	36 months after permit coverage

This 2016 program plan incorporates specific updates that must be completed 36 months after permit coverage: specifically the update to the benthic TMDL action plan to incorporate Difficult Run (Appendix G) and a new bacteria TMDL action plan (Appendix I). This plan also incorporates modifications to Fairfax County's Post-Construction Stormwater Inspection and Maintenance Policies and Procedures (Appendix C) and modifications to the street sweeping program (BMP 6.A) to reflect that the program is now managed by FCPS instead of Fairfax County. FCPS will continue to update the plan annually in accordance with the permit requirements.

B. School System Profile

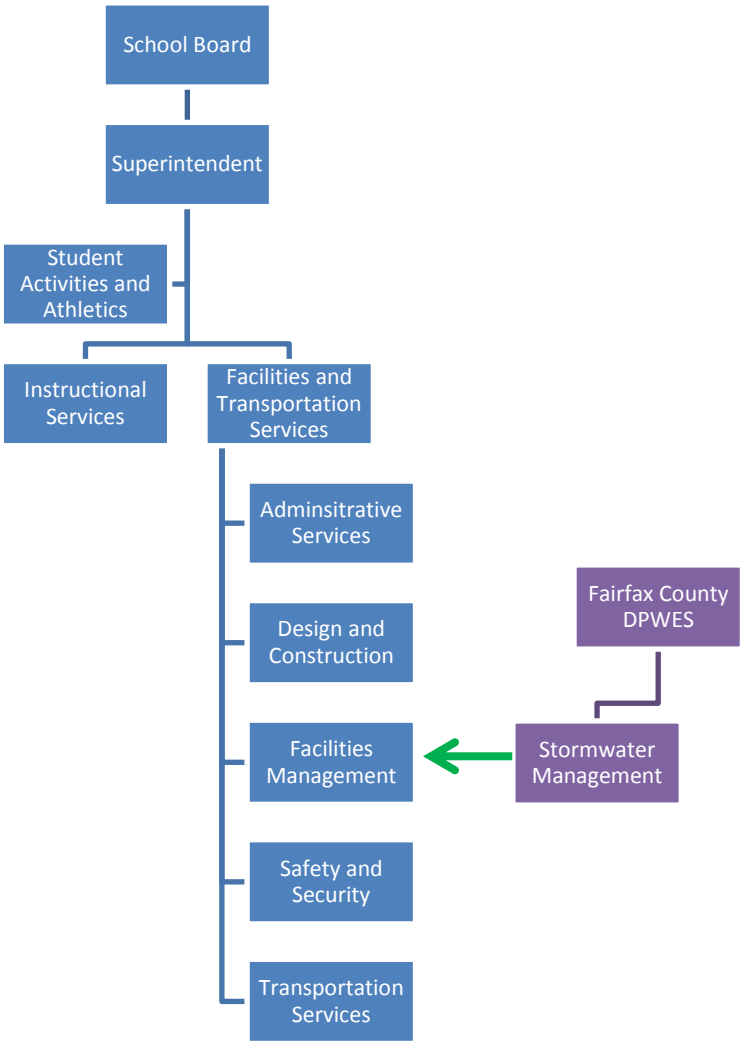
With a projected 2015 – 2016 enrollment of almost 188,545 students, FCPS is the largest school system in Virginia and the 11th largest in the United States. FCPS serves students in Fairfax County and the towns of Clifton, Herndon, and Vienna. FCPS also operates schools for the City of Fairfax based on a school services agreement in place since 1961. As of 2013 – 2014, FCPS has a total of 196 schools, which includes 139 elementary schools, 23 middle schools, 27 high schools/secondary schools, and seven special education centers.

The FCPS educational system supports a diverse student population with almost 30,000 English for Speakers of Other Languages (ESOL) students, and over half of the student population identified from ethnic backgrounds such as Hispanic, Asian American, African American, and American Indian. Recognizing the diversity of the student population is a significant consideration in developing and implementing successful BMPs, particularly with regard to education and outreach.

C. Organization of the FCPS MS4 Program

The FCPS MS4 program is designed to reduce the discharge of pollutants from the FCPS MS4 to the maximum extent practicable, to protect water quality, to ensure compliance with water quality standards, and to satisfy the appropriate water quality requirements of the Clean Water Act and its attendant regulations. The organizational chart below (Figure 1) shows departments and divisions that perform stormwater related duties. MS4 permit compliance activities are coordinated through the Office of Facilities Management (OFM), which is a division of the Department of Facilities and Transportation Services. While OFM is responsible for overall coordination, including the submittal of annual reports, several other departments and divisions have important roles in implementing the MS4 Program. In addition, support is provided to FCPS by Fairfax County through the Department of Public Works and Environmental Services, Stormwater Management.

Figure 1. MS4 Program Organization



Stormwater activities performed within each agency and those performed in cooperation with County agencies are discussed below.

Superintendent

The Superintendent provides general oversight for all school functions, including MS4 program implementation. The Superintendent is also responsible for reviewing departmental budgets and submitting budgets and funding requests to the Fairfax County School Board.

Student Activities and Athletics Program

The Student Activities and Athletics Program oversees the maintenance of high school athletic fields and is involved in nutrient management planning, stormwater pollution prevention planning, and ensuring the proper certifications for the application of pesticides and fertilizers for these fields.

Instructional Services Department

The Instructional Services Department (ISD) is responsible for developing school curriculum and instructional programs. The educational program in elementary school is designed to provide students with a foundational understanding of ecosystems and the importance of local water quality. The educational program in middle school provides more in depth concepts of environmental science. The high school instructional program culminates in Advanced Placement (AP) and International Baccalaureate (IB) course options for advanced teachings in science. This department also leads numerous involvement efforts through the Get2Green program.

Department of Facilities and Transportation Services

The Department of Facilities and Transportation Services (FTS) is responsible for overall stormwater related administration, operations, and maintenance activities. FTS coordinates with staff from Fairfax County to implement dry weather outfall screening as part of the Illicit Discharge Detection and Elimination System under MCM #3 and stormwater management facility inspections under MCM #5. FTS divisions with responsibilities relating to stormwater include the following:

Office of Administrative Services

The Office of Administrative Services is responsible for providing administrative support to the department and the assistant superintendent by supporting departmental technology requirements, and providing departmental financial management, procurement, and logistical support.

Office of Design and Construction

The Office of Design and Construction (ODS) is responsible for ensuring that all construction site and post-construction stormwater controls are implemented as required. ODS staff submit plans for review and obtain permits in the locality where design and construction projects occur.

Office of Facilities Management

The Office of Facilities Management (OFM) is the lead for MS4 program compliance activities. Within OFM, the Grounds Maintenance crews maintain grounds surrounding FCPS facilities. The Planning and Operations Section is responsible for tracking staff training and maintaining records for the certification of pesticide applicators on staff.

Office of Safety and Security

The Office of Safety and Security (OSS) provides overall guidance, direction, and support to the Safety, Health, and Security programs, and oversees the tracking of illicit discharges reported on FCPS property. The office also performs safety and environmental inspections.

Office of Transportation Services

The Office of Transportation Services (OTS) provides bus transportation services, operates a transportation training center to provide well-trained drivers and attendants, and supervises the purchase and maintenance of all school-owned vehicles.

Fairfax County Department of Public Works and Environmental Services

FCPS works in close coordination with the Fairfax County Department of Public Works and Environmental Services (DPWES) to implement several components of its stormwater management program. DPWES Stormwater Management inspects and maintains FCPS stormwater management facilities and implements dry weather screening of FCPS MS4 outfalls.

The following department and division acronyms are used in this MS4 Program Plan:

SAA ..... Student Activities and Athletics
ISD..... Instructional Services Department
FTS..... Department of Facilities and Transportation Services
OAS ..... Office of Administrative Services
ODC..... Office of Design and Construction
OFM..... Office of Facilities Management
OSS ..... Office of Safety and Security
OTS ..... Office of Transportation Services
DPWES..... Department of Public Works and Environmental Services (Fairfax County)
STW..... Stormwater Management (Fairfax County DPWES)

D. Special Requirements for Total Maximum Daily Loads (TMDLs)

Section I of the MS4 permit requires FCPS to develop action plans to address TMDLs where a wasteload allocation (WLA) has been assigned to the MS4.

The Chesapeake Bay TMDL Action Plan was included in this PY2 Program Plan update (see Appendix F). Pollutant reductions that are addressed in the Chesapeake Bay TMDL Action Plan include total nitrogen (TN), total phosphorus (TP), and total suspended solids (TSS). The plan calculates existing source loads and load reductions required during this permit cycle, and identifies the means and methods by which the load reductions will be achieved. FCPS will implement best management practices sufficient to achieve the load reductions required by the end of the permit cycle (June 30, 2018).

FCPS is also subject to TMDL WLAs for sediment in Bull Run, Difficult and Popes Head Creek (benthic impairments), and for polychlorinated biphenyls (PCBs) in the Tidal Potomac River. FCPS has developed one action plan for the benthic TMDLs and one action plan for the PCB TMDL (Appendices G and H, respectively).

This PY3 program plan update includes an update to the benthic TMDL action plan to include difficult run and a bacteria TMDL action plan for TMDL WLAs for *E. coli* in Difficult Run, Lower Accotink Creek, Holmes Run, Cameron Run, Hunting Creek and Bull Run. The updated benthic action plan and the new E. *coli* action plan were developed by June 30, 2016. The action plans identify best management practices and other interim milestone activities that will be implemented during the permit term. Any new or modified requirements will be considered and incorporated as applicable.

FCPS will work cooperatively with Fairfax County to meet the Chesapeake Bay TMDL and other TMDL requirements. In addition, the benthic TMDL action plan has been coordinated with the TSS component of the Chesapeake Bay TMDL Action Plan.

E. Minimum Control Measures

The following sections describe the BMPs that FCPS will implement to meet each of the six MCMs as well as the requirements outlined in the MS4 permit regarding impaired waters and TMDLs. Included with each BMP is a description of:

- Policies, directives, regulations, schedules, inspection forms, written procedures, and other documents necessary for BMP implementation.
- The objective and expected results of each BMP in meeting the measurable goals of the minimum control measure.
- Parties responsible for BMP implementation.
- The implementation schedule for the proposed BMP.
- Documentation and the method that will be utilized to determine the effectiveness of the BMP.

After each section is a table that summarizes the schedule of implementation for each BMP associated with the MCM.

MCM #1: Public Education and Outreach on Stormwater Impacts

Permit Reference: Section II B. 1

Relevant Excerpts:

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

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

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

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

c. The updated program shall be designed to:

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

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

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

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

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

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

Overview – Public Education and Outreach Program Development

The public education program is designed to target specific groups of students to increase their knowledge about the steps that can be taken to reduce stormwater pollution impacts to impaired waters and local water pollution concerns associated with discharges from the storm sewer system. The program is also designed to increase students' general knowledge about improper disposal of waste that may enter the storm sewer system.

Identification of High-Priority Water Quality Issues: The MS4 permit requires FCPS to identify a minimum of three high-priority water quality issues that contribute to stormwater pollution and provide a rationale for their selection. The program must be designed to annually reach a minimum of 20% of the target audience for each high-priority water quality issue.

FCPS has identified the following three high-priority water quality issues as the focus of the public education program during the permit cycle:

1. Watersheds: Local Water Quality and Volume Management,
2. Chesapeake Bay Nutrients: Phosphorus and Nitrogen, and
3. Non-Point Source Pollution Prevention: Impacts of Polluted Stormwater on Streams

Each of these high-priority water quality issues will be addressed through the curriculum provided by FCPS, while Chesapeake Bay Nutrients will also be supplemented by regional coordination as discussed below. The curriculum was developed by educational experts to provide a foundational and in depth understanding of water quality issues as part of a holistic approach to environmental studies throughout the academic year. The rationale for selecting the top three high-priority issues is provided below:

1. Watersheds: Local Water Quality and Volume Management

Understanding how watersheds function and how everyday activities may impact the quality and quantity of water discharged to our local streams can increase personal responsibility and create informed students. Including this material in the science curriculum for 4th and 5th graders ensures that students are exposed to water quality issues early on and builds a solid foundation in and understanding of watershed processes. Additionally, this foundation will serve students well as they progress to higher grade levels and to science courses that delve into more detail.

2. Chesapeake Bay Nutrients: Phosphorus and Nitrogen

The EPA's Chesapeake Bay Program has identified nitrogen, phosphorus and sediment as impacting local water quality and contributing to the impairment of the Chesapeake Bay. EPA established the Chesapeake Bay TMDL in December 2010 to address nutrients and sediment contributions from the agricultural, wastewater, and urban stormwater sectors. Educational activities positively impact water quality by changing individual behaviors, encouraging students to become environmental stewards, and providing positive messaging that can also influence the behaviors of parents, siblings and friends. This is particularly relevant to phosphorus and nitrogen, which in an urban environment may result from over fertilization or misapplication of fertilizers in the landscape.

3. Nonpoint Source Pollution Prevention: Impacts of Polluted Stormwater on Streams

The EPA's most recent National Water Quality Inventory reports that nonpoint source runoff from urban areas is one of the leading causes of surface water quality impairments. Everyday activities in the urban landscape may deposit pollutants on land surfaces that are transported in stormwater runoff through the MS4 and ultimately discharged to local waterways. Other activities may introduce pollutants directly into the MS4 as diffuse sources. Awareness of the impacts of these activities is the first step in preventing nonpoint source pollution.

Public Participation in Plan Development: The development of the Public Education Program and the selection of the three high-priority water quality issues were accomplished by staff from FCPS ISD and OFM in coordination with staff from the Fairfax County DPWES. The draft program was posted on the dedicated FCPS MS4 webpage (http://www.fcps.edu/fts/facmanagement/ms4/) and a notice requesting public comment on the plan was sent out using the parent / teacher list serve.

Coordination with Regional Efforts: In addition to FCPS-specific initiatives, FCPS participates in regional public education efforts with other MS4 communities through the Northern Virginia Regional Commission (NVRC) Clean Water Partners program. The program reaches a larger regional audience through a mix of media such as radio, TV, online and print. The Clean Water Partners program efforts specifically address the FCPS priority area of Chesapeake Bay Nutrients

as well as other important water quality issues such as bacteria from pet waste and illicit discharges.

Assessment: Each year FCPS will demonstrate that it has met the goal of reaching 20% of each target audience and will assess the effectiveness of each measure toward meeting MS4 permit requirements. If the selected BMPs are determined to not be effective, FCPS will document program changes and submit the documentation to DEQ.

BMP 1.A – Watersheds: Local Water Quality and Volume Management

Objective and Expected Results: Reaching younger students helps to build a strong foundational knowledge in the protection of surface water resources, teaches the importance of watershed protection, and shows them ways to manage water quality. This educational activity is aimed at protecting local water quality, the Potomac River, and the Chesapeake Bay.

Implementation and Schedule: FCPS has identified 4th and 5th grade students as the target audience for education and outreach efforts and provides the following science curriculum that focuses on this high-priority water quality issue:

- FCPS will continue to implement the "Ecosystems" unit in the curriculum for all 4th grade classrooms and the Fields of Science unit for all 5th grade classrooms. In these units, students investigate the Earth's natural resources and how to protect them, research the Potomac River watershed and its water resources, and examine public policy decisions related to the environment.

Responsible Parties: ISD will coordinate this BMP with appropriate schools to ensure the curriculum continues to be provided.

Documentation and Measure of Effectiveness: FCPS will provide a summary of the curriculum activities and the number of students reached during the reporting period.

- The estimated number of individuals reached by all efforts will be compared to the size of the target audience of approximately 28,000 4th and 5th grade students and a percentage reached will be reported.

BMP 1.B – Chesapeake Bay Nutrients: Phosphorus and Nitrogen

Objective and Expected Results: Excessive nutrients entering the Bay have the potential to impact stormwater runoff that is transported through the MS4 to local waters, the Potomac River, and the Chesapeake Bay. Students participating in this course work at the 7th grade level will learn about the impacts of excess nutrients on the health of the Chesapeake Bay.

Implementation and Schedule: FCPS has identified middle school students as the target audience for education and outreach efforts on this high-priority water quality issue and provides the following science curriculum and regional efforts:

- Seventh grade students will continue to participate in the "Investigations in Environmental Science" course. This course builds upon the science curriculum introduced in upper-elementary grades. Students study basic ecological concepts and how excess nutrients from over-fertilizing can be washed into the storm sewer during a rain event and impact the ecology of local waterways and the Chesapeake Bay. Process skills related to scientific investigation, reasoning, and logic are integrated throughout the course as students carry out investigations, collect and analyze data, and formulate conclusions.

- FCPS will continue to participate in the NVRC Clean Water Partners program regional efforts to provide outreach about the water quality impacts of nutrients in fertilizers.

Responsible Parties: ISD will coordinate this BMP with appropriate schools to ensure the curriculum continues to be provided. OFM will coordinate regional efforts with the Clean Water Partners program.

Documentation and Measure of Effectiveness: FCPS will provide a summary of the curriculum activities and the number of students reached during the reporting period.

- The estimated number of individuals reached by all efforts will be compared to the size of the target audience of approximately 14,000 7th grade students and a percentage reached will be reported.

BMP 1.C – Nonpoint Source Pollution Prevention: Impacts of Polluted Stormwater on Streams

Objective and Expected Results: This BMP focuses on the potential impacts of polluted stormwater discharges on local streams, the Potomac River, and the Chesapeake Bay. High school students in 11th and 12th grades often drive to school and may be learning about proper maintenance so that automotive fluids are not released into the environment. They may be responsible for walking the family pet and ensuring the proper disposal of the pet waste. Finally, educating high school juniors and seniors about the impacts of nonpoint source pollution can help them serve as role models of proper behavior for younger students.

Implementation and Schedule: FCPS has identified 11th and 12th grade students as the target audience for this BMP. At least 20 percent of all 11th and 12th graders are enrolled in Advanced Placement (AP) Environmental Science, International Baccalaureate (IB) Environmental Systems and Society, Geosystems and/or Oceanography. Reaching students at this level continues to build on stormwater quality concepts introduced in previous grade levels. Through participation at these high school grade levels, after the majority of students have progressed through the elementary school and middle school courses, student knowledge of stormwater quality issues will be enhanced even further.

- There are approximately 27,000 11th and 12th grade FCPS students in AP and IB environmental study course offerings that cover topics including non-point source pollution and stormwater studies. Geosystems integrates content from geology, astronomy, oceanography, and meteorology with various forms of technology, social and environmental issues, and hands-on experiments. Oceanography deals with geophysical and biological oceanography and covers such topics as the geology and geography of ocean basins, physical properties of sea water, marine chemistry, and marine biology. Both include coursework related to the impact of polluted stormwater on water resources.

Responsible Parties: ISD will coordinate this BMP with appropriate schools to ensure the curriculum continues to be provided.

Documentation and Measure of Effectiveness: FCPS will provide a summary of the curriculum activities and the number of students reached during the reporting period.

- The estimated number of individuals reached by all efforts will be compared to the size of the target audience of approximately 27,000 11th and 12th grade students and a percentage reached will be reported.

BMP 1.D – General Education and Outreach

Objective and Expected Results: Bacteria from pet waste have the potential to contribute to surface water impairments. As part of general education and outreach efforts, FCPS will participate in the NVRC Clean Water Partners program efforts to coordinate the regional message for these potential pollutants.

Implementation and Schedule: FCPS will participate in the NVRC Clean Water Partners program to reach pet owners on the proper disposal of pet waste. The program uses radio, TV, print and online media to reach pet owners across the region. FCPS will also continue to maintain the MS4 Program webpage at http://www.fcps.edu/fts/facmanagement/ms4/.

Responsible Parties: The NVRC Clean Water Partners program will implement this BMP on behalf of the FCPS and other regional partners.

Documentation and Measure of Effectiveness: FCPS will provide the summary of results of program efforts conducted by the NVRC Clean Water Partners to reach County residents with the regional campaign and a summary of survey results that measure the effectiveness of the regional public education and outreach campaign. This effort is not considered one of the top three water quality issues, and an estimate of the number of FCPS students reached will be provided for summary purposes only and not towards meeting a numerical goal.

MCM #1 Implementation Schedule							
BMP	**Task**	**Year(s) to Implement**					**Responsibility**
		PY1	PY2	PY3	PY4	PY5	
1.A	Implement the "Ecosystems" unit in the curriculum for all 4th and 5th grade classrooms.	►	►	►	►	►	ISD
1.B	Implement "Investigations in Environmental Science" course for all 7th grade students.	►	►	►	►	►	ISD
	Participate in the NVRC Clean Water Partners program regional efforts.		►	►	►	►	OFM, NVRC
1.C	Implement AP and IB Geosystems and Oceanography, courses for 11th and 12th grade students.	►	►	►	►	►	ISD
1.D	Provide general education for students through participation in the NVRC Clean Water Partners program regional efforts.		►	►	►	►	OFM, NVRC

MCM #2: Public Involvement / Participation
Permit Reference: Section II B. 2
a. Public involvement.
(1) The operator shall comply with any applicable federal, state, and local public notice requirements.
(2) The operator shall:
(a) Maintain an updated MS4 Program Plan. Any required updates to the MS4 Program Plan shall be completed at a minimum of once a year and shall be updated in conjunction with the annual report. The operator shall post copies of each MS4 program plan on its webpage at a minimum of once a year and within 30 days of submittal of the annual report to the department.
(b) Post copies of each annual report on the operator's web page within 30 days of submittal to the department and retain copies of annual reports online for the duration of this state permit; and
(c) Prior to applying for coverage as required by Section III M, notify the public and provide for receipt of comment of the proposed MS4 Program Plan that will be submitted with the registration statement. As part of the reapplication, the operator shall address how it considered the comments received in the development of its MS4 Program Plan. The operator shall give public notice by a method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any other forum or medium to solicit public participation.
b. Public participation. The operator shall participate, through promotion, sponsorship, or other involvement, in a minimum of four local activities annually e.g., stream cleanups; hazardous waste cleanup days; and meetings with watershed associations, environmental advisory committees, and other environmental organizations that operate within proximity to the operator's small MS4. The activities shall be aimed at increasing public participation to reduce stormwater pollutant loads; improve water quality; and support local restoration and clean-up projects, programs, groups, meetings, or other opportunities for public involvement.

BMP 2.A – Public Notice and Participation

Objective and Expected Results: FCPS is committed to meeting and exceeding all public notice requirements. Providing an opportunity for the public to have input in the MS4 Program Plan strengthens the program and allows FCPS to take advantage of local expertise.

Implementation and Schedule:

- FCPS will update its MS4 Program Plan annually in conjunction with preparation of the annual report.
- FCPS will post copies of each program plan on the OFM MS4 Program webpage at http://www.fcps.edu/fts/facmanagement/ms4/ within 30 days of submittal of the annual report to DEQ.
- FCPS will post the annual report on the OFM MS4 Program webpage at http://www.fcps.edu/fts/facmanagement/ms4/ within 30 days of submittal to DEQ and retain copies of each annual report online for duration of the permit.
- Prior to reapplication for renewed permit coverage, FCPS will notify the public and provide for receipt of comment for the proposed MS4 Program Plan that will be submitted with the registration statement.

Responsible Parties: The Environmental Specialist in OFM will ensure compliance with all public notice requirements. OFM will coordinate and develop the public notice message. The Instructional Services Department will assist.

Documentation and Measure of Effectiveness: FCPS will document compliance with public participation requirements by providing minutes of any actions taken by approval groups, copies of all press releases, if applicable, in developing the program plan, a summary of public comments received on the draft MS4 Program Plan, and a web link to the program plan and annual report.

BMP 2.B – Promote and Support Student Volunteer Activities

Objective and Expected Results: FCPS will use its Get2Green program as the vehicle for promoting and/or sponsoring a minimum of four activities aimed at increasing student participation in efforts to improve water quality. Get2Green was started as a FCPS project in December 2010 to further FCPS's goal to encourage environmental stewardship.

FCPS partnered with the National Wildlife Federation (NWF) Eco-Schools USA program to develop student-driven action teams within Eco-Schools across the County under the Get2Green program. About 65 schools are registered as Eco-Schools and 70 others are working on projects that are not officially registered in the Eco-Schools program. These teams work on a variety of environmental topics (also called pathways) under the Eco-School umbrella. In addition, FCPS has focused efforts on professional development of teachers, particularly at the elementary school level, to assist teachers in running eco teams, working with students on Eco-School USA activities, and in taking students outdoors for lessons. The students are an active group of citizen volunteers that are willing to engage in stream clean-ups and other efforts to improve water quality.

Implementation Schedule: FCPS will promote and/or sponsor at least four activities annually focusing on water quality through the Get2Green program. Specific events may include the following:

- FCPS students and faculty participate in building wildlife habitats and gardens at specific schools. This may include building garden boxes, installing native plants, putting in pavers, installing solar bird baths, planting shrubs and installing an outdoor classroom for continued learning.
- FCPS students and faculty organize events at multiple school locations. Activities at any location may include native plant sales, Earth friendly crafts, classroom outdoor activities, recycle/nature art show, recycle fashion show, community wildlife habitat and sustainable food gardening and storm drain marking events.

Responsible Parties: ISD will coordinate this BMP with assistance from the Office of Facilities Management as needed.

Documentation and Evaluation Criteria: FCPS will provide a summary of at least four local activities that are promoted, supported, sponsored, and/or publicized by FCPS. The summary will include the name of the activity, the date, the number of students participating, and a measure of the activity (e.g., number of storm drains marked), if applicable.

MCM #2 Implementation Schedule							
BMP	**Task**	**Year(s) to Implement**					**Responsibility**
		PY1	PY2	PY3	PY4	PY5	
2.A	Update MS4 Program Plan annually in conjunction with preparation of the annual report.	►	►	►	►	►	OFM
	Post MS4 Program Plan within 30 days of submittal to DEQ.	►	►	►	►	►	OFM
	Post annual report and retain copies of each annual report online for duration of the permit.	►	►	►	►	►	OFM
	Prior to reapplication for renewed coverage, provide for public comment on proposed program plan.					■	
2.B	Sponsor a minimum of four student activities annually.	►	►	►	►	►	ISD, OFM

MCM #3: Illicit Discharge Detection and Elimination

Permit Reference: Section II B. 3

Relevant Excerpts:

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

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

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

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

(a) A prioritized schedule of field screening activities determined by the operator based on such criteria as age of the infrastructure, land use, historical illegal discharges, dumping or cross connections.

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

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

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

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

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

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

(h) A mechanism to track all investigations to document: (i) the date or dates that the illicit discharge was observed and reported; (ii) the results of the investigation; (iii) any follow-up to the investigation; (iv) resolution of the investigation; and (v) the date that the investigation was closed.

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

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

BMP 3.A – Storm Sewer System Map

Objective and Expected Results: An accurate storm sewer map ensures that FCPS has a full understanding of its stormwater system, which facilitates tracking and correction of illicit discharges. The MS4 permit requires specific information to be included in the map and associated information table.

Implementation and Schedule: FCPS coordinates with Fairfax County STW to maintain its storm sewer and MS4 outfall map. This map and information table currently includes all of the required information from Section II.B.3.a., which includes the location, name and location of receiving waters and associated hydrologic unit code (HUC). However, the information table must be updated to include the estimated acreage served by each MS4 outfall.

- FCPS will coordinate with Fairfax County STW to incorporate updated and/or new storm sewer and outfall information into the existing map.
- FCPS will coordinate with Fairfax County STW to estimate the acreage draining to its MS4 outfalls and capture this in the outfall information table. The updated storm sewer map and outfall information table will be submitted with the PY4 annual report.
- The storm sewer system map and outfall information table shall be made available upon request to the public or DEQ.
- FCPS will coordinate with Fairfax County STW to identify physical interconnections and send out letters to notify neighboring MS4s as applicable.

Responsible Party: OFM will coordinate this BMP with Fairfax County STW.

Documentation and Measure of Effectiveness: FCPS will continue to update the storm sewer system map and include any updates or notifications of interconnections during the requisite annual report. The updated storm sewer map and outfall information table will be included in the PY4 annual report.

BMP 3.B – Prohibition on Illicit Discharges

Objective and Expected Results: FCPS is a nontraditional MS4 and does not establish its own ordinances. Rather, FCPS is subject to local government ordinances related to illicit discharges. FCPS works directly with localities to address suspected illicit discharges per the appropriate ordinance as applicable. In addition, FCPS has policies, notices, and regulations (directives) in place that prohibit illicit discharges to the storm sewer system and can be used to conduct necessary disciplinary actions in the case of an illicit discharge. For example, FCPS can utilize the disciplinary action in the “Students Rights and Responsibilities” handbook when an illicit discharge is associated with a student.

Implementation and Schedule: FCPS will continue to implement policies, notices, and directives to prohibit illicit discharges and will work with localities to enforce local ordinances related to illicit discharges as applicable.

Responsible Parties: OFM is responsible for this BMP with enforcement support provided by the Administration Office.

Documentation and Measure of Effectiveness: FCPS will document any changes to policies, notices, and directives in the appropriate annual report.

BMP 3.C – Written Procedures for Suspected Illicit Discharges and Illegal Dumping, and Complaint Response Tracking and Reporting

Objective and Expected Results: Promoting and publicizing a reporting mechanism will help ensure that FCPS students and staff know who to contact in the case of a suspected illicit discharge or illegal dumping situation. Written standard response procedures will then ensure that proper data is collected and appropriate staff is contacted to take necessary enforcement and clean up actions.

Implementation and Schedule:

- FCPS has written standard operating procedures (SOPs) and an outfall screening database to track investigations and follow up for suspected illicit discharges and illegal dumping. The SOP and the related field form used by staff are provided in Appendix A.
- FCPS operates a 24-hour emergency response hotline that allows reporting of suspected dumping or illicit discharges by students and staff. Staff investigates the reports and performs follow up inspections as needed to ensure elimination of confirmed illicit discharges.
- Training of field personnel in IDDE recognition and reporting under BMP 6.E will incorporate the SOP and field form.

Responsible Parties: OFM is responsible for this BMP, in coordination with the OSS.

Documentation and Measure of Effectiveness: FCPS will document any changes to the written procedures during the reporting period in the associated annual reports.

BMP 3.D – Dry Weather Outfall Screening and Tracking

Objective and Expected Results: The goal of this BMP is to identify and eliminate illicit discharges as soon as possible to minimize impacts to water quality. The FCPS IDDE program includes written SOPs for dry weather outfall screening and further investigation of observed dry weather flow. If further investigation reveals that the dry weather flow is the result of an illicit discharge, the SOP includes follow up procedures to assist in determining and eliminating the source. In addition, the Office of Facilities Management accepts and processes complaints about potential illicit discharges and coordinates the response. Dry weather screening observations, illicit discharge compliant investigations, and follow up activities are tracked using a FCPS database.

Implementation Schedule: Fairfax County STW will perform dry weather outfall screening of MS4 outfalls for FCPS. The County will contact FCPS staff to perform follow up procedures for observed dry weather flow.

- FCPS has developed a written SOP for dry weather outfall screening that incorporates MS4 general permit requirements (see Appendix A.)
- The Office of Facilities Management coordinates with Fairfax County STW to perform dry weather screening of 50 outfalls each year. Outfalls will be inspected based on the prioritization criteria provided in the SOP. The results and any follow-up activities will be tracked in the database.
- FCPS performs follow up investigations of observed dry weather flow. FCPS will record observations and follow up using the "Suspected Illicit Discharge" form. This form will also be used for spills.
- FCPS maintains database information on follow up activities for observed dry weather flows.

Responsible Party: OFM coordinates this BMP along with OSS.

Documentation and Measure of Effectiveness: FCPS will annually summarize all dry weather outfall monitoring activities including the total number of outfalls screened, the screening results, and any follow up actions. For outfalls exhibiting dry weather flow and responses to complaints of suspected illicit discharges, a summary of each investigation conducted for any suspected illicit discharge will be included in each annual report, as applicable. The summary will include: the date the discharge was observed, reported, or both; follow up activities; actions taken to eliminate the discharge, and the date the investigation was closed.

BMP 3.E – Storm Drain Marking Program

Objective and Expected Results: The storm drain marking program is designed to educate students about the impacts of illicit discharges and illegal dumping, and to remind them that storm drains connect directly to local streams, the Potomac River, and the Chesapeake Bay. The long-term goal is to mark all storm drain inlets on FCPS properties, while leveraging the activity as an opportunity to educate student groups and staff.

Implementation and Schedule: FCPS will continue to implement the storm drain marking program through the Get2Green program activities in BMP 2.B.

Responsible Parties: ISD will coordinate this BMP, with assistance from the OFM.

Documentation and Measure of Effectiveness: FCPS will annually report the number of storm drain inlets marked and the number of volunteers participating in the marking program under BMP 2.B.

BMP 3.F – Promote Recycling to Reduce Trash

Objective and Expected Results: By encouraging students to recycle waste, FCPS seeks to reduce the amount of trash and litter entering the waste stream and the potential for trash and litter to enter the storm sewer system.

Implementation and Schedule: FCPS will continuously promote recycling through the Get2Green program.

Responsible Party: The Instructional Services Department will coordinate this BMP along with the Office of Facilities Management.

Documentation and Measure of Effectiveness: FCPS will document recycling promotion efforts and the amount of recycling collected during each school year.

MCM #3 Implementation Schedule							
BMP	**Task**	**Year(s) to Implement**					**Responsibility**
		PY1	PY2	PY3	PY4	PY5	
3.A	Maintain an updated storm sewer system map.	►	►	►	►	►	OFM
	Identify any new physical interconnections and notify the connected MS4.		►	►	►	►	OFM, Fairfax County STW
	Provide the updated storm sewer system map and outfall information table.				■		OFM, Fairfax County STW
3.B	Implement prohibition on illicit discharges.	►	►	►	►	►	OFM
3.C	Develop and implement written suspected illicit discharge procedures.	■	►	►	►	►	OFM, OSS
	Operate a public complaint system.	►	►	►	►	►	OFM, OSS
3.D	Develop and implement written dry weather screening procedures.	■	►	►	►	►	OFM, Fairfax County STW
	Perform annual dry weather screening of 50 outfalls.	►	►	►	►	►	OFM, Fairfax County STW
	Maintain tracking database.	►	►	►	►	►	OFM, Fairfax County STW
3.E	Implement storm drain marking program.	►	►	►	►	►	OFM, ISD
3.F	Promote and facilitate recycling.	►	►	►	►	►	OFM, ISD

MCM #4: Construction Site Stormwater Runoff Control

Permit Reference: Section II B. 4

Relevant Excerpt:

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

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

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

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

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

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

(6) The roles and responsibilities of each of the operator's departments, divisions, or subdivisions in implementing the minimum control measure in Section II related to construction site stormwater runoff control. If the operator utilizes another entity to implement portions of the MS4 Program Plan, a copy of the written agreement must be retained in the MS4 Program Plan. The description of each party's roles and responsibilities, including any written agreements with third parties, shall be updated as necessary.

Reference may be made to any listed requirements in this subdivision provided the location of where the reference material can be found is included and the reference material is made available to the public upon request.

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

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

(2) Total number of acres disturbed;

(3) Total number of inspections conducted; and

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

Overview of Program

FCPS is committed to ensuring that it implements the proper construction site runoff controls to meets all obligations pursuant to local codes and ordinances, in compliance with the Code of Virginia and attendant regulations. FCPS is regulated as a private developer by the locality in which the land-disturbing activity is taking place. Therefore, the locality is responsible for review of FCPS erosion and sediment control plans, inspection of FCPS land-disturbing activities, and enforcement actions against non-compliant construction and land disturbing activities, where applicable. As such, the locality where the land-disturbing activity is occurring tracks FCPS land-disturbing activities and is responsible for any applicable reporting. FCPS maintains records of compliance with state and local requirements.

BMP 4.A Legal Authorities Utilized to Ensure Compliance

Unlike a locality, FCPS does not have state enabling authority to regulate land-disturbing activities, administer an erosion and sediment control program, or adopt ordinances and other enforcement mechanisms. Rather, the locality administering the program where the FCPS land-disturbing activity is occurring provides construction site stormwater control oversight of FCPS projects in the same way as it would treat a private entity. This includes reviewing all FCPS erosion and sediment control plans, inspecting construction projects and enforcement action against non-compliant construction and land disturbing activities. FCPS complies with local codes and ordinances with regard to erosion and sediment control and VSMP requirements.

ODC utilizes bid specifications to require contractors working on school construction projects to comply with local, state, and federal laws applicable to the contracted work and obtain necessary permits and other authorizations. Bid specifications also require the contractor to prevent the offsite export of soil, silt, or debris onto adjacent properties.

Implementation and Schedule: FCPS projects are subject to all local legal authorities.

Responsible Party: ODC is responsible for design and implementation while the locality is the approval and enforcement authority.

Documentation and Measure of Effectiveness: FCPS will comply with all local legal authorities, as applicable. A sample bid specifications document is provided in Appendix C.

BMP 4.B – Plan Review and Approval Procedures

Objective and Expected Results: A consistent and clear plan review and approval process helps ensure that all projects meet minimum requirements for construction site stormwater controls. Localities consider FCPS as a private entity for the purpose of reviewing and approving construction site stormwater runoff controls. FCPS plan submission and review must adhere to the same plan review and approval procedures as private developers. FCPS proposed land disturbing activities must receive plan approval from the locality prior to commencement.

Implementation and Schedule: FCPS projects will meet all local review and approval requirements.

Responsible Party: ODC is responsible for compliance with local plan review and approval procedures. The locality in which FCPS is performing construction activities is responsible for processing, reviewing, approving, and enforcing FCPS plans.

Documentation and Measure of Effectiveness: The locality where the project is occurring is responsible for reviewing and approving all FCPS site development plans associated with land-disturbing activities.

BMP 4.C – Inspection and Enforcement Procedures

Objective and Expected Results: The locality where the project is taking place administers local erosion and sediment control and VSMP requirements for land disturbing activities through review of required plan elements, along with inspection and enforcement of a site-specific stormwater pollution prevention plan (SWPPP) for the project. FCPS designates the onsite contractor for capital projects as the responsible land disturber in accordance with Title 10.1, Chapter 5, Article 4 of the Code of Virginia. While FCPS staff performs random inspections of the operations as part of contract oversight and may note observed deficiencies, they do not conduct site inspections to meet construction general permit, VSMP requirements, or MS4

requirements. As with other private land-disturbing activities, the locality inspects FCPS projects for compliance with local ordinance requirements. Inspection reports are provided to the onsite contractor.

Implementation Schedule: FCPS will comply with local requirements for all regulated land disturbing activities.

Responsible Party: ODC is responsible for coordinating inspection and enforcement with the locality. The locality conducts inspections of FCPS regulated land disturbing activities.

Documentation and Evaluation Criteria: The locality where the land-disturbing activity is occurring is responsible for inspecting site development, and enforcement action against non-compliant construction and land disturbing activities.

BMP 4.D – Public Complaint Reporting Mechanism

Objective and Expected Result: The public can serve as an additional set of eyes when it comes to ensuring that land disturbing activities meet regulatory requirements for stormwater discharges. FCPS complies with public notice requirements in Part II C of the construction general permit by conspicuously posting a copy of the notice of coverage letter near the main entrance of the construction activity upon commencement of land disturbance. In addition, many localities maintain a public complaint reporting mechanism that can be used to report site-specific concerns.

Implementation and Schedule: FCPS meets all posting requirements to ensure that the public has access to each project's construction general permit and information about the responsible land disturber.

Responsible Party: ODC manages all regulated land disturbing activities.

Documentation and Measure of Effectiveness: Complaints of land disturbing activities are received and tracked by the locality in which the activity takes place.

BMP 4.E – Land Disturbing Activities Tracking System

Objective and Expected Result: As with all other private developers, information for land-disturbing activities associated with FCPS projects are tracked by the locality where they occur.

Implementation and Schedule: FCPS submits required information during the plan review and approval process to the locality regulating the land-disturbing activity.

Responsible Party: ODC submits required information as required by the locality.

Documentation and Measure of Effectiveness: Land disturbing activities are regulated and tracked by the locality where the activities occur. FCPS does not report this information since it would result in double-counting.

MCM #4 Implementation Schedule							
BMP	**Task**	**Year(s) to Implement**					**Responsibility**
		PY1	PY2	PY3	PY4	PY5	
4.A	Comply with all local legal authorities.	►	►	►	►	►	ODC
4.B	Comply with all local plan review and approval procedures.	►	►	►	►	►	ODC
4.C	Comply with all local inspection and enforcement procedures.	►	►	►	►	►	ODC
4.D	Post permit and contact information as required by regulation and assist with reported complaints.	►	►	►	►	►	ODC
4.F	Provide information about land disturbing activities to the appropriate local government for their annual reports.	►	►	►	►	►	ODC

MCM #5: Post-construction Stormwater Management in New Development and Development on Prior Developed Lands

Permit Reference: Section II B. 5

Relevant Excerpt:

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

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

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

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

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

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

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

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

(1) The stormwater management facility type;

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

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

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

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

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

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

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

(9) The date of the operator's most recent inspection of the stormwater management facility.

In addition, the operator shall annually track and report the total number of inspections completed and, when applicable, the number of enforcement actions taken to ensure long-term maintenance.

The operator shall submit an electronic database or spreadsheet of all stormwater management facilities brought online during each reporting year with the appropriate annual report. Upon such time as the department provides the operators access to a statewide web-based reporting electronic database or

spreadsheet, the operator shall utilize such database to complete the pertinent reporting requirements of this state permit.

Overview of Fairfax County Public Schools Program Responsibilities

FCPS does not regulate post-construction stormwater runoff management and does not administer a local VSMP program associated with post-construction stormwater management. FCPS is treated in the same manner as a private developer, and as such, must meet all local water quality and water quantity requirements in accordance with the local design requirements.

Procedures for Design and Installation of Stormwater Management Facilities

Stormwater BMPs must be designed and installed properly in order to ensure that pollutant reduction requirements are met and that the facility provides water quality benefits. FCPS is considered a private developer by the locality where the construction site is located. The locality reviews project development plans to ensure the project is meeting the appropriate water quality and water quantity design criteria contained in the VSMP regulations, the Virginia BMP Clearinghouse, the Virginia Stormwater Handbook, and local design manuals, as applicable. The FCPS Office of Design and Construction is responsible for ensuring that these requirements are met.

BMP 5.A –Long Term Operation and Maintenance of BMP Facilities

Objective and Expected Results: Proper maintenance of stormwater facilities is essential to ensuring that the facilities continue to provide their intended water quality benefits. Fairfax County STW performs inspections and maintenance of FCPS stormwater facilities.

Implementation and Schedule: The permit requires written procedures for the inspection and maintenance of operator-owned facilities. The permit also requires that operator-owned facilities be inspected annually or according to an "alternative inspection schedule" determined by the permittee. FCPS relies on Fairfax County STW to perform inspection and maintenance of FCPS stormwater management facilities.

- Fairfax County STW inspects FCPS ponds according to the schedule outlined in its "Post-Construction Stormwater Inspection and Maintenance Policies and Procedures", dated January 2016, using dedicated inspection checklists based on type of facility (See Appendix C).
- Fairfax County STW performs proactive routine maintenance and required maintenance in response to inspection findings for FCPS facilities.

Responsible Parties: Fairfax County STW performs inspections and applicable maintenance on behalf of FCPS.

Documentation and Measure of Evaluation: Fairfax County STW will provide information to include in the annual report on the number of stormwater BMP facilities inspected each year and the number and type of facilities maintained, if applicable.

BMP 5.B – Stormwater Facility BMP Tracking Database

Objective and Expected Results: Fairfax County STW's stormwater management facility tracking database includes FCPS facilities and helps ensure that public facilities are being

inspected and maintained in accordance with permit requirements. The County's database was developed to track all permanent stormwater management facilities that discharge to the MS4 and to collect information necessary to meet permit reporting requirements related to inspection and maintenance activities.

Implementation and Schedule:

- New FCPS facilities are entered into the STW stormwater management facility database based on the date of inventory. Inspection and maintenance information is tracked in the database as well.
- The database will include the total acres treated, and a breakdown of impervious and pervious area treated. STW will begin updating the database to include a breakdown of impervious and pervious treated area for FCPS facilities in PY2.

Responsible Party: Fairfax County STW will coordinate the stormwater management facility database with OFM.

Documentation and Evaluation Criteria: FCPS will submit an electronic database or spreadsheet of all stormwater management facilities brought online during each reporting year with the appropriate annual report. The database will include: BMP type, location, acres treated (total acres and breakdown of pervious and impervious acres), date brought online, sixth order HUC, name of impaired segment, date of the most recent inspection, and date of last maintenance activity. Reporting on the progress of updating existing facility information to meet the new requirements will begin in PY2.

MCM #5 Implementation Schedule							
BMP	**Task**	**Year(s) to Implement**					**Responsibility**
		PY1	PY2	PY3	PY4	PY5	
5.A	Implement Fairfax County SOP for long-term operation and maintenance of stormwater facilities.		►	►	►	►	Fairfax County STW
	Inspect all stormwater facilities in accordance with Fairfax County requirements.		►	►	►	►	Fairfax County STW
5.B	Maintain the stormwater facility tracking database.	►	►	►	►	►	Fairfax County STW
	Update the stormwater facility database to include new information required by the permit.		►	►	►	►	Fairfax County STW

MCM #6: Pollution Prevention/Good Housekeeping for Municipal Operations
Permit Requirement: Section II B. 6
Relevant Excerpt:
f. At a minimum, the MS4 Program Plan shall contain:
(1) The written protocols being used to satisfy the daily operations and maintenance requirements;
(2) A list of all municipal high-priority facilities that identifies those facilities that have a high potential for chemicals or other materials to be discharged in stormwater and a schedule that identifies the year in which an individual SWPPP will be developed for those facilities required to have a SWPPP. Upon completion of a SWPPP, the SWPPP shall be part of the MS4 Program Plan. The MS4 Program Plan shall include the location in which the individual SWPPP is located;
(3) A list of lands where nutrients are applied to a contiguous area of more than one acre. Upon completion of a turf and landscape nutrient management plan, the turf and landscape nutrient management plan shall be part of the MS4 Program Plan. The MS4 Program Plan shall include the location in which the individual turf and landscape nutrient management plan is located; and
(4) The annual written training plan for the next reporting cycle.

BMP 6.A –Sweeping Projects

Objective and Expected Results: Sweeping of impervious surfaces plays an important role in pollution prevention by removing trash and particulates that could have entered the storm sewer system during a rainfall event.

Implementation and Schedule: FCPS Office of Facilities Management is responsible for maintenance of parking facilities and will continue to conduct sweeping. Parking lot sweeping is performed by a contractor or FCPS staff.

In addition to the large scale sweeping, FCPS has custodial staff on site during daily operations that monitor and address spot sweeping and collect trash.

Responsible Party: Fairfax County Public Schools oversees street sweeping at parking facilities.

Documentation and Evaluation Criteria: FCPS will provide an estimate of the total material collected during the reporting period in each annual report. Quantities will not be inclusive of all the cleaning and trash collection done by custodial staff.

BMP 6.B – Good Housekeeping Standard Operating Procedures for Daily Operations

Objective and Expected Results: FCPS employees engage in a variety of daily activities that have the potential to impact water quality. The development and implementation of written procedures designed to minimize or prevent the discharge of pollution from daily operations can have a positive impact on water quality.

Implementation Schedule: During PY2, FCPS developed written SOPs for: daily operations such as road, street and parking lot maintenance; equipment maintenance; and, the application, storage, transport and disposal of pesticides, herbicides and fertilizers. FCPS will complete the following specific activities in support of this BMP:

- FCPS will update written SOPs for daily operations as necessary.
- FCPS will implement SOPs for daily operations PY3 through PY5.

- The written SOPs for daily operations will be incorporated into the biennial pollution prevention and good housekeeping training in BMP 6.F.

Responsible Party: OFM will provide overall coordination of SOP development and implementation. Individual departments and divisions will provide implementation support based on specific SOPs.

Documentation and Evaluation Criteria: The written SOPs for daily operations are provided in Appendix E.

BMP 6.C – Stormwater Pollution Prevention Plans for High-Priority Facilities

Objective and Expected Results: Development and implementation of stormwater pollution prevention plans (SWPPPs) can minimize the impact to stormwater runoff from publicly-owned or operated high-priority facilities with a high potential to discharge pollutants due to exposure to stormwater runoff. High-priority facilities may include the following: composting facilities; equipment storage and maintenance facilities; recycling facilities; solid waste handling and transfer facilities; salt storage facilities; materials storage yards; pesticide storage facilities; public works yards; and, vehicle storage and maintenance yards.

