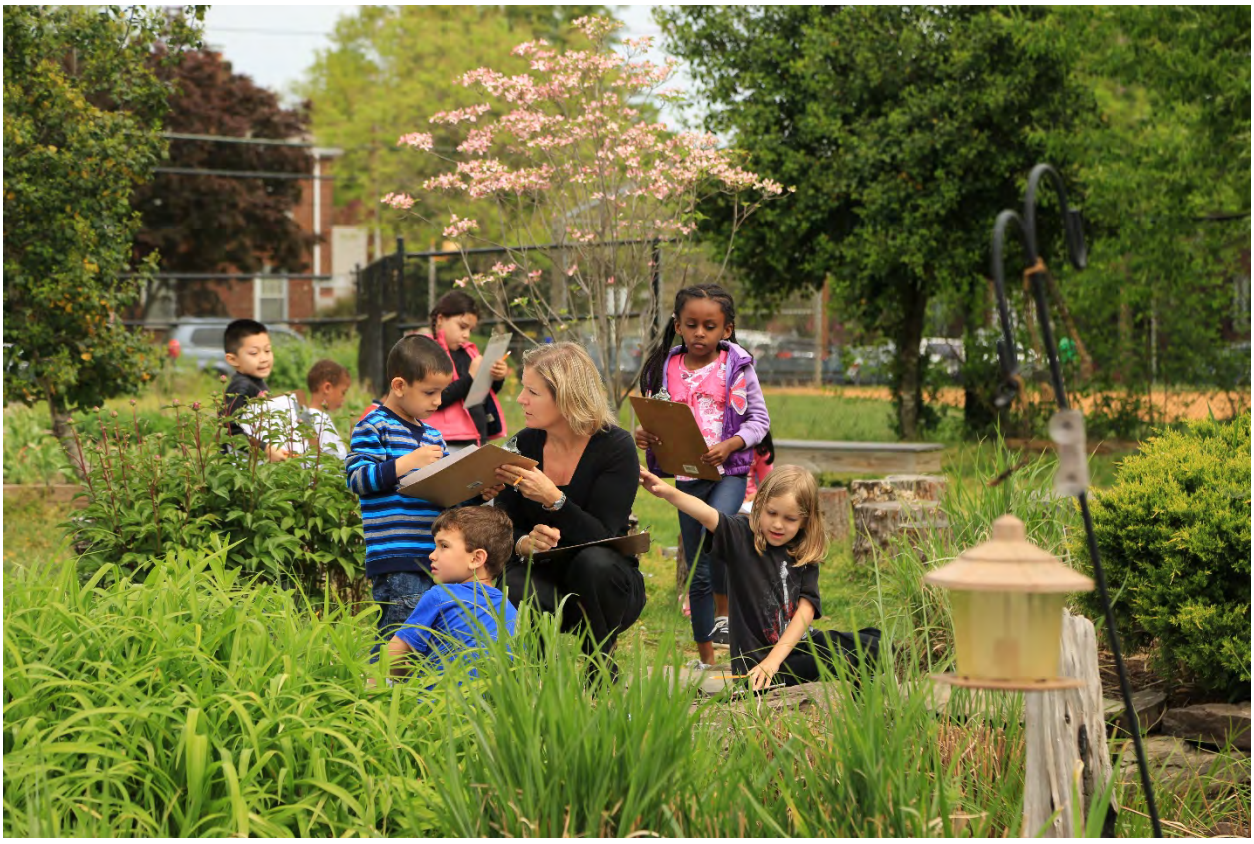
ARLINGTON PUBLIC SCHOOLS 2018 PHASE II (SMALL) MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) ANNUAL REPORT



Fiscal Year 2018 Annual Report
Virginia Stormwater Management Program (VSMP)
Permit Number VAR040127
2014 - 2018 Permit Cycle
Submitted September 30, 2018

Arlington Public Schools

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Introduction and Background Information

Arlington Public Schools (APS) Department of Facilities and Operations prepared this annual report for our Phase II (small) Municipal Separate Storm Sewer System (MS4) permit number VAR040127, issued on April 18, 2014. This report covers the period of July 1, 2017, through June 30, 2018. For this reporting period, there are no modifications to any operator's department's roles and responsibilities. In this reporting period, the acreages for various schools have been corrected based on property exchanges with Arlington County regarding right of ways and boundaries. There are no new MS4 outfalls or associated acreage by HUC added, and there were no changes to measurable goals for any minimal control measures. Table 1 lists all APS properties, their size, and the watershed in which they lie.

#	FACILITY	ADDRESS	WATER BODY	HYDROLOGIC UNIT CODE	ACRES
1	Abingdon Elementary School	3035 South Abingdon Street Arlington, VA 22206	Potomac River - Four Mile Run	PL25	9.02
2	Arlington Career Center	816 South Walter Reed Drive Arlington, VA 22204	Potomac River - Four Mile Run	PL25	7.87
3	Arlington Science Focus Elementary School	1501 North Lincoln Street Arlington, VA 22201	Potomac River - Pimmit Run	PL24	6.37
4	Arlington Traditional Elementary School	855 North Edison Street Arlington, VA 22205	Potomac River - Four Mile Run	PL25	7.82
5	Ashlawn Elementary School	5950 