Implementation Schedule: FCPS will develop and implement a SWPPP for the high-priority facility identified as having a high potential to impact stormwater runoff. The following specific activities support this BMP:

- FCPS identified the Facilities Management Grounds and Central Operations at Woodson High School facility as a high-priority facility that requires the development and implementation of SWPPP.
- FCPS will develop and implement a site-specific SWPPP for the Woodson facility no later than PY4.

SWPPP Location and Schedule of Implementation

Facility	Responsible Agency	Location	Implementation Schedule
Facilities Management Grounds and Central Operations at Woodson	OFM	9525 Main Street, Fairfax, VA 22031	PY4

Responsible Party: OFM will coordinate this BMP with other FCPS agencies as applicable.

Documentation and Evaluation Criteria: FCPS will provide a summary report on the development and implementation of the required SWPPP with each annual report.

BMP 6.D – Turf and Landscape Nutrient Management Plans

Objective and Expected Results: Implementation of turf and landscape nutrient management plans (NMPs) developed by a certified nutrient management planner in accordance with § 10.1-104.2 of the Code of Virginia will help reduce possible impacts to local water quality from stormwater runoff from these areas.

Implementation Schedule: FCPS will identify all lands owned or operated by FCPS where nutrients are applied to a contiguous area greater than one acre. A certified nutrient management planner will develop NMPs for these lands. Based on the MS4 permit, NMPs must be developed for no less than 15% of identified acres within 24 months, no less than 40% of identified acres within 36 months, no less than 75% of identified acres within 48 months, and 100% of identified acres within 60 months.

- FCPS has identified the locations where NMPs will be developed and implemented. The list of locations is provided in Appendix B. This list has been modified in the PY3 Program Plan. The PY1 list was a comprehensive list of all schools with field areas greater than one acre, since the nutrient application status was unknown at that time. The updated PY3 NMP list was revised to track acreage by playing field greater than one acre where nutrients are applied and to remove fields where nutrients are not applied, including newly constructed synthetic turf fields.

Responsible Party: OFM and SAA will provide overall coordination of this BMP.

Documentation and Evaluation Criteria: FCPS will provide a summary report on the development and implementation of the required NMPs with each annual report that includes: total acreage required to have an NMP and total acreage for which NMPs have been implemented.

BMP 6.E – Training on Recognition and Reporting Illicit Discharges by Field Personnel

Objectives and Expected Results: Field personnel serve as the "eyes and ears" of FCPS in spotting potential illicit discharges and reporting them for further investigation. This training will provide the tools for staff to recognize a potential discharge, record relevant observations and report it to the proper FCPS staff for follow up. This will help eliminate illicit discharges and minimize possible impacts to local waterways.

Implementation Schedule: FCPS will provide biennial training in Recognizing and Reporting Illicit Discharges to the field personnel positions listed below in accordance with permit requirements. Training tools may include, but are not limited to, presentations, videos, booklets, manuals, and field instructions, as appropriate. Multiple training sessions utilizing different media may be provided as appropriate to minimize impact to workloads.

The requirement for biennial training begins PY2 and is effective through PY5. FCPS will provide this training according to the following training schedule:

Staff Training Schedule:
Recognizing and Reporting Illicit Discharges for Field Personnel

Staff Position	FTEs*	Training Due
Office of Facilities Management		
Grounds Maintenance, Coordinator	1	PY2 & PY4
Environmental Compliance Specialist	1	PY2 & PY4
Engineering Technician	1	PY2 & PY4
Technical Inspector	1	PY2 & PY4
Grounds Operations Manager	1	PY2 & PY4
Grounds Equipment Technician	1	PY2 & PY4

Staff Position	FTEs*	Training Due
Facilities Environmental Specialist	1	PY2 & PY4
Facilities Environmental Technician	1	PY2 & PY4
Groundskeepers	35	PY2 & PY4
Grounds Equipment Technicians	7	PY2 & PY4
Heavy Equipment Operators	3	PY2 & PY4
Field Representative	1	PY2 & PY4
Office of Safety and Security		
Environmental Specialist	1	PY2 & PY4
Office of Design and Construction		
Technical Inspectors	9	PY2 & PY4

**Full Time Equivalents based on adopted FY14 Approved Budget*

Responsible Party: OFM will provide overall coordination, with OSS and ODC providing coordination for their respective personnel.

Documentation and Evaluation Criteria: FCPS will provide a list training events held, the training date, the number of employees attending the training and the objective of the training in each annual report for the corresponding reporting period. Sign-in sheets and materials will be retained for a minimum of three years by FCPS in accordance with the permit.

BMP 6.F – Training on Good Housekeeping and Pollution Prevention for Maintenance, Public Works, and Recreational Facility Staff

Objectives and Expected Results: FCPS engages in a number of activities that have the potential to impact water quality. Training FCPS staff on good housekeeping and pollution prevention practices can decrease the possible impact of these activities on water quality.

Implementation Schedule: FCPS will provide training for staff performing road, street and parking lot maintenance; working in and around maintenance and public works facilities; and working in and around recreational facilities. Training tools utilized may include, but are not limited to, presentations, videos, booklets, manuals, and field instructions, as appropriate. Multiple training sessions utilizing different media may be provided as appropriate to minimize impact to workloads.

The requirement for biennial training begins PY2 and is effective through PY5. FCPS will provide this training according to the following training schedule:

Staff Training Schedule:
Good Housekeeping for Municipal Operations

Staff Position	FTEs*	Training Due
Office of Facilities Management		
Facilities Administration, Coordinator	1	PY3 & PY5
Grounds Maintenance, Coordinator	1	PY3 & PY5
Environmental Compliance Specialist	1	PY3 & PY5
Custodial Operations, Coordinator	1	PY3 & PY5

Staff Position	FTEs*	Training Due
Facilities Management, Coordinators	3	PY3 & PY5
Satellite Operations, Manager	1	PY3 & PY5
Technical Inspector	1	PY3 & PY5
Management Technician	1	PY3 & PY5
Grounds Operations Manager	1	PY3 & PY5
Grounds Equipment Technician	1	PY3 & PY5
Facilities Environmental Specialist	1	PY3 & PY5
Facilities Environmental Technician	1	PY3 & PY5
Groundskeepers	35	PY3 & PY5
Grounds Equipment Technicians	7	PY3 & PY5
Heavy Equipment Operators	3	PY3 & PY5
Painters	20	PY3 & PY5
Environmental Specialist	1	PY3 & PY5
General Maintenance Workers	2	PY3 & PY5

**Full Time Equivalents based on adopted FY14 Approved Budget*

Responsible Party: OFM will provide overall coordination for this BMP.

Documentation and Evaluation Criteria: FCPS will provide a list training events held, the training date, the number of employees attending the training and the objective of the training in each annual report for the corresponding reporting period. Sign-in sheets and materials will be retained for a minimum of three years by FCPS in accordance with the permit.

BMP 6.G – Certification for Pesticide and Herbicide Applicators

Objective and Expected Results: When misapplied, pesticides and herbicides can be a source of stormwater pollution. By ensuring that applicators are certified according to Virginia law in the proper handling, application, and disposal best practices helps to reduce the likelihood of potential impacts to water quality.

Implementation Schedule: FCPS will ensure that staff and contractors applying pesticide and herbicides are certified.

- FCPS will ensure that applicable employees receive the proper training or certification in accordance with the Virginia Pest Control Act (§3.2-3900 et seq. of the Code of Virginia).
- Beginning PY2, FCPS will require through contract language and agreement language that applications on behalf of Friends of the Field and contractors applying to high school athletic fields have completed the proper training and certification prior to applying on FCPS property.

Responsible Parties: OFM and the SAA will be responsible for implementing this BMP.

Documentation and Evaluation Criteria: FCPS will verify that all employees that handle or apply pesticides and herbicides are certified by the Virginia Department of Agriculture and Consumer Services (VDACS), if applicable. FCPS will track and retain the training and certification records for staff and acknowledge meeting this requirement in the annual report.

BMP 6.H – Proper State Certification for Erosion and Sediment Control

Objective and Expected Results: Unlike a locality, FCPS does not regulate land-disturbing activities or administer an erosion and sediment control program. Rather, FCPS is considered to be the equivalent of a private developer by the localities within which they perform construction and must comply with local codes and ordinance for land-disturbing activities. The locality's program will review all FCPS erosion and sediment control plans, inspects land-disturbing activities, and performs enforcement as necessary. FCPS performs contract oversight and requires the contractor to designate a certified Responsible Land Disturber (RLD).

Implementation Schedule: FCPS will comply with erosion and sediment control requirements and designate an RLD for all FCPS projects.

Responsible Party: ODC is responsible for compliance with all local erosion and sediment control program requirements.

Documentation and Evaluation Criteria: FCPS will comply with all erosion and sediment control program requirements.

BMP 6.I – Spill Response Training for Emergency Personnel

Objective and Expected Results: Accidental spills of materials create the potential for impacts to receiving streams if they are allowed to enter into the storm sewer system. Training emergency response personnel in responding to spills can provide the right tools to keep these materials from entering the MS4.

Implementation Schedule: FCPS will ensure that that the appropriate emergency response staff attends annual training that may include one or a combination of the following: presentations, field exercises, discussions, or videos. Proper certifications required as part of the employees' job will be ensured as well.

Staff Training Schedule: Spill Response

Staff Position	FTEs*
Coordinator, Safety	1
Environmental Specialist	1

**Full Time Equivalents based on adopted FY14 Approved Budget*

Responsible Party: OSS will coordinate this BMP.

Documentation and Evaluation Criteria: FCPS will provide a list training events held, the training date, the number of employees attending the training provided or certification program completed in each annual report

BMP 6.J – Contractor Oversight Procedures

Objective and Expected Results: FCPS will ensure that contractors performing work on behalf of FCPS use appropriate pollution prevention and good housekeeping measures.

Implementation Schedule: FCPS will revise contract language during PY3 requiring contractors to follow FCPS SOPs for Daily Operations to address pollution prevention and good housekeeping as part of contractor oversight.

Responsible Party: The ODC and the OFM will share responsibility for this BMP.

Documentation and Evaluation Criteria: Following development of SOPs for Daily Operations as part of the PY2 program plan update, FCPS will provide documentation of revised contractual language.

MCM #6 Implementation Schedule							
BMP	**Task**	**Year(s) to Implement**					**Responsibility**
		PY1	PY2	PY3	PY4	PY5	
6.A	Annual parking lot sweeping.	►	►	►	►	►	Fairfax County MSMD
6.B	Develop daily operations SOPs.		■				OFM
	Implement SOPs.			►	►	►	OFM
	Incorporate SOPs into biennial training.			►		►	OFM
6.C	Develop list of high-priority facilities requiring SWPPPs.	■					OFM
	Develop and implement SWPPPs.				►	►	OFM
6.D	Develop list of locations requirement NMPs.	■					OFM, SAA
	Develop and implement NMPs.		►	►	►	►	OFM, SAA
6.E	Biennial training on Recognizing and Reporting Illicit Discharges.		■		■		OFM, OSS, ODC
6.F	Biennial training on Good Housekeeping and Pollution Prevention.			■		■	OFM
6.G	Ensure proper training or certification for pesticides and herbicides.		►	►	►	►	OFM, SAA
	Contract language or written certification for contractors.		■	►	►	►	OFM, SAA
6.H	Ensure designation of Registered Land Disturber for projects.	►	►	►	►	►	ODC
6.I	Ensure applicable spill training or certification for emergency response staff.	►	►	►	►	►	OSS
6.J	Revise contractor language for SOPs.			■	►	►	OFM, ODC

F. Annual Report and Program Evaluation

FCPS will submit annual reports to the Department of Environmental Quality each year covering the period of July 1st through June 30th. The reports will be submitted to DEQ no later than October 1st of each year. The information provided to DEQ will be in accordance with the provisions of 9VAC25-890-40 Section II.E.3.

FCPS will also provide an annual evaluation of program compliance and the effectiveness of BMPs during the annual reporting process, to include the effectiveness of BMPs in addressing discharges into impaired waters found in the 2010 Water Quality Assessment Integrated Report.

Appendix A

ILLICIT DISCHARGE DETECTION AND ELIMINATION SOPS

Appendix B

SAMPLE CONTRACTOR BID SPECIFICATIONS

Appendix C

FAIRFAX COUNTY POST-CONSTRUCTION STORMWATER INSPECTION AND MAINTENANCE POLICIES AND PROCEDURES

Appendix D

NUTRIENT MANAGEMENT PLAN (NMP) LOCATIONS

Appendix E

STANDARD OPERATING PROCEDURES FOR DAILY OPERATIONS

Appendix F

CHESAPEAKE BAY TMDL ACTION PLAN

Appendix G

BENTHIC TMDL ACTION PLAN

Appendix H

PCB TMDL ACTION PLAN

Appendix I

BACTERIA TMDL ACTION PLAN

Appendix A

ILLICIT DISCHARGE DETECTION AND ELIMINATION SOPS

Dry Weather Screening Standard Operating Procedures

Fairfax County Public Schools Phase II MS4

FINAL July 2014

1.0 PURPOSE/BACKGROUND

Fairfax County Public Schools' (FCPS) Municipal Separate Storm Sewer System (MS4) permit requires that the permittee shall create and implement a screening program to detect and correct illicit connections and improper discharges to the MS4. The Phase II permit requires FCPS to screen a minimum of 50 outfalls annually for each reporting period.

2.0 SAFETY AND TRAINING PREREQUISITES

Field staff involved in dry weather screening should attend annual training in the protocols outlined in the Standard Operating Procedures (SOP). Safety procedures require that field work must be conducted by at least two personnel. At no time are any personnel allowed to break the plane of a confined space with any part of their body. Specially trained confined space entry personnel will perform these functions. Additionally, manhole covers should only be removed after conducting atmospheric monitoring of the space. Only non-electronic powered devices should be used to collect water samples from within confined spaces. Training is provided yearly and consists of an overview of safety protocols including proper Personal Protective Equipment (PPE), manhole cover removal and confined space safety procedures. Training also covers a refresher on conducting the chemical analysis and the safety protocols involved. Field personnel must sign a training attendance record prior to conducting field activities.

3.0 DRY WEATHER OUTFALL SCREENING

Outfall inspections conducted during dry weather and periods of minimal groundwater flow should be used to identify potential illicit discharges when flow is observed or when visual, smell, or other indicators are observed. **Sampling shall not take place if it has rained 0.1 inches or more within the past 48 hours.** Flows observed during periods of dry weather could indicate an illicit discharge to the storm drainage system.

4.0 PRIORITIZATION AND SITE SELECTION

FCPS must perform dry weather screening for a minimum of 50 outfalls annually to comply with the general permit.

For the FCPS screening effort, outfalls should be prioritized based on age of infrastructure and localized uses. Previously observed historical illicit discharges, dumping or cross connections may also be a reason to prioritize FCPS outfalls for screening. In the absence of historical or anecdotal data, field crews may focus efforts on outfalls and those that drain properties owned or operated by FCPS with activities that may have a higher potential to impact water quality, such as, automotive classes, fueling operations, fleet vehicle parking, or materials storage.

5.0 GENERAL FIELD ASSESSMENT PROCEDURES

The following general procedures apply to the dry weather field inspection and water sampling work:

a) Perform field work in teams
b) Develop safety protocols and conduct annual training for field staff
c) Perform annual training for field staff in identifying and reporting potential illicit discharges
d) Utilize GIS and hard copy mapping information as discussed above

e) Fill out Outfall Screening Field Sheet (Attachment A)
f) Collect water samples and screen for pollution indicators when necessary
g) Initiate trackdown procedures if illicit discharge is evident or suspected
h) Perform QA/QC of field data and ensure prompt entry into database
i) Revisit outfalls in certain cases for follow-up investigations

6.0 INFORMATION COLLECTION FOR DRY WEATHER SCREENING

Field observations and general information shall be collected for routine dry weather screening. This information shall also be recorded for observed dry weather flow at an outfall that is being screened in conjunction with compliant investigations for reports of potential illicit discharges. When dry weather flow is observed during routine dry weather outfall screening or during investigations performed in response to complaints, staff will utilize the Field Sheet (Attachment A) to record field observations. General information collected on the data sheet includes:

a) StormNet ID (Unique GIS identifier for the outfall)
b) FCPS facility name (i.e. school name)
c) HUC
d) Watershed name
e) Date / Time of screening
f) Persons performing the screening
g) Weather conditions
h) At least 48 hours since last rain > 0.1”? (Y/N)
i) Local land uses
j) Outfall description (material, shape, number of pipes, diameter, condition)
k) Observed Dry Weather Flow (Y/N)
l) Estimated flow rate (categorical)
m) Visual field observations & physical indicators
n) Water testing results (when applicable)

7.0 FIELD OBSERVATIONS FOR FLOWING OUTFALLS

Source determination and ultimate elimination of illicit discharges is the overall goal of the program. If screening reveals dry weather flow, the discharge from the outfall and the area around the outfall must be inspected for other indicators. Staff should then perform source investigation measures in the outfall drainage area to identify and eliminate the source. Additional field observations are recorded on the data sheet.

7.1 Physical Indicators

The data sheet in Attachment A requires the field crew to note physical indicators for all outfalls, if present, and rank the relative severity index for each. At flowing outfalls this includes, flow, odor, color, turbidity and floatables. The information that is observed and documented related to these physical characteristics are helpful in determining the possible source, but cannot always be fully relied upon by themselves.

7.2 Water Quality Indicators

The field crew has the option to conduct water quality testing based on field observations of dry weather flow and/or the associated physical characteristics of the outfall/discharge. Water quality testing should be utilized when field staff find or suspect evidence of possible illicit discharges to the MS4. When the option to conduct water quality tests is exercised, refer to section 9.0 for specific test instructions.

8.0 MONITORING AND SAMPLE COLLECTION

Ideally, field screening should begin after vegetation has started to die back and the outfalls are both visible and accessible. **Sampling shall not take place if it has rained 0.1 inches or more in the past 48 hours.** The following is the proper sequence to follow in order to determine if observed dry weather flow indicates the presence of an illicit discharge:

a) Inspect selected outfall for evidence of dry weather flow and assess physical characteristics of the outfall structure and any discharge, and record observations on the data sheet found in Attachment.
b) If an illicit discharge is visually obvious upon first inspection (i.e. sewage smell, grey water, oily discharge, etc.), track down should commence immediately (see track down protocol, Section 10).
c) If flow is present and a water quality test is warranted, collect a water sample for analysis. If the outfall is submerged or stagnant, proceed to the closest upstream manhole and take a sample from there if possible. When the outfall to be sampled is from a wet pond, check the infalls to the pond and collect a water sample if there is flow. Mark location of sample collection on the field map. Place sample on ice and perform water chemistry tests in field (refer to procedure in Section 9).
d) If one or more analytes exceeds the criterion listed in Table 1 below, **wait at least eight hours** and retest the flow for any of the analytes that were in exceedance or that were close to the exceedance criteria (use best professional judgment).
   If an analyte is confirmed through retesting to exceed the criterion in Table 1, track down the source of discharge by testing farther up the storm drain network (see track down protocol, Section 10).
e) If the analyte in question is not present on the first retest (second visit), wait an additional 8 hours and retest the outfall a third time to confirm or rule out an intermittent discharge. If the analyte is in exceedance, track down the source of discharge by testing farther up the storm drain network (see track down protocol, Section 10). If the analyte is not in exceedance, no trackdown or retesting of the outfall is required.
f) For sites that were in exceedance of **Fluoride**, a **Chlorine** test should also be run as soon as possible after collecting the retest sample. If a site had an exceedance in Specific Conductance, any analytes that were close to their respective exceedance levels should also be retested. **Make sure to check RETEST on the data sheet and record all dates when samples are taken.**

Table 1. Analytes, Test kits and Ranges, Disposal Classification and Exceedance Criteria for Dry Weather discharge screening

Analyte	Kit or Probe	Exceedance Criterion	Disposal Classification (container)	Test Range (mg/L)	Possible Effluent Types Indicated
Primary Indicators					
Temperature	YSI	32°C	N/A	N/A	Industrial, Sewage/Wastewater, Wash water,
pH	YSI	< 6 or > 9	N/A	N/A	Industrial
Specific Conductance	YSI	> 1000 µS/cm	N/A	N/A	Industrial, Sewage/Wastewater
Detergents (surfactants)	Single Analyte Meter (Chemetrics)	≥ 0.25 mg/L	Acid	0.2 to 2.5	Sewage/Wastewater, Washwater
Copper	V-2000 Photometer (Chemetrics)	> 0.5 mg/L	Acid	0.5 to 12	Industrial, Cooling Tower Water

Phenol	V-2000 Photometer (Chemetrics)	> 0.4 mg/L	Toxic	0.4 to 8	Dry-cleaning
Fluoride	Fluoride Tracer Pocketester (LaMotte)	≥ 0.50 mg/L	Oxidizer/Acid	0.1 to 10	Drinking Water, Cooling Tower Water
Secondary Indicators					
Chlorine	V-2000 Photometer (Chemetrics)	> 0.4 mg/L	Flammable	0.4 to 5	Industrial, Drinking Water, Sewage/Wastewater
Ammonia	Test Strips	> 0.3 mg/L	N/A	0.0 – 6.0	Sewage/Wastewater, Wash water, Industrial

8.1 EQUIPMENT CHECKLIST AND PREPARATION

Field staff should assemble the following items before heading out to conduct sampling or track downs:

- **Meters and Test Kits**
  - MSA Altair 5X Atmospheric Gas Meter
  - YSI 556 Multi-Parameter Sonde (w/ pH, temperature & specific conductance probes)
  - Field Test Kit (orange case) containing:
    - SAM Detergents meter
    - V-2000 Photometer and light cover
    - Fluoride Tracer PockeTester
    - Test kits for chlorine, copper, fluoride, phenols, ammonia and detergents
    - Ammonia test strips
- **Personal Protection Equipment**
  - Nitrile gloves
  - Eyewash solution
  - Safety glasses
  - Steel toe boots
  - Safety vest
  - Hard hat
- **Clipboards to Contain**
  - Datasheets
  - Testing protocol (SOP)
  - Sharpies, pencils
  - Site maps
- **Supplies Needed for Sampling and Analysis**
  - Rinse bottle with distilled water
  - Fluoride standard
  - Waste Containers
  - Syringes and tubing for collecting low-flow samples
  - Plastic sample bottles
  - Tape Measure for measuring the flow depth and outfall size
  - Paper towels
  - Camera

- Cell phone
- Cooler with ice/ice packs

- **Supplies Needed for Track Down**
  - Manhole hook (2)
  - Flashlight
  - Tracing Dye
  - Long-handled scoop and/or extension grips
  - Peristaltic pump

9.0 PERFORMING WATER CHEMISTRY TESTS

If the outfall is flowing and a water quality test is warranted, obtain a sample by scooping the water with the sample bottle. If the flow is very low, the sample may need to be collected with a syringe. All sample bottles and syringes should be **rinsed three times** with sample water before collecting the final sample. Avoid collecting any detritus or sediments while collecting the sample. Sample containers must be kept on ice until they can be analyzed and not stored for more than four hours.

NOTE: All liquids and all Glass/Sharps, including contaminated rinse water, should be poured into appropriate waste containers as specified at the beginning of each test procedure. All reusable containers should be rinsed well with distilled water.

9.1 PRIMARY INDICATORS

(Specific conductance, pH, temperature, detergents, fluoride, copper and phenols): Where water quality tests are warranted, primary indicators must be analyzed during the initial visit.

9.1.1 Specific Conductance, pH and Temperature (YSI)

The YSI should be calibrated each morning before going out in the field.

Turn the YSI on and allow it to warm up for 15-20 minutes before measuring a sample. Remove the plastic cover and install the black probe guard around electrodes and place probe into flowing water. Wait for a stable result and record data. If the flow is too low to allow the probe to be completely submerged, rinse the plastic cover three times with sample and fill most of the way up. Place probe into plastic cover and screw back on. Read temperature as soon as stable as it will slowly rise while in the plastic cover.

9.1.2 Detergents/Surfactants

****Dispose of all Detergent waste in "ACID" container****

Test Detergents using the Single Analyte Meter (SAM)

Fill the zero test tube (in detergents test kit) with distilled water and wipe dry. Insert into sample cell compartment. Press and hold button until display reads "---" then "0.00."

1. Rinse red-tipped dropper bottle with sample 3 times, then fill to line with sample.
2. While holding ampoule in vertical position, snap upper tip using tip-breaking tool.
3. Invert ampoule and position open end over open dropper bottle. Snap upper tip and allow contents to drain into dropper bottle.
4. Cap dropper bottle and shake vigorously with thumb on red cap for **30 seconds**.

5. Loosen and re-tighten cap and then allow bottle to stand undisturbed for **1 minute**. Layers should separate.
6. Remove red cap and slowly invert over a clean test tube. Squeeze bottle until the entire lower chloroform layer is in test tube. Remaining blue liquid should be disposed of and dropper bottle thoroughly cleaned before next sample.
7. Wipe dry and insert into meter. Allow test tube to stand undisturbed for **4 minutes.**
8. Press and release button; reading will appear immediately (Do **NOT** hold down button, or you will re- zero meter).

9.1.3 Fluoride

****Dispose of all Fluoride waste in "OXIDIZER/ACID" container****

Test Fluoride using the Fluoride Tracer Electrode

Create Calibration Mixture

1. Remove the fluoride TRACER, tablets, electrode module and sample cup from the box.
   a. Remove caps from module.
2. Fit the electrode module onto the end of the meter body, making sure that the slots line up correctly, and tightly turn the module retaining ring to secure the assembly.
3. Wipe the fluoride crystal and reference junction with a damp tissue.
4. Fill a sample cup to 20 mL with a 1.0 ppm fluoride standard. Add one TISAB TesTab and crush tablet with tablet crusher and mix until the tablet disintegrates (a traditional 1.0 ppm fluoride standard and TISAB reagent can also be prepared, or a premade mixed TISAB and 1.0 ppm standard can be used).
5. Rinse the end of the fluoride TRACER module in TISAB solution and **wipe thoroughly** with paper tissue.
6. Place the fluoride TRACER in the 1.0 ppm standard/TISAB mixture and switch the instrument ON using the ON/OFF key. The instrument will now run its self-calibration (this takes about 35 seconds) and enter the HOLD mode when stabilized in the 1.0 ppm solution.
7. Press and hold the **CAL** key; 'CAL' will appear in the display followed by 0.5 ppm and 5.0 ppm. Continue holding until 1.0 ppm is shown. Release the CAL key. After the display stops blinking the instrument will enter the HOLD mode. For a two point calibration, repeat the calibration procedure with a 10.0 ppm standard. **A Note on Calibration Frequency**: A one point calibration is adequate prior to each new measurement batch or if more than 24 hours has elapsed since the last calibration. A two point calibration should be performed if the meter is new or has not been calibrated for five days.

Testing Sample

1. Prepare an unknown solution by adding, crushing and dissolving one TISAB TesTab in 20 mL of sample. Mix thoroughly.
2. Rinse the end of the fluoride TRACER with distilled water.
3. Place the fluoride TRACER into the prepared unknown sample. If the instrument is in the HOLD mode, press **MODE/HOLD** to unlock HOLD.
4. After 25 seconds, the instrument will display the value of the unknown concentration and will enter the HOLD mode.

9.1.4 V-2000 Photometer Zeroing Procedures

****Photometer Procedure - The following steps should be followed for copper, phenol and chlorine**

samples. NOTE: Do not expose the V-2000 to sub-freezing temperatures, as this will render the meter inoperable for an extended time. Do not leave kits in vehicles overnight in cold weather.

Zeroing Instructions – the V-2000 should be zeroed before each indicator is tested.

1. Press the **power** button on the photometer.
2. Insert the **zeroing** ampoule from the appropriate test kit into the sample cell adaptor and line up the mark on the ampoule with the arrow on the bottom of the adaptor.
3. Cover with the light shield.
4. Press the **zero** key (NOT the number 0). Display will read "wait" and then "0.000." Remove the light shield and zeroing ampoule; return ampoule to appropriate test kit.

9.1.5 Copper

****Dispose of all Copper waste in "ACID" container****

Use Program Number 55

1. Zero the photometer - see above.
2. Rinse sample cup from Copper Test Kit three times with sample. Fill to **25 mL** mark with sample.
3. Place ampoule in sample cup and snap tip by pressing on side of cup. Allow ampoule to fill (it will leave a small bubble, which facilitates mixing).
4. Invert ampoule several times to mix, allowing bubble to travel from end to end each time.
5. Wipe ampoule completely dry. Insert ampoule into V-2000, cover and press the **MEAS** button. There will be a **2 minute** automatic wait for color development

9.1.6 Phenols

****Dispose of all Phenol waste in "TOXIC" container****

Use program number 152

1. Zero the photometer - see above.
2. Rinse sample cup from Phenol Test Kit three times with sample. Fill to **25 mL** mark with sample.
3. Stir sample with tip of ampoule to dissolve crystals.
4. Place ampoule in sample cup and snap tip by pressing on side of cup. Allow ampoule to fill (it will leave a small bubble, which facilitates mixing).
5. Invert ampoule several times to mix, allowing bubble to travel from end to end each time.
6. Wipe ampoule completely dry. Insert ampoule into V-2000, cover and press the **MEAS** button. There will be a **1 minute** automatic wait for color development

9.2 SECONDARY INDICATOR

9.2.1 Chlorine

If the Fluoride concentration is above the value listed in the exceedance criteria on the retest, test for Chlorine to assist in determining the source of discharge.

****Dispose of all Chlorine waste in "FLAMMABLE" container****

Test Chlorine using the V-2000 Photometer

Use program number 32

1. Zero the photometer-see above.
2. Rinse sample cup from Chlorine Test Kit three times with sample. Fill to **25 mL** mark with sample.
3. Add **5 drops** Activator Solution, stir briefly with ampoule tip, wait **1 minute**.
4. Place ampoule in sample cup and snap tip by pressing on side of cup. Allow ampoule to fill (it will leave a small bubble, which facilitates mixing).
5. Invert ampoule several times to mix, allowing bubble to travel from end to end each time. Tap ampoule on hard surface to cause any small bubbles to rise to top of liquid.
6. Wipe ampoule completely dry. Insert ampoule into V-2000, cover and press the **MEAS** button. There will be a **1 minute** automatic wait for color development

9.2.2 Ammonia– May be helpful in determining in an illicit discharge is washwater or wastewater.

1. Fill sample vial to top line with water.
2. Dip the strip into sample water. Vigorously move the strip up and down in water sample for **30 seconds**, making sure both pads are always submerged.
3. Remove the test strip and shake off excess water.
4. Hold the test strip level, with the pad side up, for **30 seconds**.
5. To read result, **turn the test strip over** so that both pads are facing away from you.
6. Compare the color of the small pad to the color chart on the bottle. **Read the result through the clear plastic of the test strip.**
7. Rinse sample vial with distilled water after each use.

10.0 TRACKDOWN

If a high concentration of an analyte is confirmed through retesting of observed dry weather flow, trackdown to determine the source of discharge by investigating farther up the storm drain network should be conducted. Field crews performing the dry weather screening will contact the responsible FCPS staff listed in Section 12 below to commence trackdown. FCPS field crews will need to investigate upstream manholes in the storm drain network and try to narrow down the source of the discharge to a specific pipe segment between two manholes or the input source. Once the source of the suspected illicit discharge has been pinpointed to a particular area, use Table 1 to determine the possible nature of the illicit discharge. If the discharge is suspected to be sewage the discharge should be addressed immediately. After the source of an illicit discharge has been identified, call the appropriate contacts using Table 2 below. If the illicit discharge originating on FCPS property is directly discharged to a surface water, or is suspected to be discharge to a surface water, refer to Section 11 to determine if the illicit discharge must be reported to DEQ following the appropriate procedures.

10.1 ADDITIONAL DATA TRACKED FOR SUSPECTED ILLICIT DISCHARGES

The FCPS MS4 general permit requires the operator to track information related to outfall screening and follow up investigations that was conducted for any suspected illicit discharge. A summary of each investigation conducted during the reported period must be included in the annual report, and include the following information:

a) Date or dates that discharge observed and reported,

b) Results of investigation,

c) Any follow-up to the investigation,

d) Resolution of the investigation, and

e) Date investigation was closed.

11.0 REPORTS OF UNAUTHORIZED DISCHARGES

According to Section III G of the FCPS MS4 permit, there are some additional reporting requirements for observed dry weather flow that may be comprised of certain substances. In these instances, it is important that field staff performing dry weather screening record the applicable information in a) through i) below that may be included in a report to the Virginia Department of Environmental Quality (DEQ). If responsibility is handed to another agency, it is important that observations recorded are also provided in the handoff. (See Attachment B "Report of Unauthorized Discharges" form)

If the observed dry weather flow is comprised of sewage, industrial waste, or oil, the below reporting procedures must be followed. Additionally, reporting per this section must take place if other wastes or any noxious or deleterious or hazardous substance that is equal to or in excess of a reportable quantity established under either 40 CRF Part 110 (2002), 40 CRF Part 117 (2002) or 40 CRF Part 302 (2002). If the discharge occurs into or upon a surface water, or may be reasonably expected to enter surface waters, DEQ shall be notified immediately, or within 24 hours from when the discharge was first discovered. The information provided must be based on those items in a) through i) below (and Attachment B) which can be reported on. Staff shall also contact Fairfax County HazMat to respond to the release. The 24-hour report to DEQ should be accomplished through phone call if possible, but email will suffice if confirmation of notification by email can be received within the 24-hour period. If email confirmation is not received, the 24-hour report must be made via telephone. Staff must follow up the initial 24-hour notification by submitting a written report within five (5) days of the unauthorized discharge to DEQ that documents all items in a) through i). The 5-day reporting requirement to DEQ may be satisfied by using the online PREP reporting feature. If the flow continues past the 5-day period, staff must be in close contact with DEQ to report on steps being taken to eliminate the flow, and to document that the flow was stopped.

Field observations should be recorded using the "Report of Unauthorized Discharges" form located in Attachment B. If the form is not available when the illicit discharge is identified, staff should ensure that the following information is recorded and transferred to the form:

a) A description of the nature of the discharge
b) Location of the discharge
c) Cause of the discharge
d) Date on which the discharge occurred
e) Timed duration of the discharge
f) Volume of the discharge
g) If the discharge is continuing, how long is it expected to continue
h) If the discharge is continuing, what the expected total volume of the discharge will be
i) Any steps planned or taken to reduce, eliminate and prevent the current discharge and any future discharges

12.0 CONTACTS

The following table should be used by staff performing dry weather outfall screening in the event that a suspected illicit discharge is observed. Screening staff should immediately contact HAZMAT if the discharge is suspected to be composed of hazardous material(s). Screening staff should contact FCPS staff listed below for all other illicit discharges. FCPS staff will conduct Trackdown procedures detailed in Section 10 above and contact the appropriate agency based on findings.

Table 2. Illicit Discharge & Improper Disposal Contact Information

When to Call	Agency	Contact	Phone Number
Hazardous Material	FFX FRD	HAZMAT	703-246-4386
Observed Dry Weather Flow during screening	FCPS	Holly Moran	703-624-0337
Flow Tracked to FFX MS4 Interconnection	FFX SWPD	Takisha Cannon	703-324-5885
Flow Tracked to Town of Herndon MS4 Interconnection	Herndon Dept. of Public Works	Zoran Dragacevac	703-435-6856
Flow Tracked to Town of Vienna MS4 Interconnection	Vienna, Dept. of Public Works	Michael Gallagher	703-255-6389
Sewer Cross Connection	FFX WWCD	Wastewater	703-323-1211
Section 11 Reporting	DEQ	Mark Miller and/or PREP	703-583-3800
Section 11 Discharges to County waterway	FFX HD	John Yetman	703-246-8410

13.0 ATTACHMENT A

Outfall Screening Field Sheet

ATTACHMENT B

Reports of Unauthorized Discharges Form

ATTACHMENT A

Retest Required: Yes No

Second Retest Required: Yes No

Fairfax County, VA - FCPS Dry Weather Screening

SECTION 1: BACKGROUND DATA

Watershed:	STMN:	FCPS Facility:
Date (MM/DD/YY): __ __ / __ __ / __ __		Time: __ __: __ __
Investigators:	HUC:	Form completed by:
Camera:	Photo #:	Sample #:

Land Use in Drainage Area (Check all that apply):

☐ Industrial

☐ Residential

☐ Commercial

☐ Open Space

☐ Institutional (schools/churches)

Other:_____

_____

Known Industries:_____

_____

Notes/Comments (e.g.., origin of outfall, if known):

SECTION 2: OUTFALL DESCRIPTION

Location	Material	Shape		Dimensions (In.)
☐ **Closed Pipe** ☐ **Open Drainage**	☐ **RCP** ☐ **CMP** ☐ **PVC** ☐ **HDPE** ☐ **Steel** ☐ **Other:**	☐ **Circular** ☐ **Box** ☐ **Elliptical** ☐ **Arch** ☐ **Other:**	☐ **Single** ☐ **Triple** ☐ **Double** ☐ **Other:**	**Dimensions:** **Height:** _____ **Width:** _____

Headwall Condition:	☐ **No Headwall** ☐ **Good** ☐ **Fair** ☐ **Poor**
Flow Present?	☐ **Yes** ☐ **No** IF NO, SKIP TO SECTION 5
Estimated Flow Rate:	☐ **Trickle (<1 gal/min)** ☐ **Slight (1-4 gal/min)** ☐ **Moderate (5-9 gal/min)** ☐ **Heavy (>10 gal/min)** ☐ **Fluctuating**
Discharges To:	☐ **River/Stream** ☐ **Lake/Pond** ☐ **Wetland** ☐ **Woods** ☐ **Detention Basin** ☐ **Ditch** ☐ **Other:**

SECTION 3: QUANTITATIVE CHARACTERIZATION

PARAMETER	RESULT	UNITS	Exceedance Limits	Retest 1	Retest 2	Follow-Up Results	Close-Out Results
Water Temperature	__ __.__	°C	≥32°C	__ __.__	__ __.__	__ __.__	__ __.__
pH	__ __.__	pH Units	<6 or >9	__ __.__ __	__ __.__ __	__ __.__ __	__ __.__ __
Specific Conductance	__ __ __ __	µS/cm[c]	>1,000 µS/cm[c]	__ __ __ __	__ __ __ __	__ __ __ __	__ __ __ __
Copper	__.__ __	mg/l	>0.5 mg/l	__ __.__ __	__ __.__ __	__ __.__ __	__ __.__ __
Phenol	__.__ __	mg/l	>0.4 mg/l	__ __.__ __	__ __.__ __	__ __.__ __	__ __.__ __
Detergents	__.__ __	mg/l	>0.25 mg/l	__.__ __	__.__ __	__.__ __	__.__ __
Fluoride	__.__	mg/l	≥0.5 mg/l	__.__ __	__.__ __	__.__ __	__.__ __
Ammonia (2°)	__.__ __	mg/l	>0.3 mg/l	__.__ __	__.__ __	__.__ __	__.__ __
Chlorine (2°)	__.__ __	mg/l	≥0.4 mg/l	__ __.__ __	__ __.__ __	__ __.__ __	__ __.__ __
			Follow-Up Date:				
			Follow-Up Investigators:	_____	_____	_____	_____

(Form adapted from Brown, *et al.* 2004)

Fairfax County, VA – FCPS Dry Weather Screening

SECTION 4: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY

Are any physical indicators present in the flow? ☐ Yes ☐ No (*If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Chemical ☐ Other:
	Relative Severity	☐ Faint ☐ Easily detected ☐ Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:
	Relative Severity	☐ Faint colors in sample bottle ☐ Clearly visible in sample bottle ☐ Clearly visible in outfall flow
Turbidity	☐	See severity
	Relative Severity	☐ Slight cloudiness ☐ Cloudy ☐ Opaque
Floatables *-Does not include trash!!*	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:
	Relative Severity	☐ Few/slight ☐ Some ☐ Widespread

SECTION 5: PHYSICAL INDICATORS FOR FLOWING AND NON-FLOWING OUTFALLS

Are physical indicators that are not related to flow present? ☐ Yes ☐ No (*If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION COMMENTS
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:
	Comments	
Abnormal Vegetation	☐	☐ Excessive ☐ Partially Inhibited ☐ Totally Inhibited
	Comments	
Poor Pool Quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:
	Comments	
Pipe Algae Growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:
	Comments	

SECTION 6: OVERALL OUTFALL CHARACTERIZATION OF ILLICIT DISCHARGE POTENTIAL

☐ Unlikely ☐ Suspect (≥1 Section 4 indicator with a severity of 3)

☐ Potential (presence of ≥2 Section 5 indicators) ☐ Obvious (≥1 WQ indicator)

SECTION 7: DATA COLLECTION

1.	Data entered into database:	☐ Yes	Entered by:_____	Date: _____
2.	Discharge Track Down:	☐ Not Necessary	☐ Successfully completed ☐ Inconclusive	☐ Additional investigation needed

SECTION 8: RETEST NOTES/COMMENTS

Tracking and Reporting Suspected Illicit Discharge Standard Operating Procedures for FCPS Staff
June 2014

1. Purpose

The Virginia Department of Environmental Quality (DEQ) currently regulates discharges of stormwater through the authority delegated from the Environmental Protection Agency (EPA) under the National Pollutant Discharge Elimination System (NDPES) section of the Federal Clean Water Act. DEQ regulates the discharge of stormwater from the MS4 to state surface waters through the issuance of Virginia Pollutant Discharge Elimination System (VPDES) MS4 permits.

The ultimate goal of the Illicit Discharge Detection and Elimination (IDDE) program is to find, eliminate and prevent illicit discharges to the Fairfax County Public Schools (FCPS) stormwater sewer system in order to protect and enhance surface water quality. An illicit discharge is defined as any discharge to the storm sewer system that is not composed entirely of stormwater, except for discharges allowed under a separate VPDES permit. These nonstormwater flows can be made up of any number of substances, from those that may have little or no impact to aquatic life, to extremely hazardous materials. It is important to know the difference, as the reporting requirements and who to contact is different depending on the material that enters the storm sewer system.

2. Program

An effective IDDE program is comprised dry weather outfall screening, mapping the system, and providing for public reporting of suspected illicit discharges. Dry weather screening of FCPS outfalls as required by the MS4 permit utilizes separate but related Dry Weather Screening Standard Operating Procedures. Portions of those SOPs may be relied upon to perform chemical testing and trackdown to determine the source of a suspected illicit discharge. The following Tracking and Reporting of Suspected Illicit Discharge Standard Operating Procedures focuses on the type of data to track suspected illicit discharges and outlines the data to track and who to call (see Section 6) for follow up investigations.

3. Suspected Illicit Discharges

FCPS staff will be the first point of contact for receipt and investigation of suspected illicit discharges. Staff may observe a suspected discharge firsthand, or receive complaints of potential illicit discharges initiated by other school staff, to include teachers, or the complaint may be initiated the student population utilizing the public reporting method promoted per the FCPS permit. FCPS staff observing the discharge or initially receiving the complaint will first route the complaint through the Environmental Specialist position within the Office of Facilities Management (OFM) and initiate tracking measures using the Suspected Illicit Discharge Form. (Attachment A)

If the complaint or the initial investigation by FCPS indicates that the suspected illicit discharge is comprised of a hazardous substance, the investigator shall immediately call the County Fire Marshal or call 911, as well as the FCPS Office of Safety and Security. (See Section 6) FCPS staff making the call shall remain safely onsite and receive the responders.

If the initial investigation indicates a non-hazardous substance, FCPS staff will begin

completing the Suspected Illicit Discharge Form by conducting an onsite source investigation. If the illicit discharge was observed at the point of entry, and the source can be determined, then staff should ensure that the source is eliminated and document on the form. If the suspected illicit discharge was received as a complaint and no observation can be made, document on the form. If the initial observation of the suspected illicit discharge occurred at an outfall, and investigations by FCPS staff does not yield a probable source, then staff should document all actions and contact the appropriate personnel in Section 6 in order to perform chemical testing, monitoring and trackdown procedures, as applicable.

4. Reports of Unauthorized Discharges

This reporting applies if an illicit discharge occurs during a 24-hour period into or upon surface water; or if the illicit discharge may be reasonably expected to enter surface waters through the MS4. Section III G of the MS4 general permit requires a verbal report to DEQ's Northern Virginia Regional Office (NRO) within 24-hours of when the discharge was first discovered. The 24-hour report must be followed up with a written report to NRO within 5 days. Reporting is required for the following materials and quantities:

Any of following waste materials, regardless of amount:

- sewage
- industrial waste
- other wastes

If the amount of the following is equal to or exceeds reportable quantities occurring in a 24-hour period:

- any noxious substance
- deleterious substance
- hazardous substance
- oil (any amount)

Field observations of this type of illicit discharges must be recorded using the "Report of Unauthorized Discharges" form (Attachment C). If the form is not available when the illicit discharge is first identified, staff should ensure that the following information is recorded and transferred to the form:

- A description of the nature of the discharge
- Location of the discharge
- Cause of the discharge
- Date on which the discharge occurred
- Timed duration of the discharge
- Volume of the discharge
- If the discharge is continuing, how long is it expected to continue
- If the discharge is continuing, what the expected total volume of the discharge will be
- Any steps planned or taken to reduce, eliminate and prevent the current discharge and any future discharges

FCPS shall immediately contact the appropriate FCPS staff through the Environmental Specialist in OFM, who in turn will contact the appropriate Fairfax County agency according to the list in Section 6 below.

5. Annual Reporting

FCPS must provide a summary of suspected illicit discharge complaints with each annual report. The MS4 permit requires the annual report to include the following summary information for each investigation conducted, including:

- Date observed or reported (or both)
- How it was resolved, including any follow-up
- Resolution of the investigation, and
- Date investigation was closed

6. Who To Call for Suspected Illicit Discharges

When to Call	Agency	Contact	Phone Number
Hazardous Material	FFX FRD	HAZMAT	703-246-4386
Observed Dry Weather Flow during screening	FCPS	Holly Moran	703-624-0337
Flow Tracked to FFX MS4 Interconnection	FFX SWPD	Takisha Cannon	703-324-5885
Flow Tracked to Town of Herndon MS4 Interconnection	Herndon Dept. of Public Works	Zoran Dragacevac	703-435-6856
Flow Tracked to Town of Vienna MS4 Interconnection	Vienna, Dept. of Public Works	Michael Gallagher	703-255-6389
Sewer Cross Connection	FFX WWCD	Wastewater	703-323-1211
Section 11 Reporting	DEQ	Mark Miller and/or PREP	703-583-3800
Section 11 Discharges to County waterway	FFX HD	John Yetman	703-246-8410

ATTACHMENT A
Fairfax County Public Schools
Suspected Illicit Discharge Investigation
Municipal Separate Storm Sewer System (MS4)

Reference: MS4 General Permit Section II B.3.c. (h)

1. Name and Title of Person(s) making report:

2. Date and time suspected illicit discharge was reported:

3. Date and time suspected illicit discharge observed:

4. Description and nature of the discharge:

   _____
   _____
   _____

5. Location (if outfall flowing, include unique ID):

   _____
   _____

6. Initial Investigation Results:

   _____
   _____
   _____
   _____
   _____

7. Estimated Volume (gallons):

8. Follow up investigation (if applicable):

   _____
   _____
   _____
   _____
   _____

9. Resolution of Investigation:

   _____
   _____
   _____

10. Did discharge enter the storm system (MS4)?

11. Did the discharge reach, or is it expected to reach, surface water?

12. Log #: _____(if applicable)

ATTACHMENT B
Fairfax County Public Schools
Reporting Form for Unauthorized Discharge to Municipal Separate Storm Sewer System (MS4)

Reference: MS4 General Permit Section III G. Reports of Unauthorized Discharges

1. Name and Title of Person(s) making report:

2. Date and time staff became aware that the discharge occurred:

3. Description and nature of the discharge:

   _____
   _____
   _____

4. Location:

   _____
   _____

5. Cause of the discharge:

   _____
   _____
   _____

6. Estimated Date/Time Discharge Started:

7. Estimated Date/Time Discharge Ended:

8. Estimated Volume (gallons):

9. Corrective Action to reduce, eliminate and prevent a recurrence. Please describe:

   _____
   _____
   _____
   _____
   _____
   _____
   _____

10. If the discharge is continuing, how long it is expected to continue:

11. If the discharge is continuing, what is the expected total volume:

12. Did discharge enter the storm system (MS4)?

13. Did the discharge enter surface water?

14. Log #: _____

Appendix B

SAMPLE CONTRACTOR BID SPECIFICATIONS

16. GOVERNING LAW

A. The Contract Documents shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia, without reference to conflict of laws principles. In the event that there is a conflict between any provision set forth in the Contract Documents and the Code of Virginia, and specifically Section 2.2-4300 *et seq.* (the "Virginia Public Procurement Act"), the Code of Virginia shall control. The Contractor is cognizant of the provisions of the Comprehensive Conflict of Interest Act (Va. Code Ann. Section 2.2-3100 through 2.2-3127) and Article 6 of the Virginia Public Procurement Act entitled “Ethics in Public Contracting” (Va. Code Ann. Section 2.2-4367 through 2.2-4377).

B. Legal Provisions Deemed Included: Each and every provision of any law required by law to be inserted in this Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though it were included herein and if, through mistake or otherwise, any such provision is not inserted or is not correctly inserted, then upon application of either party the Contract shall forthwith be physically amended to make such insertion. The Owner does not discriminate against faith-based organizations.

17. COMPLIANCE WITH LAWS; PERMITS, FEES, AND NOTICES

The successful bidder shall be required to comply with all local, state and federal laws, rules, regulations and ordinances applicable to the contract and to the work contemplated hereby. The successful bidder shall be required to obtain, at its expense, all permits, licenses and other authorizations necessary for the prosecution of the Work, except that the Owner shall obtain, at its expense, the General Building Permit and any easement agreement necessary and indispensable to the completion of the Project. The successful bidder shall be responsible for giving all notices and complying with all laws, ordinances, rules, regulations and directives of any public authority bearing on the performance of the work.

18. CONSTRUCTION SAFETY

A. The Contractor shall comply with the construction safety standards promulgated by the U.S. Department of Labor and by the Virginia Department of Labor and Industry.

END OF SECTION

SECTION 01560

TEMPORARY CONTROLS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and General Provisions of Contract, including General Conditions and other Division 1 Specification Sections, apply to the Work of this Section, with special attention to the following:

1. Construction Aids: Section 01520.

2. Barriers: Section 01530.

3. Cleaning: Section 01710.

1.02 RELATED WORK

A. Related requirements specified in Division 2: Site Work.

1.03 DESCRIPTION OF WORK

A. Contractor shall provide and pay for all controls required by Fairfax County Regulations for noise, dust, water, pest and rodent, debris, pollution, traffic and erosion whether indicated in the Contract Documents or not.

B. All site controls and features shall be constructed and maintained in accordance with the latest edition of the Fairfax County Public Facilities Manual.

1.04 OTHER REGULATIONS

A. All regulations of the Fairfax County Department of Public Works and Environmental Services.

1.05 OPEN BURNING

A. Not Permitted

1.06 EROSION CONTROL

A. The Contractor shall perform the work in such a manner as to prevent the washing of any soil, silt, or debris onto adjacent properties, and shall be held responsible for any damage incurred for a period of one year after date of acceptance of the completed work. This includes construction of berms, siltation pond, collars on structures, etc., or any other device that might aid as a determent to erosion.

B. The Contractor shall construct a siltation trap in natural ground at the base of all perimeter fill slopes. The siltation trap shall be 2 feet deep, 2 feet wide at the bottom with 2:1 side slopes. All excavated material shall be placed on the

downhill side of the construction to act as a berm. Minimum one-foot top berms shall be maintained at all times during the construction of perimeter fills.

C. The Contractor agrees to hold the School Board or any of its agents harmless from any and all liability or damage that may arise out of a violation of the Siltation Ordinance and agrees to indemnify them against any loss.

D. If at any time during the construction of this property silt goes offsite and if, when this occurs, the site plan and specifications for siltation and erosion control as approved by Fairfax County are not being complied with, then the Contractor shall pay to the Owner the sum of $5,000 as liquidated damages.

E. This provision for liquidated damages shall be a continuing one and for each and every occurrence there shall be paid to the Owner the sum of $5,000 as liquidated damages.

1.07 INSPECTION AND APPROVAL

A. The County School Board of Fairfax County, Virginia, shall provide an inspector to represent it in the inspections of the work. The presence of this inspector shall in no way be construed by the Contractor as approval of methods or materials that do not conform to the requirements of this Contract.

1.08 TRAFFIC CONTROL

A. The Contractor shall maintain, at his expense, all boundary, adjacent and/or access roads, regardless of status, classification, or ownership, which he or his subcontractor uses, under permit or otherwise during the course of construction of this project. Maintenance shall be performed as needed to keep the road passable at all times, so as to guarantee that other users of the road can travel thereon with a minimum of inconvenience and interruption of normal routine.

B. Contractor shall, at his expense, provide and maintain all traffic control devices, signals, barriers, flares, lights, flagmen, etc. required by law when his operations conflict with the movement of traffic, both vehicular and pedestrian, on dedicated streets and highways.

1.09 PERMITS AND FEES

A. Contractor shall obtain and pay for all permits and fees required for the performance of this Work.

END OF SECTION

Appendix C

FAIRFAX COUNTY POST-CONSTRUCTION STORMWATER INSPECTION AND MAINTENANCE POLICIES AND PROCEDURES

Post-Construction Stormwater Inspection and Maintenance Policies and Procedures

January 2016

Prepared by:

Fairfax County Department of Public Works and Environmental Services (DPWES)
Maintenance and Stormwater Management Division (MSMD)
10635 West Drive
Fairfax, Virginia 22030

In consultation with:

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Chantilly, VA 20151

Table of Contents

Introduction

Section 9VAC25-870-112 of the Virginia Administrative Code, Section 124-2-10 of Fairfax County Code and Part I.B.2 of Fairfax County's Phase I Municipal Separate Storm Sewer System (MS4) Permit (VA0088587 Part I.B.2.h) all include requirements for the long term operation and maintenance of stormwater management facilities (SWM) and Best Management Practices (BMPs). With approximately 5,700 stormwater management facilities located within the unincorporated Fairfax County boundary, this represents both a regulatory mandate as well as a considerable program investment toward protecting the general public's health, safety, and property through the maintenance of properly functioning stormwater management infrastructure.

Virginia code VAC15.2-625 delegates the responsibility of performing inspections and maintenance of public infrastructure to the Director of the Department of Public Works and Environmental Services (DPWES) of Fairfax County. The Maintenance and Stormwater Management Division (MSMD) of the DPWES, hereinafter called "MSMD or County", provides direct maintenance for approximately one-third of the noted stormwater facility inventory, which primarily includes dry ponds serving residential areas. These facilities are referred to as "public facilities." The remaining two-thirds of the stormwater management facility inventory are referred to as "private facilities" and are inspected by MSMD, but maintained by the facility owner or operator. This presents some unique programming challenges to ensure private facility owners are educated and aware of proper maintenance requirements and able to execute the necessary maintenance work.

This document provides an overview of the policies and procedures for the inspection and long term maintenance of both public and private SWM and BMP facilities located in Fairfax County. Public facilities are inspected and maintained per County schedules and guidelines by MSMD. While private facilities must be maintained by the owner, the MSMD also inspects all private facilities at least once every five years to ensure that they are being properly maintained.

The following sections document the County's authorities, guidelines, required records, and procedures for the inspection and maintenance of both public and private stormwater management facilities. County enforcement protocols for private facilities, with attendant timelines and penalties, are also reviewed.

Authority and Regulations

The Code of Fairfax County includes several ordinances that align to facilitate the necessary authority to comply with state code and with the County's MS4 permit. The Stormwater Management Ordinance (Chapter 124), which the County recently amended and updated to comply with Virginia's updated stormwater management law and regulations (VA Code §62.1-44.15:24, et seq. and 9VAC870); Erosion and Sediment Control Ordinance (Chapter 104); Zoning Ordinance (Chapter 112); and Chesapeake Bay Preservation Ordinances (Chapter 118) all provide either direct or tangential County authority to manage stormwater in accordance with the terms of Virginia's Stormwater Management Act, Erosion and Sediment Control Law and Chesapeake Bay Preservation Act, as well as the County's MS4 permit. In addition, the County's Public Facilities Manual (PFM) serves as the primary administrative tool supporting these ordinances, outlining the County's land development and management technical standards, specifications, and accepted practices.

The following is a summary of regulations and requirements which specifically apply to both public and private stormwater management facilities. While these concepts are reflected across all of the authorities and ordinances noted above, the primary authority is referenced in each summary subsection.

Stormwater Management Regulations

It is the responsibility of the owners of stormwater management facilities to maintain the proper functioning of a facility, per its original design. Maintenance should be performed on a regular basis and deficiencies addressed within an advised and reasonable timeline and per facility specific maintenance schedules and guidelines, or the default maintenance requirements noted in the original design specifications or within the Attachment A of the recorded Private Maintenance Agreement (PMA). Where a PMA exists, the PMA and Stormwater Management Ordinance §124-2-10 serve as the primary, regulatory governing authority. If a PMA does not exist, then the County uses the requirements specified on the site plan as the primary governing authority, per Zoning Ordinance §18-901(1) and 17-108(6).

Inspection/Maintenance Records

For facilities constructed after July 1, 2014 under the Stormwater Management Ordinance, the facility owner must have a system in place, in accordance with §124-2-5 and 124-2-10, to accommodate the performance and documentation of inspections and maintenance on an annual basis.

Public and private stormwater management facility records are maintained electronically by the County. Private facility owners may maintain copies of their records in paper or electronic format, provided they are accurate, current, legible, and easily accessible. All private and public stormwater management facilities are noted in MSMDs database, for regulatory and inventory purposes. The database, Infor Enterprise Asset Management (EAM) system (Infor-EAM™), includes information such as the general facility location, acres treated, type of facility, inventory date, bond release date, last inspection date, etc.

Inspection Authority

The County has established an inspection program, in accordance with the County Stormwater Management Ordinance (§124-2-5 and 124-2-10), and may enter establishments for the performance of reasonable inspections or investigations. PMAs provide the County with authority to enter a facility to conduct inspections and related activities to ensure the facility functions per the approved design plan. This program includes routine inspections, random regulatory inspections, or investigations resulting from complaints or indications of potential discharge issues. In addition, many County PMA documents also include the County's right to perform maintenance at the facility owner's expense if necessary to achieve adequate functionality.

Regardless of whether a PMA exists, the County will notify the person responsible for the property that the County intends to conduct a site inspection. In the event there is no PMA, access to the inspection site will be obtained in accordance with applicable laws.

Public Stormwater Facility Inspection and Maintenance

Maintenance Schedule and Guidelines

Public stormwater management facilities should be maintained according to the established maintenance protocols specific to public facilities as well as any facility specific maintenance schedules and guidelines, County ordinances, and any original design specifications that apply to the specific facility.

Routine maintenance for public ponds[1] is performed once or twice per year. Routine maintenance for ponds includes grass mowing, basic channel clearing, trash removal, sign installation and dewatering. Non-pond facility routine maintenance is performed on the following low impact development (LID) facilities: tree filters, bioretention facilities, green roofs, porous/pervious pavement, and vegetated swales. All other non-pond facility types are maintained as needed via non-routine maintenance work orders issued as a result of observed deficiencies during an annual inspection. Out of turn inspections and non-routine maintenance may be initiated by a complaint received by MSMD. LID facility routine maintenance includes trash removal, sediment removal, and removal/trimming of overgrown and unwanted vegetation. Items such as tree and invasive vegetation removal, major sediment removal, concrete repairs, etc. on ponds, for example, are considered non-routine maintenance tasks. Non-routine needs are prioritized in order to address safety, urgent needs and to manage resources efficiently. Please refer to the Work Flow Process Charts (Appendix C) to see an overview of the typical workflow and responsible parties. Table 1, below, reviews maintenance frequencies, by facility type.

Inspections

The purpose of public facility inspections is to assess and record the current, point-in-time condition of the public stormwater management facility compared to its original design on either an annual or biennial (once every two years) basis. MSMD's biennial inspections reflect an alternative inspection schedule, as allowed in the County's MS4 Permit [PART I B.2) h) 1) (b)]. The alternative inspection schedule was developed to reflect the County's assessment of the risk of failure based on facility type and frequency of routine maintenance. Facilities that receive routine maintenance one or more times per year are scheduled for biennial inspections rather than annual. This reduced inspection frequency proves sufficient to maintain proper function because the County's routine maintenance schedule provides additional visual evaluation of each facility throughout the year. For all other facility types without routine maintenance schedules, MSMD performs an annual inspection of those facilities. Table 1, below, notes scheduled inspection and maintenance frequencies by facility type.

Table 1-Maintenance and Inspection Frequency

Facility Type	Routine Maintenance Frequency	Inspection Frequency
Amended Soil	Not Applicable	Annual
Bioretention	Annual (5x/year)	Biennial
Cistern/Rain Barrel	Not Applicable	Annual
Dry Pond (Non-regional)	Annual (HOA 1x/year, non-HOA 2x/year)	Biennial
Dry Pond (Regional)	Annual (4x/year)	Annual
Green Roof	Annual (4x/year)	Biennial
Manufactured BMP	Not Applicable	Annual
Parking Lot Detention	Not Applicable	Annual
Porous Pavement	Annual (1x/year)	Biennial
Reforestation	Not Applicable	Annual
Rooftop Detention	Not Applicable	Annual
Rooftop Disconnection	Not Applicable	Annual
Sand Filter	Not Applicable	Annual

[1] The County is in the process of revising the routine maintenance program for Enhanced Extended Detention (EED) facilities and Constructed Wetlands (WL).

Facility Type	Routine Maintenance Frequency	Inspection Frequency
Tree Filter (Including Filterra)	Annual (4x/year)	Biennial
Infiltration Trench	Not Applicable	Annual
Underground Storage/Detention	Not Applicable	Annual
Vegetated Filter Strip	Not Applicable	Annual
Vegetated Swale	Annual (5x/year)	Biennial
Wet Pond (Non-regional)	Annual (HOA 1x/year, non-HOA 2x/year)	Biennial
Wet Pond (Regional)	Annual (4x/year)	Annual
Wetland (Constructed Wetland)	Not Applicable	Annual

The inspection protocol identifies any visible deficiencies that prevent the facility from functioning as designed (i.e., non-functional). Further, these protocols are also intended to ensure the safety of inspection personnel and inform the owner and general public as part of the County's overall education and outreach efforts. This section is a brief process overview; detailed procedures are contained in the County's Inspections SOP (Inspection SOP – Appendix D).

Inspections on public pond facilities are scheduled within a week of annual routine maintenance, so that the maintenance contractor's work can be verified and to ensure overgrown vegetation does not hamper the facility's inspection. Prior to inspection, inspectors prepare an inspection folder with any relevant site maps, forms, and letters. Unlike private facility inspections, a pre-inspection letter to the facility owner is not part of the inspection preparations; however, inspectors do attempt to check-in with the property owner, manager, or tenant to advise of their presence and purpose prior to the inspection. This brief check in with the property owner is done primarily as a courtesy, whenever feasible; however, some public facilities - - such as schools, child care centers, and assisted living communities - - have required check-in and credentialing processes which must be followed for the safety and consideration of the students and/or residents. Unless previously arranged with the owner or if the facility is located in a high traffic area, inspections take place during normal working hours, Monday through Friday, 8:00am to 5:00pm. The County does notify a property owner, and when applicable adjacent property owners, when non-routine maintenance work, as described above, is scheduled. All inspections must also follow proper safety procedures, especially those pertaining to removal of manhole covers and Confined Space Entry (29 CFR 1910), the latter of which is not routinely undertaken under this program.

MSMD has created a unique inspection form for each facility type, with relevant sections and maintenance items. Inspection forms are included in Appendix A of this document, and all forms follow the same general format. Maintenance items are scored on a range of 1-3, with (1) for severe issues with a high priority and (3) for minor items with a lower priority. Maintenance items rated at (3) still have the potential for significant future issues, if not addressed in a reasonable amount of time. The forms also allow for a notation of ⊙, which means items do not currently need non-routine maintenance and/or should be addressed through regular routine maintenance, or N/A which means that item is not applicable to the specific facility being inspected.

Photographs, sketches, measurements, and observations are documented, as appropriate to the facility and per inspection procedures. For public facilities, any additional measurements that will be necessary in order to generate a work order are also taken while in the field, per the Field Measurements and Work Order Preparation SOP (Appendix D).

Most public stormwater management facilities are dry ponds serving residential areas. During inspection of all facility types, however, the most common maintenance issues encountered include the following:

- Blockages
- Structural issues
- Joint issues
- Vegetation (or lack thereof)
- Animal holes/burrows
- Erosion/undermining/cave-ins
- Trash/debris
- Sedimentation
- Algal/water quality issues
- Encroachment

Inspectors should also remain alert for signs of potential illicit discharges or public hazards, both of which require immediate reporting from the field. Any indications of possible illicit discharges are reported to the Fairfax County Industrial and High Risk Runoff/Illicit Discharge and Improper Disposal (IHRR/IDID) staff, and conditions that represent a public safety hazard (such as actively failing dam embankments, missing/loose manhole covers, etc.) are immediately reported to MSMD.

After the inspection is complete, the inspector prepares and submits an inspection report that is reviewed internally, and a work order scope and work narrative are generated, if applicable. Work orders and related narratives are submitted per the guidelines of the Field Measurements and Work Order Preparation SOP (Appendix D). All information is entered into the County's Infor-EAM™, with special attention to noting any changes to safety, access information, or incorrect information that could impact future inspections.

Work orders are then submitted by MSMD to in-house crews or to a contractor, as appropriate to address the deficiency(ies), with a request for proposals. Once the proposal for work has been submitted and authorized, maintenance work is scheduled for completion. Scheduling non-routine maintenance takes approximately two months from the time of conducting the facility's routine, annual maintenance.

During inspections, MSMD and their contractors identify any necessary non-routine maintenance work. Each inspection form is tailored to the type of facility being inspected and has a standardized prioritization process. Table 2 shows how MSMD prioritizes and schedules this work for all public facilities.

Table 2-Priority and Targeted Response Time

Assessed Condition	Priority	Targeted Response Time
Good / Excellent	No Work Required (NWR)	None
Fair	3	0 to 2 years
Poor / Non-Emergency	2	2 weeks to 1 year
Failed – Emergency **(house flooding, structural endangerment, roadway flooding)**	1	Immediate to 2 weeks

During the process of maintenance, required work may move to a lower priority. For example, a Priority 1 (P1) issue can be downgraded to Priority 2 (P2) if a short term solution, such as stabilizing a cave-in, can be implemented, allowing time for the design of a longer-term structural solution. In other instances the targeted response time may not be met due to factors outside of the county's control, such as land ownership affecting easements and access, facilities that need to be re-designed, and weather events. In all instances, the county will initiate measures to ensure public safety and take action to correct critical deficiencies in a timely manner. In some instances, a facility designated as Priority 3 (P3) will not be maintained because the maintenance items are extremely minor in nature and not critical to the safety

and performance of the system. In those cases, the P3 designation will remain and maintenance will be deferred until the benefit of performing the work exceeds the cost to do so.

Follow-up

All County maintenance work is tracked in the Infor-EAM™ database and through a maintenance tracking spreadsheet. Maintenance contractors, for both routine and non-routine tasks, submit photos upon completion of all maintenance work orders. Photos, completion dates, and costs are included and updated on the work order in Infor-EAM™ and also in the maintenance tracking spreadsheets. For public facilities, the tracking spreadsheets are primarily used to track costs, completion dates and any related notes on work completed/not completed. MSMD verifies routine maintenance completion via submitted photographs, and project completion reports are generated for all non-routine maintenance work.

Private Stormwater Facility Inspection and Maintenance

Maintenance Schedule and Guidelines

Private stormwater management facilities must be maintained by the owner according to established maintenance schedules and guidelines as noted in the Private Maintenance Agreement (PMA), County guidelines, and the original design specifications. Maintenance should be performed on a regular basis and deficiencies addressed within an advised and reasonable timeline, as noted in the recorded PMA. Should the facility not have a PMA in place, then County specific maintenance schedules, guidelines, and/or the default maintenance requirements noted in the original design specifications will be the governing directives.

Private facility owners must also maintain accurate records on site and make them available to the County upon request. The County also inspects all private facilities at least once every five years.
Private stormwater management facilities include a wide variety of types, including:

- Amended Soils
- Bioretention Facilities
- Cistern/Rain Barrel
- Ponds (Dry or Wet)
- Green Roofs
- Manufactured BMPs
- Parking Lot Detention
- Pervious Pavement
- Rooftop Disconnection
- Reforestation
- Rooftop Detention
- Sand Filters
- Tree Filters
- Infiltration Trenches
- Underground Detention
- Vegetated Filter Strips
- Vegetated Swales
- Constructed Wetlands

Inspections

As previously noted, the purpose of facility inspections is to regularly assess and record the current condition and functionality of the stormwater management facility compared to its original design. Informing owners of their facility's condition in a technically accurate but easily understood manner is particularly important for the private facility inspection process. Facility owners may lack the technical background to fully comprehend the scope of maintenance requirements, the means of correcting noted deficiencies, and/or an understanding of the full risks of failing to properly maintain their facilities. The general inspection procedure for private facilities, with a few notable exceptions, is the

same as that for public facilities. However, the reporting for private facilities is specifically designed to facilitate the private owner's understanding of the maintenance items identified in the inspection, if any, and responsibility to resolve any noted maintenance issues.

The County begins the private facility inspection process by preparing a pre-inspection letter that is mailed to the private facility owner at least two weeks prior to the County's inspection. The County also conducts a thorough pre-inspection research process through which it reviews facility information such as site plans, available "as built" drawings, GIS and Tax Map data, property ownership information, PMA's, etcetera. This pre-inspection research also ascertains any prior noted deficiencies, maintenance completed, known access issues, or other conditions of note prior to the County's inspection. If there are known or previously recorded access issues, such as locked gates, excessive vegetation, etc., the inspectors may also contact the facility owner to ensure appropriate site access is provided for the inspection.

The County then prepares an inspection folder with any maps, forms, letters, and public outreach materials for use on the day of inspection. Inspections are conducted in the same manner as that for public facilities, with the exception that detailed measurements are not required for the purpose of preparing a work order for any noted deficiencies, as any necessary maintenance is the responsibility of the facility owner.

Within approximately thirty (30) days of a completed inspection, the County provides the facility owner with a Notice of Inspection (NOI), which includes several pertinent site and informational materials per the County's Inspection SOP. The primary documents submitted are a cover letter and a Condition Assessment Report (CAR) with photos. A blank Maintenance Activity Report (MAR) is also included, if deficiencies exist and maintenance is required. The CAR is a detailed report explaining the observations and findings resulting from the inspection, with direct reference to attached and captioned photos. An orientation sketch is also typically included as part of the CAR, as an aid to understanding the facility layout. A MAR is provided so the owner may document and verify that the necessary maintenance work has been completed; this form is completed and submitted back to the County, along with photos of the completed work. The receipt of a completed and acceptable MAR is the trigger to close any open inspection files where deficiencies were noted. Examples of a NOI cover letter, a CAR, and a MAR are included in Appendix B. Special care is taken to make certain pictures and text are presented clearly to facilitate owner understanding, noting that the owner may or may not have any experience dealing with facility functionality and maintenance requirements. All documentation must clearly reference the facility design and function, with any necessary maintenance needs placed in clear context.

As with public facility inspections, the basic inspection information is entered into the County's Infor-EAM™, with special attention to noting any changes to safety, access information, or incorrect information that could impact future inspections.

For private inspections, any contracting bids and maintenance are the responsibility of the facility owner. The County tracks the receipt of the NOI and any responses in order to determine whether noted deficiencies are properly addressed or whether further action may be necessary, as noted below.

Tracking Protocols

The NOI is mailed to the private facility owner via certified mail, and returned certified mailing slips are tracked by delivery date. If no MAR is received, reminder letters are sent out 45 days, and again 90 days, after initial NOI delivery. If the owner responds with a fully completed MAR, within either the 45 or 90-day allowable time frames, then the inspection files for that facility are closed out on the County tracking database and no further follow-ups or actions will take place until the next scheduled inspection or receipt of a complaint by the general public. Once the 90-day letter is received by the facility owner, he/she has 45 days to respond (for a total of 135 days from initial NOI submission to owner) or the case is sent to enforcement for further action.

All mailing dates and any MAR received dates are recorded in a tracking spreadsheet for each year's worth of private inspections, along with the Enforcement-submittal date and comments on any non-MAR owner responses. These dates are also saved on the inspection work order in the Infor-EAM™ database.

Private Stormwater Facility Enforcement

Enforcement Authority – Facilities with a Private Maintenance Agreement (PMA)

Should the owner fail to maintain the stormwater management facility in functioning order and in keeping with its approved plan and maintenance guidelines, the terms of the recorded PMA may be enforced or the county may pursue civil penalties or seek injunctive relief.

Enforcement Authority – Facilities without a PMA

Should the owner fail to maintain the stormwater management facility in accordance with its approved plan, and a PMA is not recorded, the County has the following option available:

- Enforcement through the Zoning Ordinance (Chapter 112 of the County Code)
    - §17-108.6: Requires use and structures' continued compliance with all applicable regulations regarding drainage, design criteria/specifications as noted in the Public Facilities Manual (PFM), and other site plan requirements as noted.
    - §18-901-3: Authorizes the County to notify the facility owner, requesting corrective action via a Notice of Violation (NOV) and to pursue the civil and criminal penalties noted below in the "Penalties for Non-Compliance" section.

Enforcement and Compliance Timeframes

The first step of any enforcement action is to verify that the facility ownership has not changed since the initial inspection and an attempt to establish contact with the owner via phone and/or email to provide a response expiration date. If ownership has changed, then the NOI package is mailed to the new owner of record and the response times are re-established for the new owner. Otherwise, the facility will proceed through the enforcement process.

At the end of the response expiration period (135 days), MSMD will provide advance notice to the property owner (Notice of Maintenance Verification (NOMV) letter) of another site inspection to determine if maintenance needs previously specified in the NOI have been fully completed. MSMD will then coordinate with the DPWES Code Development and Compliance Division (CDCD) to perform the inspection. If MSMD determines maintenance needs have been fully completed, the facility will be removed from enforcement. If it is determined maintenance needs have not been fully completed, and the facility is deemed non-functional, MSMD will transfer the enforcement case to CDCD to issue a Notice of Violation (NOV) and provide further enforcement actions.

Notice of Violation (NOV)

The County's DPWES MSMD and CDCD review the enforcement documentation package and, if appropriate, the CDCD sends a Notice of Violation to the facility owner. The owner has 60 days to correct the deficiencies or may choose to appeal the NOV within the timeframes set forth in the regulations. During any necessary enforcement period,

the CDCD works closely with the Office of the County Attorney (OCA) to pursue any civil penalties and/or injunctive relief when additional enforcement actions are deemed necessary.

Penalties for Non-Compliance

Failure to comply with an NOV issued under the Stormwater Ordinance or the Zoning Ordinance may result legal action to obtain compliance in an action for civil penalties or injunctive relief. The severity of civil penalty sought depends on the legal basis for enforcement (Zoning Ordinance or Stormwater Ordinance) and the severity of the violation.

Appendix A-Inspection Forms

There are 17 inspection forms used by the County, representing the increasingly complex and sophisticated range of common SWM and BMP facility types within the County. Some forms are used for more than one facility type. All forms follow the same basic format and scoring protocol. Facility types and forms are as follows:

- A-1: Amended Soils Inspection Form
- A-2: Bioretention Inspection Form
- A-3: Cistern/Rain Barrel Inspection Form
- A-4: Pond/Wetland Inspection Form
- A-5: Green Roof Inspection Form
- A-6: Manufactured BMP Inspection Form
- A-7: Parking Lot Detention Inspection Form
- A-8: Pervious Pavement Inspection Form
- A-9: Rooftop Disconnection Inspection Form
- A-10: Reforestation Inspection Form
- A-11: Rooftop Detention Inspection Form
- A-12: Sand Filter Inspection Form
- A-13: Tree Filter Inspection Form
- A-14: Infiltration Trench Inspection Form
- A-15: Underground Detention Inspection Form
- A-16: Vegetated Filter Strip Inspection Form
- A-17: Vegetated Swale Inspection Form

A-1: Amended Soils Inspection Form

Amended Soils Inspection Form

Fairfax County Maintenance and Stormwater Management Division

Inspector:

Date:

Site ID: Facility ID: Facility Name:

Address: Coordinates / ParID:

Watershed: District:

Functional? Yes No

Score Totals: 1 2 3

Scoring Key

①	High Priority / Non-functional
②	Moderate Priority / Approaching Non-functional
③	Low Priority / Functional
⊙	No Priority / Continue Routine Maintenance
⊗	Not Applicable

Notes / Specifications:

Facility Specific Info:

Facility Type / Addl Facility Info:

Signs

SCORE	PHOTO	DESCRIPTION
③⊙⊗		Facility Sign
③⊙⊗		Facility Labeling

Weather Conditions

Last Rainfall	Date:	Amount:
Current weather conditions?		

Accessibility

Access Comments

New Access Comments for EAM:

ACCESS PROBLEMS (Circle)	NEXT STEP (Circle One)
Locked Gate / Fence	Coordinate with Owner
Other:_____	Return for Re-inspection
	Request Photos from Owner
	Contact MSMD
	Other:_____

SCORE	PHOTO	DESCRIPTION
① ⊙⊗		Overall Facility Access
①②③⊙⊗		Component Access: _____

Amended Soils Area

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
① ⊙⊗		Impervious Area Encroachments *Description / Area:*	
① ⊙⊗		Evidence of Excessive Fertilizer / Chemicals	
①②③⊙⊗		Obstructions to Infiltration *Description / Area:*	
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*	
①②③⊙⊗		Erosion / Bare Spots *Area:*	
①②③⊙⊗		Grass / Groundcover Condition	
①②③⊙⊗		Other:	

Other

SCORE	PHOTO	DESCRIPTION	LOCATION
①②③⊙⊗		Encroachments	
①②③⊙⊗		Modifications	
①②③⊙⊗		Mosquito Habitat	
①②③⊙⊗		Evidence of Possible Illicit Discharge, Call to Re (703-877-2800: Inspection, Maint., & Enforc. Section)	

INSPECTOR COMMENTS

A-2: Bioretention Inspection Form

Bioretention Inspection Form

Fairfax County Maintenance and Stormwater Management Division

Inspector: _____
Date: _____

Site ID: _____ Facility ID: _____ Facility Name: _____
Address: _____ Coordinates / ParID: _____
Watershed: _____ District: _____
Functional? ☐ Yes ☐ No
Score Totals: _____ (1) _____ (2) _____ (3)

Scoring Key

①	High Priority / Non-functional
②	Moderate Priority / Approaching Non-functional
③	Low Priority / Functional
⊙	No Priority / Continue Routine Maintenance
⊗	Not Applicable

Notes / Specifications: _____ Facility Specific Info: _____

Facility Type / Addl Facility Info: _____

Signs			Weather Conditions		
SCORE	PHOTO	DESCRIPTION	Last Rainfall	Date:	Amount:
③⊙⊗		Facility Sign	Current weather conditions?		
③⊙⊗		Facility Labeling			

Accessibility

Access Comments	ACCESS PROBLEMS (Circle)	NEXT STEP (Circle One)
New Access Comments for EAM:	Locked Gate / Fence	Coordinate with Owner
	Heavy Vegetation	Return for Re-inspection
	Stuck / Broken Cover	Request Photos from Owner
	Equipment Needed: _____	Contact MSMD
	Other: _____	Other: _____

SCORE	PHOTO	DESCRIPTION
①	⊙⊗	Overall Facility Access
①②③⊙⊗		Component Access: _____

Ponding Area

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS	
①	⊙⊗	Standing Water in Basin		
①	⊙⊗	Basin Area	Observed:	Specified:
①	⊙⊗	Ponding Depth	Observed:	Specified:
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*		
①②③⊙⊗		Mulch Cover (2-3" min.)		
①②③⊙⊗		Erosion / Bare Spots *Area:*		
①②③⊙⊗		Repair Filter Fabric		
①②③⊙⊗		Other: *Description:*		
		Plant Material	Plants in Inventory:	
①	⊙⊗	Trees Missing	Observed:	Specified:
①	⊙⊗	Shrubs Missing	Observed:	Specified:
①	⊙⊗	Grass / Groundcover Missing	Observed:	Specified:
①②③⊙⊗		Unhealthy / Damaged		
①②③⊙⊗		Overgrown / Invasive Vegetation		
①②③⊙⊗		Other: *Description:*		
		Observation Well / Cleanout(s)		
①	⊙⊗	Missing / Not Found		
①	⊙⊗	Cap Missing / Stuck		
①②③⊙⊗		Water / Sediment Observed in Well?		
①②③⊙⊗		Vegetation / External Obstructions		
①②③⊙⊗		Damaged *Description:*		
①②③⊙⊗		Other: *Description:*		

Inflow(s)

SCORE	PHOTO	DESCRIPTION	1	2	3	4	5	6
		Material / Size / Type:						
①②③⊙⊗		Blockage *(③ < 25% < ② < 75% < ①)*						
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*						
①②③⊙⊗		Erosion / Undermining						
①②③⊙⊗		Spalling / Deterioration						
①②③⊙⊗		Separation / Misalignment						
①②③⊙⊗		Overgrown Vegetation / Tree Removal						
①②③⊙⊗		Other: *Description:*						

Pre-Treatment / Energy Dissipators

Type(s): Flow spreader / Forebay / Gravel diaphragm / Grass filter strip / Grass channel / Leaf screen / Level spreader / Other: _____

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS	
①	⊙⊗	Missing / Non-Functional *Description:*		
①	⊙⊗	Inconsistent with Plans *(Area / Vertical Drop / etc.)*	Observed:	Specified:
①②③⊙⊗		Damage / Deterioration *Description:*		
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*		
①②③⊙⊗		Other:		

Dam / Berm and Overflow Spillway

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS	
①	⊙⊗	Missing	Observed:	Specified:
①②③⊙⊗		Slope Erosion *Area:*		
①②③⊙⊗		Bare Spots *Area:*		
①②③⊙⊗		Animal Holes		
①②③⊙⊗		Overgrown Vegetation / Tree Removal		
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*		
①②③⊙⊗		Other: *Description:*		

Bioretention Inspection Form Page 2

Site ID: _____ Facility ID: _____ Facility Name: _____

Control Structure

Function: | Orifice Size: | Type (Circle): Riser Structure / Pipe End / Weir / Other:_____

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①②③⊙⊗		Damage / Deterioration *Description:*	
①②③⊙⊗		Vegetation / External Obstructions	
①②③⊙⊗		Other: *Description:*	
		Low-Flow Orifice and Trash Rack	
① ⊙⊗		Orifice Plate Missing / Non-Functional	
① ⊙⊗		Trash Rack Missing / Non-Functional	
①②③⊙⊗		Blockage *(③ < 25% < ② < 75% < ①)*	
①②③⊙⊗		Damage / Deterioration *Description:*	
		Top Trash Rack and Anti-Vortex Plate	
① ⊙⊗		Pad Lock Missing	
①②③⊙⊗		Blockage *(③ < 25% < ② < 75% < ①)*	
①②③⊙⊗		Damage / Deterioration *Description:*	
		Riser Interior	
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*	
①②③⊙⊗		Ladder / Steps Condition	
①②③⊙⊗		Manhole Condition	

Underdrain(s) and Principal Spillway Pipe

SCORE	PHOTO	DESCRIPTION	UNDERDRAIN(S)	PRINCIPAL SPILLWAY PIPE
		Specified on Approved Plans?		
① ⊙⊗		Missing		
①②③⊙⊗		Blockage *(③ < 25% < ② < 75% < ①)*		
①②③⊙⊗		Spalling / Deterioration		
①②③⊙⊗		Separation / Misaligned Joints		
①②③⊙⊗		Other:		

Outfall Structure

Material: | Size: | End Type:

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①②③⊙⊗		Blockage *(③ < 25% < ② < 75% < ①)*	
①②③⊙⊗		Trash / Debris / Sediment	
①②③⊙⊗		Erosion / Undermining *Area:*	
①②③⊙⊗		Spalling / Deterioration	
①②③⊙⊗		Separation / Misalignment	
①②③⊙⊗		Overgrown Vegetation / Tree Removal	
①②③⊙⊗		Manhole Condition	
①②③⊙⊗		Ladder / Steps Condition	
①②③⊙⊗		Downstream Channel Condition	
①②③⊙⊗		Other:	

Other

SCORE	PHOTO	DESCRIPTION	LOCATION
①②③⊙⊗		Encroachments	
①②③⊙⊗		Modifications	
①②③⊙⊗		Mosquito Habitat	
①②③⊙⊗		Evidence of Possible Illicit Discharge, Call to Re (703-877-2800: Inspection, Maint., & Enforc. Section)	

INSPECTOR COMMENTS

A-3: Cistern/Rain Barrel Inspection Form

Cistern / Rain Barrel Inspection Form

Inspector:

Fairfax County Maintenance and Stormwater Management Division

Date:

Site ID: Facility ID: Facility Name:

Address: Coordinates / ParID:

Watershed: District:

Functional? Yes No

Score Totals: 1 2 3

Scoring Key

①	High Priority / Non-functional
②	Moderate Priority / Approaching Non-functional
③	Low Priority / Functional
⊙	No Priority / Continue Routine Maintenance
⊗	Not Applicable

Notes / Specifications:

Facility Specific Info:

Facility Type / Addl Facility Info:

Signs			Weather Conditions		
SCORE	PHOTO	DESCRIPTION	Last Rainfall	Date:	Amount:
③⊙⊗		Facility Sign	Current weather conditions?		
③⊙⊗		Facility Labeling			

Accessibility

Access Comments	ACCESS PROBLEMS (Circle)	NEXT STEP (Circle One)
New Access Comments for EAM:	Locked Gate / Fence	Coordinate with Owner
	Heavy Vegetation	Return for Re-inspection
SCORE PHOTO DESCRIPTION	Stuck / Broken Cover	Request Photos from Owner
①⊙⊗	Overall Facility Access	Equipment Needed: _____	Contact MSMD
①②③⊙⊗	Component Access: _____	Other: _____	Other: _____

Downspouts

SCORE	PHOTO	DESCRIPTION	1	2	3	4	5	6
①⊙⊗		Disconnected						
①②③⊙⊗		Damaged / Leaking						
①②③⊙⊗		Blockage (③ < 25% < ② < 75% < ①)						
①②③⊙⊗		Other: Description:						

Rainwater Harvesting System

Type: Cistern / Rain Barrel / Other:_____ Size: Location:

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①②③⊙⊗		Trees over Roof Surface	
①②③⊙⊗		Debris / Sediment in Gutter	
		Pre-Treatment Device Type:	
①⊙⊗		Missing / Non-Functional	
①②③⊙⊗		Damage / Deterioration	
①②③⊙⊗		Trash / Debris / Sediment Description / Amount:	
①②③⊙⊗		Other: Description:	
		Storage Tank	
①②③⊙⊗		Damage / Deterioration	
①②③⊙⊗		Trash / Debris / Sediment Description / Amount:	
①②③⊙⊗		Other: Description:	
		Overflow / Bypass	
①⊙⊗		Missing / Non-Functional	
①②③⊙⊗		Blockage (③ < 25% < ② < 75% < ①)	
①②③⊙⊗		Damage / Deterioration	
①②③⊙⊗		Other: Description:	
		Discharge / Water Use	
①⊙⊗		Missing / Non-Functional	
①②③⊙⊗		Damage / Deterioration	
①②③⊙⊗		Erosion Area:	
①②③⊙⊗		Other: Description:	

Other

SCORE	PHOTO	DESCRIPTION	LOCATION
①②③⊙⊗		Encroachments	
①②③⊙⊗		Modifications	
①②③⊙⊗		Mosquito Habitat	
①②③⊙⊗		Evidence of Possible Illicit Discharge, Call to Re (703-877-2800: Inspection, Maint., & Enforc. Section)	

INSPECTOR COMMENTS

A-4: Pond/Wetland Inspection Form

Pond / Wetland Inspection Form

Fairfax County Maintenance and Stormwater Management Division

Inspector:
Date:

Site ID: Facility ID: Facility Name:
Coordinates / ParID:
Address: Watershed: District:

Functional? Yes No

Score Totals: 1 2 3

Scoring Key

①	High Priority / Non-functional
②	Moderate Priority / Approaching Non-functional
③	Low Priority / Functional
☉	No Priority / Continue Routine Maintenance
⊗	Not Applicable

Notes / Specifications:

Facility Specific Info:

Facility Type / Addl Facility Info:

Signs			Weather Conditions		
SCORE	PHOTO	DESCRIPTION	Last Rainfall	Date:	Amount:
③☉⊗		Facility Sign	Current weather conditions?		
③☉⊗		Facility Labeling			

Accessibility

Access Comments	ACCESS PROBLEMS (Circle)	NEXT STEP (Circle One)
New Access Comments for EAM:	Locked Gate / Fence	Coordinate with Owner
	Heavy Vegetation	Return for Re-inspection
	Stuck / Broken Cover	Request Photos from Owner
	Equipment Needed:	Contact MSMD
	Other:	Other:

SCORE	PHOTO	DESCRIPTION
①	☉⊗	Overall Facility Access
①②③☉⊗		Component Access:

Control Structure

Function: Orifice Size: Type (Circle): Riser Structure / Pipe End / Weir / Other:

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①②③☉⊗		Damage / Deterioration Description:	
①②③☉⊗		Vegetation / External Obstructions	
①②③☉⊗		Other: Description:	
		Low-Flow Orifice and Trash Rack	
①	☉⊗	Orifice Plate Missing / Non-Functional	
①	☉⊗	Trash Rack Missing / Non-Functional	
①②③☉⊗		Blockage (③ < 25% < ② < 75% < ①)	
①②③☉⊗		Damage / Deterioration Description:	
		Top Trash Rack and Anti-Vortex Plate	
①	☉⊗	Pad Lock Missing	
①②③☉⊗		Blockage (③ < 25% < ② < 75% < ①)	
①②③☉⊗		Damage / Deterioration Description:	
		Riser Interior	
①②③☉⊗		Trash / Debris / Sediment Description / Amount:	
①②③☉⊗		Ladder / Steps Condition	
①②③☉⊗		Manhole Condition	

			1	2	3	4	5	6
		Principal Spillway Pipe, Upstream End						
①②③☉⊗		Blockage (③ < 25% < ② < 75% < ①)						
①②③☉⊗		Spalling / Deterioration						
①②③☉⊗		Separation / Misaligned Joints						

Dam / Berm and Emergency Spillway

Sep Auxillary Spillway:

SCORE	PHOTO	DESCRIPTION	FACE SLOPE Score	FACE SLOPE Comments	TOP OF DAM Score	TOP OF DAM Comments	BACK SLOPE Score	BACK SLOPE Comments	EMERG. SPILLWAY Material: Score	EMERG. SPILLWAY Comments
①②③☉⊗		Toe Soft Spots								
①②③☉⊗		Cave-In								
①②③☉⊗		Slope Erosion Area:								
①②③☉⊗		Bare Spots Area:								
①②③☉⊗		Animal Holes								
①②③☉⊗		Tree Removal Num/Size:								
①②③☉⊗		Woody Vegetation								
①②③☉⊗		Overgrown Non-woody Veg.								
①②③☉⊗		Trash / Debris / Sediment								
①②③☉⊗		Alterations: Description:								
①②③☉⊗		Other: Description:								
①②③☉⊗		Blockage at Emergency Spillway (③ < 25% < ② < 75% < ①)								
①②③☉⊗		Damage / Deterioration at Emergency Spillway Description:								

Outfall Structure / PSP Downstream End

Material: Size: End Type: Pipe Total:

SCORE	PHOTO	DESCRIPTION	1	2	3	4	5	6
①②③☉⊗		Blockage (③ < 25% < ② < 75% < ①)						
①②③☉⊗		Trash / Debris / Sediment Description / Amount:						
①②③☉⊗		Erosion / Undermining Area:						
①②③☉⊗		Spalling / Deterioration						
①②③☉⊗		Separation / Misalignment						
①②③☉⊗		Overgrown Vegetation / Tree Removal						
①②③☉⊗		Handrail Status						
①②③☉⊗		Manhole Condition						
①②③☉⊗		Ladder / Steps Condition						
①②③☉⊗		Downstream Channel Condition						
①②③☉⊗		Other:						

Pond / Wetland Inspection Form Page 2

Site ID: _____ Facility ID: _____ Facility Name: _____

Pond Floor / Pool			
SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
① ⊙ ⊗		Water Level Inconsistent with Plans	
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*	
①②③⊙⊗		Overgrown Vegetation	
①②③⊙⊗		Tree Removal *Number / Size:*	
①②③⊙⊗		Erosion / Bare Spots *Area:*	
①②③⊙⊗		Other: *Description:*	

	Trickle Ditch / Low Flow Channel	Shown on Plans: Yes / No	Ditch Material:		Ditch Total
① ⊙ ⊗		Not Found / Completely Covered			
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*			
①②③⊙⊗		Blockage *(③ < 25% < ② < 75% < ①)*			
①②③⊙⊗		Erosion / Trenching / Roots *Description:*			
①②③⊙⊗		Detoured Flow Line *Description:*			
①②③⊙⊗		Damage / Deterioration *Description:*			
①②③⊙⊗		Other: *Description:*			

			1	2	3	4	5	6
	Sediment Forebay and Micropools							
① ⊙ ⊗		Inconsistent with Plans						
①②③⊙⊗		Erosion / Bare Spots *Area:*						
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*						
①②③⊙⊗		Overgrown Vegetation						
①②③⊙⊗		Tree Removal *Number / Size:*						
①②③⊙⊗		Displaced Rip Rap						
①②③⊙⊗		Weir Condition *Type:*						
①②③⊙⊗		Other: *Description:*						

	Wetland Habitat	Signs Posted: Yes / No	Plants in Inventory:		
①②③⊙⊗		Submergent Vegetation	Observed:	Specified:	
①②③⊙⊗		Emergent Vegetation	Observed:	Specified:	
①②③⊙⊗		Undesired Vegetation (Cattails / Phragmites)			
①②③⊙⊗		Posted Sign Condition			
①②③⊙⊗		Other: *Description:*			

Upstream Inflow(s)														
SCORE	PHOTO	DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12
		End Type / Overland:												
		Pipe Material:												
		Pipe Size:												
①②③⊙⊗		Blockage *(③ < 25% < ② < 75% < ①)*												
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*												
①②③⊙⊗		Erosion / Undermining *Area:*												
①②③⊙⊗		Spalling / Deterioration												
①②③⊙⊗		Separation / Misalignment												
①②③⊙⊗		Overgrown Vegetation / Tree Removal												
①②③⊙⊗		Handrail Status												
①②③⊙⊗		Downstream Channel Condition												
①②③⊙⊗		Other:												

Other			
SCORE	PHOTO	DESCRIPTION	LOCATION
①②③⊙⊗		Encroachments	
①②③⊙⊗		Modifications	
①②③⊙⊗		Mosquito Habitat	
①②③⊙⊗		Evidence of Possible Illicit Discharge, Call to Re (703-877-2800: Inspection, Maint., & Enforc. Section)	

INSPECTOR COMMENTS

A-5: Green Roof Inspection Form

Green Roof Inspection Form

Fairfax County Maintenance and Stormwater Management Division

Inspector:
Date:
Site ID: Facility ID: Facility Name:
Coordinates / ParID:
Address: Watershed: District:
Functional? Yes No
Score Totals: 1 2 3

Scoring Key

①	High Priority / Non-functional
②	Moderate Priority / Approaching Non-functional
③	Low Priority / Functional
⊙	No Priority / Continue Routine Maintenance
⊗	Not Applicable

Notes / Specifications:
Facility Specific Info:
Facility Type / Addl Facility Info:

Signs			Weather Conditions		
SCORE	PHOTO	DESCRIPTION	Last Rainfall	Date:	Amount:
③⊙⊗		Facility Sign	Current weather conditions?		
③⊙⊗		Facility Labeling			

Accessibility

Access Comments	ACCESS PROBLEMS (Circle)	NEXT STEP (Circle One)
New Access Comments for EAM:	Locked Access Door	Coordinate with Owner
	Broken / Unsafe Ladder	Return for Re-inspection
	Too Tall for Standard Ladder	Request Photos from Owner
	Equipment Needed:	Contact MSMD
	Other:	Roofing Contractor/Bucket Truck

Roof Surface

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS	
⊙⊗		Change in Roof Design	Observed:	Specified:
①②③⊙⊗		Visible Damage to Surface		
①②③⊙⊗		Erosion / Bare Spots *Area:*		
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*		
①②③⊙⊗		Ponding Water (after dry weather) *Area:*		
①②③⊙⊗		Access Path	Observed:	Specified:
①②③⊙⊗		Aluminum Curbing	Observed:	Specified:
①②③⊙⊗		Other: *Description:*		
		Plant Material	Plants in Inventory:	
⊙⊗		Trees Missing	Observed:	Specified:
⊙⊗		Shrubs Missing	Observed:	Specified:
⊙⊗		Grass / Groundcover Missing	Observed:	Specified:
①②③⊙⊗		Unhealthy / Damaged		
①②③⊙⊗		Overgrown / Invasive Vegetation		
①②③⊙⊗		Other: *Description:*		
		For Multi-Level Rooftop Detention Systems,	Notes	
		Describe Stormwater Flow:		

Roof Drains

SCORE	PHOTO	DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12
⊙⊗		Debris Cage Missing												
①②③⊙⊗		Blockage *(◎ < 25% < ◎ < 75% < ◎)*												
①②③⊙⊗		Damage / Deterioration												
①②③⊙⊗		Vegetation / External Obstructions												
①②③⊙⊗		Other: *Description:*												

Scupper Ports / Emergency Overflow

SCORE	PHOTO	DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12
①②③⊙⊗		Blockage *(◎ < 25% < ◎ < 75% < ◎)*												
①②③⊙⊗		Damage / Deterioration												
①②③⊙⊗		Vegetation / External Obstructions												
①②③⊙⊗		Other: *Description:*												
⊙⊗		Insufficient Emergency Overflow	Observed:						Specified:					

Other

SCORE	PHOTO	DESCRIPTION	LOCATION
①②③⊙⊗		Encroachments	
①②③⊙⊗		Modifications	
①②③⊙⊗		Mosquito Habitat	
①②③⊙⊗		Evidence of Possible Illicit Discharge, Call to Re (703-877-2800: Inspection, Maint., & Enforc. Section)	

INSPECTOR COMMENTS

A-6: Manufactured BMP Inspection Form

Manufactured BMP Inspection Form

Inspector:

Fairfax County Maintenance and Stormwater Management Division

Date:

Site ID: Facility ID: Facility Name:

Address: Coordinates / ParID :

Watershed: District:

Functional? Yes No

Score Totals: 1 2 3

Scoring Key	
①	High Priority / Non-functional
②	Moderate Priority / Approaching Non-functional
③	Low Priority / Functional
☉	No Priority / Continue Routine Maintenance
⊗	Not Applicable

Notes / Specifications:

Facility Specific Info:

Facility Type / Addl Facility Info:

Signs			Weather Conditions		
SCORE	PHOTO	DESCRIPTION	Last Rainfall	Date:	Amount:
③☉⊗		Facility Sign	Current weather conditions?		
③☉⊗		Facility Labeling			

Accessibility				
Access Comments			ACCESS PROBLEMS (Circle)	NEXT STEP (Circle One)
New Access Comments for EAM:			Locked Gate / Fence	Coordinate with Owner
			Parked Cars	Return for Re-inspection
SCORE	PHOTO	DESCRIPTION	Stuck / Broken Cover	Request Photos from Owner
① ☉⊗		Overall Facility Access	Equipment Needed:	Contact MSMD
①②③☉⊗		Component Access:	Other:	Other:

Maintenance Records			
YES / NO	PHOTO	DESCRIPTION	COMMENTS
YES / NO		Inspection / Maintenance Conducted Recently	
YES / NO		Maintenance Records Available On-Site	

Manufacturer-Specific Items				
Look for these items as you inspect each chamber of the Manufactured BMP facility.				
SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS	
		Oil/Grit Separator		
①②③☉⊗		CMP Elbow Condition		
①②③☉⊗		Trash Rack Condition		
		StormFilter		
①②③☉⊗		StormGate Condition	*(Inspect the StormGate structure as it's own 'Chamber' below.)*	
①②③☉⊗		Flow Spreader / Dissipator Condition	*(at Both ends of the Cartridge Bay)*	
① ☉⊗		Number of Cartridges Inconsistent with Plans	# Observed	# Specified:
①②③☉⊗		Cartridge Condition *Description:*		
		Vortechs Hydrodynamic Separator		
①②③☉⊗		Swirl Chamber		
①②③☉⊗		Orifice Plates for High and Low Flows		
		Stormceptor		
①②③☉⊗		Fiberglass Insert		
①②③☉⊗		Weir		
①②③☉⊗		Inspection Port		
①②③☉⊗		Safety Grate (optional)		
		BaySaver		
①②③☉⊗		Tee Pipes		
①②③☉⊗		Bypass Plate		
		Downstream Defender		
①②③☉⊗		Cylindrical Baffle		

Inspect Chambers from Upstream to Downstream, Providing Identifying Information for Each

Chamber 1

Structure # on Plan: Chamber Name on Plan: Label on Sketch:

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS	
① ☉⊗		Inconsistent with Plans	Observed:	Specified:
①②③☉⊗		Trash / Debris / Sediment *Description / Amount:*		
①②③☉⊗		Blockage *(Full of water after dry weather, no permanent pool on plans.)*		
①②③☉⊗		Spalling / Deterioration		
①②③☉⊗		Connecting Pipes, if any	Pipe Direction:	Problem:
①②③☉⊗		Manhole / Bilco Door Condition		
①②③☉⊗		Ladder / Steps Condition		
①②③☉⊗		Other:		

Chamber 2

Structure # on Plan: Chamber Name on Plan: Label on Sketch:

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS	
① ☉⊗		Inconsistent with Plans	Observed:	Specified:
①②③☉⊗		Trash / Debris / Sediment *Description / Amount:*		
①②③☉⊗		Blockage *(Full of water after dry weather, no permanent pool on plans.)*		
①②③☉⊗		Spalling / Deterioration		
①②③☉⊗		Connecting Pipes, if any	Pipe Direction:	Problem:
①②③☉⊗		Manhole / Bilco Door Condition		
①②③☉⊗		Ladder / Steps Condition		
①②③☉⊗		Other:		

Manufactured BMP Inspection Form Page 2

Site ID: _____ Facility ID: _____ Facility Name: _____

Chamber 3

Structure # on Plan		Chamber Name on Plan		Label on Sketch
SCORE / PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS		
① ⊙⊗	Inconsistent with Plans	Observed:	Specified:	
①②③⊙⊗	Trash / Debris / Sediment *Description / Amount:*			
①②③⊙⊗	Blockage *(Full of water after dry weather, no permanent pool on plans.)*			
①②③⊙⊗	Spalling / Deterioration			
①②③⊙⊗	Connecting Pipes, if any	Pipe Direction:	Problem:	
①②③⊙⊗	Manhole / Bilco Door Condition			
①②③⊙⊗	Ladder / Steps Condition			
①②③⊙⊗	Other:			

Chamber 4

Structure # on Plan		Chamber Name on Plan		Label on Sketch
SCORE / PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS		
① ⊙⊗	Inconsistent with Plans	Observed:	Specified:	
①②③⊙⊗	Trash / Debris / Sediment *Description / Amount:*			
①②③⊙⊗	Blockage *(Full of water after dry weather, no permanent pool on plans.)*			
①②③⊙⊗	Spalling / Deterioration			
①②③⊙⊗	Connecting Pipes, if any	Pipe Direction:	Problem:	
①②③⊙⊗	Manhole / Bilco Door Condition			
①②③⊙⊗	Ladder / Steps Condition			
①②③⊙⊗	Other:			

Chamber 5

Structure # on Plan		Chamber Name on Plan		Label on Sketch
SCORE / PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS		
① ⊙⊗	Inconsistent with Plans	Observed:	Specified:	
①②③⊙⊗	Trash / Debris / Sediment *Description / Amount:*			
①②③⊙⊗	Blockage *(Full of water after dry weather, no permanent pool on plans.)*			
①②③⊙⊗	Spalling / Deterioration			
①②③⊙⊗	Connecting Pipes, if any	Pipe Direction:	Problem:	
①②③⊙⊗	Manhole / Bilco Door Condition			
①②③⊙⊗	Ladder / Steps Condition			
①②③⊙⊗	Other:			

Outfall Structure / Other

Outfall Structure

Material:		Size:	End Type:	Structure # on Plans:	
SCORE / PHOTO	DESCRIPTION		COMMENTS / DIMENSIONS		
①②③⊙⊗	Blockage *(③ < 25% < ② < 75% < ①)*				
①②③⊙⊗	Trash / Debris / Sediment				
①②③⊙⊗	Erosion / Undermining *Area:*				
①②③⊙⊗	Spalling / Deterioration				
①②③⊙⊗	Separation / Misalignment				
①②③⊙⊗	Overgrown Vegetation / Tree Removal				
①②③⊙⊗	Manhole Condition				
①②③⊙⊗	Ladder / Steps Condition				
①②③⊙⊗	Downstream Channel Condition				
①②③⊙⊗	Other:				

Other

SCORE / PHOTO	DESCRIPTION	LOCATION
①②③⊙⊗	Encroachments	
①②③⊙⊗	Modifications	
①②③⊙⊗	Mosquito Habitat	
①②③⊙⊗	Evidence of Possible Illicit Discharge, Call to Re (703-877-2800: Inspection, Maint., & Enforc. Section)	

INSPECTOR COMMENTS

A-7: Parking Lot Detention Inspection Form

Parking Lot Detention Inspection Form

Fairfax County Maintenance and Stormwater Management Division

Inspector:
Date:
Site ID: Facility ID: Facility Name:
Coordinates / ParID:
Address: Watershed: District:
Functional? Yes No
Score Totals: 1 2 3

Scoring Key

①	High Priority / Non-functional
②	Moderate Priority / Approaching Non-functional
③	Low Priority / Functional
⊙	No Priority / Continue Routine Maintenance
⊗	Not Applicable

Notes / Specifications:
Facility Specific Info:
Facility Type / Addl Facility Info:

Signs			Weather Conditions		
SCORE	PHOTO	DESCRIPTION	Last Rainfall	Date:	Amount:
③⊙⊗		Facility Sign	Current weather conditions?		
③⊙⊗		Facility Labeling			

Accessibility				
Access Comments			ACCESS PROBLEMS (Circle)	NEXT STEP (Circle One)
New Access Comments for EAM:			Locked Gate / Fence	Coordinate with Owner
			Parked Cars	Return for Re-inspection
SCORE	PHOTO	DESCRIPTION	Stuck / Broken Cover	Request Photos from Owner
① ⊙⊗		Overall Facility Access	Equipment Needed:	Contact MSMD
①②③⊙⊗		Component Access:	Other:	Other:

Control Structure				
		Orifice Size:	Emegency Overflow Provided?	Yes / No
SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS	
①②③⊙⊗		Blockage (③ < 25% < ② < 75% < ①)		
①②③⊙⊗		Damaged		
①②③⊙⊗		Spalling / Deterioration		
①②③⊙⊗		Overgrown Vegetation / External Obstruction		
①②③⊙⊗		Other:		
		Restrictor Plate / Trash Rack		
① ⊙⊗		Restrictor Plate Missing	Observed:	Specified:
① ⊙⊗		Trash Rack Missing	Observed:	Specified:
①②③⊙⊗		Damage / Deterioration		
①②③⊙⊗		Other:		
		Structure Interior		
①②③⊙⊗		Trash / Debris / Sediment (interior)	Description / Amount:	
①②③⊙⊗		Manhole Condition		
①②③⊙⊗		Ladder / Steps Condition		
		Outlet Pipe		
①②③⊙⊗		Blockage (③ < 25% < ② < 75% < ①)		
①②③⊙⊗		Spalling / Deterioration		
①②③⊙⊗		Separation / Misalignment		
①②③⊙⊗		Other: Description:		

Parking Lot Surface			
SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①②③⊙⊗		Ponding Water (after dry weather)	
①②③⊙⊗		Trash / Debris / Sediment Description / Amount:	
①②③⊙⊗		Asphalt / Concrete Condition	
①②③⊙⊗		Other: Description:	

Outfall Structure					
Material:		Size:		End Type:	
SCORE	PHOTO	DESCRIPTION		COMMENTS / DIMENSIONS	
①②③⊙⊗		Blockage (③ < 25% < ② < 75% < ①)			
①②③⊙⊗		Trash / Debris / Sediment			
①②③⊙⊗		Erosion / Undermining	Area:		
①②③⊙⊗		Spalling / Deterioration			
①②③⊙⊗		Separation / Misalignment			
①②③⊙⊗		Overgrown Vegetation / Tree Removal			
①②③⊙⊗		Manhole Condition			
①②③⊙⊗		Ladder / Steps Condition			
①②③⊙⊗		Downstream Channel Condition			
①②③⊙⊗		Other:			

Other			
SCORE	PHOTO	DESCRIPTION	LOCATION
①②③⊙⊗		Encroachments	
①②③⊙⊗		Modifications	
①②③⊙⊗		Mosquito Habitat	
①②③⊙⊗		Evidence of Possible Illicit Discharge, Call to Re (703-877-2800: Inspection, Maint., & Enforc. Section)	

INSPECTOR COMMENTS

A-8: Pervious Pavement Inspection Form

Pervious Pavement Inspection Form

Fairfax County Maintenance and Stormwater Management Division

Inspector:
Date:
Site ID: Facility ID: Facility Name:
Coordinates / ParID :
Address: Watershed: District:
Functional? Yes No
Score Totals: 1 2 3

Scoring Key

①	High Priority / Non-functional
②	Moderate Priority / Approaching Non-functional
③	Low Priority / Functional
⊙	No Priority / Continue Routine Maintenance
⊗	Not Applicable

Notes / Specifications:
Facility Specific Info:
Facility Type / Addl Facility Info:

Signs			Weather Conditions		
SCORE	PHOTO	DESCRIPTION	Last Rainfall	Date:	Amount:
③⊙⊗		Facility Sign	Current weather conditions?		
③⊙⊗		Facility Labeling			

Accessibility

Access Comments	ACCESS PROBLEMS (Circle)	NEXT STEP (Circle One)
New Access Comments for EAM:	Locked Gate / Fence	Coordinate with Owner
	Stuck / Broken Cover	Return for Re-inspection
	Equipment Needed: _____	Request Photos from Owner
	Other:_____	Contact MSMD
		Other:_____

SCORE	PHOTO	DESCRIPTION
①⊙⊗		Overall Facility Access
①②③⊙⊗		Component Access: _____

Parking Lot

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*	
①②③⊙⊗		Asphalt / Concrete Condition	
①②③⊙⊗		Other: *Description:*	

Permeable Pavement

Type (Paver/Concrete/Asphalt): Infiltration: Underdrain:

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①⊙⊗		Ponding Water (after dry weather)	
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*	
①②③⊙⊗		Vegetation	
①②③⊙⊗		Pavement Functionality (Infiltration)	*Test infiltration of system with 5-gallon bucket of water*
①②③⊙⊗		Surface Damage (Cracking / Settlement)	
①②③⊙⊗		Broken or Missing Pavers	
①②③⊙⊗		Tree Dripline Over Pavement	
①②③⊙⊗		Evidence of Sand/Salt Application	
①②③⊙⊗		Other:	
		Observation Well / Cleanout (if applicable)	
①⊙⊗		Missing	
①⊙⊗		Cap Missing / Stuck	
①⊙⊗		Water / Sediment Observed in Well	
①②③⊙⊗		Damaged	
①②③⊙⊗		Other:	

Emergency Overflow / Outfall Structure

Emegency Overflow Provided? Yes / No

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①②③⊙⊗		Blockage *(ⓓ < 25% < ⓒ < 75% < ⓑ)*	
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*	
①②③⊙⊗		Damage / Deterioration	
①②③⊙⊗		Overgrown Vegetation / External Obstruction	
①②③⊙⊗		Manhole Condition	
①②③⊙⊗		Ladder / Steps Condition	
①②③⊙⊗		Downstream Pipe Condition	
①②③⊙⊗		Other: *Description:*	
		Underdrain Pipe	Required by Plans? Yes / No
①⊙⊗		Missing / Not Found	
①⊙⊗		Flow-Reduction Orifice Missing (if required)	
①②③⊙⊗		Blockage *(ⓓ < 25% < ⓒ < 75% < ⓑ)*	
①②③⊙⊗		Damage / Deterioration	
①②③⊙⊗		Other: *Description:*	

Other

SCORE	PHOTO	DESCRIPTION	LOCATION
①②③⊙⊗		Encroachments	
①②③⊙⊗		Modifications	
①②③⊙⊗		Mosquito Habitat	
①②③⊙⊗		Evidence of Possible Illicit Discharge, Call to Re (703-877-2800: Inspection, Maint., & Enforc. Section)	

INSPECTOR COMMENTS

A-9: Rooftop Disconnection Inspection Form

Rooftop Disconnection Inspection Form

Inspector:

Fairfax County Maintenance and Stormwater Management Division

Date:

Site ID: Facility ID: Facility Name:

Coordinates / ParID:

Address: Watershed: District:

Functional? Yes No

Score Totals: 1 2 3

Scoring Key

①	High Priority / Non-functional
②	Moderate Priority / Approaching Non-functional
③	Low Priority / Functional
⊙	No Priority / Continue Routine Maintenance
⊗	Not Applicable

Notes / Specifications:

Facility Specific Info:

Facility Type / Addl Facility Info:

Signs

SCORE	PHOTO	DESCRIPTION
③⊙⊗		Facility Sign
③⊙⊗		Facility Labeling

Weather Conditions

Last Rainfall	Date:	Amount:
Current weather conditions?		

Accessibility

Access Comments

New Access Comments for EAM:

SCORE	PHOTO	DESCRIPTION
① ⊙⊗		Overall Facility Access
①②③⊙⊗		Component Access: _____

ACCESS PROBLEMS (Circle)	NEXT STEP (Circle One)
Locked Gate / Fence	Coordinate with Owner
Heavy Vegetation	Return for Re-inspection
Other:_____	Request Photos from Owner
	Contact MSMD
	Other:_____

Rooftop Disconnection

SCORE	PHOTO	DESCRIPTION	1	2	3	4	5	6
		Downspouts						
① ⊙⊗		Not Disconnected						
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*						
①②③⊙⊗		Blockage *(③ < 25% < ② < 75% < ①)*						
①②③⊙⊗		Damaged *Description:*						
①②③⊙⊗		Outflow Obstruction *Description:*						
①②③⊙⊗		Other: *Description:*						
		Downstream Treatment / Receiving Area *Type:*						
① ⊙⊗		Functioning as Designed						
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*						
①②③⊙⊗		Erosion / Bare Spots *Area:*						
①②③⊙⊗		Other: *Description:*						
		Total Number of Downspouts	Observed:			Specified:		
		Total Number of Disconnected Downspouts	Observed:			Specified:		

Other

SCORE	PHOTO	DESCRIPTION	LOCATION
①②③⊙⊗		Encroachments	
①②③⊙⊗		Modifications	
①②③⊙⊗		Mosquito Habitat	
①②③⊙⊗		Evidence of Possible Illicit Discharge, Call to Re (703-877-2800: Inspection, Maint., & Enforc. Section)	

INSPECTOR COMMENTS

A-10: Reforestation Inspection Form

Reforestation Inspection Form

Inspector:

Fairfax County Maintenance and Stormwater Management Division

Date:

Site ID: Facility ID: Facility Name:

Address: Coordinates / ParID:

Watershed: District:

Functional? Yes No

Score Totals: 1 2 3

Scoring Key

①	High Priority / Non-functional
②	Moderate Priority / Approaching Non-functional
③	Low Priority / Functional
⊙	No Priority / Continue Routine Maintenance
⊗	Not Applicable

Notes / Specifications:

Facility Specific Info:

Facility Type / Addl Facility Info:

Signs

SCORE	PHOTO	DESCRIPTION
③⊙⊗		Facility Sign
③⊙⊗		Facility Labeling

Weather Conditions

Last Rainfall	Date:	Amount:
Current weather conditions?		

Accessibility

Access Comments

New Access Comments for EAM:

ACCESS PROBLEMS (Circle)	NEXT STEP (Circle One)
Locked Gate / Fence	Coordinate with Owner
Other:_____	Return for Re-inspection
	Request Photos from Owner
	Contact MSMD
	Other:_____

SCORE	PHOTO	DESCRIPTION
①	⊙⊗	Overall Facility Access
①②③⊙⊗		Component Access: _____

Reforested Area

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS	
①	⊙⊗	Reforestation Area	Observed:	Specified:
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*		
①②③⊙⊗		Erosion / Bare Spots *Area:*		
		Plant Material	Plants in Inventory:	
①	⊙⊗	Trees Missing	Observed:	Specified:
①	⊙⊗	Shrubs Missing	Observed:	Specified:
①	⊙⊗	Grass / Groundcover Missing	Observed:	Specified:
①②③⊙⊗		Unhealthy / Damaged		
①②③⊙⊗		Undesired / Invasive Vegetation		
①②③⊙⊗		Other: *Description:*		

Other

SCORE	PHOTO	DESCRIPTION	LOCATION
①②③⊙⊗		Encroachments	
①②③⊙⊗		Modifications	
①②③⊙⊗		Mosquito Habitat	
①②③⊙⊗		Evidence of Possible Illicit Discharge, Call to Re (703-877-2800: Inspection, Maint., & Enforc. Section)	

INSPECTOR COMMENTS

A-11: Rooftop Detention Inspection Form

Rooftop Detention Inspection Form

Fairfax County Maintenance and Stormwater Management Division

Inspector: _____

Date: _____

Site ID: _____ Facility ID: _____ Facility Name: _____

Address: _____ Coordinates / ParID: _____

Watershed: _____ District: _____

Functional? ☐ Yes ☐ No

Score Totals: 1 _____ 2 _____ 3 _____

Scoring Key

①	High Priority / Non-functional
②	Moderate Priority / Approaching Non-functional
③	Low Priority / Functional
⊙	No Priority / Continue Routine Maintenance
⊗	Not Applicable

Notes / Specifications:

Facility Specific Info:

Facility Type / Addl Facility Info:

Signs

SCORE	PHOTO	DESCRIPTION
③⊙⊗		Facility Sign
③⊙⊗		Facility Labeling

Weather Conditions

Last Rainfall	Date:	Amount:
Current weather conditions?		

Accessibility

Access Comments

New Access Comments for EAM:

SCORE	PHOTO	DESCRIPTION
①	⊙⊗	Overall Facility Access
①②③⊙⊗		Component Access: _____

ACCESS PROBLEMS (Circle)	NEXT STEP (Circle One)
Locked Access Door	Coordinate with Owner
Broken / Unsafe Ladder	Return for Re-inspection
Too Tall for Standard Ladder	Request Photos from Owner
Equipment Needed: _____	Contact MSMD
Other: _____	Roofing Contractor/Bucket Truck

Roof Surface

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①	⊙⊗	Change in Roof Design	Observed: / Specified:
①②③⊙⊗		Visible Damage to Surface	
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*	
①②③⊙⊗		Ponding Water (after dry weather) *Area:*	
①②③⊙⊗		Other: *Description:*	
		Parapet Wall	
①	⊙⊗	Missing	
①②③⊙⊗		Damaged *Description:*	
①②③⊙⊗		Other: *Description:*	
		For Multi-Level Rooftop Detention Systems, Describe Stormwater Flow:	Notes:

Roof Drains and Detention Devices

SCORE	PHOTO	DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12
		Detention Device Type:												
		Opening Size:												
		No. of Openings:												
		Adjustable Device Setting:												
①	⊙⊗	Missing												
①②③⊙⊗		Blockage (③ < 25% < ② < 75% < ①)												
①②③⊙⊗		Damage / Deterioration												
①②③⊙⊗		Unapproved Alteration / Setting												
①②③⊙⊗		Other: *Description:*												
		Debris Cage												
①	⊙⊗	Missing												
①②③⊙⊗		Blockage (③ < 25% < ② < 75% < ①)												
①②③⊙⊗		Damage / Deterioration												
①②③⊙⊗		Other: *Description:*												
		Roof Drain Pipe Pipe Diameter:												
①②③⊙⊗		Blockage (③ < 25% < ② < 75% < ①)												
①②③⊙⊗		Damage / Deterioration												
①②③⊙⊗		Other: *Description:*												
		Detention Summary Number of Roof Drains:	Observed:						Specified:					
		Number of Detention Devices:	Observed:						Specified:					
(may be completed in office)		Total Area of Openings, < 3" Height:	Observed:						Specified:					
①	⊙⊗	Insufficient Detention												

Scupper Ports / Emergency Overflow

SCORE	PHOTO	DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12
①	⊙⊗	< 3" Above Roof Surface												
①②③⊙⊗		Blockage (③ < 25% < ② < 75% < ①)												
①②③⊙⊗		Damage / Deterioration												
①②③⊙⊗		Other: *Description:*												
		Detention Devices at Scuppers (When Applicable)												
①	⊙⊗	Missing												
①②③⊙⊗		Blockage (③ < 25% < ② < 75% < ①)												
①②③⊙⊗		Damage / Deterioration												
①②③⊙⊗		Unapproved Alteration												
①②③⊙⊗		Other: *Description:*												
		Emergency Overflow Summary					Plans Approved:							
		Number of Scuppers:	Observed:						Specified:					
①	⊙⊗	Insufficient Emergency Overflow *(Note Plan Date)*												

Rooftop Detention Inspection Form Page 2

Site ID: _____ Facility ID: _____ Facility Name: _____

Other			
SCORE	PHOTO	DESCRIPTION	LOCATION
①②③☉⊗		Encroachments	
①②③☉⊗		Modifications	
①②③☉⊗		Mosquito Habitat	
①②③☉⊗		Evidence of Possible Illicit Discharge, Call to Re (703-877-2800: Inspection, Maint., & Enforc. Section)	

INSPECTOR COMMENTS

A-12: Sand Filter Inspection Form

Sand Filter Inspection Form

Fairfax County Maintenance and Stormwater Management Division

Inspector:
Date:

Site ID: Facility ID: Facility Name:
Coordinates / ParID:
Address: Watershed: District:
Functional? Yes No
Score Totals: 1 2 3

Scoring Key

①	High Priority / Non-functional
②	Moderate Priority / Approaching Non-functional
③	Low Priority / Functional
⊙	No Priority / Continue Routine Maintenance
⊗	Not Applicable

Notes / Specifications:
Facility Specific Info:
Facility Type / Addl Facility Info:

Signs

SCORE	PHOTO	DESCRIPTION
③⊙⊗		Facility Sign
③⊙⊗		Facility Labeling

Weather Conditions

Last Rainfall	Date:	Amount:
Current weather conditions?		

Accessibility

Access Comments
New Access Comments for EAM:

ACCESS PROBLEMS (Circle)	NEXT STEP (Circle One)
Locked Gate / Fence	Coordinate with Owner
Parked Cars	Return for Re-inspection
Stuck / Broken Cover	Request Photos from Owner
Equipment Needed:	Contact MSMD
Other:	Other:

SCORE	PHOTO	DESCRIPTION
① ⊙⊗		Overall Facility Access
①②③⊙⊗		Component Access:

Maintenance Records

YES / NO	PHOTO	DESCRIPTION	COMMENTS
YES / NO		Inspection / Maintenance Conducted Recently	
YES / NO		Maintenance Records Available On-Site	

D.C. / Delaware Sand Filter

Sediment Chamber

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
① ⊙⊗		Water Level Too Low	
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*	
①②③⊙⊗		Spalling / Deterioration	
①②③⊙⊗		Manhole / Bilco Door Condition	
①②③⊙⊗		Ladder / Steps Condition	
①②③⊙⊗		Other: *Description:*	
		Bypass Pipe / Overflow Weir	
① ⊙⊗		Missing	
①②③⊙⊗		Blockage *(ⓐ < 25% < ⓑ < 75% < ⓒ)*	
①②③⊙⊗		Damage / Deterioration	
		Inflows	
①②③⊙⊗		Spalling / Deterioration	
①②③⊙⊗		Separation / Misalignment	
①②③⊙⊗		Blockage *(ⓐ < 25% < ⓑ < 75% < ⓒ)*	
①②③⊙⊗		Other: *Description:*	

Filter Chamber

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①②③⊙⊗		Ponding Water (after dry weather) *Area:*	
①②③⊙⊗		Spalling / Deterioration	
①②③⊙⊗		Cleanout(s) Condition	
①②③⊙⊗		Emergency Overflow *Type:*	
①②③⊙⊗		Manhole / Bilco Door Condition	
①②③⊙⊗		Ladder / Steps Condition	
①②③⊙⊗		Other: *Description:*	
		Filter Bed	
①②③⊙⊗		Filter Media Level	
①②③⊙⊗		Erosion of Filter Media / Exposed Filter Fabric	
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*	
		Observation Well / Cleanout(s)	
① ⊙⊗		Missing / Not Found	
①②③⊙⊗		Damage / Deterioration	
①②③⊙⊗		Other: *Description:*	

Clearwell

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*	
①②③⊙⊗		Spalling / Deterioration	
①②③⊙⊗		Underdrain(s) Condition	
①②③⊙⊗		Emergency Overflow *Type:*	
①②③⊙⊗		Manhole / Bilco Door Condition	
①②③⊙⊗		Ladder / Steps Condition	
①②③⊙⊗		Other:	
		Dewatering Drain Valve	
① ⊙⊗		Missing	
① ⊙⊗		Not Fully Closed	
①②③⊙⊗		Damage / Deterioration	
①②③⊙⊗		Other:	

Sand Filter Inspection Form Page 2

Site ID: _____ Facility ID: _____ Facility Name: _____

Austin Sand Filter

Control Structure

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①②③⊙⊗		Damage / Deterioration Description:	
①②③⊙⊗		Vegetation / External Obstructions	
①②③⊙⊗		Other: Description:	
		Low-Flow Orifice and Trash Rack	Orifice Size:
① ⊙⊗		Orifice Plate Missing / Non-Functional	
① ⊙⊗		Trash Rack Missing / Non-Functional	
①②③⊙⊗		Blockage (③ < 25% < ② < 75% < ①)	
①②③⊙⊗		Damage / Deterioration Description:	
		Top Trash Rack and Anti-Vortex Plate	
① ⊙⊗		Pad Lock Missing	
①②③⊙⊗		Blockage (③ < 25% < ② < 75% < ①)	
①②③⊙⊗		Damage / Deterioration Description:	
		Riser Interior	
①②③⊙⊗		Trash / Debris / Sediment Description / Amount:	
①②③⊙⊗		Ladder / Steps Condition	
		Principal Spillway Pipe, Upstream End	
①②③⊙⊗		Blockage (③ < 25% < ② < 75% < ①)	
①②③⊙⊗		Spalling / Deterioration	
①②③⊙⊗		Separation / Misaligned Joints	

Dam / Berm and Emergency Spillway

Sep Auxillary Spillway:

SCORE	PHOTO	DESCRIPTION	FACE SLOPE Score	FACE SLOPE Comments	TOP OF DAM Score	TOP OF DAM Comments	BACK SLOPE Score	BACK SLOPE Comments	EMERG. SPILLWAY Material: Score	EMERG. SPILLWAY Comments
①②③⊙⊗		Toe Soft Spots / Cave-In								
①②③⊙⊗		Slope Erosion / Bare Spots								
①②③⊙⊗		Animal Holes								
①②③⊙⊗		Tree Removal Num/Size:								
①②③⊙⊗		Overgrown Vegetation								
①②③⊙⊗		Other: Description:								
①②③⊙⊗		Blockage at Emergency Spillway (③ < 25% < ② < 75% < ①)								
①②③⊙⊗		Damage / Deterioration at Emergency Spillway Description:								

Ponding Area

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①②③⊙⊗		Erosion / Bare Spots Area:	
①②③⊙⊗		Trash / Debris / Sediment Description / Amount:	
①②③⊙⊗		Overgrown Vegetation	
①②③⊙⊗		Tree Removal Number / Size:	
①②③⊙⊗		Gabion Wall Condition	
①②③⊙⊗		Other: Description:	

Inflow(s)

SCORE	PHOTO	DESCRIPTION	1	2	3	4	5	6
		End Type / Material / Size:						
①②③⊙⊗		Blockage (③ < 25% < ② < 75% < ①)						
①②③⊙⊗		Trash / Debris / Sediment Description / Amount:						
①②③⊙⊗		Erosion / Undermining Area:						
①②③⊙⊗		Spalling / Deterioration						
①②③⊙⊗		Separation / Misalignment						
①②③⊙⊗		Overgrown Vegetation / Tree Removal						
①②③⊙⊗		Other:						

Outfall Structure / Other

Outfall Structure

Material: Size: End Type:

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①②③⊙⊗		Blockage (③ < 25% < ② < 75% < ①)	
①②③⊙⊗		Trash / Debris / Sediment	
①②③⊙⊗		Erosion / Undermining Area:	
①②③⊙⊗		Spalling / Deterioration	
①②③⊙⊗		Separation / Misalignment	
①②③⊙⊗		Overgrown Vegetation / Tree Removal	
①②③⊙⊗		Manhole Condition	
①②③⊙⊗		Ladder / Steps Condition	
①②③⊙⊗		Downstream Channel Condition	
①②③⊙⊗		Other:	

Other

SCORE	PHOTO	DESCRIPTION	LOCATION
①②③⊙⊗		Encroachments	
①②③⊙⊗		Modifications	
①②③⊙⊗		Mosquito Habitat	
①②③⊙⊗		Evidence of Possible Illicit Discharge, Call to Re (703-877-2800: Inspection, Maint., & Enforc. Section)	

INSPECTOR COMMENTS

A-13: Tree Filter Inspection Form

Tree Filter Inspection Form

Fairfax County Maintenance and Stormwater Management Division

Inspector:
Date:
Site ID: Facility ID: Facility Name:
Address: Coordinates / ParID:
Watershed: District:
Functional? Yes No
Score Totals: 1 2 3

Scoring Key

①	High Priority / Non-functional
②	Moderate Priority / Approaching Non-functional
③	Low Priority / Functional
⊙	No Priority / Continue Routine Maintenance
⊗	Not Applicable

Notes / Specifications:
Facility Specific Info:
Facility Type / Addl Facility Info:

Signs			Weather Conditions		
SCORE	PHOTO	DESCRIPTION	Last Rainfall	Date:	Amount:
③⊙⊗		Facility Sign	Current weather conditions?		
③⊙⊗		Facility Labeling			

Accessibility				
Access Comments			ACCESS PROBLEMS (Circle)	NEXT STEP (Circle One)
New Access Comments for EAM:			Locked Gate / Fence	Coordinate with Owner
			Parked Cars	Return for Re-inspection
SCORE	PHOTO	DESCRIPTION	Stuck / Broken Cover	Request Photos from Owner
①⊙⊗		Overall Facility Access	Equipment Needed:	Contact MSMD
①②③⊙⊗		Component Access:	Other:	Other:

Filter Box / Control Structure			
①⊙⊗		Surge Stone / Energy Dissipator Missing	
①②③⊙⊗		Blockage at Throat (③ < 25% < ② < 75% < ①)	
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*	
①②③⊙⊗		Damage / Deterioration of the Grate	
①②③⊙⊗		Damage / Deterioration of the Structure	
①②③⊙⊗		Overgrown Vegetation / External Obstruction	
①②③⊙⊗		Other:	
	Plant Material		Plants in Inventory:
①⊙⊗		Missing / Dead	Observed: / Specified:
①②③⊙⊗		Unhealthy / Damaged	
①②③⊙⊗		Overgrown / Invasive Vegetation	
①②③⊙⊗		Other: *Description:*	
	Mulch		
①⊙⊗		Missing	
①②③⊙⊗		Not at Design Thickness	
①②③⊙⊗		Other: *Description:*	
	Observation Well / Cleanout(s)		
①⊙⊗		Missing / Not Found	
①②③⊙⊗		Damage / Deterioration	
①②③⊙⊗		Other: *Description:*	

Emergency Overflow / Outfall Structure			
			Emegency Overflow Provided? Yes / No
SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①②③⊙⊗		Blockage (③ < 25% < ② < 75% < ①)	
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*	
①②③⊙⊗		Damage / Deterioration	
①②③⊙⊗		Overgrown Vegetation / External Obstruction	
①②③⊙⊗		Manhole Condition	
①②③⊙⊗		Ladder / Steps Condition	
①②③⊙⊗		Downstream Pipe Condition	
①②③⊙⊗		Other: *Description:*	
	Underdrain Pipe		
①⊙⊗		Missing / Not Found	
①②③⊙⊗		Blockage (③ < 25% < ② < 75% < ①)	
①②③⊙⊗		Damage / Deterioration	
①②③⊙⊗		Other: *Description:*	

Other			
SCORE	PHOTO	DESCRIPTION	LOCATION
①②③⊙⊗		Encroachments	
①②③⊙⊗		Modifications	
①②③⊙⊗		Mosquito Habitat	
①②③⊙⊗		Evidence of Possible Illicit Discharge, Call to Re (703-877-2800: Inspection, Maint., & Enforc. Section)	

INSPECTOR COMMENTS

A-14: Infiltration Trench Inspection Form

Infilitration Trench Inspection Form

Fairfax County Maintenance and Stormwater Management Division

Inspector:

Date:

Site ID: Facility ID: Facility Name:

Address: Coordinates / ParID:

Watershed: District:

Functional? Yes No

Score Totals: 1 2 3

Scoring Key

①	High Priority / Non-functional
②	Moderate Priority / Approaching Non-functional
③	Low Priority / Functional
⊙	No Priority / Continue Routine Maintenance
⊗	Not Applicable

Notes / Specifications:

Facility Specific Info:

Facility Type / Addl Facility Info:

Signs		
SCORE	PHOTO	DESCRIPTION
③⊙⊗		Facility Sign
③⊙⊗		Facility Labeling

Weather Conditions		
Last Rainfall	Date:	Amount:
Current weather conditions?		

Accessibility

Access Comments	ACCESS PROBLEMS (Circle)	NEXT STEP (Circle One)
New Access Comments for EAM:	Locked Gate / Fence	Coordinate with Owner
	Parked Cars	Return for Re-inspection
SCORE PHOTO DESCRIPTION	Stuck / Broken Cover	Request Photos from Owner
① ⊙⊗ Overall Facility Access	Equipment Needed:	Contact MSMD
①②③⊙⊗ Component Access:	Other:	Other:

Surface Trench Components

Gravel Bed Surface

Surface Cover: Gravel / Grass / Both / Other:

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①	⊙⊗	Trench Eliminated	
①	⊙⊗	Gravel Not Found Under Turf	Depth to Gravel (if applicable):
①	⊙⊗	Gravel Footprint	Area Observed: / Area Specified:
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*	
①②③⊙⊗		Unauthorized Planting *Description:*	
①②③⊙⊗		Bare Spots / Erosion *Area:*	
①②③⊙⊗		Condition of Grass or Gravel	
①②③⊙⊗		Repair Filter Fabric	
①②③⊙⊗		Other: *Description:*	

Observation Well / Cleanout(s)

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①	⊙⊗	Missing / Not Found	Observed: / Specified:
①	⊙⊗	Cap Missing / Stuck	
①②③⊙⊗		Water / Sediment Observed in Well?	
①②③⊙⊗		Damaged	
①②③⊙⊗		Other: *Description:*	

Dam / Berm and Emergency Spillway

Required by Plans? Yes / No

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①	⊙⊗	Missing	Observed: / Specified:
①②③⊙⊗		Erosion / Bare Spots *Area:*	
①②③⊙⊗		Cave-In	
①②③⊙⊗		Animal Holes	
①②③⊙⊗		Overgrown Vegetation / Tree Removal	
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*	
①②③⊙⊗		Other: *Description:*	

Surface Inflows and Roof Drains

SCORE	PHOTO	DESCRIPTION	1	2	3	4	5	6
		Inflow Type (Sheet Flow, Curb Cut, Roof Downspout, Pipe, etc.):						
		Pipe Material:						
		Pipe Size:						
①	⊙⊗	Roof Drain Downspout Disconnected						
①②③⊙⊗		Blockage *(③ < 25% < ② < 75% < ①)*						
①②③⊙⊗		Spalling / Deterioration						
①②③⊙⊗		Erosion / Undermining						
①②③⊙⊗		Trash / Debris / Sediment Removal						
①②③⊙⊗		Overgrown Vegetation / Tree Removal						
①②③⊙⊗		Other:						
	Inflow Summary							
①	⊙⊗	Curb Cuts Missing / Inconsistent with Plans	Observed: / Specified:					
①	⊙⊗	Inflow Diverted Away From Trench	Observed: / Specified:					
①②③⊙⊗		Other:						

Pre-Treatment / Energy Dissipators

Type(s): Gravel diaphragm / Grass filter strip / Grass channel / Leaf screen / Level spreader / Plunge pool / Sediment trap / Sump pit / Other:

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①	⊙⊗	Missing / Non-Functional *Description:*	
①	⊙⊗	Inconsistent with Plans *(Area / Vertical Drop / etc.)*	Observed: / Specified:
①②③⊙⊗		Damage / Deterioration *Description:*	
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*	
①②③⊙⊗		Other:	

Infiltration Trench Inspection Form Page 2

Site ID: _____ Facility ID: _____ Facility Name: _____

Underground Trench Components

Control Structure

Function:		Orifice Size:		Structure # on Plans:		Label(s) on Sketch:	

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①②③☉⊗		Standing Water (after dry weather)	
①②③☉⊗		Trash / Debris / Sediment *Description / Amount:*	
①②③☉⊗		Spalling / Deterioration	
①②③☉⊗		Manhole / Bilco Door Condition	
①②③☉⊗		Ladder / Steps Condition	
①②③☉⊗		Other: *Description:*	
		Low-Flow Orifice and Trash Rack	
① ☉⊗		Orifice Plate Missing / Non-Functional	
① ☉⊗		Trash Rack Missing / Non-Functional	
①②③☉⊗		Blockage *(③ < 25% < ② < 75% < ①)*	
①②③☉⊗		Damage / Deterioration *Description:*	
		Higher-Flow Orifice / Weir	
① ☉⊗		Missing / Not Found	Observed: / Specified:
①②③☉⊗		Blockage *(③ < 25% < ② < 75% < ①)*	
①②③☉⊗		Other: *Description:*	
		Outlet Pipe	
①②③☉⊗		Blockage *(③ < 25% < ② < 75% < ①)*	
①②③☉⊗		Spalling / Deterioration	
①②③☉⊗		Separation / Misalignment	

Detention Pipe / Vault

SCORE	PHOTO	DESCRIPTION	1	2	3	4	5	6
		Structure # on Plans:						
		Label on Sketch:						
①②③☉⊗		Standing Water (after dry weather)						
①②③☉⊗		Trash / Debris / Sediment *Description / Amount:*						
①②③☉⊗		Spalling / Deterioration						
①②③☉⊗		Separation / Misalignment						
①②③☉⊗		Inflow Pipes, if any *Pipe Direction / Problem:*						
①②③☉⊗		Manhole / Bilco Door Condition						
①②③☉⊗		Ladder / Steps Condition						
①②③☉⊗		Blockage *(③ < 25% < ② < 75% < ①)*						
①②③☉⊗		Other: *Description:*						

Outfall Structure / Other

Outfall Structure

Material:		Size:		End Type:	

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①②③☉⊗		Blockage *(③ < 25% < ② < 75% < ①)*	
①②③☉⊗		Trash / Debris / Sediment	
①②③☉⊗		Erosion / Undermining *Area:*	
①②③☉⊗		Spalling / Deterioration	
①②③☉⊗		Separation / Misalignment	
①②③☉⊗		Overgrown Vegetation / Tree Removal	
①②③☉⊗		Manhole Condition	
①②③☉⊗		Ladder / Steps Condition	
①②③☉⊗		Downstream Channel Condition	
①②③☉⊗		Other:	

Other

SCORE	PHOTO	DESCRIPTION	LOCATION
①②③☉⊗		Encroachments	
①②③☉⊗		Modifications	
①②③☉⊗		Mosquito Habitat	
①②③☉⊗		Evidence of Possible Illicit Discharge, Call to Re (703-877-2800: Inspection, Maint., & Enforc. Section)	

INSPECTOR COMMENTS

A-15: Underground Detention Inspection Form

Underground Detention Inspection Form

Inspector:

Fairfax County Maintenance and Stormwater Management Division

Date:

Site ID: Facility ID: Facility Name:

Address: Coordinates / ParID:

Watershed: District:

Functional? Yes No

Score Totals: 1 2 3

Scoring Key

①	High Priority / Non-functional
②	Moderate Priority / Approaching Non-functional
③	Low Priority / Functional
⊙	No Priority / Continue Routine Maintenance
⊗	Not Applicable

Notes / Specifications:

Facility Specific Info:

Facility Type / Addl Facility Info:

Signs

SCORE	PHOTO	DESCRIPTION
③⊙⊗		Facility Sign
③⊙⊗		Facility Labeling

Weather Conditions

Last Rainfall Date: Amount:

Current weather conditions?

Accessibility

Access Comments

New Access Comments for EAM:

ACCESS PROBLEMS (Circle)	NEXT STEP (Circle One)
Locked Gate / Fence	Coordinate with Owner
Parked Cars	Return for Re-inspection
Stuck / Broken Cover	Request Photos from Owner
Equipment Needed: _____	Contact MSMD
Other: _____	Other: _____

SCORE	PHOTO	DESCRIPTION
① ⊙⊗		Overall Facility Access
①②③⊙⊗		Component Access: _____

Control Structure

Function: Orifice Size: Structure # on Plans: Label(s) on Sketch:

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①②③⊙⊗		Standing Water (after dry weather)	
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*	
①②③⊙⊗		Spalling / Deterioration	
①②③⊙⊗		Manhole / Bilco Door Condition	
①②③⊙⊗		Ladder / Steps Condition	
①②③⊙⊗		Other: *Description:*	
		Low-Flow Orifice and Trash Rack	
① ⊙⊗		Orifice Plate Missing / Non-Functional	
① ⊙⊗		Trash Rack Missing / Non-Functional	
①②③⊙⊗		Blockage *(③ < 25% < ② < 75% < ①)*	
①②③⊙⊗		Damage / Deterioration *Description:*	
		Higher-Flow Orifice / Weir	
① ⊙⊗		Missing / Not Found	Observed: Specified:
①②③⊙⊗		Blockage *(③ < 25% < ② < 75% < ①)*	
①②③⊙⊗		Other: *Description:*	
		Outlet Pipe	
①②③⊙⊗		Blockage *(③ < 25% < ② < 75% < ①)*	
①②③⊙⊗		Spalling / Deterioration	
①②③⊙⊗		Separation / Misalignment	

Detention Pipe / Vault

SCORE	PHOTO	DESCRIPTION	1	2	3	4	5	6
		Structure # on Plans:						
		Label on Sketch:						
①②③⊙⊗		Standing Water (after dry weather)						
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*						
①②③⊙⊗		Spalling / Deterioration						
①②③⊙⊗		Separation / Misalignment						
①②③⊙⊗		Inflow Pipes, if any *Pipe Direction / Problem:*						
①②③⊙⊗		Manhole / Bilco Door Condition						
①②③⊙⊗		Ladder / Steps Condition						
①②③⊙⊗		Blockage *(③ < 25% < ② < 75% < ①)*						
①②③⊙⊗		Other: *Description:*						

Outfall Structure

Material: Size: End Type:

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
①②③⊙⊗		Blockage *(③ < 25% < ② < 75% < ①)*	
①②③⊙⊗		Trash / Debris / Sediment	
①②③⊙⊗		Erosion / Undermining *Area:*	
①②③⊙⊗		Spalling / Deterioration	
①②③⊙⊗		Separation / Misalignment	
①②③⊙⊗		Overgrown Vegetation / Tree Removal	
①②③⊙⊗		Manhole Condition	
①②③⊙⊗		Ladder / Steps Condition	
①②③⊙⊗		Downstream Channel Condition	
①②③⊙⊗		Other:	

Underground Detention Inspection Form Page 2

Site ID: _____ **Facility ID:** _____ **Facility Name:** _____

Other			
SCORE	PHOTO	DESCRIPTION	LOCATION
①②③⊙⊗		**Encroachments**	
①②③⊙⊗		**Modifications**	
①②③⊙⊗		**Mosquito Habitat**	
①②③⊙⊗		**Evidence of Possible Illicit Discharge, Call to Re** (703-877-2800: Inspection, Maint., & Enforc. Section)	

INSPECTOR COMMENTS

A-16: Vegetated Filter Strip Inspection Form

Vegetated Filter Strip Inspection Form

Inspector:

Fairfax County Maintenance and Stormwater Management Division

Date:

Site ID: Facility ID: Facility Name:

Address: Coordinates / ParID:

Watershed: District:

Functional? Yes No

Score Totals: 1 2 3

Scoring Key

①	High Priority / Non-functional
②	Moderate Priority / Approaching Non-functional
③	Low Priority / Functional
⊙	No Priority / Continue Routine Maintenance
⊗	Not Applicable

Notes / Specifications:

Facility Specific Info:

Facility Type / Addl Facility Info:

Signs			Weather Conditions		
SCORE	PHOTO	DESCRIPTION	Last Rainfall	Date:	Amount:
③⊙⊗		Facility Sign	Current weather conditions?		
③⊙⊗		Facility Labeling			

Accessibility

Access Comments	ACCESS PROBLEMS (Circle)	NEXT STEP (Circle One)
New Access Comments for EAM:	Locked Gate / Fence	Coordinate with Owner
	Other:_____	Return for Re-inspection
		Request Photos from Owner
		Contact MSMD
		Other:_____

SCORE	PHOTO	DESCRIPTION
① ⊙⊗		Overall Facility Access
①②③⊙⊗		Component Access:_____

Energy Dissipator

Type: Gravel Diaphragm / Engineered Level Spreader / Other:_____ Required by Plans? Yes / No

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS	
① ⊙⊗		Missing / Non-Functional *Description:*		
① ⊙⊗		Inconsistent with Plans *(Area / Vertical Drop / etc.)*	Observed:	Specified:
①②③⊙⊗		Damage / Deterioration *Description:*		
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*		
①②③⊙⊗		Other: *Description:*		

Vegetated Filter Strip

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS	
① ⊙⊗		Ponding Water (after dry weather)		
①②③⊙⊗		Bare Spots / Erosion *Area:*		
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*		
①②③⊙⊗		Other: *Description:*		
	Plant Material		Plants in Inventory:	
① ⊙⊗		Missing / Dead	Observed:	Specified:
①②③⊙⊗		Unhealthy / Damaged		
①②③⊙⊗		Overgrown / Invasive Vegetation *(Mow twice/year or more.)*		
①②③⊙⊗		Unauthorized Planting *Description:*		
①②③⊙⊗		Other: *Description:*		

Permeable Berm

Required by Plans? Yes / No

SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS
① ⊙⊗		Missing / Non-Functional *Description:*	
①②③⊙⊗		Bare Spots / Erosion *Area:*	
①②③⊙⊗		Damaged *Description:*	
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*	
①②③⊙⊗		Overgrown Vegetation	
①②③⊙⊗		Other: *Description:*	

Other

SCORE	PHOTO	DESCRIPTION	LOCATION
①②③⊙⊗		Encroachments	
①②③⊙⊗		Modifications	
①②③⊙⊗		Mosquito Habitat	
①②③⊙⊗		Evidence of Possible Illicit Discharge, Call to Re (703-877-2800: Inspection, Maint., & Enforc. Section)	

INSPECTOR COMMENTS

A-17: Vegetated Swale Inspection Form

Vegetated Swale Inspection Form

Fairfax County Maintenance and Stormwater Management Division

Inspector: _____ Date: _____

Site ID: _____ Facility ID: _____ Facility Name: _____

Address: _____ Coordinates / ParID: _____

Watershed: _____ District: _____

Functional? ☐ Yes ☐ No

Score Totals: 1 _____ 2 _____ 3 _____

Scoring Key	
①	High Priority / Non-functional
②	Moderate Priority / Approaching Non-functional
③	Low Priority / Functional
⊙	No Priority / Continue Routine Maintenance
⊗	Not Applicable

Notes / Specifications: _____ Facility Specific Info: _____

Facility Type / Addl Facility Info: _____

Signs			Weather Conditions		
SCORE	PHOTO	DESCRIPTION	Last Rainfall	Date:	Amount:
③⊙⊗		Facility Sign	Current weather conditions?		
③⊙⊗		Facility Labeling			

Accessibility				
Access Comments			ACCESS PROBLEMS (Circle)	NEXT STEP (Circle One)
New Access Comments for EAM:			Locked Gate / Fence	Coordinate with Owner
			Heavy Vegetation	Return for Re-inspection
SCORE	PHOTO	DESCRIPTION	Equipment Needed: _____	Request Photos from Owner
① ⊙⊗		Overall Facility Access	Other: _____	Contact MSMD
①②③⊙⊗		Component Access: _____		Other: _____

Vegetated Swale				
SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS	
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*		
①②③⊙⊗		Bare Spots / Erosion *Area:*		
①②③⊙⊗		Condition of Vegetated Cover		
①②③⊙⊗		Unauthorized Planting *Description:*		
①②③⊙⊗		Other:		
		Check Dams		
① ⊙⊗		Missing / Inconsistent with Plans	Observed:	Specified:
①②③⊙⊗		Damaged		
①②③⊙⊗		Other:		
		Observation Well / Cleanout(s)		
① ⊙⊗		Missing / Not Found	# Observed	# Specified:
① ⊙⊗		Cap Missing / Stuck		
①②③⊙⊗		Water / Sediment Observed in Well?		
①②③⊙⊗		Vegetation / External Obstructions		
①②③⊙⊗		Damaged		
①②③⊙⊗		Other:		
		Plant Material	Plants in Inventory:	
① ⊙⊗		Trees Missing	Observed:	Specified:
① ⊙⊗		Shrubs Missing	Observed:	Specified:
① ⊙⊗		Grass / Groundcover Missing	Observed:	Specified:
①②③⊙⊗		Unhealthy / Damaged		
①②③⊙⊗		Overgrown / Invasive Vegetation		
①②③⊙⊗		Other:		

Upstream Inflow(s)								
SCORE	PHOTO	DESCRIPTION	1	2	3	4	5	6
		End Type / Overland:						
		Pipe Material:						
		Pipe Size:						
①②③⊙⊗		Trash / Debris / Sediment Removal						
①②③⊙⊗		Blockage (③ < 25% < ② < 75% < ①)						
①②③⊙⊗		Spalling / Deterioration						
①②③⊙⊗		Erosion / Undermining						
①②③⊙⊗		Overgrown Vegetation / Tree Removal						
①②③⊙⊗		Other:						

Pre-Treatment / Energy Dissipators				
Type(s):	Check dams / Flow spreader / Forebay / Gravel diaphragm / Grass filter strip / Grass channel / Leaf screen / Level spreader / Other: _____			
SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS	
① ⊙⊗		Missing / Non-Functional *Description:*		
① ⊙⊗		Inconsistent with Plans *Area / Vertical Drop / etc.)*	Observed:	Specified:
①②③⊙⊗		Damage / Deterioration *Description:*		
①②③⊙⊗		Trash / Debris / Sediment *Description / Amount:*		
①②③⊙⊗		Other:		

Underdrain(s)				
SCORE	PHOTO	DESCRIPTION	COMMENTS / DIMENSIONS	
		Specified on Approved Plans?		
① ⊙⊗		Missing		
①②③⊙⊗		Blockage (③ < 25% < ② < 75% < ①)		
①②③⊙⊗		Spalling / Deterioration		
①②③⊙⊗		Separation / Misaligned Joints		
①②③⊙⊗		Other:		

Vegetated Swale Inspection Form Page 2

Site ID: _____ Facility ID: _____ Facility Name: _____

Other			
SCORE	PHOTO	DESCRIPTION	LOCATION
①②③⊙⊗		Encroachments	
①②③⊙⊗		Modifications	
①②③⊙⊗		Mosquito Habitat	
①②③⊙⊗		Evidence of Possible Illicit Discharge, Call to Re (703-877-2800: Inspection, Maint., & Enforc. Section)	

INSPECTOR COMMENTS

Appendix B-Reporting Forms

B-1: Notice of Inspection (NOI)

The NOI is the full inspection report sent to a private facility owner, and it includes a cover letter, CAR, photos with orientation sketch, any applicable site plans, a copy of the PMA (if applicable), a tax map, GIS map, a copy of the County Maintenance guidelines, and a blank MAR (for the owner to complete and return). As most components of the NOI are already described or attached in the Appendices, we will include samples of four cover letters, covering facilities with or without required maintenance and with or without an established PMA.

Cover Letter with PMA (No required maintenance)

County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

The Owner
1234 Everywhere Court
Fairfax, VA 22033

Subject: Notice of Inspection of Privately Maintained Stormwater Management Facility

Reference: Site ID / Facility ID: **S1234 / BR0056**
Project / Plan No.: The Owner / 0102-SD-03-4
Location: 1234 Everywhere Court
Tax Map No: 023.4 ((56)) () 7

Dear Facility Owner:

As part of Fairfax County's stormwater management program, Maintenance and Stormwater Management Division (MSMD) staff inspects stormwater management facilities to ensure proper maintenance is performed and that the facility is functioning according to the approved design. The County performs maintenance inspections of stormwater management facilities to meet regulatory requirements as well as practice good environmental stewardship. As the owner, you are responsible for ensuring proper maintenance and functionality of the stormwater facility that serves your property.

Fairfax County conducted a visual condition assessment of the above-referenced stormwater management facility on 10/16/2013. This letter is sent to inform you of the inspection findings and any required maintenance activities that must be performed. The following are enclosed with this letter:

- Condition Assessment Report (CAR), including photos
- Copy of Approved Facility Plan Sheets
- Copy of Private Maintenance Agreement (Deed Book / Page: 12304 / 5607)
- Copy of Tax Map
- Copy of GIS Aerial Site Photo
- Maintenance Guidelines
- Maintenance Contractor List

As required by the Virginia Stormwater Management Act and Chesapeake Bay Preservation Act, the Stormwater Management Ordinance of Fairfax County (Chapter 124 of the Code of the County of Fairfax, Virginia) establishes the County's stormwater management program. Section 124-2-10(a) requires all stormwater management facilities to have a recorded Private Maintenance Agreement (PMA) and sets forth the owner's inspection and maintenance requirements and the County's quality assurance inspections. Specifically, the PMA requires all stormwater management facilities be maintained and authorizes the County to inspect facilities to ensure they are being maintained in good working order. Under the provisions of §124-8-1(a), the County is authorized to pursue enforcement against anyone who fails to maintain their stormwater management facility in accordance with the terms of the recorded PMA, including penalties up to $32,500.00 per incident (§124-8-2).

Department of Public Works and Environmental Services
Maintenance and Stormwater Management Division
10635 West Drive
Fairfax, VA 22030-4229
Phone: 703-877-2800, TTY: 711, FAX: 703-877-2868
www.fairfaxcounty.gov/dpwes

Plan No: 0102-SD-03-4
Facility ID: BR0056
Page 2 of 2

Additionally, under the Virginia Stormwater Management Program permit regulations (9VAC25-870), the Virginia Department of Environmental Quality (DEQ) requires the County to control stormwater pollution to the maximum extent practicable and to ensure that facilities are being maintained and function properly.

The recorded PMA states that all stormwater management facilities must be adequately maintained by their owners. The PMA is executed between the site developer/owner and the County to ensure proper functionality and regular maintenance for the life of the facility. This agreement is on file in our office, runs with the land as part of the recorded deed and is thus binding on subsequent landowners.

The following observation was made during the 10/16/2013 inspection: **Other than your normal routine maintenance, no additional maintenance activity appears to be needed at this time (see enclosed Condition Assessment Report).** We thank you for maintaining this facility in good condition and look forward to your continued cooperation in protecting the waters of Fairfax County and the Chesapeake Bay.

Your time and cooperation are greatly appreciated and will help to achieve our goal of protecting our streams, rivers and the Chesapeake Bay. If you have any questions regarding the Condition Assessment Report, please contact Warren O'Hara or myself at (703) 877-2800. For additional information on maintaining stormwater management facilities, please visit our website at: www.fairfaxcounty.gov/dpwes/utilities/swm_facility_maint.htm.

Sincerely,

Karlee Copeland, Chief
Inspections, Maintenance and Enforcement Section

KHC/Company Initials
Encl.: As Stated
cc: Chron Files & Facility Files

Cover Letter with PMA (with required maintenance)

County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

The Owner
1234 Main Street
Alexandria, VA 22306

Subject: Notice of Inspection of Privately Maintained Stormwater Management Facility

Reference: Site ID / Facility ID: **S1234 / BR0012**
Project / Plan No.: The Owner / 1234-SP-05-6
Location: 1234 Main Street
Tax Map No: 012.3 ((45)) () 6

Dear Facility Owner:

As part of Fairfax County's stormwater management program, Maintenance and Stormwater Management Division (MSMD) staff inspects stormwater management facilities to ensure proper maintenance is performed and that the facility is functioning according to the approved design. The County performs maintenance inspections of stormwater management facilities to meet regulatory requirements as well as practice good environmental stewardship. As the owner, you are responsible for ensuring proper maintenance and functionality of the stormwater facility that serves your property.

Fairfax County conducted a visual condition assessment of the above-referenced stormwater management facility on 8/19/2014. This letter is sent to inform you of the inspection findings and any required maintenance activities that must be performed. The following are enclosed with this letter:

- Condition Assessment Report (CAR), including photos
- Copy of Approved Facility Plan Sheets
- Copy of Private Maintenance Agreement (Deed Book / Page: 12345 / 6000)
- Copy of Tax Map
- Copy of GIS Aerial Site Photo
- Maintenance Guidelines
- Maintenance Contractor List
- Maintenance Activity Report (MAR)

As required by the Virginia Stormwater Management Act and Chesapeake Bay Preservation Act, the Stormwater Management Ordinance of Fairfax County (Chapter 124 of the Code of the County of Fairfax, Virginia) establishes the County's stormwater management program. Section 124-2-10(a) requires all stormwater management facilities to have a recorded Private Maintenance Agreement (PMA) and sets forth the owner's inspection and maintenance requirements and the County's quality assurance inspections. Specifically, the PMA requires all stormwater management facilities be maintained and authorizes the County to inspect facilities to ensure they are being maintained in good working order. Under the provisions of §124-8-1(a), the County is authorized to pursue enforcement against anyone who fails to maintain their stormwater management facility in accordance with the terms of the recorded PMA, including penalties up to $32,500.00 per incident (§124-8-2).

Department of Public Works and Environmental Services
Maintenance and Stormwater Management Division
10635 West Drive
Fairfax, VA 22030-4229
Phone: 703-877-2800, TTY: 711, FAX: 703-877-2868
www.fairfaxcounty.gov/dpwes

Plan No: 1234-SP-05-6
Facility ID: BR0012
Page 2 of 2

Additionally, under the Virginia Stormwater Management Program permit regulations (9VAC25-870), the Virginia Department of Environmental Quality (DEQ) requires the County to control stormwater pollution to the maximum extent practicable and to ensure that facilities are being maintained and function properly.

The following observation was made during the 8/19/2014 inspection:

☐ Maintenance is recommended to ***ensure continued functionality*** of the facility. Failure to perform timely maintenance may lead to greater expense in the future.

☐ Immediate maintenance is required to ***restore proper functionality*** of the facility. Failure to comply will result in a Notice of Violation (Article 8 of the Stormwater Management Ordinance).

The recorded PMA states that all stormwater management facilities must be adequately maintained by their owners. The PMA is executed between the site developer/owner and the County to ensure proper functionality and regular maintenance for the life of the facility. This agreement is on file in our office, runs with the land as part of the recorded deed and is thus binding on subsequent landowners.

The enclosed stormwater management guidelines are provided as a courtesy and are based on general knowledge of maintenance required for these types of facilities. The guidelines are not meant to replace or supersede any specific recommendations offered by a qualified professional. In order to complete the Federal and State-required inspection process, MSMD requests that the responsible party(ies) respond in writing (Attn: Private Inspection & Enforcement Program), using the attached Maintenance Activity Report (MAR) form, within 45 days of your receipt of this letter.

To ensure an adequate response, please note the following:

- Reference your Site ID and Facility ID in all verbal and written correspondence
- The MAR must be completed and signed for the facility listed above
- The MAR must address each maintenance issue described in the CAR
- Please include **photos**, invoices, contracts, proposals, and/or work plans with the MAR
- Relaying this information via phone does not substitute completion of the form
- No extensions will be granted and all work must be completed in order to be closed.

Your time and cooperation are greatly appreciated and will help to achieve our goal of protecting our streams, rivers and the Chesapeake Bay. If you have any questions regarding the Condition Assessment Report, please contact Warren O'Hara or myself at (703) 877-2800. For additional information on maintaining stormwater management facilities, please visit our Website at: www.fairfaxcounty.gov/dpwes/utilities/swm_facility_maint.htm.

Sincerely,

Karlee Copeland, Chief
Inspections, Maintenance and Enforcement Section

KHC/Company Initials
Encl.: As Stated
cc: Chron Files & Facility Files

Cover Letter without PMA (No required maintenance)

County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

Owner HOA
1230 Beta Court
Chantilly, VA 20151

Subject: Visual Condition Assessment of Privately Maintained Stormwater Management Facilities

Reference: Site ID / Facility ID: **S2345 / WP0678**
Project / Plan No.: Owner Sec. 1 / 1234-SP-05-6
Location: 1230 Beta Court
Tax Map No: 034.5 ((67)) () F1

Dear Facility Owner:

As part of Fairfax County's stormwater management program, Maintenance and Stormwater Management Division (MSMD) staff inspects stormwater management facilities to ensure proper maintenance is performed and that the facility is functioning according to the approved design. The County performs maintenance inspections of stormwater management facilities to meet regulatory requirements as well as practice good environmental stewardship. As the owner, you are responsible for ensuring proper maintenance and functionality of the stormwater facility that serves your property.

Fairfax County conducted a visual condition assessment of the above-referenced stormwater management facility on 6/16/2011. This letter is sent to inform you of the inspection findings and any required maintenance activities that must be performed. The following are enclosed with this letter:

- Condition Assessment Report (CAR), including photos
- Copy of Approved Facility Plan Sheets
- Copy of Tax Map
- Copy of GIS Aerial Site Photo
- Maintenance Guidelines
- Maintenance Contractor List

Under the Virginia Stormwater Management Program permit regulations (9VAC25-870), the Virginia Department of Environmental Quality (DEQ) requires the County to control stormwater pollution to the maximum extent practicable and to ensure that facilities are being maintained and function properly.

The following observation was made during the 6/16/2011 inspection: **Other than your normal routine maintenance, no additional maintenance activity appears to be needed at this time (see enclosed Condition Assessment Report).** We thank you for maintaining this facility in good condition and look forward to your continued cooperation in protecting the waters of Fairfax County and the Chesapeake Bay.

Department of Public Works and Environmental Services
Maintenance and Stormwater Management Division
10635 West Drive
Fairfax, VA 22030-4229
Phone: 703-877-2800, TTY: 711, FAX: 703-877-2868
www.fairfaxcounty.gov/dowes

Plan No: 1234-SP-05-6
Facility ID: WP0678
Page 2 of 2

Your time and cooperation are greatly appreciated and will help to achieve our goal of protecting our streams, rivers and the Chesapeake Bay. If you have any questions regarding the Condition Assessment Report, please contact Warren O'Hara or myself at (703) 877-2800. For additional information on maintaining stormwater management facilities, please visit our website at: www.fairfaxcounty.gov/dpwes/utilities/swm_facility_maint.htm.

Sincerely,

Karlee Copeland, Chief
Inspections, Maintenance and Enforcement Section

KHC/Company Initials
Encl.: As Stated
cc: Chron Files & Facility Files

Cover Letter without PMA (with required maintenance)

County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

Owner HOA
1234 Somewhere Court
Chantilly, VA 20151

Subject: Visual Condition Assessment of Privately Maintained Stormwater Management Facilities

Reference: Site ID / Facility ID: **S2345 / WP0456**
Project / Plan No.: The Owner / 1234-SP-05-6
Location: 1234 Somewhere Court
Tax Map No: 056.7 ((89)) () F9

Dear Facility Owner:

As part of Fairfax County's stormwater management program, Maintenance and Stormwater Management Division (MSMD) staff inspects stormwater management facilities to ensure proper maintenance is performed and that the facility is functioning according to the approved design. The County performs maintenance inspections of stormwater management facilities to meet regulatory requirements as well as practice good environmental stewardship. As the owner, you are responsible for ensuring proper maintenance and functionality of the stormwater facility that serves your property.

Fairfax County conducted a visual condition assessment of the above-referenced stormwater management facility on «Last_Inspection_Date». This letter is sent to inform you of the inspection findings and any required maintenance activities that must be performed. The following are enclosed with this letter:

- Condition Assessment Report (CAR), including photos
- Copy of Approved Facility Plan Sheets
- Copy of Tax Map
- Copy of GIS Aerial Site Photo
- Maintenance Guidelines
- Maintenance Contractor List
- Maintenance Activity Report (MAR)

Under the Virginia Stormwater Management Program permit regulations (9VAC25-870), the Virginia Department of Environmental Quality (DEQ) requires the County to control stormwater pollution to the maximum extent practicable and to ensure that facilities are being maintained and function properly.

The following observation was made during the «Last_Inspection_Date» inspection:

☐ Maintenance is recommended to ***ensure continued functionality*** of the facility. Failure to perform timely maintenance may lead to greater expense in the future.

☐ Immediate maintenance is required to ***restore proper functionality*** of the facility. Failure to comply will result in a Notice of Violation (17-108(6) and 18-901(1) of the Zoning Ordinance).

Department of Public Works and Environmental Services
Maintenance and Stormwater Management Division
10635 West Drive
Fairfax, VA 22030-4229
Phone: 703-877-2800, TTY: 711, FAX: 703-877-2868
www.fairfaxcounty.gov/dpwes

Plan No: 1234-SP-05-6
Facility ID: WP0456
Page 2 of 2

The enclosed stormwater management guidelines are provided as a courtesy and are based on general knowledge of maintenance required for these types of facilities. The guidelines are not meant to replace or supersede any specific recommendations offered by a qualified professional. In order to complete the Federal and State-required inspection process, MSMD requests that the responsible party(ies) respond in writing (Attn: Private Inspection & Enforcement Program), using the attached Maintenance Activity Report (MAR) form, within 45 days of your receipt of this letter.

To ensure an adequate response, please note the following:

- Reference your Site ID and Facility ID in all verbal and written correspondence
- The MAR must be completed and signed for the facility listed above
- The MAR must address each maintenance issue described in the CAR
- Please include **photos**, invoices, contracts, proposals, and/or work plans with the MAR
- Relaying this information via phone does not substitute completion of the form
- No extensions will be granted and all work must be completed in order to be closed.

Your time and cooperation are greatly appreciated and will help to achieve our goal of protecting our streams, rivers and the Chesapeake Bay. If you have any questions regarding the Condition Assessment Report, please contact Warren O'Hara or myself at (703) 877-2800. For additional information on maintaining stormwater management facilities, please visit our Website at: www.fairfaxcounty.gov/dpwes/utilities/swm_facility_maint.htm.

Sincerely,

Karlee Copeland, Chief
Inspections, Maintenance and Enforcement Section

KHC/Company Initials
Encl.: As Stated
cc: Chron Files & Facility Files

B-2: Condition Assessment Report (CAR)-this is an example using a Bioretention BMP

BIORETENTION AREA
CONDITION ASSESSMENT REPORT (CAR)

Site ID / Facility ID: S000x / BR-sample

☐ No deficiencies were noted during the assessment. Thank you for maintaining your stormwater management facility in good working order. Please continue routine maintenance.

☒ **Maintenance is requested to *ensure continued functionality* of the facility. Failure to perform timely maintenance may lead to greater expense in the future.**

☐ Immediate maintenance is required to *restore proper functionality* of the facility. Failure to comply will result in a Notice of Violation (Article 8 of the Stormwater Management Ordinance).

Summary of Condition Assessment Results

Continue Routine Maintenance	Deficiencies Noted, Action Required	
☒	☐	Facility Overall
☒	☐	Inflow(s)
☐	☒	**Ponding Area**
☒	☐	Control Structure
☒	☐	Overflow Berm
☒	☐	Underdrain(s) and Principal Spillway Pipe
☒	☐	Outfall

This stormwater management Condition Assessment Report (CAR) offers a "point-in-time" representation of observed conditions at the facility and is not intended to provide any information regarding the functional integrity of the structure nor provide warranty as to present or future structure condition or performance. The CAR is not meant to replace or supersede any specific recommendation offered by a qualified professional.

B-3: Maintenance and Activity Report (MAR)

MAINTENANCE ACTIVITY REPORT

(Response requested within 45 days of receipt)

According to County records you are the current owner of a privately maintained stormwater management facility that had deficiencies at the time of an inspection on «Inspection_Date». This standard Maintenance Activity Report is requested as part of the private inspection/enforcement process. Failure to complete this form in a timely manner could result in a non-compliance status which could lead to enforcement activities.

Complete this form legibly in ink and mail or email to the following address within 45 days of receipt.

Please reference your Site ID and Facility ID in all correspondence

Attn: Visual Condition Assessment Program
Department of Public Works and Environmental Services
Maintenance and Stormwater Management Division
10635 West Drive
Fairfax, Virginia 22030
TEL: 703-877-2800
Email: DPWES-MSMD-Inspections@fairfaxcounty.gov

Facility Information (as shown on plan of record):

Project: **«Plan_Name»**
Plan No: **«Plan_Number»**
Location: **«Facility_Address»**
Tax Map: **«Full_Tax_Map»**
Site ID / Facility ID: **«SITE_ID» / «FACILITY_ID»**
Watershed: **«Watershed»**

Ownership and Contact Information

Current Owner:

Name: _____
Company: _____
Address: _____
_____
Phone: _____
Fax: _____
Email: _____

Owner's Agent for Maintenance:

Name: _____
Company: _____
Address: _____
_____
Phone: _____
Fax: _____
Email: _____

Description of Work Completed Attach any invoices, photos or other information relative to maintenance performed or planned	**Date Completed**	**Cost (optional)**
See other side for additional space.		

I, _____, hereby certify that the statements above are true to the best of my knowledge.
Printed Name

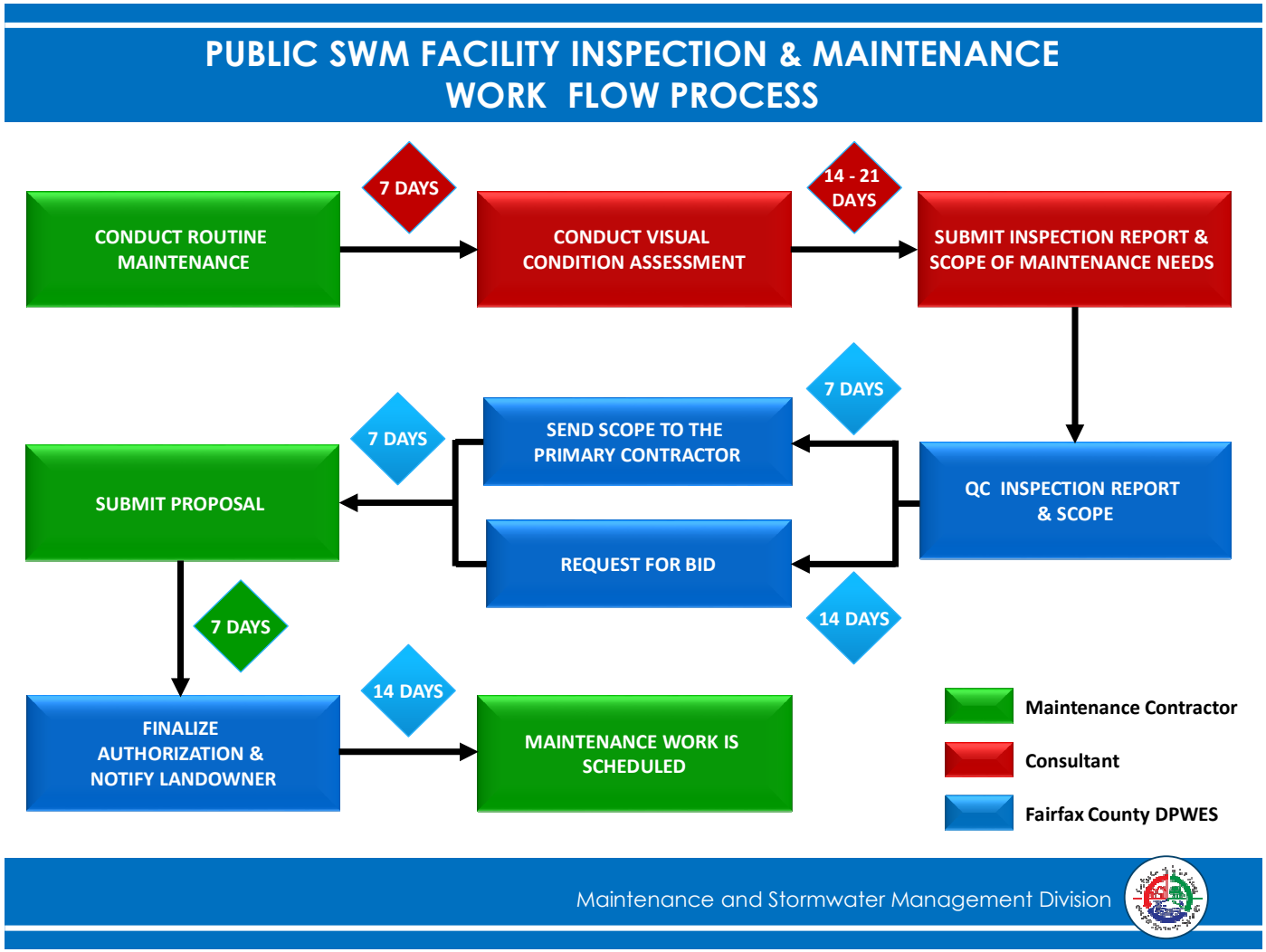
_____ _____ _____
Signature (Owner or Owner's Agent) Title Date

Legislation/Regulations/Permitting/Guidelines:

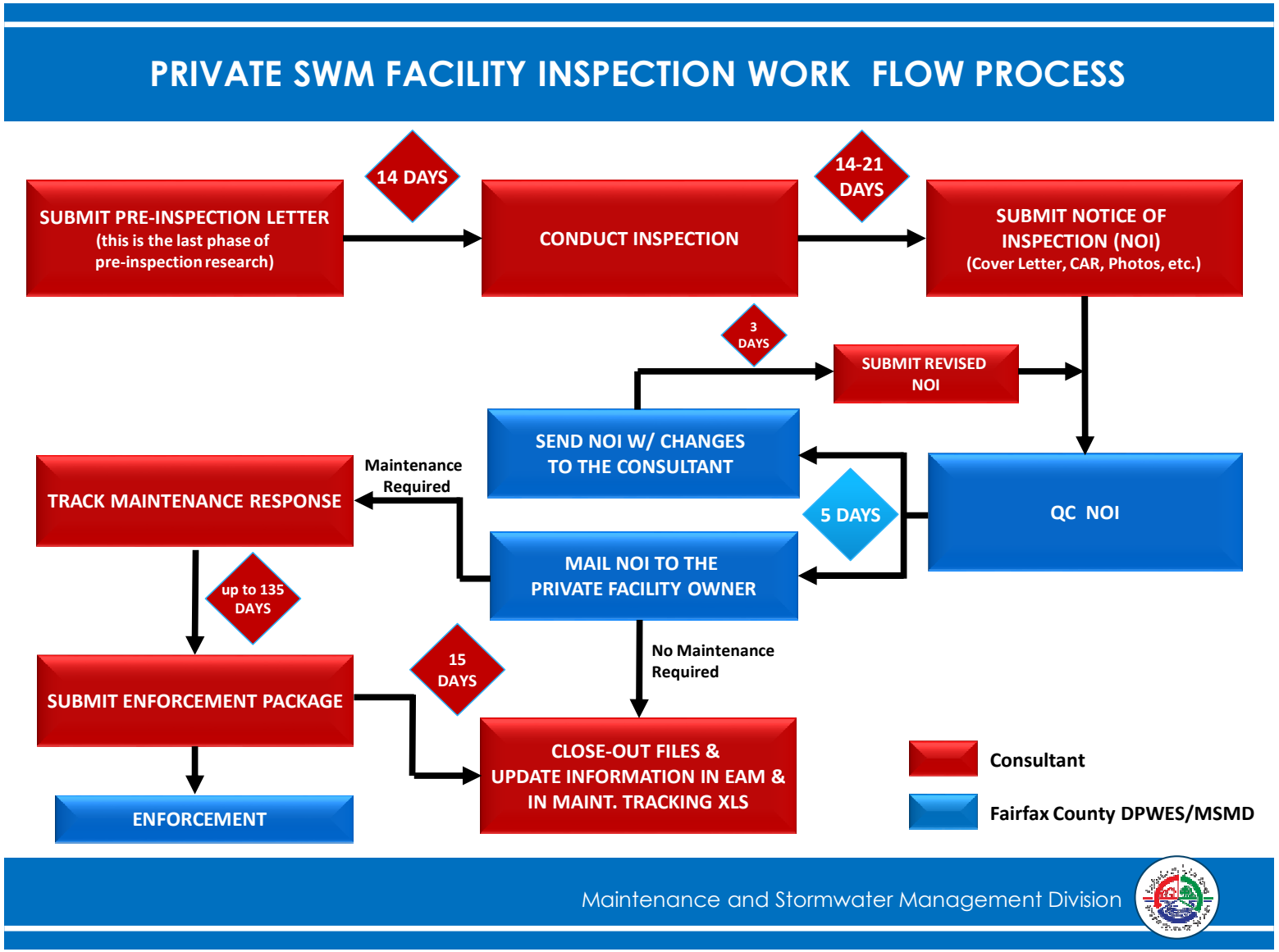
Fairfax County Codes, Article 1, Section 106-1-1, Storm drainage facilities; maintenance and cleanliness
Fairfax County Codes, Article 1, Section 105-1-1, Pollution of State Waters
Federal Clean Water Act/Section 402-(P) enabling the National Pollution Discharge Elimination System under which Fairfax County is required to meet Federal mandates as required by the Municipal Separate Storm Sewer System (MS4) Permit #: VA0088587
Chesapeake Bay Preservation Act
Virginia Stormwater Management Act

Appendix C-Work Flow Process Charts

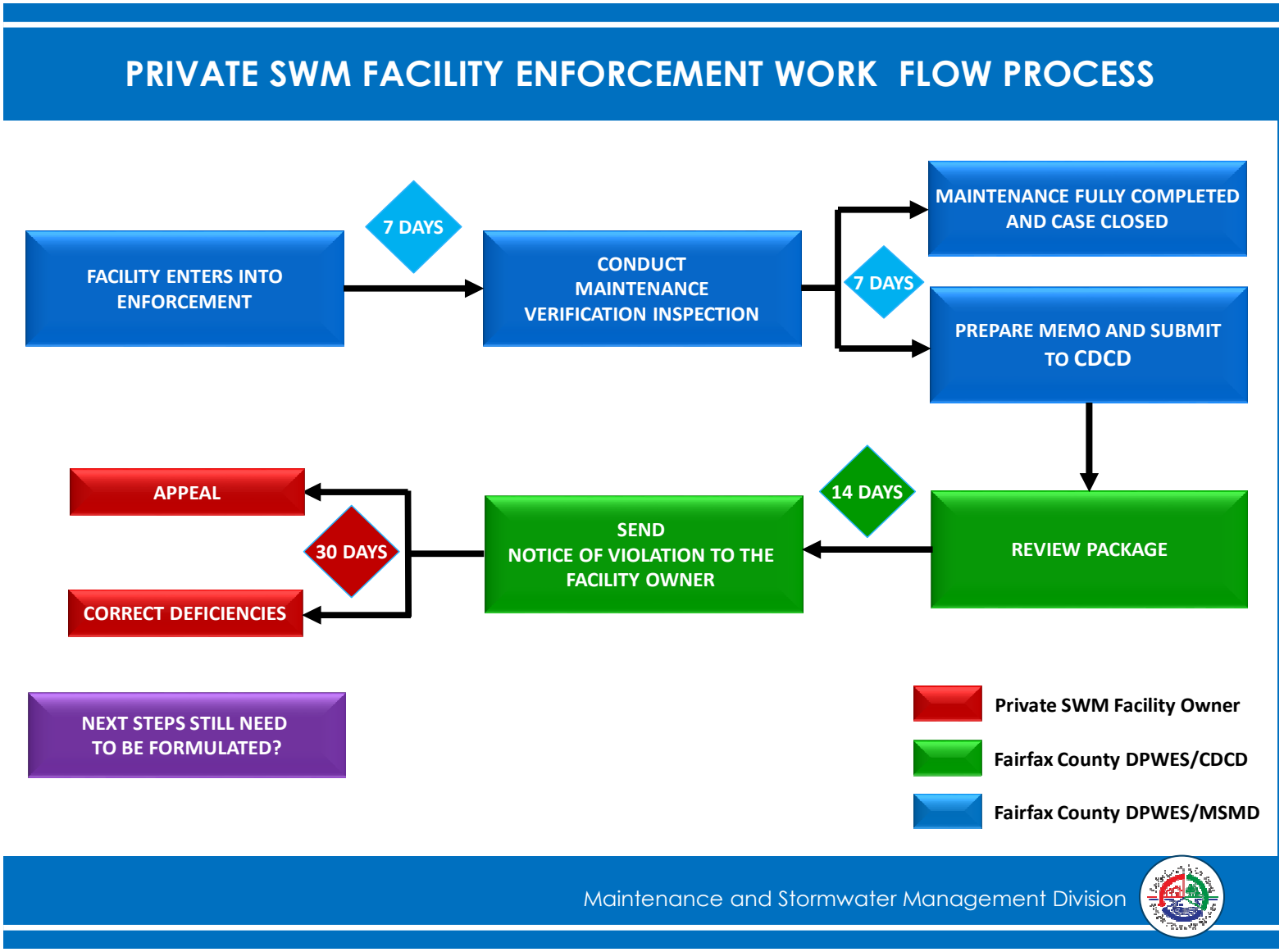
C-1: Public SWM Facilities-Inspection and Maintenance



C-2: Private SWM Facilities-Inspection



C-3: Private SWM Facilities-Enforcement Work



Appendix D

NUTRIENT MANAGEMENT PLAN (NMP) LOCATIONS

FCPS Elementary School Fields Requiring NMPs

School Name	Acres	Field Type	Latitude	Longitude
Bull Run ES	1.17	RF	38.827679	-77.474513
Canterbury Woods ES	1.80	BB	38.819565	-77.249664
Centre Ridge ES	1.21	RF	38.825763	-77.447276
Clearview ES	1.78	RF	38.982483	-77.391609
Coates ES	2.03	MP	38.952459	-77.420248
Colin Powell ES	1.14	RF	38.846786	-77.407891
Colvin Run ES	1.10	RF	38.947623	-77.266035
Colvin Run ES	1.13	RF	38.947274	-77.265526
Crossfield ES	1.50	RF	38.915095	-77.361018
Daniels Run ES	1.23	BB	38.851732	-77.295047
Flint Hill ES	1.38	MP	38.896628	-77.286057
Freedom Hill ES	1.19	RF	38.910971	-77.228785
Herndon ES	1.25	RF	38.975525	-77.374875
Marshall Road ES	1.94	MP	38.881881	-77.265136
McNair ES	1.18	RF	38.947828	-77.403395
McNair ES	1.18	RF	38.947325	-77.402799
North Springfield ES	1.48	RF	38.802468	-77.207267
Vienna ES	1.96	BB	38.900651	-77.261621
Waples Mill ES	1.57	RF	38.875706	-77.343981
Willow Springs ES	1.30	RF	38.832159	-77.37866
Wolftrap ES	1.07	MP	38.917777	-77.265196
Total Acres	**29.59**			

FCPS Middle School Fields Requiring NMPs

School Name	Acres	Field Type	Latitude	Longitude
Carl Sandburg	1.72	RF	38.729818	-77.064032
Carl Sandburg	1.78	BB	38.729061	-77.064298
Franklin MS	1.60	RF	38.906398	-77.422018
Kilmer MS	1.01	RF	38.905942	-77.224872
Kilmer MS	1.67	RF	38.905639	-77.223932
South County MS	1.63	RF	38.721672	-77.243449
Stone MS	1.27	RF	38.856186	-77.456688
Total Acres	**10.68**			

FCPS High School and Secondary School Fields Requiring NMPs

School Name	Acres	Field Name	Field Type	Size	Latitude	Longitude
Annandale HS	2.41	1	BB	90	38.822653	-77.211097
Centreville HS	2.39	1	BB	90	38.825262	-77.40886
Chantilly HS	2.48	1	BB	90	38.878644	-77.407824
Edison HS	2.22	1	BB	90	38.780876	-77.13158
Falls Church HS	1.62	1	BB	90	38.862399	-77.209376
Hayfield SS	2.53	1	BB	90	38.751867	-77.141143
Herndon HS	1.97	1	BB	90	38.988213	-77.37533
Jefferson HS	1.51	Stadium	RF		38.821455	-77.168806
Jefferson HS	2.33	RF #1	RF		38.8203	-77.168051
Jefferson HS	2.25	1	BB	90	38.820276	-77.169125
Lake Braddock SS	1.13	RF #2	RF		38.803993	-77.261859
Lake Braddock SS	2.53	1	BB	90	38.803775	-77.262891
Langley HS	1.88	2	RF		38.95204	-77.164288
Langley HS	2.05	RF #1	RF		38.952791	-77.166256
Langley HS	2.05	1	BB	90	38.951303	-77.16446
Lee HS	1.18	RF #1	RF		38.781271	-77.167943
Lee HS	2.32	1	BB	90	38.778687	-77.170356
Madison HS	2.29	1	BB	90	38.897537	-77.279657
Marshall HS	1.25	RF #3	RF		38.903116	-77.21357
Marshall HS	2.45	1	BB	90	38.904245	-77.21228
McLean HS	1.41	RF #1	RF		38.922412	-77.18319
McLean HS	1.93	0	BB	60	38.921557	-77.185808
McLean HS	2.27	1	BB	90	38.92221	-77.184599
Mt Vernon HS	1.53	RF #1	RF		38.724245	-77.093852
Mt Vernon HS	2.46	1	BB	90	38.724756	-77.092659
Oakton HS	1.26	RF #2	RF		38.88101	-77.280897
Oakton HS	2.22	1	BB	90	38.881068	-77.281933
Robinson SS	2.21	2	MP	90	38.818296	-77.305061
Robinson SS	2.46	RF #2	RF		38.817751	-77.307867
Robinson SS	2.70	1	BB	90	38.817933	-77.306542
South County HS	1.70	<Null>	RF		38.720647	-77.242374
South County HS	1.74	RF #1	RF		38.720334	-77.241433
South County HS	1.88	<Null>	RF		38.721616	-77.24056
South County HS	2.51	1	BB	90	38.720014	-77.239823
South Lakes HS	2.49	1	BB	90	38.934321	-77.341299
Stuart HS	1.82	1	BB	90	38.855662	-77.148581
West Potomac HS	1.99	1	BB	90	38.774367	77.074601
West Potomac HS	1.06	<Null>	RF		38.773521	-77.074593
West Springfield HS	1.73	RF #1	RF		38.783839	-77.241632
West Springfield HS	2.17	1	BB	90	38.78388	-77.240444
Westfield HS	1.40	RF #4	RF		38.888389	-77.468154
Westfield HS	1.53	RF #1	RF		38.885178	-77.466143
Westfield HS	1.90	RF #3	RF		38.885648	-77.467205
Westfield HS	2.07	1	BB	90	38.886739	-77.46687
Woodson HS	1.13	RF #3	RF		38.836104	-77.276102
Woodson HS	1.69	RF #2	RF		38.83795	-77.276115
Woodson HS	2.31	RF #4	RF		38.835901	-77.275184
Woodson HS	2.43	1	BB	90	38.836297	-77.277409
Total Acres	**94.82**					

FCPS Other Fields Requiring NMPs

Fields	Acres	Field Type	Latitude	Longitude
ALT-HS				
Burke Center	1.36	RF	38.783122	-77.277634
Dunn Loring Center	1.49	RF	38.896384	-77.227642
Leis Center	1.59	MP	38.85668	-77.202873
Total Acres	**4.44**			

Appendix E

STANDARD OPERATING PROCEDURES FOR DAILY OPERATIONS

Fairfax County Standard Operating Procedure (SOP)

Standard Operating Procedures (SOPs) for:	
Equipment Maintenance and Washing	
Date:	May 2015
Purpose of SOP:	To establish standard, consistent stormwater pollution prevention procedures for equipment maintenance and washing activities in order to prevent the discharge of pollutants related to these activities.
MS4 Permit Section:	General Permit VAR04, SectionII.B.6
Location of SOP:	(Indicate where SOP is kept – electronic or hard copy.)
Administrator of SOP:	XXXXXXX

To protect water quality, non-stormwater discharges to the Municipal Separate Storm Sewer System (MS4) must be minimized. This standard operating procedure (SOP) is to be followed for equipment repair, maintenance and washing activities. This Equipment Maintenance and Washing SOP is prepared with the intention of preventing the discharge of pollutants associated with these activities before they can enter the MS4. The goal for County and contracted staff is to limit the potential for pollutants to impact surface waters.

Responsible Parties

- Fairfax County Public Schools (FCPS) – provides for the routine maintenance of equipment necessary to support daily activities. Maintenance of vehicles, such as buses, are performed by the Fairfax County Department of Vehicle Services.

EQUIPMENT MAINTENANCE

Standard operating procedures for equipment maintenance are important to prevent the release of pollutants such as petroleum products (oil, fuel, grease, etc.), antifreeze, solvents, battery acid, detergents, and heavy metals to the MS4. The procedures outlined below are intended to target specific vehicle/equipment repair and maintenance activities that could negatively impact water quality.

Minimum Requirements:

- To the extent possible, all maintenance activities should be conducted indoors or under cover.
- A designated area should be established for equipment awaiting maintenance.
    - The designated area should be located away from storm drain inlets or other stormwater conveyances.
    - Drips pans or other secondary containment should be placed under leaking, or leak prone equipment.
    - Periodic visual inspections of the designated area should be conducted to identify any issues that could negatively impact surface waters.
- Fluids such as fuel, anti-freeze, hydraulic fluid, motor oils, solvents and similar material should be properly stored when not in use.

  - Fluids should be stored within a secondary containment structure, such as a concrete secondary structure, spill pad, or other similar structure.
  - Keep waste oil, antifreeze, and other fluids properly covered and contained in tight fitting labelled containers.
- Spills and leaks should be cleaned immediately.
  - Dry cleanup methods should be used to clean up spilled material. This includes the use of absorbent pads, granular absorbent, booms, and similar measures.
  - Waste sorbent material must be disposed of properly.
  - Water should never be used to clean up spilled material.
- Sweep the maintenance area as needed, to prevent a buildup of pollutants.
- Inspect equipment for damaged hoses and leaky gaskets routinely and repair or replace immediately.
- Only wash parts in a designated area (e.g., parts washer) and verify that no wash water is discharged during the process.
  - Clean parts without using solvents whenever possible.
- A trash receptacle must be provided in/near the maintenance area.

Spill Response:

- Spill kits with absorbent containment materials, drain covers or plugs (if applicable), and instructions must be mounted within 50 feet of designated equipment maintenacnearea.
- Refer to Spill Prevention and Response Procedures.
- Use dry clean-up methods only, if possible.
- Clean up minor fuel drips and leaks immediately after discovery.
  - Drips and leaks are not cleaned up until the absorbent is picked up and disposed of properly.
- Collected waste is to be disposed of properly based upon the size and severity of the spill.

WASHING ACTIVITIES

Equipment maintenance generally includes washing activities as well. Equipment washing presents a unique set of challenges and subsequent management practices. Required standard operating procedures for washing activities are included below.

Minimum Requirements:

- Equipment washing should only be conducted in designated and approved areas that prevent wash water from discharging to the MS4.
- If access to a designated wash area is not an option, the following alternatives must be used:
  - Use a commercial washing contractor that provides mobile washing services.
    - All wash water must be contained and removed by the washing contractor.
    - County staff must oversee the activities to ensure proper containment and removal of all water and associated wastes.

  - Utilize a commercial washing facility.
    - The County has a contract with multiple vehicle washing companies.
  - Alternative washing facilities must also comply with the County's wastewater discharge and plumbing requirements, which include preventing sand, grease or mud from entering the storm drain system.
- If washing can be done without the use of soap or detergent, washing activities can be done on a flat grassy area away from storm drains, stormwater conveyances, or natural water ways, dirty vehicles or equipment may be washed off without the above noted containment measures.
  - Washing in this case must be done only for dirt and may not include salt, fuels, oil, etc.

Routine Maintenance for Wash Rack (if applicable):

- Accumulated sediment and other debris should be periodically removed from the wash rack and connected systems to prevent wash water backup.
- Wash rack plumbing, recycling, and pretreatment systems must be regularly maintained, per manufacturer recommendations.

Additional Requirements:

Signage Required:

- Wash areas must be clearly marked.
- Storm drains must be stenciled to remind employees to wash equipment in designated wash areas.
- Signage must be posted at water spigots to remind employees that washing is allowed only in the wash area and that discharges to the storm drain are prohibited.

Spill Response:

- Spill kits with absorbent containment materials, drain covers or plugs (if applicable), and instructions must be mounted within 50 feet of all wash racks.
- Use dry clean-up methods only, if possible.
- Properly dispose of spill cleanup material.

GENERAL REQUIREMENTS

Training Requirements:

- Train employees on proper preventative practices for equipment repair and maintenance.
- Train employees on proper handling and disposal of engine fluids and waste material.
- Train employees and contractors on proper spill containment and cleanup procedures.
- Train employees on approved wash locations and proper cleaning and wash water disposal.
- Train employees on proper operation and maintenance procedures of the wash area.
- Conduct “refresher” courses on biennial basis as required by the County’s MS4 permit.

Reviewed By:		Date:	
Approved By:		Date:	

Last Updated By:		Date/Time:	

Fairfax County Standard Operating Procedure (SOP)

Standard Operating Procedures (SOPs) for:	
Landscaping and Grounds Maintenance	
Date:	May 2015
Purpose of SOP:	To establish standard, consistent stormwater pollution prevention procedures for landscaping and grounds maintenance activities in order to prevent the discharge of pollutants related to these activities.
MS4 Permit Section:	General Permit VAR04, SectionII.B.6
Location of SOP:	(Indicate where SOP is kept – electronic or hard copy.)
Administrator of SOP:	XXXXXXX

To protect water quality, non-stormwater discharges to the Municipal Separate Storm Sewer System (MS4) must be minimized. This standard operating procedure (SOP) is to be followed for general landscaping and ground maintenance activities. This SOP is prepared with the intention of preventing the discharge of pollutants associated with these activities before they can enter the MS4. The goal for County and contracted staff is to limit the potential for pollutants to impact surface waters.

Responsible Parties

- Fairfax County Public Schools (FCPS) – personnel conduct general landscaping and grounds maintenance activities on school properties throughout the county. These activities are limited to routine maintenance and do not include the application of pesticides, herbicides, or fertilizer except in limited situations. Fertilizer applications are handled by outside contractors or through Friend of the Field agreements, which provide guidelines for application.

LANDSCAPE AND GROUNDS MAINTENANCE STANDARD OPERATING PROCEDURES

Standard operating procedures for landscaping and grounds maintenance are important to prevent the release of pollutants such as organic matter, sediment, and chemical residues to the MS4. The procedures outlined below are intended to target specific landscaping and grounds maintenance activities that could negatively impact water quality.

Minimum Requirements:

- Vegetation should be managed regularly to minimize the amount of vegetative waste generated at one time.
- Removed vegetation should be disposed of daily, in an appropriate manner.
- Avoid disturbing underlying soil when removing vegetation. In the event that soil is disturbed, the area should be assessed for the need for erosion and sediment controls.
- Use mulch or other erosion control measures on exposed soils.
- Mowing operations should be conducted during dry periods. Mowing during wet conditions could result in the buildup of clippings or the exposure of soil.

- Inspect sidewalks, streets and other impervious areas for grass clippings following mowing operations. In the event that clippings have been dispersed, use a blower or broom to collect and remove the clippings.
- Grass clippings should either be mulched in place or collected to minimize the potential to discharge form the site.
- Maintenance equipment should be cleaned after each use to prevent the buildup of material that could become dislodged and release pollutants to the MS4 (see the Equipment Maintenance SOP).
- Fueling handheld equipment should be done within a secondary containment (truck bed, trailer, etc.) to minimize the potential for a spill to impact surface waters.
- Equipment should be inspected before and after transport to the site to look for signs of leaks or other indications of maintenance needs.
- Any pesticide or herbicide application should be performed by a certified pesticide and herbicide applicator.
- Use Integrated Pest Management (IPM) techniques (e.g., judicious use of pesticides), when possible.
- If using irrigation sprinklers, use timers to minimize runoff.
    - Apply water at rates that do not exceed the infiltration rate of the soil.
- Inspect irrigation systems at least annually to ensure the right amount of water is being applied, excessive runoff is not occurring, and to keep them properly functioning.
- Ensure stockpiles have proper coverage and material/debris is not eroding. Refer to Outside Storage SOP for additional details.

Spill Response:

- Spill kits with absorbent containment materials, drain covers or plugs should be available at all times during maintenance activities.
- Use dry clean-up methods only, if possible.
- Clean up minor fuel drips and leaks immediately after discovery.
    - Drips and leaks are not cleaned up until the absorbent is picked up and disposed of properly.
- Collected waste is to be disposed of properly based upon the size and severity of the spill.

GENERAL REQUIREMENTS

Training Requirements:

- Train employees on proper preventative practices for landscaping and grounds maintenance, and handling of landscape related waste materials.
- Train employees on proper spill containment and cleanup procedures.
- Train employees to use IPM techniques, when possible.

- Conduct “refresher” courses on biennial basis as required by the County’s MS4 permit.

Reviewed By:		Date:	
Approved By:		Date:	
Last Updated By:		Date/Time:	

Fairfax County Standard Operating Procedure (SOP)

Standard Operating Procedures (SOPs) for:	
Outdoor Material Storage	
Date:	May 2015
Purpose of SOP:	To establish standard, consistent stormwater pollution prevention procedures for outdoor material storage activities in order to prevent the discharge of pollutants related to these activities.
MS4 Permit Section:	General Permit VAR04, Section II.B.6
Location of SOP:	(Indicate where SOP is kept – electronic or hard copy.)
Administrator of SOP:	XXXXXXX

To protect water quality, non-stormwater discharges to the Municipal Separate Storm Sewer System (MS4) must be minimized. This standard operating procedure (SOP) is to be followed for outdoor material storage activities. This SOP is prepared with the intention of preventing the discharge of pollutants associated with these activities before they can enter the MS4. The goal for County and contracted staff is to limit the potential for pollutants to impact surface waters.

Responsible Parties

- Fairfax County Public Schools (FCPS) – activities necessitate the storage of materials outdoors for a variety of activities. FCPS personnel are to adhere to certain protocol to prevent illicit discharges to the MS4.

OUTDOOR MATERIAL STORAGE STANDARD OPERATING PROCEDURES

To the extent possible, materials should always be stored inside where they are protected from precipitation. When that is not possible, the following standard operating procedures are important to prevent the release of pollutants such as sediment, salts, heavy metals, petroleum products, organic wastes and other related materials to the MS4. The procedures outlined below are intended to target specific vehicle/equipment repair and maintenance activities that could negatively impact water quality.

Minimum Requirements:

- To the extent possible, materials stored outdoors should be stored under cover of a permanent structure.
  - If a permanent cover is not feasible, materials should be covered with a water-proof, durable tarp or similar covering. Tarps must be securely fastened at all times when the material is not being actively worked.
- Storage areas should not be located directly adjacent to storm drain inlets or other conveyances. Providing a buffer of at least 25 feet from storm drain inlets and conveyances is recommended.
- At a minimum, storage areas should be constructed with a three-sided containment structure.
- When covering storage piles is not feasible, the storage area can be sloped to prevent runoff, as well as limiting the potential for run-on into the pile.

- Perimeter controls around a storage pile should always be in place when the entire pile and handling activities cannot be protected by an overhead cover.
- Material handling areas should be swept at the end of loading activities to prevent spilled material from being discharged to the drainage system.
- Salt and other deicers must be stored on an impervious surface and protected from precipitation.
- Liquid materials must be stored with adequate secondary containment to prevent unintended leaks or spills from entering the MS4.
- All containment structures should be inspected periodically for signs of deterioration.

Spill Response:

- Spill kits with absorbent containment materials, drain covers or plugs (if applicable), must be located in close proximity to the storage activities.
- Refer to Spill Prevention and Response Procedures for additional requirements.
- Use dry clean-up methods only, if possible.
- Collected waste is to be disposed of properly based upon the size and severity of the spill.

GENERAL REQUIREMENTS

Training Requirements:

- Train employees on proper storage practices for each type of material stored at the facility.
- Conduct “refresher” courses on biennial basis as required by the County’s MS4 permit.

Reviewed By:		Date:	
Approved By:		Date:	
Last Updated By:		Date/Time:	

Appendix F

CHESAPEAKE BAY TMDL ACTION PLAN

Fairfax County Public Schools

Chesapeake Bay TMDL Action Plan

Prepared in compliance with General Permit No. VAR040104

FINAL

July 27, 2015

Department of Facilities Management
Sideburn Support Center
5025 Sideburn Road
Fairfax, Virginia 22032

Fairfax County Public Schools
Chesapeake Bay TMDL Action Plan

July 27, 2015

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July 27, 2015

1. Introduction

1.1 Purpose

This Chesapeake Bay TMDL Action Plan documents how Fairfax County Public Schools (FCPS) intends to meet the "Special Condition for the Chesapeake Bay TMDL" in Section I, Part C of the General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s). FCPS's most recent permit (VAR040104) was issued by the Virginia Department of Environmental Quality (DEQ) effective July 1, 2013 and will expire June 30, 2018.

FCPS's MS4 permit requires the development and implementation of action plans for impaired streams where a Total Maximum Daily Load (TMDL) assigns a waste load allocation (WLA) to FCPS that has been approved by the State Water Control Board. A TMDL establishes the maximum amount of a pollutant that can enter a water body without violating water quality standards.

A TMDL for the Chesapeake Bay was established by the U.S. Environmental Protection Agency in 2010. Pollutants of concern (POCs) identified for the Chesapeake Bay include total nitrogen (TN), total phosphorus (TP), and total suspended solids (TSS). Virginia subsequently developed and adopted a Watershed Implementation Plan (WIP) that establishes the framework for meeting the Chesapeake Bay TMDL. The Virginia WIP states that MS4 permit holders will implement a phased approach for meeting required reductions over three five-year permit cycles in accordance with the following: 5% of required reductions by the end of the first permit cycle (June 30, 2018); a total of 40% of required reductions by the end of the second permit cycle; and, 100% of required reductions by the end of the third permit cycle.

This Chesapeake Bay TMDL Action Plan establishes the 5% reduction target and the means and methods for achieving the reduction target in accordance with the MS4 permit and the Chesapeake Bay TMDL Special Condition Guidance developed by DEQ (Guidance Memo No 14-2012).

1.2 Cooperative Approach to Implementation

This stand-alone Chesapeake Bay TMDL Action Plan is submitted to DEQ until such time that a Fairfax County Joint TMDL Action Plan is developed that includes the FCPS MS4. FCPS is currently negotiating a Memorandum of Understanding (MOU) with Fairfax County to document roles and responsibilities for meeting implementation of a joint MS4 permit program. Fairfax County's MS4 permit (VA0088587) was re-issued and became effective April 1, 2015. Upon

termination of the FCPS MS4 permit by DEQ, this Action Plan will be superseded by the Joint Fairfax County Chesapeake Bay TMDL Action Plan.

The primary means for meeting the POC load reductions in this Chesapeake Bay TMDL Action Plan are stormwater retrofit projects implemented by Fairfax County on FCPS properties. When the Fairfax County Joint Chesapeake Bay TMDL Action Plan is prepared, projects and reductions will be reassessed to ensure that projects are not double-counted and that all entities are jointly meeting the required reductions.

1.3 Summary of Required Reductions and Means and Methods to Achieve Required Reductions

In accordance with the MS4 permit, FCPS must calculate reductions required from existing sources as of June 30, 2009 (Section 4). Because FCPS is not a VSMP authority, it is not responsible for offsets for increases in pollutant loads due to new sources initiating construction between July 1, 2009 and June 30, 2014 (Section 6) and grandfathered projects beginning construction after July 1, 2014 (Section 7).

FCPS calculates that the following reductions must be achieved from existing sources as of June 30, 2009: 40.0 pounds for TN, 3.5 pounds for TP, and 3,835.1 pounds for TSS. FCPS will achieve the reductions through the means and methods as detailed in Section 5: implemented and planned stormwater management projects on its property. Therefore, FCPS is on target to meet the 5% reduction required during the current permit cycle (July 2013 – June 2018).

These practices are anticipated to result in the following POC reductions: 109.59 pounds for TN, 21.1 pounds for TP, and 3,840.21 pounds for TSS. These practices exceed required reductions from existing sources.

FCPS will also take credit for any purchased off-site nutrient credits and additional means and methods that may be implemented during the current permit cycle in accordance with DEQ's Chesapeake Bay TMDL Special Conditions Guidance. Any credits will be documented in the FCPS's annual report to DEQ.

Table 1A– Summary of Required Reductions and Means and Methods to Achieve Required Reductions

	Total Nitrogen (lbs)	**Total Phosphorus (lbs)**	**Total Suspended Solids (lbs)**
Required Reductions from Existing Sources	40.0	3.5	3,835.1
- Means and Methods from Section 5	109.59	21.1	3,840.21
= Excess Credit from Existing Sources	69.59	17.6	5.11

1.4 Permit Compliance Crosswalk

Table 1B provides each of the requirements of FCPS's MS4 permit and the specific section where the requirement is addressed in this Chesapeake Bay TMDL Action Plan.

Table 1B – Action Plan and Permit Compliance Crosswalk

FCPS Action Plan Section	Element from DEQ TMDL Special Condition Guidance	MS4 Permit	MS4 Permit Requirement
Section 2.1	Part VI.1 - Current Program and Existing Legal Authority	Section I.C.2.a(1)	A review of the current MS4 program implemented as a requirement of this state permit including a review of the existing legal authorities and the operator's ability to ensure compliance with this special condition.
Section 2.2	Part VI.2 - New or Modified Legal Authority	Section I.C.2.a(2)	The identification of any new or modified legal authorities such as ordinances, state and other permits, orders, specific contract language, and inter-jurisdictional agreements implemented or needing to be implemented to meet the requirements of this special condition.
Section 3	Part VI.3 - Means and Methods to Address Discharges from New Sources	Section I.C.2.a(3)	The means and methods that will be utilized to address discharges into the MS4 from new sources.
Section 4	Part VI.4 - Estimated Existing Source Loads and Calculated Total Pollutants of Concern (POC) Required Reductions	Section I.C.2.a(4) and Section I.C.2.a(5)	An estimate of the annual POC loads discharged from the existing sources as of June 30, 2009, based on the 2009 progress run. The operator shall utilize the applicable versions of Tables 2 a-d in this section based on the river basin to which the MS4 discharges by multiplying the total existing acres served by the MS4 on June 30, 2009 and the 2009 Edge of Stream (EOS) loading rate. A determination of the total pollutant load reductions necessary to reduce the annual POC loads from existing sources utilizing the applicable versions of Tables 3 a-d in this section based on the river basin to which the MS4 discharges. This shall be calculated by multiplying the total existing acres served by the MS4 by the first permit cycle required reduction in loading rate. For the purpose of this determination, the

FCPS Action Plan Section	Element from DEQ TMDL Special Condition Guidance	MS4 Permit	MS4 Permit Requirement
			operator shall utilize those existing acres identified by the 2000 U.S. Census Bureau urbanized area and served by the MS4.
Section 5	Part VI.5 - Means and Methods to Meet the Required Reductions and Schedule	Section I.C.2.a(6)	The means and methods, such as best management practices and retrofit programs that will be utilized to meet the required reductions included in subdivision 2.a(5) of this subsection, and a schedule to achieve those reductions. The schedule should include annual benchmarks to demonstrate the ongoing progress in meeting those reductions.
Section 6	Part VI.6 - Means and Methods to Offset Increased Loads from New Sources Initiating Construction between July 1, 2009 and June 30, 2014	Section I.C.2.a(7)	The means and methods to offset the increased loads from new sources initiating construction between July 1, 2009 and June 30, 2014 that disturb one acre or greater as a result of the utilization of an average land cover condition greater than 16% impervious cover for the design of post-development stormwater management facilities. The operator shall utilize Table 4 in this section to develop the equivalent pollutant load for nitrogen and total suspended solids. The operator shall offset 5.0% of the calculated increased load from these new sources during the permit cycle.
Section 7	Part VI.7 - Means and Methods to Offset Increased Loads from Grandfathered Projects that Begin Construction after July 1, 2014	Section I.C.2.a(8)	The means and methods to offset the increased loads from projects as grandfathered in accordance with 4VAC50-60-48 that disturb one acre or greater that begin construction after July 1, 2014, where the project utilizes an average land cover condition greater than 16% impervious cover in the design of post-development stormwater management facilities. The operator shall utilize Table 4 in this section to develop the equivalent pollutant load for nitrogen and total suspended solids.
Section 8	Part VI.8 - List of Future Projects, and Associated Acreage that Qualify as Grandfathered	Section I.C.2.a(10)	A list of future projects and associated acreage that qualify as grandfathered in accordance with 4VAC50-60-48.

FCPS Action Plan Section	Element from DEQ TMDL Special Condition Guidance	MS4 Permit	MS4 Permit Requirement
Section 9	Part VI.9 - Estimated Expected Cost to Implement Necessary Reductions	Section I.C.2.a(11)	An estimate of the expected costs to implement the requirements of this special condition during the state permit cycle.
Section 10	Part VI.10 a&b - Public Comments on Draft Action Plan	Section I.C.2.a(12)	An opportunity for receipt and consideration of public comment regarding the draft Chesapeake Bay TMDL Action Plan. A list of all comments received as a result of public comment and any modifications made to the draft Chesapeake Bay TMDL Action Plan as a result of the public comments.

2. Current Program and Legal Authority

2.1 Current Program and Existing Legal Authority

FCPS has adopted an MS4 Program Plan that documents implementation of all MS4 permit requirements, including the programmatic and legal authorities required to meet the "Special Condition for the Chesapeake Bay TMDL." The full MS4 Program Plan can be found at http://www.fcps.edu/fts/facmanagement/ms4/programplan.pdf. Table 2A provides a summary of elements of the six minimum control measures (MCMs) implemented by FCPS under the MS4 permit that relate to controlling total nitrogen, total phosphorus, and total suspended solids.

Table 2A – MS4 Program Plan Components Related to Meeting the Chesapeake Bay TMDL

Minimum Control Measure	MS4 Program Plan Elements Related to Controlling Total Nitrogen, Total Phosphorus, and Total Suspended Solids
Public Education and Outreach on Stormwater Impacts.	FCPS's MS4 Public Education and Outreach Plan identifies Chesapeake Bay nutrients and sediment; local water quality and volume management; and nonpoint source pollution prevention as the three high-priority pollutants for the focus of FCPS's public education program during the permit cycle. Actions specific to nutrients and sediment and their impact on the Chesapeake Bay include: • FCPS will continue to implement the "Ecosystems" unit in the curriculum for all 4th grade classrooms and the Fields of Science unit for all 5th grade classrooms. In these units, students investigate the Earth's natural resources and how to protect them, research the Potomac River watershed and its water resources, and examine public policy decisions related to the environment. • Seventh grade students will continue to participate in the "Investigations in Environmental Science" course. This course builds upon the science curriculum introduced in upper-

Minimum Control Measure	MS4 Program Plan Elements Related to Controlling Total Nitrogen, Total Phosphorus, and Total Suspended Solids
	elementary grades. Students study basic ecological concepts and how excess nutrients from over-fertilizing can be washed into the storm sewer during a rain event and impact the ecology of local waterways and the Chesapeake Bay. Process skills related to scientific investigation, reasoning, and logic are integrated throughout the course as students carry out investigations, collect and analyze data, and formulate conclusions. • FCPS will continue to participate in the NVRC Clean Water Partners program regional efforts to provide outreach about the water quality impacts of nutrients in fertilizers. • FCPS will continue to provide environmental study course offerings to eleventh and twelfth grade FCPS students that cover topics including non-point source pollution and stormwater studies. Geosystems integrates content from geology, astronomy, oceanography, and meteorology with various forms of technology, social and environmental issues, and hands-on experiments. Oceanography deals with geophysical and biological oceanography and covers such topics as the geology and geography of ocean basins, physical properties of sea water, marine chemistry, and marine biology. Both include coursework related to the impact of polluted stormwater on water resources
Public Involvement and Participation	FCPS has designed a program to involve the public in the decision-making process by meeting all public notice requirements and sponsoring at least four activities annually focusing on water quality through the Get2Green program.
Illicit Discharge Detection and Elimination	FCPS has integrated into its MS4 Program Plan an Illicit Discharge Detection and Elimination Program. This program includes preventing, identifying, and eliminating sources of pollutants, including total nitrogen and total phosphorus as well as total suspended solids.
Construction Site Stormwater Runoff Control	FCPS's construction site stormwater runoff control program is designed to ensure that its construction projects comply with all local legal authorities. FCPS construction projects are subject to review, approval, and enforcement by the locality where the land-disturbing activity is occurring.
Post-Construction Stormwater Management	FCPS relies on the Fairfax County Department of Public Works and Environmental Services for its post-construction stormwater management program. The County inspects, maintains, and tracks data related to FCPS stormwater facilities as required by the Virginia Stormwater Management Act and its attendant regulations.
Pollution Prevention and Good Housekeeping for Municipal Operations	FCPS has included in its MS4 Program Plan actions to meet the pollution prevention and good housekeeping requirements for municipal operations. This includes developing a SWPPP for the Woodson Operations Facility, employee training, and developing standard operating procedures for daily operations. FCPS is also developing nutrient management plans as required by the permit.

2.2 New or Modified Legal Authority

After review of FCPS's existing MS4 Program Plan and legal authorities, FCPS finds that no additional legal authorities are required for compliance with the "Special Condition for the Chesapeake Bay TMDL."

As described in Section 1.2, FCPS will eventually be covered under the County's Phase I permit. This will achieve efficiencies by allowing FCPS and the County to implement projects where they will achieve maximum benefit regardless of their physical location.

3. Means and Methods to Address Discharges from New Sources

FCPS must identify and implement the means and methods necessary to address discharges into the MS4 from new sources (developed or redeveloped on or after July 1, 2009). Any new source that disturbs one acre or greater and utilizes an average land cover condition greater than 16% impervious cover for the design of post-development stormwater management facilities must be offset in accordance with Section I.C.2.a(3) of the permit. Between July 1, 2009 and June 30, 2014, FCPS utilized an average land cover condition as required by the locality where the construction project occurred. See Section 6 for detail on offsets for development occurring in the FCPS MS4 between July 1, 2009 and June 30, 2014.

FCPS is subject to the stringent new stormwater quality requirements approved by the localities where school construction projects occur. These localities include Fairfax County, the City of Fairfax, the Town of Herndon, and the Town of Vienna. The new requirements, which became effective July 1, 2014, meet the requirements of the Virginia Stormwater Management Act (§62.1-44.15:24 et seq, Code of Virginia), the Erosion and Sediment Control Act (§62.1-44.15:51 et seq, Code of Virginia), the Chesapeake Bay Preservation Act (§62.1-44.15:67 et seq, Code of Virginia), and their attendant regulations.

All new development within these localities must meet a standard of 0.41 pounds of phosphorus per acre per year. All redevelopment must reduce the phosphorus load by 20% if the land disturbance is one acre or greater or by 10% if the land disturbance is less than one acre (not to exceed the 0.41 standard for new development). The standard of 0.41 pounds of phosphorus per acre per year is mandated by the Virginia Stormwater Management Regulations, and according to DEQ's guidance, meet the requirement for no-net increase from new sources.

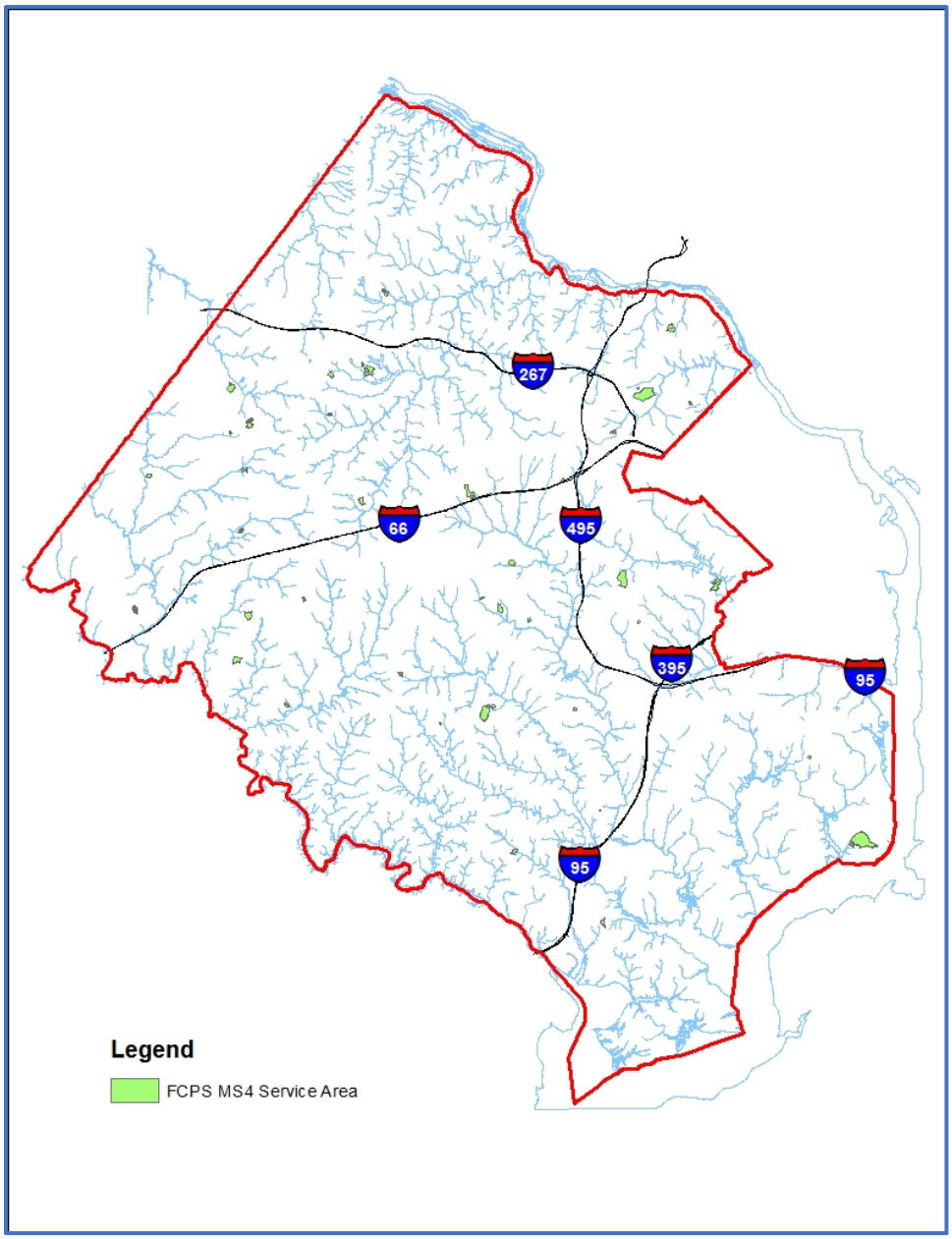
4. Estimated Existing Source Loads and Calculated Total Pollutant of Concern (POC) Required Reductions

The following sections describe the methodology used by FCPS to estimate existing POC source loads. In accordance with the MS4 permit, FCPS must estimate the annual POC loads discharged from existing sources as of June 30, 2009, based on the 2009 progress run. Completed calculation tables from the permit are included in Table 4A.

4.1 MS4 Service Area Delineation Methodology

The FCPS MS4 service area is defined as areas draining to an outfall owned and/or operated by FCPS. Storm sewer system maps were used in conjunction with hydrologic features, local topographic data, and high-resolution aerial photos to delineate FCPS's MS4 boundary and create an MS4 boundary polygon layer. Drainage features were thoroughly reviewed by engineers and planners using a GIS environment in order to accurately account for storm sewer drainage areas and determine break points between the manmade and natural hydrologic systems. The FCPS MS4 Service area is presented on Map 4A.

Map 4A – Fairfax County Public Schools MS4 Service Area Delineation



4.2 Pervious and Impervious Surface Delineation Methodology

A GIS approach was used to determine FCPS's regulated urban impervious and regulated urban pervious acres. Planimetric impervious cover GIS data was developed by Fairfax County from 2009 aerial imagery. This impervious cover dataset contains the FCPS areas as well as areas within the County. Impervious cover surfaces include buildings, roads, parking lots, sidewalks, recreational surfaces, and other similar features.

To calculate the 2009 impervious regulated area, the 2009 planimetric impervious cover features were clipped using the MS4 boundary polygon layer and the resulting acres were totaled. Regulated pervious acres were calculated by subtracting the regulated impervious acres from the total MS4 acres.

4.3 Estimated Existing Source Loads

FCPS must estimate the total existing source loads for total nitrogen, total phosphorus, and total suspended solids as of June 30, 2009 based on the 2009 Chesapeake Bay Model progress run and using 2009 Edge of Stream (EOS) loading rates. Since FCPS is within the Potomac River watershed, the 2009 EOS loading rates from Table 2b of the MS4 permit must be utilized. FCPS has a total of 881.7 acres served by the regulated MS4.

Table 4A presents the estimated existing source loads in accordance with the MS4 permit and the Chesapeake Bay TMDL Special Conditions Guidance.

Table 4A – Estimated Existing Source Loads

Source	**Pollutant**	**Total Existing Acres Served by MS4 (6/30/09)**	**2009 EOS Loading Rate (lbs/acre)**	**Estimated Total POC Load Based on 2009 Progress Run**	
Regulated Urban Impervious	Nitrogen	290.6	16.86	4,900	10,550
Regulated Urban Pervious		561.1	10.07	5,650	
Regulated Urban Impervious	Phosphorus	290.6	1.62	471	701
Regulated Urban Pervious		561.1	0.41	230	
Regulated Urban Impervious	Total Suspended Solids	290.6	1,171.32	340,392	439,034
Regulated Urban Pervious		561.1	175.80	98,642	

4.4 Required Reductions from Existing Source Loads

The reductions from the estimated existing source loads (loads in existence as of June 30, 2009) in Table 4A must be calculated using Table 3b of the MS4 permit. Table 4B shows the completed calculations from Table 3b of the permit.

Table 4B – Required Reductions from Estimated Existing Source Loads

Source	Pollutant	Total Existing Acres Served by MS4 (6/30/09)	First Permit Cycle required Reduction in Loading Rate (lbs/acre)	Total Reduction Required First Permit Cycle (lbs)	
Regulated Urban Impervious	Nitrogen	290.6	0.08	23.2	40.0
Regulated Urban Pervious		561.1	0.03	16.8	
Regulated Urban Impervious	Phosphorus	290.6	0.01	2.9	3.5
Regulated Urban Pervious		561.1	0.001	0.6	
Regulated Urban Impervious	Total Suspended Solids	290.6	11.71	3,403.0	3,835.1
Regulated Urban Pervious		561.1	0.77	432.1	

5. Means and Methods to Meet Required Reductions and Schedule

This section describes the means and methods by which FCPS will achieve the 5% reductions required for source loads in existence as of June 30, 2009 as calculated in Section 4. FCPS's reductions will be achieved through stormwater projects constructed on FCPS properties. FCPS reserves the right to take credit for additional means and methods that may be implemented during the current permit cycle in accordance with DEQ's Chesapeake Bay TMDL Special Conditions Guidance (Section 5.5), including credit for purchase of off-site nutrient credits.

5.1 Stormwater Projects

FCPS will take credit for projects implemented cooperatively between Fairfax County and FCPS after July 1, 2009 that are located on FCPS property. FCPS will also take credit for projects currently planned to be completed prior to the end of this permit cycle. Information on implemented and planned projects is included in Appendix A in accordance with the Chesapeake Bay TMDL Special Condition Guidance. Appendix A provides a list of projects implemented

cooperatively between Fairfax County and FCPS after July 1, 2009. Information on each project is included in accordance with the Chesapeake Bay TMDL Special Condition Guidance.

Table 5A – Summary of Reductions from Stormwater Projects

	Nitrogen Reduction (lbs)	Phosphorus Reduction (lbs)	Total Suspended Solids Reduction (lbs)
Implemented Reductions	77.67	16.03	3,022.58
Planned Reductions	31.92	5.07	817.63
Total Reductions	**109.59**	**21.1**	**3,840.21**

5.2 Redevelopment

FCPS may take credit for redevelopment projects where a reduction in POC loads is achieved. FCPS is not taking any credit for redevelopment in the FCPS MS4 area at this time. However, FCPS reserves the right to document and take credit for any reductions in FCPS's annual report submitted to DEQ.

5.3 Additional Means and Methods

FCPS reserves the right to implement and take credit for additional creditable facilities or practices as provided for in the Chesapeake Bay TMDL Special Condition Guidance. This may include credit for the sweeping program conducted on FCPS parking lots or purchase of off-site nutrient credits. The guidance document specifically references the work of the Chesapeake Bay Urban Stormwater Workgroup, which includes credits for urban nutrient management and homeowner best management practices such as rainwater harvesting, downspout disconnection, permeable hard-scapes, tree planting, and impervious cover removal. Finally, FCPS has the option of purchasing off-site nutrient credits under the provisions of §62.1-44.15:33 of the Code of Virginia. Reductions achieved will be documented to DEQ in FCPS's annual report.

5.4 Compliance Demonstration

Tables 5B through 5D demonstrate how FCPS will meet the required reductions from Section 4 for each POC with the means and methods described in Section 5.1.

Table 5B – Compliance Demonstration for Total Nitrogen

Total Required Reductions (Table 4B)	Total Reductions Achieved (Table 5A)	Total Reductions Remaining (lbs)	Percentage Target Achieved
40.0	109.59	-69.59	274%

Table 5C – Compliance Demonstration for Total Phosphorus

Total Required Reductions (Table 4B)	Total Reductions Achieved (Table 5A)	Total Reductions Remaining (lbs)	Percentage Target Achieved
3.5	21.1	-17.6	603%

Table 5D – Compliance Demonstration for Total Suspended Solids

Total Required Reductions (Table 4B)	Total Reductions Achieved (Table 5A)	Total Reductions Remaining (lbs)	Percentage Target Achieved
3,835.1	3,840.21	--5.11	100%

6. Means and Methods to Offset Increased Loads from New Sources Initiating Construction Between July 1, 2009 and June 30, 2014

FCPS is not a VSMP authority and did not have its own water quality requirements between July 1, 2009 and June 30, 2014 but complied with the water quality requirements of the locality in which FCPS construction occurred. The VSMP authority will be responsible for the offsets for any FCPS construction during this timeframe.

7. Means and Methods to Offset Increased Loads from Grandfathered Projects Beginning Construction After July 1, 2014

FCPS is not a VSMP authority and does not have its own water quality requirements but complies with the water quality requirements of the locality in which FCPS construction occurs. The VSMP authorities will be tracking grandfathered projects in their locality and will be responsible for the offsets for any FCPS grandfathered projects.

8. List of Future Projects Qualifying as Grandfathered

FCPS is not a VSMP authority and does not have its own water quality requirements but complies with the water quality requirements of the locality in which FCPS construction occurs. The VSMP authorities will be tracking grandfathered projects in their locality and will be responsible for the offsets for any FCPS grandfathered projects.

9. Cost Estimate

Table 9A provides a summary of the estimated cost to implement projects in Section 5. These projects exceed the POC reduction requirements and therefore meet the 5% required reduction of this permit cycle.

Table 9A – Estimated Cost of Compliance

Strategy	Cost Explanation	Estimated Cost
Completed Stormwater Projects	Projects funded through a partnership between FCPS and Fairfax County.	$1,203,000
Planned Stormwater Projects	To be funded through a partnership between FCPS and Fairfax County.	$640,000

10. Public Comment Plan

The draft Chesapeake Bay TMDL Action Plan was posted on the dedicated FCPS MS4 webpage (http://www.fcps.edu/fts/facmanagement/ms4/) from June 3 to June 25, 2015 and a notice requesting public comment on the plan was sent out using the parent / teacher list serve.

No public comments were received.

Appendix A

Detailed Project List

Table Appendix A1 – Reductions from Projects Implemented On or After July 1, 2009

Date Installed	BMP Name	Type	Impervious Acres Treated	Total Acres Treated	Runoff Captured	Unit	TN Efficiency	TP Efficiency	TSS Efficiency	Efficiency Unit	TN Removed	TP Removed	TSS Removed
9/14/2009	Franklin Middle School, Constructed Wetland, 1	Constructed Wetland	10.1	54.4	0.52	AC	29.1%	45.7%	58.2%	%	56.05	12.31	2,410.82
9/14/2009	Franklin Middle School, Bioretention, 2	Bioretention	1.09	1.41	0.095	AC	57.6%	70.7%	75.8%	%	9.88	1.70	279.50
8/18/2011	Shrevewood Parking Lot Retrofit, Permeable Pavement, 1	Permeable Pavement	0.53	0.72	0.0427	AC	56.4%	69.3%	74.2%	%	4.72	0.81	133.55
8/8/2012	Waples Mill ES Phase II, Permeable Pavement, 1	Permeable Pavement	0.71	0.82	0.114	AC	63.3%	77.7%	83.3%	%	7.02	1.21	198.71
Total											**77.67**	**16.03**	**3,022.58**

Table Appendix A2 – Reductions from Projects Planned to be Implemented During the Current Permit Cycle

BMP Name	Type	Impervious Acres Treated	Total Acres Treated	Runoff Captured	Unit	TN Efficiency	TP Efficiency	TSS Efficiency	Efficiency Unit	TN Removed	TP Removed	TSS Removed
Sunrise Valley Elementary School, Permeable Pavement, 2	Permeable Pavement	0.39	0.55	0.0923	AC	64.8%	79.6%	85.3%	%	4.09	0.69	114.06
Sunrise Valley Elementary School, Dry Swale, 3	Dry Swale	0.19	0.33	0.0158	AC	56.9%	69.%	74.8%	%	1.74	0.30	49.21
Sunrise Valley Elementary School, Permeable Pavement, 1	Permeable Pavement	0.14	0.21	0.0332	AC	64.8%	79.6%	85.3%	%	1.49	0.25	41.28
Sunrise Valley Elementary School, Soil Compost Amendment, 4	Soil Compost Amendment	0.0001	3.75	0.0000	AC	0.00%	0.00%	0.00%	%	12.23	1.71	263.11
Terraset Elementary School, Permeable Pavement, 2	Permeable Pavement	0.35	0.69	0.4385	AC	64.8%	79.6%	85.3%	%	3.70	0.63	104.59
Terraset Elementary School, Permeable Pavement, 1	Permeable Pavement	0.84	1.28	0.5770	AC	64.8%	79.6%	85.3%	%	8.67	1.49	245.38
Total										**31.92**	**5.07**	**817.63**

Appendix B

Reserved for Future Use

Appendix G

BENTHIC TMDL ACTION PLAN

Fairfax County Public Schools

Benthic TMDL Action Plan

Prepared in compliance with General Permit No. VAR040104

Final

Approved December 15, 2015
Updated June 20, 2016

Department of Facilities Management
Sideburn Support Center
5025 Sideburn Road
Fairfax, Virginia 22032

Fairfax County Public Schools
Benthic TMDL Action Plan

Approved December 15, 2015
Updated June 20, 2016

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Fairfax County Public Schools
Benthic TMDL Action Plan

Approved December 15, 2015
Updated June 20, 2016

1. Introduction

1.1 Purpose

This Benthic TMDL Action Plan documents how Fairfax County Public Schools (FCPS) intends to meet the "Special Conditions for Approved TMDLs Other Than the Chesapeake Bay TMDL" in Section I, Part B of the General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s). FCPS's most recent permit (VAR040104) was issued by the Virginia Department of Environmental Quality (DEQ) effective July 1, 2013 and will expire June 30, 2018.

FCPS's MS4 permit requires the development and implementation of action plans for impaired streams where a Total Maximum Daily Load (TMDL) approved by the State Water Control Board assigns a Waste Load Allocation (WLA) to FCPS. A TMDL establishes the maximum amount of a pollutant that can enter a water body without violating water quality standards.

FCPS is subject to three separate TMDLs for benthic impairments. The TMDLs are for impairments to Popes Head Creek, Bull Run, and Difficult Run. All three TMDLs assign WLAs to FCPS for sediment. The *Benthic TMDL Development for Popes Head Creek* (Popes Head TMDL) and *Benthic TMDL Development for Bull Run, Virginia* (Bull Run TMDL) were approved by the State Water Control Board on June 27, 2007. Since these TMDLs were approved prior to July 9, 2008, the action plan for these two TMDLs were completed and approved by DEQ on December 15, 2015. The *Benthic TMDL for Difficult Run, Virginia* (Difficult Run TMDL) was approved by the Board on April 27, 2009. The action plan was revised to incorporate the Difficult Run TMDL by June 30, 2016 according to the schedule in the General Permit.

This Benthic TMDL Action Plan addresses the requirements of FCPS's MS4 permit by evaluating significant sources of sediment, assessing the adequacy of existing programs and legal authorities, identifying new action items and associated schedules and milestones, and determining how the effectiveness of the plan will be assessed

1.2 Permit Compliance Crosswalk

This Benthic TMDL Action Plan (action plan) is submitted to DEQ until such time as a Fairfax County Benthic TMDL Action Plan is developed that includes the FCPS MS4. FCPS is currently negotiating a Memorandum of Understanding (MOU) with Fairfax County to document roles and responsibilities for implementation of a joint MS4 program. Fairfax County's MS4 permit (VA0088587) was re-issued and

became effective April 1, 2015. Upon termination of the FCPS MS4 permit by DEQ, this action plan will be superseded by the Fairfax County Benthic TMDL Action Plan.

Table 1.A provides an overview of the organization of this action plan and how each section addresses the FCPS MS4 permit and the draft guidance provided by DEQ dated April 2015.

Table 1.A - Action Plan and Permit Compliance Crosswalk

Action Plan	Action Plan Element	DEQ Draft Local TMDL Action Plan Guidance	MS4 Permit
Section 1	Introduction		
Section 2.1	TMDL Report	1. The name(s) of the Final TMDL report(s)	Section I.B
Section 2.2	Pollutant	2. The pollutant(s) causing the impairment(s)	Section I.B.2.a
Section 2.3	Benthic TMDLs	3. The WLA(s) assigned to the MS4 as aggregate or individual WLAs	Section I.B.2.b
Section 2.4	Evaluation of Significant Sources of Sediment	4. Significant sources of POC(s) from facilities of concern owned or operated by the MS4 operator that are not covered under a separate VPDES permit. A significant source of pollutant(s) from a facility of concern means a discharge where the expected pollutant loading is greater than the average pollutant loading for the land use identified in the TMDL;	Section I.B.2.d
Section 2.5	Existing and Planned Management Controls	5. Existing or new management practices, control techniques, and system design and engineering methods that have been or will be implemented as part of the MS4 Program Plan that are applicable to reducing the pollutant identified in the WLA;	Section I.B.2.b
Section 2.6	Legal Authorities	6. Legal authorities such as ordinances, state and other permits, orders, specific contract language, and inter-jurisdictional agreements applicable to reducing the POCs identified in each respective TMDL;	Section I.B.2.a
Section 2.7	Enhanced Education, Outreach, and Training	7. Enhancements to public education, outreach, and employee training programs to also promote methods to eliminate and reduce discharges of the POC(s) for which a WLA has been assigned;	Section I.B.2.c
Section 2.8	Schedule and Milestones	8. A schedule of interim milestones and implementation of the items in 5, 6, and 7;	Section I.B.2.e
Section 2.9	Assessment of Effectiveness	9. Methods to assess TMDL Action Plans for their effectiveness in reducing the pollutants identified in the WLAs; and	Section I.B.2.e

Action Plan	Action Plan Element	DEQ Draft Local TMDL Action Plan Guidance	MS4 Permit
Section 2.10	Measurable Goals	10. Measurable goals and the metrics that the permittee and Department will use to track those goals (and the milestones required by the permit). Evaluation metrics other than monitoring may be used to determine compliance with the TMDL(s).	Section I.B.2.e
Section 3	Conclusion		

2. Benthic TMDL Action Plan

The benthic TMDLs for Popes Head Creek, Bull Run, and Difficult Run assign WLAs for discharges of sediment to each impaired water. The WLAs are assigned in aggregate to FCPS, the Town of Vienna, the George Washington Memorial Parkway, Fairfax County, and the Virginia Department of Transportation (VDOT). The details of each TMDL are provided in this section.

2.1 TMDL Reports

The final TMDL reports addressed by this action plan are the *Benthic TMDL Development for Popes Head Creek* (Popes Head TMDL), *Benthic TMDL Development for Bull Run, Virginia* (Bull Run TMDL), and *Benthic TMDL Development for Difficult Run* (Difficult Run TMDL). The Popes Head and Bull Run TMDLs were approved by the State Water Control Board on June 27, 2007. The Difficult Run TMDL was approved by the State Water Control Board on April 27, 2009.

2.2 Pollutant

Stream segments in the Popes Head Creek, Bull Run, and Difficult Run watersheds were identified as impaired based on benthic macroinvertebrate assessments. The most probable stressor identified in the TMDLs is sediment.

2.3 Benthic TMDLs

The Popes Head Creek TMDL delineated a contributing watershed of 12,097.5 acres. The area covered by the TMDL is delineated in Map 2.A. The FCPS, Fairfax County, and VDOT MS4 areas were assumed in the TMDL to cover a total of 11,926.0 acres. The existing aggregate sediment loading to Popes Head Creek from these three MS4s (excluding non-MS4 stormwater general permits) was then calculated at 2,175 tons/year. The TMDL set the allocated load at 1,571.5 tons/year. The difference between the existing total load and the allocated load is the target reduction, which equates to 603.5 tons/year. These allocations are summarized in Table 2.A.

Table 2.A - Popes Head Creek TMDL Aggregate Allocations for FCPS, Fairfax County, and VDOT MS4s

Aggregated MS4s	Existing Sediment Load (tons/yr)	Allocated Sediment Load (tons/yr)	% Reduction	Load Reduction (tons/yr)
FCPS Fairfax County City of Fairfax VDOT	2,175.0	1,571.5	27.7	603.5

The Bull Run TMDL delineated a contributing watershed of 65,456 acres. The area covered by the TMDL is delineated in Map 2.B. The FCPS, Fairfax County, and VDOT MS4 areas were assumed in the TMDL to cover a total of 50,024.9 acres. The existing aggregate sediment loading to Bull Run from these three MS4s (excluding non-MS4 stormwater general permits) was then calculated at 19,470.5 tons/year. The TMDL set the allocated load at 4,450.6 tons/year. The difference between the existing total load and the allocated load is the target reduction, which equates to 15,019.9 tons/year. These allocations are summarized in Table 2.B.

Table 2.B - Bull Run TMDL Aggregate Allocations for FCPS, Fairfax County, and VDOT MS4s

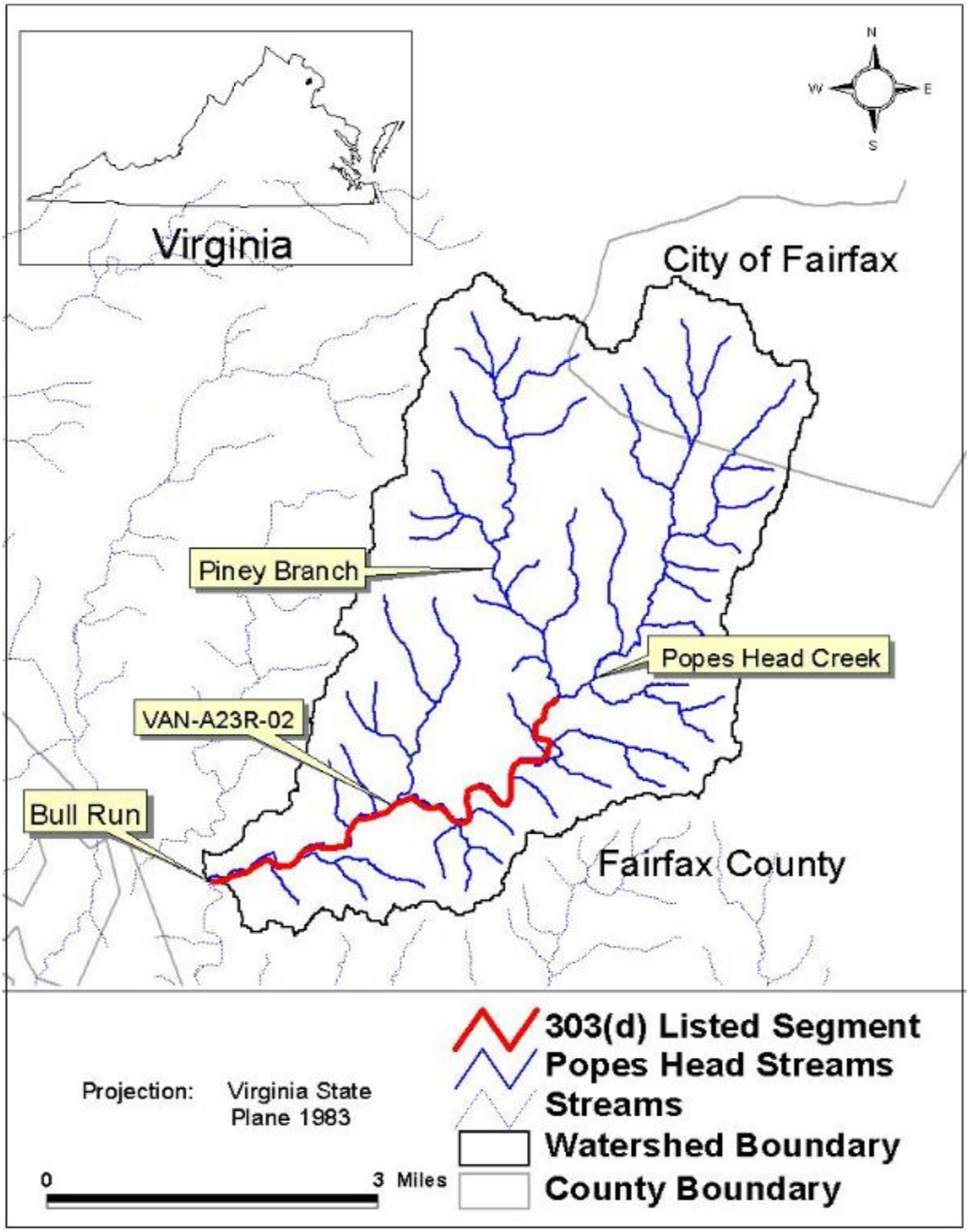
Total MS4 Acres	Total Existing Sediment Loading (tons/yr)	Allocated Sediment Load (tons/yr)	% Reduction	Load Reduction (tons/yr)
FCPS Fairfax County City of Fairfax VDOT	19,470.5	4,450.6	77.1	15,019.9

The Difficult Run TMDL delineated a contributing watershed of 37,260 acres. The area covered by the TMDL is delineated in Map 2.C. The FCPS, Fairfax County, the City of Fairfax, the Town of Vienna, the George Washington Memorial Parkway, and VDOT MS4 areas were assumed in the TMDL to be equivalent to the developed area (68%) of the watershed, for a total of 25,336.8 acres. The existing aggregate sediment loading to Difficult Run from these MS4s (excluding non-MS4 stormwater general permits) was then calculated at 5,316.6 tons/year. The TMDL set the allocated load at 3,595 tons/year. The difference between the existing total load and the allocated load is the target reduction, which equates to 1,721.6 tons/year. These allocations are summarized in Table 2.C.

Table 2.C - Difficult Run TMDL Aggregate Allocations for FCPS, Fairfax County, City of Fairfax, Town of Vienna, George Washington Memorial Parkway, and VDOT MS4s

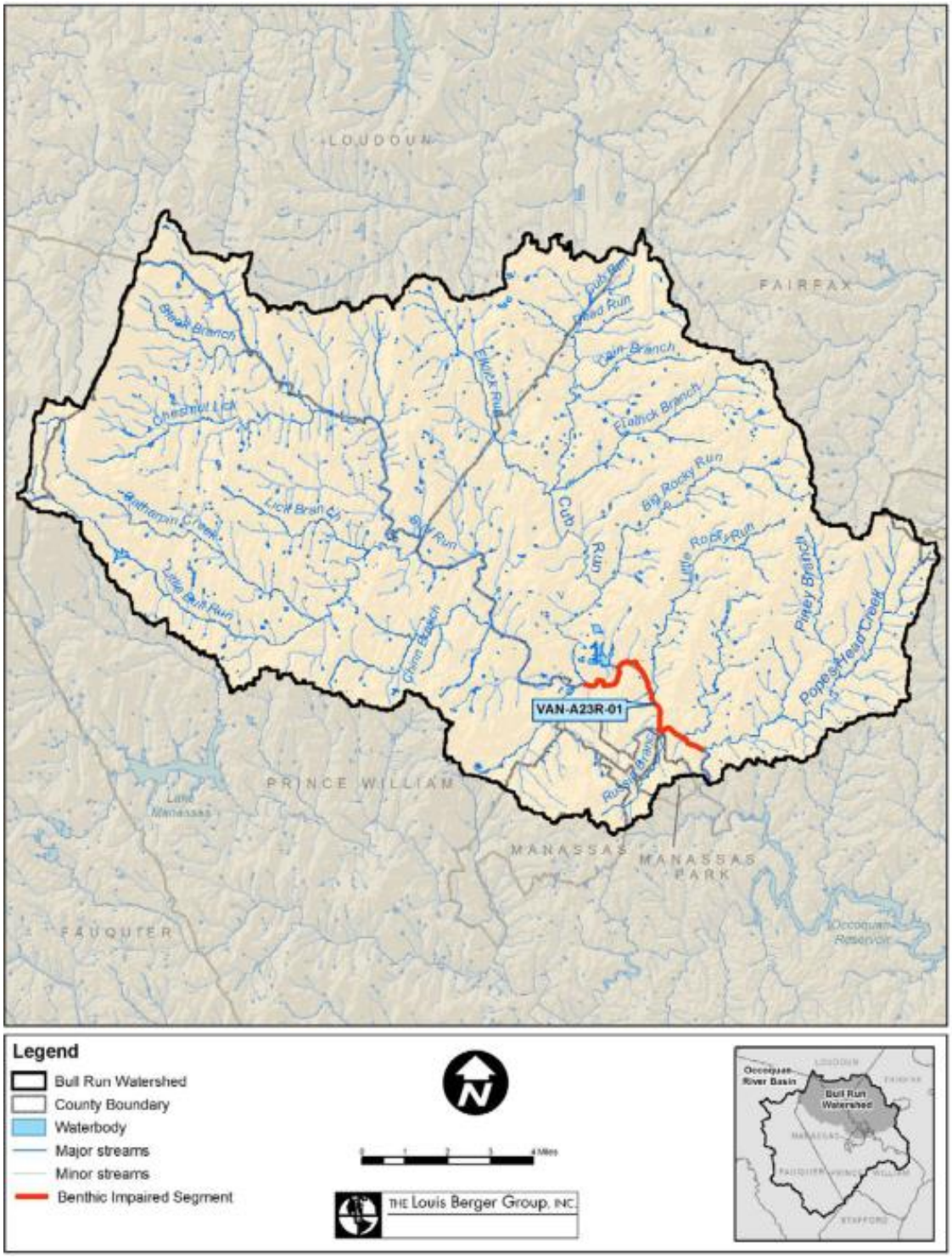
Total MS4 Acres	Total Existing Sediment Loading (tons/yr)	Allocated Sediment Load (tons/yr)	% Reduction	Load Reduction (tons/yr)
FCPS Fairfax County City of Fairfax Town of Vienna VDOT GW Parkway	5,316.6	3,595	32	1,721.6

Map 2.A - Popes Head Creek Impairment and Watershed Delineation



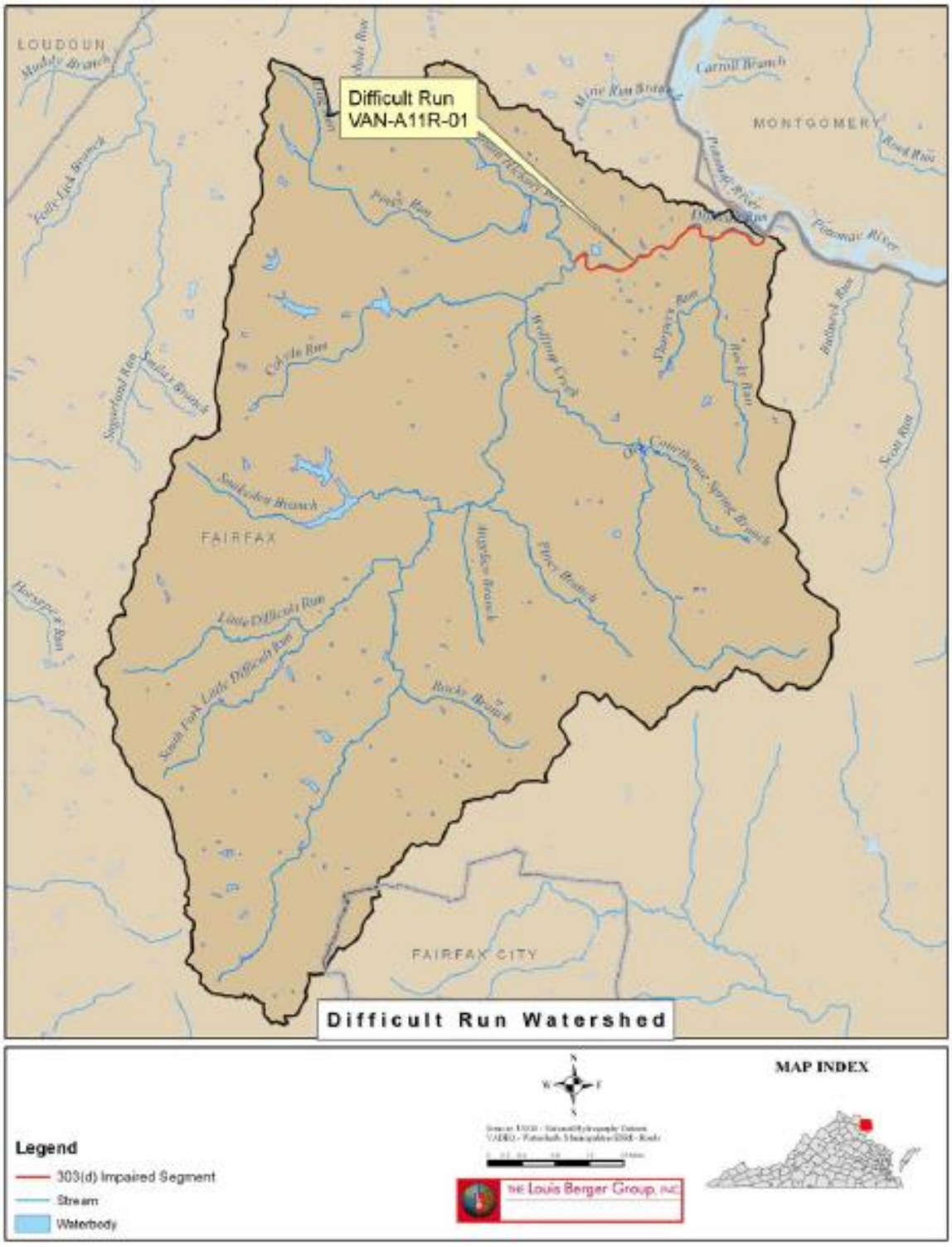
Source: *Benthic TMDL Development for Popes Head Creek, Virginia, August 2006. The Louis Berger Group, Inc.*

Map 2.B - Bull Run Impairment and Watershed Delineation



Source: *Benthic TMDL Development for Bull Run, Virginia, June 2006. The Louis Berger Group, Inc.*

Map 2.C - Difficult Run Impairment and Watershed Delineation



Source: *Benthic TMDL Development for Difficult Run, Virginia, August 2008. The Louis Berger Group, Inc.*

2.4 Evaluation of Significant Sources of Sediment

This action plan is directed at those facilities and activities that are most likely to constitute a significant source of sediment to surface waters. The first step in implementing this approach was to identify the portion of the FCPS MS4 that is subject to the Popes Head Creek, Bull Run, and Difficult Run TMDLs. The second step was to evaluate whether the facilities and activities subject to the TMDL are considered significant sources of sediment.

2.4.1 MS4 Service Area Delineation Methodology

The FCPS MS4 service area is defined as areas draining to an outfall owned and/or operated by FCPS. Storm sewer system maps were used in conjunction with hydrologic features, local topographic data, and high-resolution aerial photos to delineate FCPS's MS4 boundary and to create an MS4 boundary polygon layer. Drainage features were thoroughly reviewed by engineers and planners using a GIS environment in order to accurately account for storm sewer drainage areas and determine break points between the manmade and natural hydrologic systems. The FCPS MS4 service area is presented on Map 2.D.

2.4.2 Identification of FCPS Facilities Subject to the Popes Head Creek, Bull Run, and Difficult Run TMDLs

The TMDL is limited to the affected portions of the Popes Head Creek, Bull Run, and Difficult Run watersheds. An evaluation of the FCPS regulated MS4 service area was conducted to determine those properties affected by the TMDLs. This evaluation identified the FCPS facilities shown in Table 2.D, Table 2.E, and Table 2.F. Only those facilities that are listed in these tables are included in the strategies outlined in this action plan. Based on a GIS analysis, the MS4 area in these three watersheds is 215.54 acres, with 76.08 acres of impervious cover. All three TMDLs identify instream erosion as the dominant source of sediment loads from MS4s within the watersheds. Instream erosion generally correlates with urbanization and increases in impervious cover.

Map 2.D - Fairfax County Public Schools MS4 Service Area Delineation

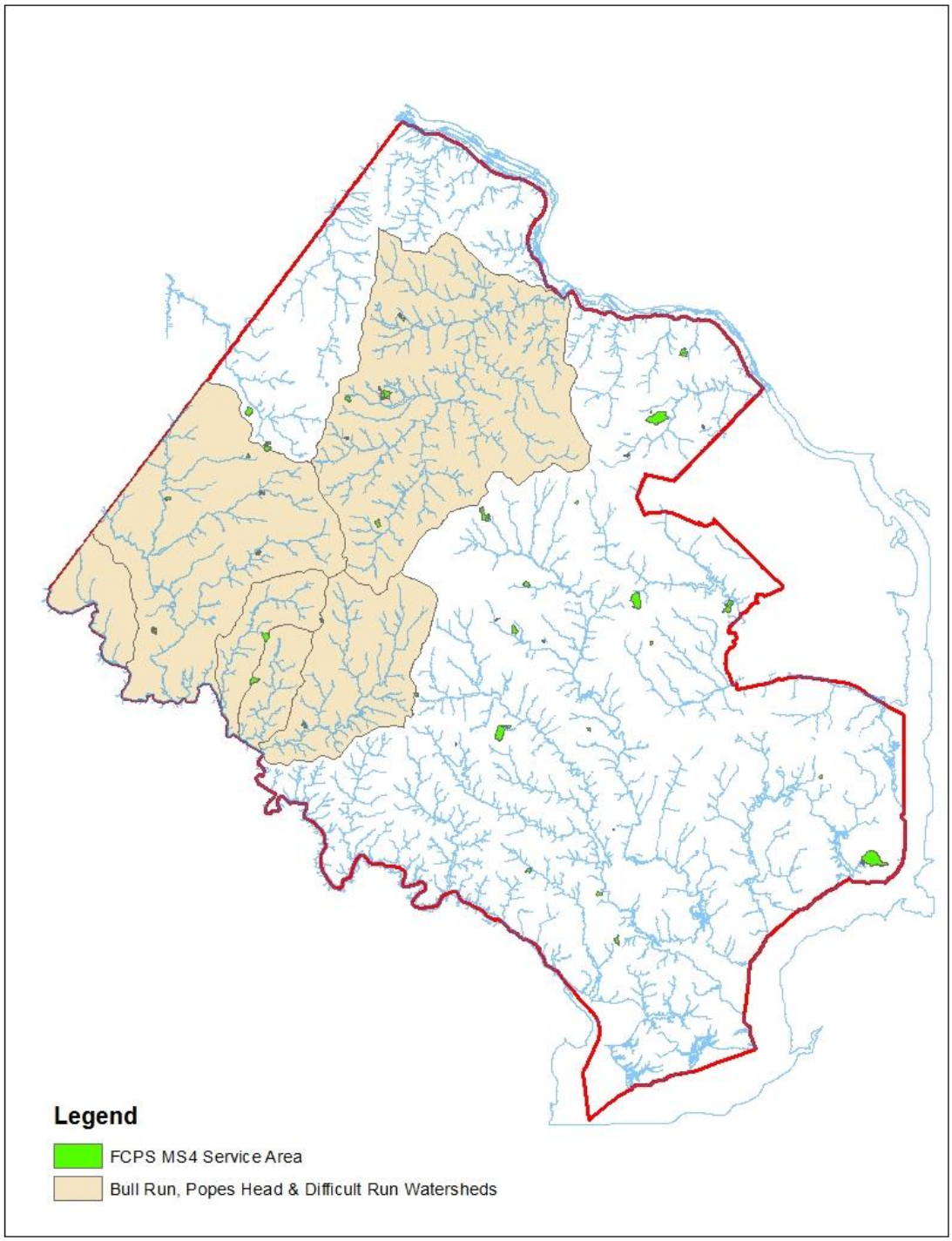


Table 2.D - FCPS Facilities Subject to the Bull Run TMDL

School	Address	Year Built	Year Renovated
Franklin Middle School	3300 Lees Corner Rd., Chantilly, VA	1984	-
Liberty Middle School	6801 Union Mill Rd., Clifton VA	2002	-
Westfield High School	4700 Stonecroft Blvd., Chantilly, VA	2000	-
Centreville High School	6001 Union Mill Rd, Clifton, VA	1988	-
Lees Corner Elementary School	13500 Hollinger Ave., Fairfax, VA	1987	-
Bull Run Elementary School	15301 Lee Hwy., Centreville, VA	1999	-
Poplar Tree Elementary School	13440 Melville Ln., Chantilly, VA	1990	-

Table 2.E - FCPS Facilities Subject to the Popes Head Creek TMDL

School	Address	Year Built	Year Renovated
Willow Springs Elementary School	5400 Willow Springs School Rd., Fairfax, VA	1990	-
Former Clifton Elementary – Administration Center	7010 Clifton Rd., Clifton, VA	1952	-

Table 2.F - FCPS Facilities Subject to the Difficult Run TMDL

School	Address	Year Built	Year Renovated
Forest Edge Elementary School	1501 Becontree Ln, Reston, VA	1971	2004
South Lakes High School	11400 South Lakes Dr., Reston, VA	1978	2009
Terraset Elementary School	11411 Ridge Heights Rd., Reston, VA	1977	2015
Hughes Middle School	11401 Ridge Heights Rd., Reston, VA	1980	Planning stage (2015 bond)
Hunters Woods Elementary School	2401 Colts Neck Rd., Reston, VA	1969	2002
Crossfield Elementary School	2791 Fox Mill Rd., Herndon, VA	1988	-
Waples Mill Elementary School	11509 Waples Mill Rd., Oakton, VA	1991	-
Louise Archer Elementary School	324 Nutley St. NW, Vienna, VA	1939	1991
Vienna Elementary School	128 Center St. S, Vienna, VA	1921	2011

2.4.3 Evaluation of Significant Sources of Sediment

An evaluation of FCPS facilities within the regulated MS4 services area was completed to determine whether any facility subject to this action plan should be considered a significant source of sediment. The FCPS MS4 permit defines a significant source as a facility that has a "discharge where the expected pollutant loading is greater than the average pollutant loading for the land use identified in the TMDL." The evaluation consisted of a desktop survey of FCPS facilities within the Popes Head Creek, Bull Run, and Difficult Run watersheds. Aerial imagery for each facility was observed for indications of conditions or activities that could constitute a significant source of sediment. These activities include, but are not limited to, active construction areas and large sections of disturbed soil. Based on this evaluation, it was determined that no FCPS facility subject to this action plan currently constitutes a significant pollutant source.

FCPS facilities could become a significant source of sediment during construction and other land disturbing activities if adequate erosion and sediment controls are not in place and/or construction stormwater permit requirements are not met. Similarly, structural stormwater management controls, if not properly operated and maintained, could result in increased sediment loads. As such, a core strategy of this action plan is to ensure that compliance is achieved with local erosion and sediment control and stormwater management ordinances.

2.4.4 Sediment Loads from Bank Erosion Attributed to the MS4

While sediment loads from bank erosion occur outside of the regulated MS4, all three TMDLs establish a link between increased stormwater flow from impervious surface areas and accelerated bank erosion. The Bull Run TMDL attributes 55% of the sediment load from instream erosion to the watershed's MS4s, the Popes Head Creek TMDL attributes 99.8% of the sediment load from instream erosion to the watershed's MS4s, and the Difficult Run TMDL attributes 68% of the sediment load from instream erosion to the watershed's MS4s.

FCPS will address stormwater flow through adherence to requirements of the Virginia Stormwater Management Act and attendant regulations as described in Section 2.5.1 and through control measures implemented in response to the requirements of the Chesapeake Bay TMDL as described in Section 5.2.3.

2.5 Existing and Planned Management Controls

This section discusses the existing and planned management controls that will be implemented to reduce sediment in the Popes Head Creek, Bull Run, and Difficult Run watersheds. These reductions will occur over multiple permit cycles and will be coordinated with the FCPS Chesapeake Bay TMDL Action Plan.

2.5.1 MS4 Program Plan

FCPS has adopted an MS4 Program Plan that documents implementation of all MS4 permit requirements, including the programmatic and legal authorities required to meet the "Special Conditions for TMDLs Other Than the Chesapeake Bay TMDL." The full MS4 Program Plan can be found at http://www.fcps.edu/fts/facmanagement/ms4/programplan2015.pdf. Table 2.G provides a summary of elements of the six minimum control measures (MCMs) implemented by FCPS under the MS4 permit that relate to meeting the MS4 allocations identified in the Pope's Head Creek, Bull Run, and Difficult Run benthic TMDLs.

Table 2.G - MS4 Program Plan Elements Related to Meeting the MS4 Allocations Identified in the Pope's Head Creek, Bull Run, and Difficult Run Benthic TMDLs

Minimum Control Measure	MS4 Program Plan Elements Related to Controlling Total Suspended Solids and Related Pollutants
Public Education and Outreach on Stormwater Impacts.	FCPS's MS4 Public Education and Outreach Plan identifies Chesapeake Bay nutrients and sediment, local water quality and volume management, and nonpoint source pollution prevention as the three high-priority pollutants for the focus of FCPS's public education program during the permit cycle.
Illicit Discharge Detection and Elimination	FCPS has integrated into its MS4 Program Plan an Illicit Discharge Detection and Elimination (IDDE) Program. This program includes preventing, identifying, and eliminating sources of sediment.
Construction Site Stormwater Runoff Control	FCPS's construction site stormwater runoff control program is designed to ensure that its construction projects comply with all local legal authorities. FCPS construction projects are subject to review, approval, and enforcement by the locality where the land-disturbing activity is occurring.
Post-Construction Stormwater Management	FCPS relies on the Fairfax County Department of Public Works and Environmental Services for its post-construction stormwater management program. The County inspects, maintains, and tracks data related to FCPS stormwater facilities as required by the Virginia Stormwater Management Act and its attendant regulations.
Pollution Prevention and Good Housekeeping for Municipal Operations	FCPS has included in its MS4 Program Plan actions to meet the pollution prevention and good housekeeping requirements for municipal operations. These activities are intended to eliminate the discharge of sediment and related pollutants from FCPS facilities.

2.5.2 Virginia Stormwater Management Program

All FCPS facilities comply with local stormwater management ordinances regulating land-disturbing activities adopted under the Virginia Stormwater Management Act (§62.1-44.15:24 et seq) and attendant regulations. In the Popes Head Creek, Bull Run, and Difficult Run watersheds, this includes Fairfax County Code Chapter 124 "Stormwater Management Ordinance," City of Fairfax Code Chapter 110, Article II, Division 11 "Stormwater and Storm Drainage Facilities," And Town of Vienna Code Chapter 23, Article 3 "Stormwater Management." These ordinances include water quantity control standards that meet or exceed those of the Virginia Stormwater Management Regulations. These regulations are designed to prevent degradation of stream beds as a result of new development and to reduce flows that cause degradation as a result of redevelopment. FCPS anticipates that as its facilities are redeveloped over time, control measures will be implemented that will ultimately reduce sediment loads from streambank erosion.

2.5.3 Coordination with FCPS Chesapeake Bay TMDL Action Plan

The FCPS Chesapeake Bay TMDL Action Plan and future Fairfax County Chesapeake Bay TMDL Action Plan to be developed under the MOU with Fairfax County will identify sediment reductions

that are also applicable to the reductions required by the benthic TMDLs for Popes Head Creek, Bull Run, and Difficult Run.

A TMDL for the Chesapeake Bay was established by the U.S. Environmental Protection Agency in 2010. Pollutants of concern (POCs) identified for the Chesapeake Bay include total nitrogen, total phosphorus, and total suspended solids (sediment). Virginia subsequently developed and adopted a Watershed Implementation Plan (WIP) that establishes the framework for meeting the Chesapeake Bay TMDL. The Virginia WIP states that MS4 permit holders will implement a phased approach for meeting required reductions over three five-year permit cycles in accordance with the following: 5% of required reductions by the end of the first permit cycle (June 30, 2018); a total of 40% of required reductions by the end of the second permit cycle; and, 100% of required reductions by the end of the third permit cycle.

The FCPS Chesapeake Bay TMDL Action Plan establishes the 5% reduction target and the means and methods for achieving the reduction target in accordance with the MS4 permit and the Chesapeake Bay TMDL Special Condition Guidance developed by DEQ (Guidance Memo No 15-2005).

Three projects have been implemented at FCPS facilities in the subject watersheds that achieve sediment reductions documented in the FCPS Chesapeake Bay TMDL Action Plan. These include a constructed wetland and a bioretention facility at Franklin Middle School and permeable pavement at Waples Mill Elementary School as shown in Table 2.H. In addition to achieving direct reductions in sediment discharge from the FCPS MS4, these projects reduce the volume and/or velocity of stormwater flow to local streams. As a result, these projects also help reduce sediment loads from bank erosion.

Table 2.H - Summary of Sediment Reductions Achieved

Date Installed	BMP Name	Type	Impervious Acres Treated	Total Acres Treated	Runoff Captured	Unit	TN Efficiency	TP Efficiency	TSS Efficiency	Efficiency Unit	TN Removed	TP Removed	TSS Removed
9/14/2009	Franklin Middle School, Constructed Wetland, 1	Constructed Wetland	10.1	54.4	0.52	AC	29.1%	45.7%	58.2%	%	56.05	12.31	2,410.82
9/14/2009	Franklin Middle School, Bioretention, 2	Bioretention	1.09	1.41	0.095	AC	57.6%	70.7%	75.8%	%	9.88	1.70	279.50
8/8/2012	Waples Mill Elementary School Phase II	Permeable Pavement, 1	0.71	0.82	0.11	AC	63.3%	77.8%	83.3%	%	8.28	0.93	708.85
Total			**11.9**								**74.21**	**14.94**	**3,399.17**

Two permeable pavement projects are also planned to be implemented at Terraset Elementary School during the current permit cycle as shown in Table 2.I

Table 2.I - Summary of Reductions from Projects Planned to be Implemented

BMP Name	Type	Impervious Acres Treated	Total Acres Treated	Runoff Captured	Unit	TN Efficiency	TP Efficiency	TSS Efficiency	Efficiency Unit	TN Removed	TP Removed	TSS Removed
Terraset Elementary School, 2	Permeable Pavement, 2	0.35	0.69	0.07	AC	64.8%	79.6%	85.3%	%	6.05	0.56	400.69
Terraset Elementary School, 1	Permeable Pavement, 1	0.84	1.28	0.18	AC	64.8%	79.6%	85.3%	%	12.05	1.23	905.27
		1.19								**18.1**	**1.79**	**1305.96**

Table 2.J provides a summary of reductions achieved by these projects.

Table 2.J - Summary of Sediment Reductions Achieved

	Impervious Area Covered (acres)	**Percent MS4 Impervious Area Covered (acres[1])**	**Sediment Reduction (lbs)**
Implemented Reductions	13.09	17.22%	4,705.13

[1]Based on 76 acres of impervious MS4 service area.

2.5.4 Coordination with Fairfax County Action Plans for Popes Head Creek, Bull Run, and Difficult Run

Fairfax County, under their MS4 Phase I permit, is required to develop TMDL action plans for Popes Head Creek, Bull Run, and Difficult Run no later than March 31, 2017. As part of the collaborative partnership between FCPS and Fairfax County, the County and FCPS will consider additional projects that may be implemented in the FCPS MS4 service area based on feasibility, cost-effectiveness, and other factors as determined by both parties. These projects will be identified in future updates to this Benthic TMDL Action Plan or in annual reports to DEQ, as appropriate.

2.5.5 Other Management Practices

FCPS will continue other practices that reduce sediment loads such as parking lot sweeping, proper storage of materials, and maintenance of school grounds. FCPS parking lots are swept once annually beginning after the end of the winter season. Proper storage of materials and maintenance of school grounds are addressed in standard operating procedures (SOPs) adopted as part of the MS4 permit. These include Outdoor Storage, Equipment Maintenance, and Landscape and Grounds SOPs. The SOPs are implemented year around and through training identified in the FCPS MS4 Program Plan.

2.6 Legal Authorities

FCPS has adopted an MS4 Program Plan that documents implementation of all legal authorities required to meet the "Special Conditions for TMDLs Other than the Chesapeake Bay TMDL." While FCPS is ultimately responsible for ensuring that all projects and land disturbing activities comply with local, state, and federal stormwater management requirements, FCPS does not have independent enabling authority to adopt ordinances. Rather, FCPS is subject to the stormwater quality requirements approved by the localities where school construction projects occur. These include the requirements of the Virginia Stormwater Management Act (§62.1-44.15:24 et seq, Code of Virginia), the Erosion and Sediment Control Act (§62.1-44.15:51 et seq, Code of Virginia), the Chesapeake Bay Preservation Act (§62.1-44.15:67 et seq, Code of Virginia), and their attendant regulations.

As noted in Section 1.2, FCPS is currently negotiating a MOU with Fairfax County to document roles and responsibilities for implementation of a joint MS4 program.

After review of FCPS's existing MS4 Program Plan and legal authorities, FCPS finds that no additional legal authorities are required for compliance with the "Special Conditions for TMDLs Other than the Chesapeake Bay TMDL."

2.7 Enhanced Education, Outreach, and Training

As noted in Table 2.G, FCPS has adopted a Public Education and Outreach Plan and has integrated the plan into the FCPS MS4 Program Plan. The plan includes specific education, outreach, and training on subjects related to the reduction of sediment in stormwater discharges. Of particular note is the IDDE program and training that specifically includes potential sources of sediment. In addition, as described in Section 2.5.5, SOPs that relate to sediment have been developed for landscape and grounds maintenance and outdoor storage of materials. These SOPs are being incorporated into annual training requirements as provided for in the MS4 Program Plan. FCPS will continue to assess whether additional enhancement of education, outreach and training would be beneficial to reducing sediment loads within the Popes Head Creek, Bull Run, and Difficult Run watersheds.

2.8 Schedule and Milestones

This Benthic TMDL Action Plan will be implemented in accordance with the following schedule and milestones.

Table 2.K – Schedule and Milestones

Implementation Item	Description	Schedule and Milestones
MS4 Program Plan	FCPS will continue to implement the MS4 Program Plan, including elements related to sediment, in accordance with the schedule provided for in the MS4 Program Plan.	The FCPS MS4 Program elements related to sediment will be integrated into the Fairfax County MS4 Program Plan after adoption of the MOU between the County and FCPS.

Implementation Item	Description	Schedule and Milestones
Virginia Stormwater Management Program.	FCPS will continue to ensure that all land disturbing projects comply with local VSMP requirements.	This is an ongoing program. Any reductions in sediment loads or flows will be documented in the appropriate annual report to DEQ.
FCPS Chesapeake Bay TMDL Action Plan	Three projects within the subject watersheds have already been implemented. The FCPS Chesapeake Bay TMDL Action Plan will be incorporated into the Fairfax County Action Plan after adoption of the MOU between the County and FCPS. The County will include as one of the prioritization measures in the Fairfax County Action Plan projects that are effective at reducing sediment from FCPS properties within the Popes Head Creek, Bull Run, and Difficult Run watersheds.	The Fairfax County Chesapeake Bay TMDL Action Plan is to be developed no later than March 31, 2017.
Fairfax County Action Plans for Popes Head Creek, Bull Run, and Difficult Run	The County will also be developing action plans for the Popes Head Creek, Bull Run, and Difficult Run watersheds and projects will be identified as part of this process. As part of the FCPS and Fairfax County partnership effort, construction projects occurring in FCPS MS4 service areas will be considered for partnerships based on feasibility, cost-effectiveness, and other factors as determined by both parties.	Fairfax County TMDL action plans for Popes Head Creek, Bull Run, and Difficult Run are to be developed no later than March 31, 2017.
Education, Outreach, and Training	SOPs developed for landscape and grounds maintenance and outdoor storage are being incorporated into training required under the MS4 Program Plan.	Enhanced training has been delivered in accordance with the schedule in the MS4 Program Plan starting in Permit Year 3.

2.9 Assessment of Effectiveness

This Benthic TMDL Action Plan will be assessed based on its effectiveness in preventing sediment loads from new sources and reducing sediment loads from existing sources.

Effectiveness in preventing sediment loads from new sources will be assessed based on (1) compliance with locally administered erosion and sediment control and post-construction stormwater management requirements and (2) successful implementation of SOPs and other good housekeeping policies designed to prevent sediment from entering the MS4. FCPS will confirm in each annual report to DEQ that it continues to comply with local erosion and sediment control and post-construction stormwater management requirements. Successful implementation of SOPs and other good housekeeping policies will be demonstrated through submittal of training materials and employee sign-in sheets.

Effectiveness in reducing sediment loads from existing sources will be measured by comparing reductions achieved with applicable targets in the Popes Head Creek, Bull Run, and Difficult Run TMDLs. For water quality measures designed to reduce sediment discharges from the MS4 area, this will include an estimate of the sediment load reduction achieved in pounds per acre per year based on established BMP efficiencies. For water quantity measures that reduce flow and therefore reduce bank erosion, this will include an estimate of the percent of impervious area within the MS4 area draining to a water quantity control facility as defined by the Virginia Stormwater Management Regulations. Reductions will be iterative and occur over multiple permit cycles.

At the end of this permit cycle (June 30, 2018), FCPS will assess progress in sediment reduction and will update the plan with strategies for the next permit cycle based on progress and effectiveness of strategies implemented to-date.

2.10 Measurable Goals

In accordance with Table 2.K, the following measurable goals will be met under this plan:

- Good housekeeping/pollution prevention measures and training required under the FCPS MS4 Program Plan will be implemented per the MS4 Program Plan schedule.
- Consideration of projects on FCPS properties in the watersheds through the development of the Fairfax County Benthic TMDL Action Plan to be completed by March 31, 2017.

3. Conclusion

This Benthic TMDL Action Plan was prepared to address sediment wasteload allocations assigned to FCPS under the Popes Head Creek, Bull Run, and Difficult Run benthic TMDLs. This action plan was prepared in accordance with draft guidance for local TMDL action plans developed by DEQ. Upon termination of the FCPS MS4 permit by DEQ, this action plan will be superseded by the Fairfax County Benthic TMDL Action Plan.

Appendix A

(Reserved for Future Use)

Appendix H

PCB TMDL ACTION PLAN

Fairfax County Public Schools

Polychlorinated Biphenyl (PCB) TMDL Action Plan

Prepared in compliance with General Permit No. VAR040104

Final

August 13, 2015

Department of Facilities Management
Sideburn Support Center
5025 Sideburn Road
Fairfax, Virginia 22032

Fairfax County Public Schools

Chesapeake Bay TMDL Action Plan

August 13, 2015

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Fairfax County Public Schools
PCB TMDL Action Plan

August 13, 2015

1. Introduction

1.1 Purpose

This Polychlorinated Biphenyl (PCB) TMDL Action Plan documents how Fairfax County Public Schools (FCPS) intends to meet the "Special Conditions for Approved TMDLs Other Than the Chesapeake Bay TMDL" in Section I, Part B of the General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s). FCPS's most recent permit (VAR040104) was issued by the Virginia Department of Environmental Quality (DEQ) effective July 1, 2013 and will expire June 30, 2018.

FCPS's MS4 permit requires the development and implementation of action plans for impaired streams where a Total Maximum Daily Load (TMDL) assigns a waste load allocation (WLA) to FCPS that has been approved by the State Water Control Board. A TMDL establishes the maximum amount of a pollutant that can enter a water body without violating water quality standards.

The "Total Maximum Daily Loads of Polychlorinated Biphenyls (PCBs) for Tidal Portions of the Potomac and Anacostia Rivers in the District of Columbia, Maryland, and Virginia" (PCB TMDL) was established by the U.S. Environmental Protection Agency in 2007, and adopted by the State Water Control Board on April 11, 2008. While the Potomac River PCB TMDL assesses the tidal Potomac River and tributary waters, the TMDL only establishes WLAs for the direct drainage portions of the MS4 permitted jurisdictions.[1] The TMDL for the tidal Potomac River is set at an aggregate 1,510 grams per year. FCPS was not assigned a specific WLA under the TMDL.

PCBs are a legacy pollutant and were used as a coolant and as an insulator, particularly in transformers, hydraulic equipment, and electrical equipment. The manufacture of PCBs was banned in 1979; however, PCBs are persistent in the environment and do not readily decompose under normal conditions. They also tend to settle into the sediment of waterways or adsorb to terrestrial soils. PCBs may still be released by

[1] The applicability of the Potomac River PCB WLA to only that portion of the FCPS MS4 with the area defined as direct drainage in the TMDL was confirmed by Jennifer Carlson, Regional TMDL Coordinator for DEQ's Northern Regional Office, in a phone conversation on July 30, 2015.

illegal or improper dumping of PCB-containing wastes or leaks from legacy electrical transformers containing PCBs.

1.2 TMDL Background

The tidal waters of the Potomac River and several of its tributaries were placed on the Virginia 303(d) impaired waters lists for elevated fish tissue levels of PCBs starting in 2002. The District of Columbia, Maryland, and Virginia agreed to coordinate TMDL development efforts to address all of their tidal Potomac PCB impairments by September 30, 2007. The objective of the PCB TMDL is to ensure that the "fish consumption" use is protected in each of the impaired waterbodies by identifying maximum allowable loads of PCBs that would meet the applicable PCB water quality criteria and result in fish tissue PCB concentrations that do not exceed jurisdictional thresholds. See Section 2.3 for more information on the TMDL WLAs.

1.3 Permit Compliance Crosswalk

Table 1A provides an overview of the organization of this plan and how each section addresses the FCPS's MS4 permit and the draft guidance provided by the Virginia Department of Environmental Quality dated April 2015.

Table 1A – Action Plan and Permit Compliance Crosswalk

Action Plan	Action Plan Element	DEQ Draft Local TMDL Action Plan Guidance	MS4 Permit
Section 1	Introduction		
Section 2.1	TMDL Report	1. The name(s) of the Final TMDL report(s);	Section I.B
Section 2.2	Pollutant	2. The pollutant(s) causing the impairment(s);	Section I.B.2.a
Section 2.3	PCB TMDLs	3. The WLA(s) assigned to the MS4 as aggregate or individual WLAs;	Section I.B.2.b
Section 2.4	Evaluation of Significant Sources of PCBs	4. Significant sources of POC(s) from facilities of concern owned or operated by the MS4 operator that are not covered under a separate VPDES permit. A significant source of pollutant(s) from a facility of concern means a discharge where the expected pollutant loading is greater than the average pollutant loading for the land use identified in the TMDL;	Section I.B.2.d
Section 2.5	Existing and Planned Management Controls	5. Existing or new management practices, control techniques, and system design and engineering methods that have been or will be implemented as part of the MS4 Program Plan that are applicable to reducing the pollutant identified in the WLA;	Section I.B.2.b

Action Plan	Action Plan Element	DEQ Draft Local TMDL Action Plan Guidance	MS4 Permit
Section 2.6	Legal Authorities	6. Legal authorities such as ordinances, state and other permits, orders, specific contract language, and inter-jurisdictional agreements applicable to reducing the POCs identified in each respective TMDL;	Section I.B.2.a
Section 2.7	Enhanced Education, Outreach, and Training	7. Enhancements to public education, outreach, and employee training programs to also promote methods to eliminate and reduce discharges of the POC(s) for which a WLA has been assigned;	Section I.B.2.c
Section 2.8	Schedule and Milestones	8. A schedule of interim milestones and implementation of the items in 5, 6, and 7;	Section I.B.2.e
Section 2.9	Assessment of Effectiveness	9. Methods to assess TMDL Action Plans for their effectiveness in reducing the pollutants identified in the WLAs; and	Section I.B.2.e
Section 2.10	Measurable Goals	10. Measurable goals and the metrics that the permittee and Department will use to track those goals (and the milestones required by the permit). Evaluation metrics other than monitoring may be used to determine compliance with the TMDL(s).	Section I.B.2.e
Section 3	Conclusion		

2. PCB TMDL Action Plan

2.1 TMDL Report

The "Total Maximum Daily Loads of Polychlorinated Biphenyls (PCBs) for Tidal Portions of the Potomac and Anacostia Rivers in the District of Columbia, Maryland, and Virginia" was established by the U.S. Environmental Protection Agency on October 31, 2007 and adopted by the State Water Control Board on April 11, 2008.

2.2 Pollutant

The cause of the impairment is PCB in fish tissue for the impaired segments addressed in the TMDL. As described in the 2014 impaired waters fact sheet, the fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. The advisory, dated April 19, 1999 and modified December 13, 2004 and October 7, 2009, limits consumption of bullhead catfish, channel catfish less than eighteen inches long, largemouth bass, anadromous (coastal) striped bass, sunfish species, smallmouth bass, white catfish, white perch, gizzard shad, and yellow perch to no more than two meals per month. The advisory also bans the consumption of American eel, carp, and channel catfish greater than eighteen inches long.

2.3 PCB TMDL

In Table 10 of the PCB TMDL, the following MS4 permits are aggregated under the Fairfax County primary location:

- City of Fairfax
- City of Falls Church
- Fairfax County
- Fairfax County Public Schools
- George Mason University
- George Washington Memorial Parkway
- Northern Virginia Community College
- Town of Vienna
- US Army – Fort Belvoir
- US Central Intelligence Agency – George Bush Center

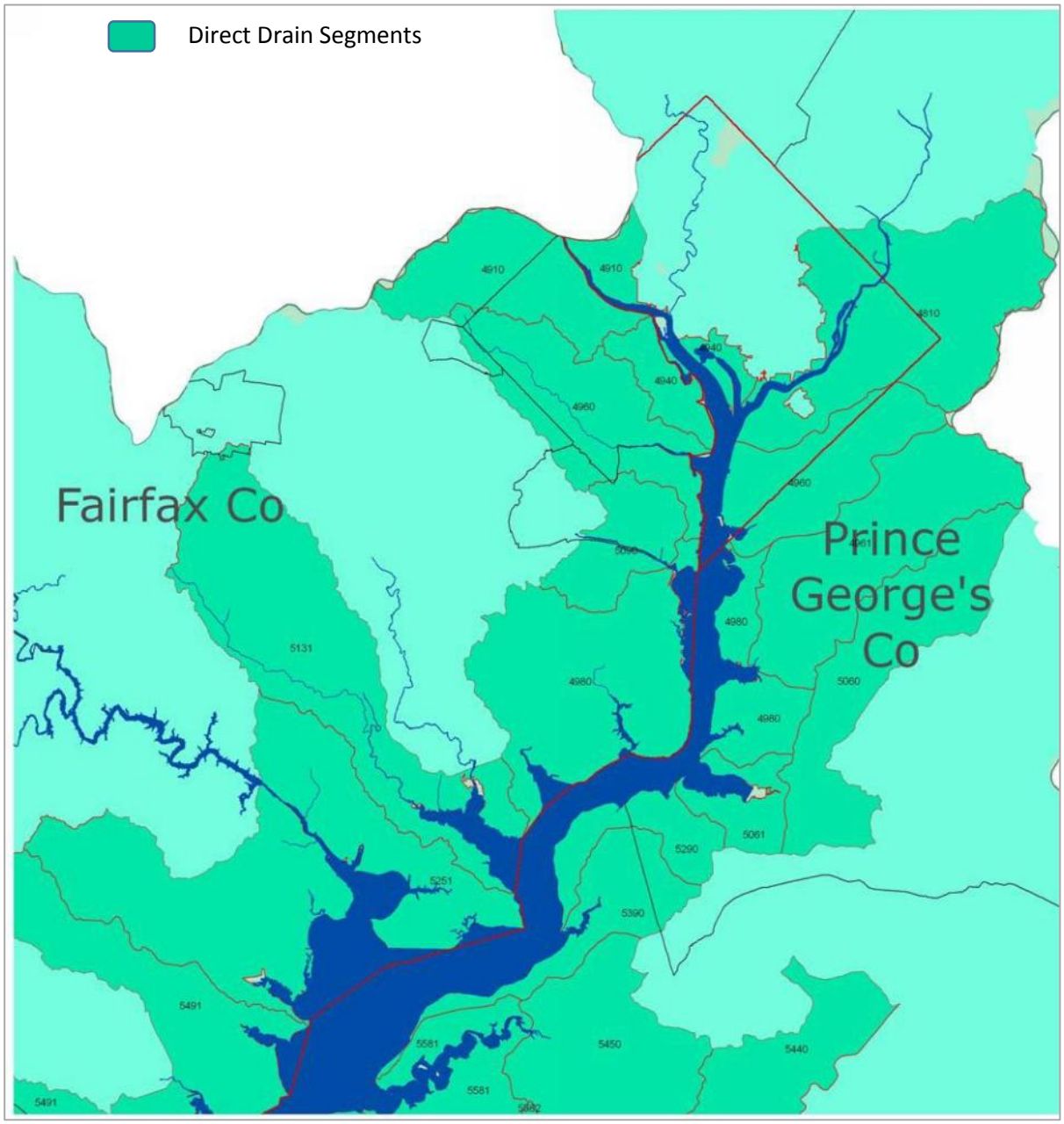
The cities of Falls Church and Fairfax are assigned their own WLAs in the TMDL. Fairfax County's WLAs include the FCPS MS4 portion and are assigned as shown in Table 2A. These stormwater WLAs only apply in the areas directly draining to the tidal Potomac as shown in Map 2A.

Table 2A – WLAs Assigned to Direct Drainage Areas of Fairfax County

Impaired Waterbody	Baseline (g/yr)	WLA (g/yr)	Percent Reduction
Upper Potomac	78.6	0.973	98.8%
Lower Potomac Fourmile Run	19.9	0.943	95.3%
Dogue Creek Hooff Run & Hunting Creek Little Hunting Creek Potomac River Upper	85.9	37.4	56.5%
Hooff Run & Hunting Creek	39.7	5.65	85.8%
Accotink Bay Gunston Cove Pohick Creek Pohick Bay	8.54	8.11	5%
Belmont Bay/Occoquan Bay Neabsco Creek Occoquan River Potomac River Middle Potomac River Upper	9.81	1.64	83.3%
Total	242	54.7	74.7%

Source: Table 12 from Total Maximum Daily Loads of PCBs for Tidal Portions of the Potomac and Anacostia Rivers in the District of Columbia, Maryland, and Virginia

Map 2A – Direct Drain Watershed Segments to the Tidal Potomac



Source: Figure 8 from Total Maximum Daily Loads of PCBs for Tidal Portions of the Potomac and Anacostia Rivers in the District of Columbia, Maryland, and Virginia

2.4 Evaluation of Significant Sources of PCBs

This action plan is directed at those facilities and activities that are most likely to constitute a significant source of PCBs to surface waters. The first step in implementing this approach was to identify the portion of the FCPS MS4 that is subject to the PCB TMDL. The second step was to evaluate whether the facilities and activities subject to the TMDL are considered a significant source of PCBs.

2.4.1 MS4 Service Area Delineation Methodology

The FCPS MS4 service area is defined as areas draining to an outfall owned and/or operated by FCPS. Storm sewer system maps were used in conjunction with hydrologic features, local topographic data, and high-resolution aerial photos to delineate FCPS's MS4 boundary and to create an MS4 boundary polygon layer. Drainage features were thoroughly reviewed by engineers and planners using a GIS environment in order to accurately account for storm sewer drainage areas and determine break points between the manmade and natural hydrologic systems. The FCPS MS4 service area is presented on Map 2B.

2.4.2 Identification of FCPS Facilities within the Tidal Potomac Watershed

The WLAs in the TMDL are limited to the direct drainage watershed segments to the tidal Potomac. An evaluation of the FCPS regulated MS4 service area was conducted to delineate those areas that discharge to the area impacted by the PCB TMDL. This evaluation identified the FCPS facilities included in Table 2B. Only those facilities that are listed in the table below are considered to be subject to the requirements of this action plan.

Table 2B – FCPS Facilities Subject to this Action Plan

School	Address	Year Built	Year Renovated
Chesterbrook Elementary School	1753 Kirby Rd McLean, VA 22101	1926	2000
Kent Gardens Elementary School	1717 Melbourne Dr McLean, VA 22101	1957	2003
McLean High School	1633 Davidson Rd McLean, VA 22101	1955	2004
Hybla Valley Elementary School	3415 Lockheed Blvd Alexandria, VA 22306	1964	2010
White Oaks Elementary School	6130 Shiplett Blvd Burke, VA 22015	1980	-
Lorton Station Elementary School	9298 Lewis Chapel Rd Lorton, VA 22079	2003	-
Gunston Elementary School	10100 Gunston Rd Lorton, VA 22079	1954	1995
Fairview Elementary School	5815 Ox Rd Fairfax Station, VA 22039	1938	1999

School	Address	Year Built	Year Renovated
Lemon Road Elementary School	7230 Idylwood Rd Falls Church, VA 22043	1955	2002
Fort Hunt Elementary School	8832 Linton Ln Alexandria, VA 22308	1969	2001
Halley Elementary School	8850 Cross Chase Circle Fairfax Station, VA 22039	1995	-

2.4.3 Evaluation of Significant Sources of PCBs

A desktop evaluation of FCPS facilities within the regulated MS4 services area was completed to determine the likelihood of PCB contamination that could affect stormwater runoff. Three factors were used to determine that none of the FCPS facilities is likely to be a significant source of PCBs. First, all of the subject FCPS facilities were built or underwent extensive renovation after the manufacture of PCBs was banned (see Table 2B).

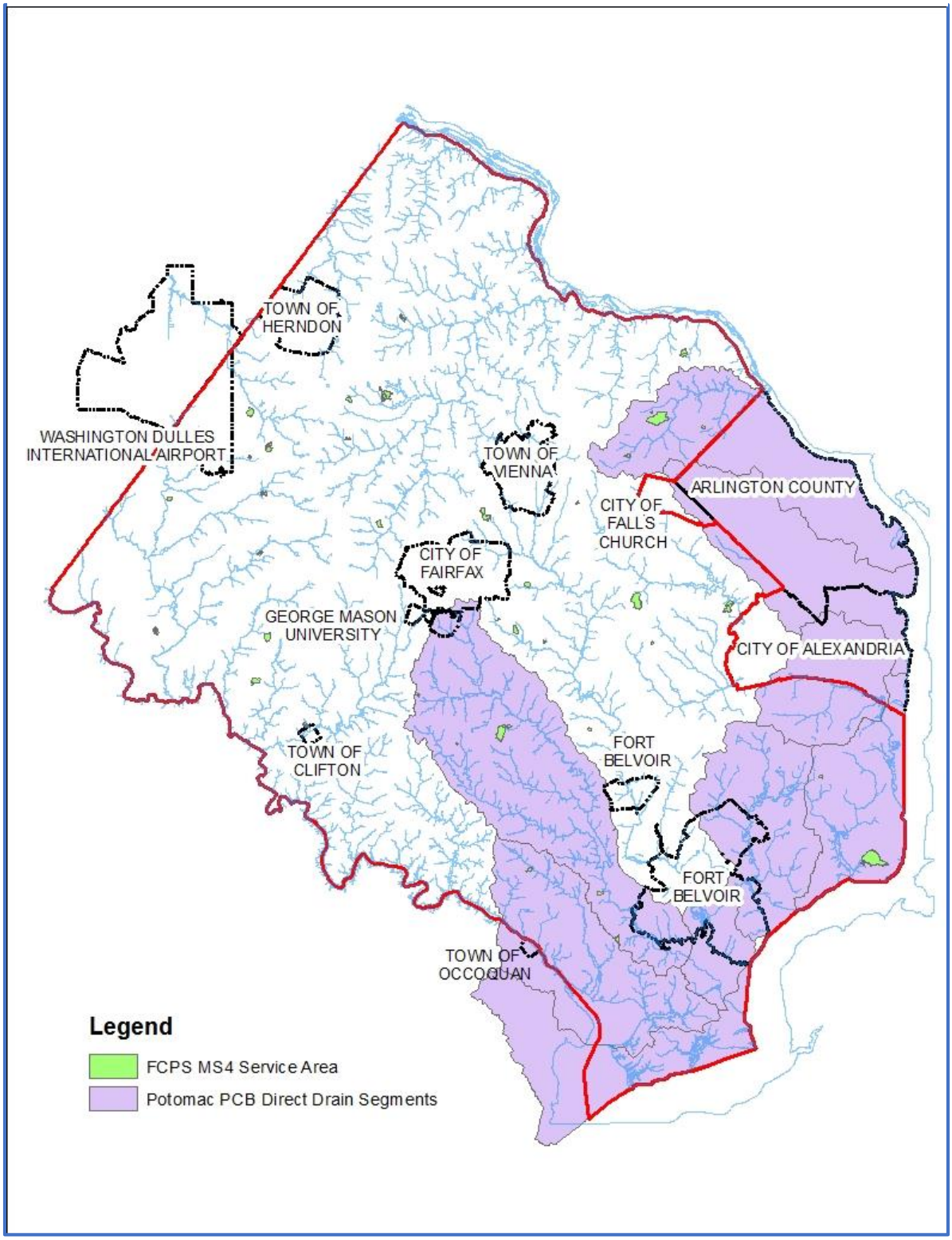
Second, none of the FCPS facilities subject to this action plan fall under one of DEQ's high risk categories for PCBs. High risk category sites for potential sources of residual PCBs include the following Standard Industrial Classifications (SICs): 26&27 (Paper and Allied Products), 30 (Rubber and Misc. Plastics), 33 (Primary Metal Industries), 34 (Fabricated Metal Products), 37 (Transportation Equipment), 49 (Electrical, Gas, and Sanitary Services), 5093 (Scrap Metal Recycling), and 1221 & 1222 (Bituminous Coal).

Finally, FCPS researched the U.S. Environmental Protection Agency (EPA) PCB Transformer Registration Database at http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/data.htm to determine if any FCPS properties are registered sites, indicating the presence and location of PCB-containing transformers that may be located on FCPS properties. No FCPS facilities are listed as currently operating a PCB-containing transformer.

Dominion Virginia Power maintains small transformers that are part of the system of providing electric service to FCPS properties. Dominion confirmed that the majority of transformers are filled with non-PCB mineral oil. However, there may be transformers in service that were manufactured prior to July 1979 that could contain detectable levels of PCB. Dominion noted that under normal operating conditions, these facilities are not subject to leaking or spilling. If an incident were to occur, Dominion has in place plans and procedures to promptly respond in accordance with state and federal regulatory requirements.

Based on this evaluation, FCPS has determined that no particular site or operation is considered a significant source of PCBs. Therefore, the actions proposed in this action plan focus on educating staff to heighten awareness of potential PCB sources, such as an older transformer operated by Virginia Dominion Power, and how to respond to the discovery of an unexpected source of PCBs.

Map 2B - Fairfax County Public Schools MS4 Service Area Delineation



2.5 Existing and Planned Management Controls

FCPS has put into place all necessary programmatic and legal requirements to meet the "Special Conditions for Approved TMDLs Other Than the Chesapeake Bay TMDL." The details of the existing program elements and associated legal authorities required to comply with the PCB TMDL are discussed in this section.

2.5.1 MS4 Program Plan

FCPS has adopted an MS4 Program Plan that documents implementation of all MS4 permit requirements, including the necessary programmatic and legal authorities to fully implement the plan. The full MS4 Program Plan can be found at http://www.fcps.edu/fts/facmanagement/ms4/programplan.pdf. Table 2C provides a summary of elements of the six minimum control measures (MCMs) implemented by FCPS under the MS4 permit that relate to controlling discharges that have the potential to contain PCBs.

Table 2C – MS4 Program Plan Elements Related to Meeting the Tidal Potomac PCB TMDL

Minimum Control Measure	MS4 Program Plan Elements Related to Understanding and Controlling Various Pollutants, Including PCBs
Illicit Discharge Detection and Elimination	FCPS has integrated into its MS4 Program Plan an Illicit Discharge Detection and Elimination Program. This program includes preventing, identifying, and eliminating sources of pollutants, including sediment that can contain levels of PCBs.

2.6 Legal Authorities

After review of FCPS's existing MS4 Program Plan and legal authorities, FCPS finds that no additional legal authorities are required for compliance with the "Special Conditions for Approved TMDLs Other Than the Chesapeake Bay TMDL" for the Tidal Potomac PCB TMDL.

2.7 Enhanced Education, Outreach, and Training

FCPS will enhance existing education, outreach, and training programs to heighten awareness of potential PCB sources and how to respond to the discovery of an unexpected source of PCBs.

2.7.1 Training on Recognition and Reporting of Illicit Discharges by Field Personnel

BMP 6.E of the existing MS4 Program Plan provides for training to field personnel to recognize and address illicit discharges that can negatively surface waters. This training will be modified to include information on PCBs. The training will provide field personnel with information that will help them identify illicit discharges that may have a potential to include PCBs. This information will be included in existing illicit discharge training.

2.7.2 Training on Good Housekeeping and Pollution Prevention for Maintenance, Public Works, and Recreational Facility Staff

FCPS staff that are engaged in maintenance activities are trained in good housekeeping and pollution prevention techniques as detailed in BMP 6.F of the MS4 Program Plan. This training will be modified to include information on PCBs. This information may include:

- Potential sources that may be encountered at existing or future school facilities;
- Legacy activities that could contribute to PCB pollution on historic FCPS sites; and,
- What to do if you discover equipment, machinery, or contaminated soil that may contain PCBs.

The enhanced training will be required for personnel that are assigned to the facilities listed in Table 2B.

2.8 Schedule and Milestones

The education and training actions in Section 2.7 will be developed and implemented in Permit Year 3 (PY3) in the following manner:

- BMP 6.E – Existing training material will be revised in PY3 to include information relevant to PCB discharges. The training will be implemented in PY4 as part of the ongoing biennial training program.
- BMP 6.F – Training materials will be revised in PY3 to include information relevant to potential PCB sources and steps to take if a source of PCBs is discovered at a FCPS property.

2.9 Assessment of Effectiveness

The primary outcome of this TMDL action plan is to provide training to targeted staff so that they have a working understanding of the potential sources of PCBs and what actions must be taken if a potential source is discovered. As a result, the measure of effectiveness is the successful delivery of this training. Should a source of PCBs ever be discovered, FCPS will assess the effectiveness of the training in identifying the source and taking appropriate follow up actions. Modifications will then be made to the TMDL action plan, if necessary.

2.10 Measurable Goals

FCPS will document training activities on a yearly basis. Training material will be maintained, along with rosters for each training event that will include the date of the training along with personnel in attendance. This training will be documented in the MS4 annual reports.

3. Conclusion

This PCB TMDL Action Plan was prepared to address PCB wasteload allocations assigned to FCPS in the "Total Maximum Daily Loads of Polychlorinated Biphenyls (PCBs) for Tidal Portions of the Potomac and Anacostia Rivers in the District of Columbia, Maryland, and Virginia." This action plan was prepared in accordance with the draft guidance provided by the Virginia Department of Environmental Quality dated April 2015. Fairfax County and FCPS are negotiating a Memorandum of Understanding that, when approved, will provide the basis for a request to DEQ to include FCPS under the Fairfax County Phase I MS4 Permit and to terminate the FCPS Phase II MS4 permit. If the FCPS permit is terminated, the FCPS properties will be covered under the Fairfax County TMDL Action Plans to be developed by March 31, 2017.

Appendix I

BACTERIA TMDL ACTION PLAN

Fairfax County Public Schools

Bacteria TMDL Action Plan

Prepared in compliance with General Permit No. VAR040104

June 20, 2016

Department of Facilities Management
Sideburn Support Center
5025 Sideburn Road
Fairfax, Virginia 22032

Fairfax County Public Schools

Bacteria TMDL Action Plan

June 20, 2016

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Bacteria TMDL Action Plan

June 20, 2016

1. Introduction

1.1 Purpose

This Bacteria TMDL Action Plan documents how Fairfax County Public Schools (FCPS) intends to meet the "Special Conditions for Approved TMDLs Other Than the Chesapeake Bay TMDL" in Section I, Part B of the General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s). FCPS's most recent permit (VAR040104) was issued by the Virginia Department of Environmental Quality (DEQ) effective July 1, 2013 and will expire June 30, 2018.

FCPS's MS4 permit requires the development and implementation of action plans for impaired streams where a Total Maximum Daily Load (TMDL) approved by the State Water Control Board (SWCB) assigns a Waste Load Allocation (WLA) to FCPS. A TMDL establishes the maximum amount of a pollutant that can enter a water body without violating water quality standards.

FCPS is subject to four separate TMDLs for bacteria impairments. The TMDLs are for impairments to Difficult Run, Captain Hickory Run, Little Difficult Run, Nichols Run, Snakeden Branch, Wolftrap Creek, Hunting Creek, Cameron Run, Holmes Run, Accotink Creek, Long Branch, Cub Run, Elklick Run, Little Rocky Run, and Popes Head Creek. All four TMDLs assign WLAs to FCPS for bacteria and were approved after July 9, 2008. Action plans to address them must be completed by June 30, 2016 according to the schedule in the General Permit.

Contamination by fecal coliform bacteria is the most common cause of water quality violations in Virginia streams. According to the Virginia DEQ and the United States Geologic Survey "Although fecal coliform bacteria are not necessarily dangerous to humans, their presence in streams indicates that the water is contaminated with fecal waste from warm-blooded animals… For this reason, fecal coliform bacteria are known as 'indicator organisms;' their presence in recreational waters indicates an increased risk to human health."[1] In Virginia, water quality standards for bacteria were changed in 2003 from more general fecal coliform bacteria to *E. coli* (*Escherichia coli*). *E. coli* is a subset of fecal coliform bacteria and is considered a better indicator of the pathogenic potential of contamination.

This Bacteria TMDL Action Plan addresses the requirements of FCPS's MS4 permit by evaluating significant sources of bacteria, assessing the adequacy of existing programs and legal authorities, identifying new action items and associated schedules and milestones, and determining how the effectiveness of the plan will be assessed.

[1] "Identifying Sources of Fecal Coliform Bacteria in Accotink Creek," USGS and Virginia DEQ, undated.

1.2 Permit Compliance Crosswalk

This Bacteria TMDL Action Plan (action plan) is submitted to DEQ until such time as a Fairfax County Bacteria TMDL Action Plan is developed that includes the FCPS MS4. FCPS is currently negotiating a Memorandum of Understanding (MOU) with Fairfax County to document roles and responsibilities for implementation of a joint MS4 program. Fairfax County's MS4 permit (VA0088587) was re-issued and became effective April 1, 2015. Upon termination of the FCPS MS4 permit by DEQ, this action plan will be superseded by the Fairfax County Bacteria TMDL Action Plan.

Table 1.A provides an overview of the organization of this action plan and how each section addresses the FCPS MS4 permit and the draft guidance provided by DEQ dated April 2015.

Table 1.A - Action Plan and Permit Compliance Crosswalk

Action Plan	Action Plan Element	DEQ Draft Local TMDL Action Plan Guidance	MS4 Permit
Section 1	Introduction		
Section 2.1	TMDL Report	1. The name(s) of the Final TMDL report(s)	Section I.B
Section 2.2	Pollutant	2. The pollutant(s) causing the impairment(s)	Section I.B.2.a
Section 2.3	Bacteria TMDLs	3. The WLA(s) assigned to the MS4 as aggregate or individual WLAs	Section I.B.2.b
Section 2.4	Evaluation of Significant Sources of Bacteria	4. Significant sources of POC(s) from facilities of concern owned or operated by the MS4 operator that are not covered under a separate VPDES permit. A significant source of pollutant(s) from a facility of concern means a discharge where the expected pollutant loading is greater than the average pollutant loading for the land use identified in the TMDL;	Section I.B.2.d
Section 2.5	Existing and Planned Management Controls	5. Existing or new management practices, control techniques, and system design and engineering methods that have been or will be implemented as part of the MS4 Program Plan that are applicable to reducing the pollutant identified in the WLA;	Section I.B.2.b
Section 2.6	Legal Authorities	6. Legal authorities such as ordinances, state and other permits, orders, specific contract language, and inter-jurisdictional agreements applicable to reducing the POCs identified in each respective TMDL;	Section I.B.2.a
Section 2.7	Enhanced Education, Outreach, and Training	7. Enhancements to public education, outreach, and employee training programs to also promote methods to eliminate and reduce discharges of the POC(s) for which a WLA has been assigned;	Section I.B.2.c

Action Plan	Action Plan Element	DEQ Draft Local TMDL Action Plan Guidance	MS4 Permit
Section 2.8	Schedule and Milestones	8. A schedule of interim milestones and implementation of the items in 5, 6, and 7;	Section I.B.2.e
Section 2.9	Assessment of Effectiveness	9. Methods to assess TMDL Action Plans for their effectiveness in reducing the pollutants identified in the WLAs; and	Section I.B.2.e
Section 2.10	Measurable Goals	10. Measurable goals and the metrics that the permittee and Department will use to track those goals (and the milestones required by the permit). Evaluation metrics other than monitoring may be used to determine compliance with the TMDL(s).	Section I.B.2.e
Section 3	Conclusion		

2. Bacteria TMDL Action Plan

FCPS is subject to four separate TMDLs that assign WLAs for discharges of bacteria to impaired waters. The WLAs are assigned in aggregate to FCPS, Fairfax County, Arlington County, the City of Fairfax, the City of Alexandria, the City of Falls Church, the Town of Vienna, the Northern Virginia Community College, the Virginia Department of Transportation (VDOT), George Washington Memorial Parkway, and Fort Belvoir. The details of each TMDL are provided in this section.

2.1 TMDL Reports

The final bacteria TMDL reports addressed by this plan are summarized in Table 2.A. FCPS is not assigned a WLA for two other bacteria TMDLs in Fairfax County because its MS4 permit was issued subsequent to the TMDLs being approved. These two TMDLs are the *Fecal Coliform TMDL for Four Mile Run, Virginia* and the *Fecal Coliform TMDL for Accotink Creek, Fairfax County, Virginia*. Both of these TMDLs were approved by the SWCB on June 17, 2004. There is no FCPS MS4 area in the Four Mile Run watershed and the FCPS MS4 area in the Accotink Creek watershed is addressed in this action plan by virtue of it being included in the *Bacteria TMDL for the Lower Accotink Creek Watershed*.

Table 2.A – Bacteria TMDLs with WLAs Assigned to FCPS

TMDL Name	SWCB Approval	Water Name	Cause	Aggregated Wasteload Allocation (WLA)	Reduction Target
Bacteria TMDL for the Difficult Run Watershed	04/28/2009	Difficult Run; Captain Hickory Run; Little Difficult Run; Nichols Run; Snakeden Branch; Wolftrap Creek	*Escherichia coli*	9.44E+12 cfu/yr	90%
Bacteria TMDLs for the Hunting	08/04/2011	Hunting Creek	*Escherichia coli*	1.02E+14 cfu/yr	83%

TMDL Name	SWCB Approval	Water Name	Cause	Aggregated Wasteload Allocation (WLA)	Reduction Target
Creek, Cameron Run, and Holmes Run Watersheds		Cameron Run	*Escherichia coli*	9.60E+13 cfu/yr	83%
		Holmes Run	*Escherichia coli*	5.47E+13 cfu/yr	83%
Bacteria TMDL for the Lower Accotink Creek Watershed	04/28/2009	Accotink Creek; Long Branch	*Escherichia coli*	1.73E+12 cfu/yr	97%
Bacteria TMDLs for Popes Head Creek, Broad Run, Kettle Run, Little Bull Run, Bull Run and the Occoquan River	07/31/2008	Cub Run; Elklick Run; Little Rocky Run	*Escherichia coli*	7.61E+10 cfu/yr	89%
		Popes Head Creek	*Escherichia coli*	6.83E+11 cfu/yr	94%

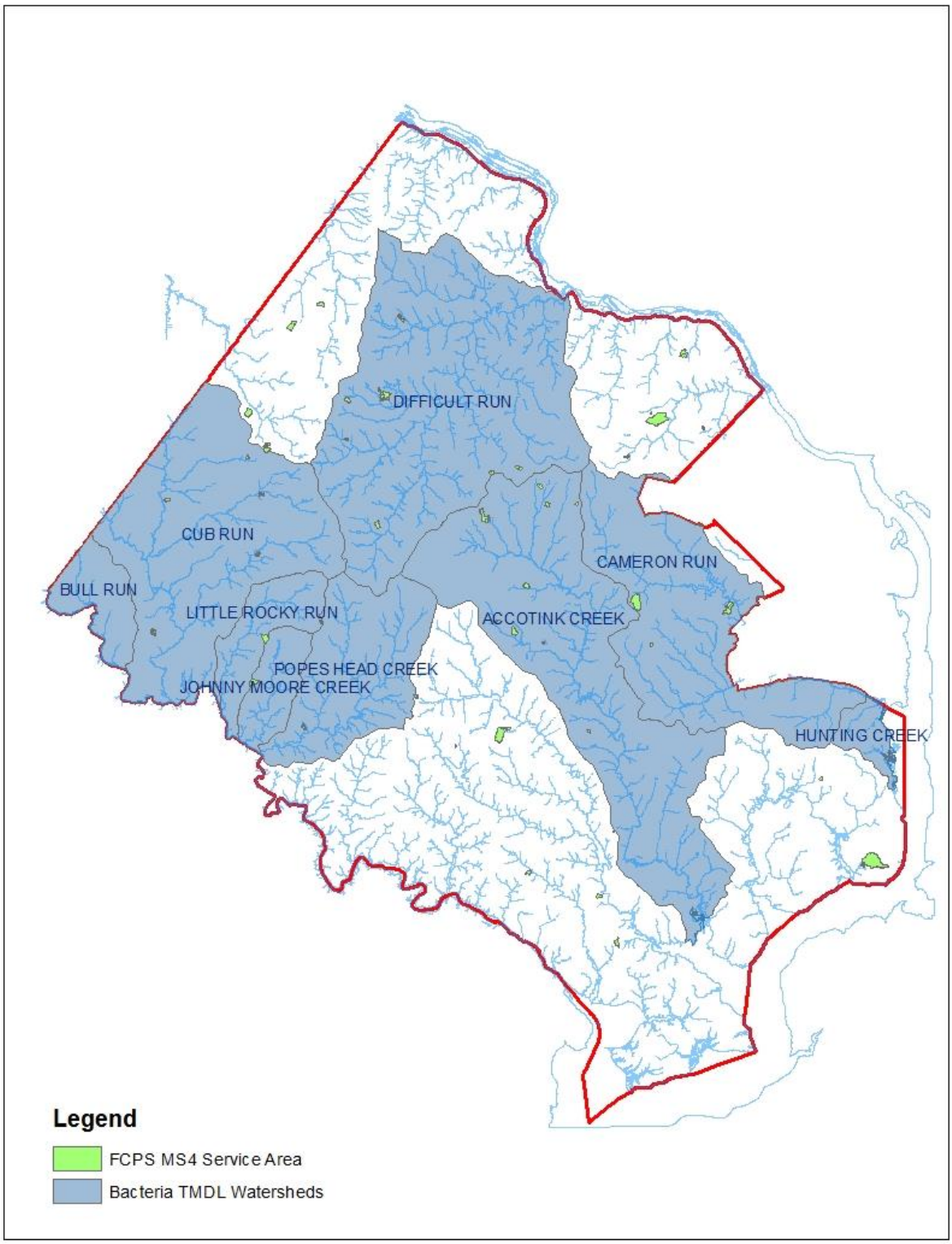
2.2 Pollutant

Stream segments in the TMDL watersheds were identified as impaired based on *E. coli* assessments. The primary sources of bacteria identified in the TMDLs for MS4s are human, pets and wildlife.

2.3 Bacteria TMDLs

This action plan applies to those areas in the FCPS regulated MS4 that drain to the areas covered under the bacteria TMDLs. The MS4 regulated area is defined in the MS4 permit as a system that discharges to waters of the state that is owned or operated by the permittee. Map 1.A shows FCPS's MS4 area and the bacteria TMDL watersheds.

Map 1.A – FCPS MS4 Service Area and Bacteria TMDL Watersheds



2.3.1 Difficult Run TMDL

The Difficult Run watershed drains approximately 37,260 acres of Fairfax County, the City of Fairfax, and the Town of Vienna. FCPS's MS4 portion of the watershed is 88 acres, or approximately 0.2%. Table 2.B shows the aggregated existing bacteria load, allocated bacteria load, and target load reduction contained in the Difficult Run TMDL.

Table 2.B – Difficult Run TMDL Aggregate Allocations to MS4s

Aggregated MS4s	Existing Bacteria Load (cfu/yr)	Allocated Bacteria Load (cfu/yr)	Reduction	Load Reduction (cfu/yr)
FCPS Fairfax County City of Fairfax Town of Vienna VDOT GW Pkwy	9.44E+13	9.44E+12	90%	8.50E+13

The TMDL examined several potential sources of bacteria within the watershed. These included permitted point sources, failed septic systems, forests, cropland, pasture, cattle through direct deposition, wildlife through direct deposition, and MS4s. The TMDL assumed that the MS4 category is comprised of urban land uses, including low, medium, and high density residential and commercial/industrial land uses. MS4s were estimated to account for approximately 80% of the baseline bacteria load, with the majority of the MS4 load being attributed to pets.

2.3.2 Hunting Creek, Cameron Run, and Holmes Run TMDL

The Hunting Creek, Cameron Run, and Holmes Run watersheds drain approximately 29,179 acres of Fairfax County, Arlington County, the City of Falls Church, and the City of Alexandria. FCPS's MS4 portion of the watershed is 113 acres, or approximately 0.4%. Table 2.C shows the aggregated existing bacteria load, allocated bacteria load, and target load reduction contained in the Hunting Creek, Cameron Run, and Holmes Run TMDL.

Table 2.C – Hunting Creek/Cameron Run/Holmes Run TMDL Aggregate Allocations to MS4s

Aggregated MS4s	Stream	Existing Bacteria Load (cfu/yr)	Allocated Bacteria Load (cfu/yr)	Reduction	Load Reduction (cfu/yr)
FCPS Fairfax County Arlington County City of Alexandria	Holmes Run	3.22E+14	5.47E+13	83%	2.67E+14
	Cameron Run	5.65E+14	9.60E+13	83%	4.69E+14

Aggregated MS4s	Stream	Existing Bacteria Load (cfu/yr)	Allocated Bacteria Load (cfu/yr)	Reduction	Load Reduction (cfu/yr)
City of Falls Church VDOT GW Pkwy	Hunting Creek	6.00E+14	1.02E+14	83%	4.98E+14

The TMDL examined several potential sources of bacteria within the watershed. These included permitted point sources, failed septic systems, sanitary sewer overflows (SSOs), wildlife through direct deposition, and MS4s. The TMDL assumed that the MS4 category is comprised of urban land uses, including low, medium, and high density residential, transportation and commercial/industrial land uses. MS4s were estimated to account for approximately 90% of the baseline bacteria load in Holmes Run and Cameron Run. In Hunting Creek, MS4s account for approximately 42% of the baseline bacteria load due to the loads contributed by the Alexandria Sanitation Authority WTP and the City of Alexandria Combined Sewer System.

2.3.3 Lower Accotink Creek TMDL

The lower Accotink Creek watershed drains approximately 30,890 acres and the lower portion of the watershed is approximately 11,395 acres. FCPS's MS4 portion of the entire watershed is 89 acres, or approximately 0.3%. Table 2.D shows the aggregated existing bacteria load, allocated bacteria load, and target load reduction contained in the Lower Accotink Creek TMDL.

Table 2.D – Lower Accotink Creek TMDL Aggregate Allocations to MS4s

Aggregated MS4s	Existing Bacteria Load (cfu/yr)	Allocated Bacteria Load (cfu/yr)	Reduction	Load Reduction (cfu/yr)
FCPS Fairfax County VDOT Northern Virginia Community Col. Fort Belvoir	5.75E+13	1.73E+12	97%	5.58E+13

The TMDL examined several potential sources of bacteria within the watershed. These included permitted facilities, human sources (septic systems and straight pipes), livestock, land application of manure and biosolids, wildlife, and pets. The TMDL assumed that the MS4 category is comprised of urban land uses, including low, medium, and high density residential and commercial/industrial land uses. MS4s were estimated to account for approximately 93% of the baseline bacteria load.

2.3.4 Bull Run and Popes Head Creek TMDL

This TMDL covers streams in a large area with 17% of the TMDL area in Fairfax County, which includes the impaired segments of Bull Run and Popes Head Creek. These streams drain approximately 50,707 acres of Fairfax County. FCPS's MS4 portion of the watershed is 108 acres, or approximately 0.2%. Table 2E shows the aggregated existing bacteria load, allocated bacteria load, and target load reduction contained in the Bull Run and Popes Head Creek TMDL.

Table 2.E – Bull Run and Popes Head Creek TMDL Aggregate Allocations to MS4s

Aggregated MS4s	Stream	Existing Bacteria Load (cfu/yr)	Allocated Bacteria Load (cfu/yr)	Reduction	Load Reduction (cfu/yr)
FCPS Fairfax County City of Fairfax VDOT	Bull Run	6.81E+11	7.61E+10	89%	6.05E+11
	Popes Head Creek	1.08E+13	6.83E+11	94%	1.01E+13

The TMDL examined several potential sources of bacteria within the watershed. These included permitted facilities, human sources (septic systems), livestock, land application of manure and biosolids, wildlife and pets. The TMDL assumed that the MS4 category is comprised of portions of all land-use based loads. The TMDL states that "loading from low density residential areas, and direct deposition from cattle and wildlife are the predominant sources of bacteria in the Bull Run watershed." It also states that "loading from the urban areas are the predominant sources of bacteria in the Popes Head Creek watershed."

All of the TMDLs address implementation with statements similar to this: "For MS4/VSMP general permits, the Commonwealth expects the permittee to specifically address the TMDL wasteload allocations for stormwater through iterative implementation of programmatic BMPs. BMP effectiveness would be determined through permittee implementation of an individual control strategy that includes a monitoring program that is sufficient to determine its BMP effectiveness." The TMDLs also say that "Virginia and EPA are not proposing the elimination of wildlife to allow for the attainment of water quality standards. This is obviously an impractical action. While managing over-populations of wildlife remains as an option to local stakeholders, the reduction of wildlife or changing a natural background condition is not the intended goal of a TMDL."

2.4 Evaluation of Significant Sources of Bacteria

The MS4 permit requires FCPS to evaluate significant sources of bacteria from facilities of concern. This is defined in the permit as "a discharge where the expected pollutant loading is greater than the average pollutant loading for the land use identified in the TMDL." As described in the TMDLs, the primary sources of bacteria assigned to MS4s in general are pet waste in the Difficult Run and Accotink Creek watersheds and pet waste and wildlife deposition assigned to land uses in the Holmes Run, Cameron Run, Hunting Creek, Bull Run, and Popes Head Creek watersheds. In addition, all human sources of bacteria are expected to be eliminated. Potential human sources to MS4s include failed septic systems (through infiltration) and sanitary sewer cross-connections.

All of the TMDLs base pet waste loads on the average number of dogs and cats per household. Since FCPS does not have households as described in the TMDL, there is no load associated with pet waste from residential sources at FCPS facilities. One potentially significant source of bacteria could be a confined pet activity area such as a dog park. However, there are no dog parks or similar activity areas located in the FCPS MS4 service area.

The wildlife population on FCPS properties is discouraged to some extent by fencing. Canada geese are common in the urban areas of Fairfax County but are not more likely to be found on an FCPS property than any other area in the County. As previously noted, the reduction of wildlife or changing natural background conditions are not the intended goals of a TMDL.

No actively-used FCPS properties within the affected MS4 area are on septic (the former Clifton Elementary School closed in 2011). Further, Fairfax County (as well as the towns of Herndon and Vienna) prohibits new septic systems when sanitary sewer is available. With regard to the sanitary sewer system, FCPS has enacted a rigorous dry weather outfall monitoring program designed to detect illicit connections (BMP 3.D of the MS4 Program Plan) and has integrated illicit discharge detection and elimination into its staff training program (BMP 3.E of the MS4 Program Plan).

The FCPS facilities listed in Table 2.F were evaluated to determine if the expected pollutant loading from these sites is greater than the average pollutant loading identified in the TMDLs. No FCPS facilities have concentrated numbers of pets or wildlife. Further, no FCPS facilities have active septic systems or have experienced cross-connections with the sanitary sewer system. As a result no FCPS facilities are expected to have a larger than average pollutant loading.

Table 2.F - FCPS Facilities Subject to Bacteria TMDLs

School	Address	TMDL Watershed
Forest Edge Elementary School	1501 Becontree Ln, Reston, VA	Difficult Run
South Lakes High School	11400 South Lakes Dr., Reston, VA	Difficult Run
Terraset Elementary School	11411 Ridge Heights Rd., Reston, VA	Difficult Run
Hughes Middle School	11401 Ridge Heights Rd., Reston, VA	Difficult Run
Hunters Woods Elementary School	2401 Colts Neck Rd., Reston, VA	Difficult Run
Crossfield Elementary School	2791 Fox Mill Rd., Herndon, VA	Difficult Run
Waples Mill Elementary School	11509 Waples Mill Rd., Oakton, VA	Difficult Run
Louise Archer Elementary School	324 Nutley St. NW, Vienna, VA	Difficult Run
Vienna Elementary School	128 Center St. S, Vienna, VA	Difficult Run
Mason Crest Elementary School	3705 Crest Drive, Annandale	Holmes Run
Glasgow Middle School	4101 Fairfax Parkway, Alexandria, VA	Holmes Run
Poe Middle School	7000 Cindy Lane, Annandale, VA	Cameron Run
Oakton High School	2900 Sutton Road, Vienna, VA	Accotink Creek
Stenwood Elementary School	2620 Gallows Road, Vienna, VA	Accotink Creek

School	Address	TMDL Watershed
Mantua Elementary School	9107 Horner Court, Fairfax, VA	Accotink Creek
Olde Creek Elementary School	9524 Old Creek Drive, Fairfax, VA	Accotink Creek
Little Run Elementary School	4511 Olley Lane, Fairfax, VA	Accotink Creek
Canterbury Woods Elementary School	4910 Willet Drive, Annandale, VA	Accotink Creek
Irving Middle School	8100 Old Keene Mill Road, Springfield, VA	Accotink Creek
Franklin Middle School	3300 Lees Corner Rd., Chantilly, VA	Bull Run
Liberty Middle School	6801 Union Mill Rd., Clifton VA	Bull Run
Westfield High School	4700 Stonecroft Blvd., Chantilly, VA	Bull Run
Centreville High School	6001 Union Mill Rd, Clifton, VA	Bull Run
Lees Corner Elementary School	13500 Hollinger Ave., Fairfax, VA	Bull Run
Bull Run Elementary School	15301 Lee Hwy., Centreville, VA	Bull Run
Poplar Tree Elementary School	13440 Melville Ln., Chantilly, VA	Bull Run
Willow Springs Elementary School	5400 Willow Springs School Rd., Fairfax, VA	Popes Head Creek
Former Clifton Elementary – Administration Center	7010 Clifton Rd., Clifton, VA	Popes Head Creek

2.5 Existing and Planned Management Controls

FCPS has in place a rigorous program aimed at preventing the discharge of pollutants from the MS4. The program is described in the FCPS's MS4 Program Plan. The program plan identifies local water quality and nonpoint source pollution as a high-priority water quality issue and contains strategies to reach at least 20% of target audiences with a pollution prevention message annually. Table 2.G summarizes FCPS's current bacteria reduction best management practices (BMPs) from the MS4 Program Plan.

Table 2.G - FCPS Current Bacteria Reduction Program

Source Document	Description	Implementation and Schedule
MS4 Program Plan BMPs 1.A, 1.B and 1.D	The purpose of these BMPs is to reduce bacteria pollution by educating students on the impacts of pet waste on water quality and the importance of picking up after pets.	FCPS has identified students as the target audience for water quality and pet waste related education. The following actions are contained in the MS4 Program Plan: • Implement the "Ecosystems" unit for all 4th graders and "Fields of Science" unit for all 5th graders annually. • 20% of 11th and 12th graders are enrolled in Environmental Science, Environmental Systems and Society, Geosystems and/or Oceanography. These courses are offered annually.

Source Document	Description	Implementation and Schedule
		• Participate in the NVRC Clean Water Partners program effort to reduce water quality impacts from bacteria caused by pet waste.
MS4 Program Plan BMP 3.B "Prohibition on Illicit Discharges"	The purpose of this BMP is to prohibit illicit discharges through policies, notices and regulations.	FCPS will continue to implement policies, notices, and directives to prohibit illicit discharges and will work with localities to enforce local ordinances related to illicit discharges as applicable.
MS4 Program Plan BMP 3.C "Written Procedures for Suspected Illicit Discharges and Dumping, and Complaint Response Tracking and Reporting"	The purpose of this BMP is to establish procedures to identify and address unauthorized discharges and illegal dumping. FCPS implements standard operating procedures, a hotline, and training under this BMP.	The following actions are contained in the MS4 Program Plan: • Beginning FY15, implement the Dry Weather Screening Standard Operating Procedures. • Continue to operate 24-hour emergency response hotline. • Beginning FY15, relevant portions of the IDDE Manual will be incorporated into field personnel training in BMP 6.E.
MS4 Program Plan BMP 3.D "Dry Weather Outfall Screening and Tracking"	The purpose of this BMP is to identify and eliminate illicit discharges as soon as possible through a dry weather outfall screening program. The program includes bacteria pollution.	The following actions are contained in the MS4 Program Plan: • Beginning FY15, perform dry weather screening on at least 50 outfalls annually.
MS4 Program Plan BMP 6.E "Training on Recognition and Reporting Illicit Discharges by Field Personnel" and 6.F "Training on Good Housekeeping and Pollution Prevention for Maintenance, Public Works and Recreational Facility Staff	The purpose of this BMP is to ensure that employees are aware of pollution prevention goals and trained to recognize and correct potential sources of pollution.	Office of Facilities Management, Office of Safety and Security, and Office of Design and Construction staff are trained in illicit discharge recognition and reporting every other year and Office of Facilities Management staff are trained in general pollution prevention every other year in accordance with the MS4 Program Plan.

In addition to the actions captured in the MS4 Program Plan, the Office of Safety and Security produces a series of fact sheets with information on environmental health issues for FCPS. These include two fact sheets related to bacteria sources (see Appendix A):

- Safety and Security Fact Sheet on the Pooper Scooper Ordinance (SAF-8)
- Safety and Security Fact Sheet on Canada Geese (SHE-21)

These fact sheets will be reviewed by FCPS to determine whether any changes are necessary to support the bacteria reduction targets in the TMDLs. FCPS will then update the fact sheets as needed. The timeline for this review is provided in Section 2.8.

2.6 Legal Authorities

FCPS has adopted an MS4 Program Plan that documents implementation of all legal authorities required to meet the "Special Conditions for TMDLs Other than the Chesapeake Bay TMDL." FCPS does not have independent enabling authority to adopt ordinances. Rather, FCPS is subject to the stormwater quality

requirements and prohibitions on illicit discharges approved by the localities where schools are located. In addition, employees and visitors on school properties are subject to local pooper scooper ordinances and their associated fines.

After review of FCPS's existing MS4 Program Plan and legal authorities, FCPS finds that no additional legal authorities are required for compliance with the "Special Conditions for TMDLs Other than the Chesapeake Bay TMDL."

2.7 Enhanced Education, Outreach, and Training

As noted in Table 2.G, FCPS has adopted a Public Education and Outreach Plan as part of its MS4 Program Plan. The plan includes specific education, outreach, and training on subjects related to the reduction of bacteria in stormwater discharges. In addition, FCPS has integrated the identification of illicit discharges, including bacteria pollution, into its staff training program. FCPS will continue to assess whether additional enhancement of education, outreach and training would be beneficial to reducing bacteria within the Difficult Run, Holmes Run, Cameron Run, Hunting Creek, Accotink Creek, Bull Run and Popes Head Creek watersheds.

2.8 Schedule and Milestones

This Bacteria TMDL Action Plan will be implemented in accordance with the following schedule and milestones.

Table 2.H – Schedule and Milestones

Implementation Item	Description	Schedule and Milestones
MS4 Program Plan	FCPS will continue to implement the MS4 Program Plan, including elements related to bacteria.	Implement in accordance with permit schedule.
Review of Safety and Security Fact Sheets on Pooper Scooper Ordinance and Canada Geese	FCPS will review the fact sheets to ensure that they are up to date and provide direction to staff on ways to reduce bacteria pollution.	The fact sheets will be reviewed by the end of FY17 and revised, as needed, by the end of FY18.

2.9 Assessment of Effectiveness

Unlike structural stormwater management controls, the practices put in place to reduce bacteria pollution do not have assigned reduction efficiencies. Further, ambient in-stream water quality monitoring programs, while effective at measuring overall progress toward bacteria reduction targets, are not appropriate indicators of MS4 permit compliance.

The effectiveness of public education and outreach measures will be assessed based on progress toward meeting the goal of reaching 20% of target audiences annually as described in the MS4 Program Plan. In addition, FCPS will utilize annual surveys conducted by the Clean Water Partners program to assess the overall effectiveness of regional public education and outreach efforts.

All assessment measures will be reported annually to DEQ in each MS4 permit annual report and used to update the MS4 Program Plan as appropriate.

2.10 Measurable Goals

In accordance with Table 2.H, the following measurable goals will be met under this plan:

- FCPS will continue to implement its MS4 program per the MS4 Program Plan schedule.
- FCPS will review the Safety and Security Fact Sheets on the Pooper Scooper Ordinance and Canada Geese by June 30, 2017 and revise, as needed, by June 30, 2018.

3. Conclusion

This Bacteria TMDL Action Plan was prepared to address bacteria WLAs assigned to FCPS under the Difficult Run, Holmes Run, Cameron Run, Hunting Creek, Accotink Creek, Bull Run, and Popes Head Creek bacteria TMDLs. This action plan was prepared in accordance with draft guidance for local TMDL action plans developed by DEQ. Upon termination of the FCPS MS4 permit by DEQ, this action plan will be superseded by the Fairfax County Bacteria TMDL Action Plan.

Appendix A

Safety and Security Fact Sheets

Pooper Scooper Ordinance Enforcing Health Notice Signs

SAF-8
REV-05/07

Safety & Security Fact Sheet

✓ *WHAT YOU NEED TO KNOW AND WHAT YOU SHOULD DO ABOUT ENFORCING THE POOPER SCOOPER ORDINANCE*

Can citizens really be prohibited from bringing their dogs onto school property since these are public grounds?

*The answer is **YES**. There are three county ordinances that can help you "curb" the problem of unwanted animals on school grounds. They are:*

1. ***Section 41.1-2-15 - Permitting animals to trespass***
   This section prohibits trespassing by animals. It states that no pet owner shall permit their animal to trespass on another' premises after being requested by the owner or tenant of the property not to let the animal come on the premises. Our health notice signs ask pet owners not to bring their animals onto school property.

2. ***Section 41.1-2-4 - Unrestricted dogs prohibited: leash law***

   No dog is allowed to run unrestricted in the County. If there is an unleashed dog on your school grounds, call the Animal Warden to remove the dog. Exceptions to this would be animals that are under direct supervision while hunting (but not on school property), engaged in a formal obedience training class, or during formally sanctioned field trials.

3. ***Section 41.1-2-6 Animals causing unsanitary conditions***

   Requires the owner of a dog to remove their dogs excreted deposits from the property of another, including school grounds. If an owner and their dog come onto school property, ask them to take their dogs "deposits" with them as they leave.

If you need assistance, call the safety section at 571-423-2010 or the animal warden at 703-830-3310.

SEH- 21
Rev 4/15

CANADA GEESE

Office of Safety and Security Fact Sheet

- **WHAT ARE CANADA GEESE?**
  Historically, Canada geese (*Branta canadensis*) migrated through the eastern United States from breeding grounds in Canada to wintering habitats in the southern states. These migratory waterfowl are protected from harm by the Migratory Bird Treaty Act of 1918. The Canada geese that do not migrate, but instead remain in Virginia year-round, are referred to as "local breeding" or "resident" Canada geese. Since these are no longer migratory birds, and have become a nuisance on playgrounds and golf courses, some would argue that they no longer deserve regulatory protection. Nevertheless, they remain on the protected species list, and harming them continues to be a punishable offense except under the conditions of a permit issued by the regulatory authority. Harmless harassment, however, is not prohibited.
- **WHAT CAN BE DONE TO CHASE AWAY RESIDENT CANADA GEESE OR TO DISCOURAGE THEIR GRAZING OR NESTING?**
  The Canada geese have so completely adapted to their new sedentary existence that they have learned to ignore the various means employed to chase them away. Not even boisterous children playing will move them. Barriers and other exclusion methods such as fencing, hedgerows, or wire grids are effective in preventing their landing and grazing, but these methods are not consistent with school property use.
- **WHAT IF GEESE ARE NESTING AND CAUSING SAFETY CONCERNS FOR FCPS STUDENTS AND STAFF?**
  Because they are very protective of their nesting sites, nesting geese can be very aggressive to anyone in the vicinity of their nest, even if unprovoked. If you witness geese nesting in an area where students or staff commonly pass by or occupy, call the Safety Office at 571-423-2010.
- **WHAT ABOUT TRAPPING AND REMOVING THE GEESE TO ANOTHER LOCATION?**
  Trapping and transporting is not cost-effective. A cooperative cost-share capture and removal program is provided by federal and state agencies. However, captured Canada geese are not relocated to alleviate damage or conflicts with humans because Canada geese cause damage or conflicts statewide. Federal and state agencies understandably do not wish to transfer the nuisance from one locality to another. *Instead, captured Canada geese are processed by a meat processor and donated to food banks to feed people in need*. Public opinion would not likely tolerate this method of control.
- **WHY CAN'T DOGS BE USED TO CHASE THE GEESE AWAY?**
  Allowing dogs to run loose on school property would be in violation of the Fairfax County leash law, though the use of free-ranging dogs trained to chase birds soon after landing has been demonstrated to be an effective control measure. The use of slip wires to control the dogs will restrict their movement, allowing the geese to simply move beyond their reach.
- **OK! SO, WE'RE NOT GOING TO GET RID OF THEM. WHAT CAN BE DONE TO MINIMIZE THE ADVERSE EFFECT OF GEESE ON SCHOOL PLAYGROUNDS?**

  ✓ Discourage the feeding of geese on school property by posting signs saying Keep "wild" in wildlife. Feeding ducks and geese is prohibited. Posting reminders in school publications may also be helpful.
  ✓ Inspect the playground for fresh droppings immediately before use to determine where the geese have been most recently grazing. Fresh droppings are green and squishy; day-old or older droppings are brown, dried, and not as messy. Instruct the children to avoid the playground areas where fresh droppings may be present.
  ✓ Use a garden hose to rinse droppings from walkways near building exits before children are allowed to go outdoors.
  ✓ Place walk-off mats inside the doors to be entered from the playground. Instruct children to wipe the bottoms of their shoes carefully and have teachers check the bottoms of the children's shoes as they step from the walk-off mat.
  ✓ Instruct children to wash their hands carefully after playing on the playground.

If you need assistance, call the Safety Section at 571-423-2010.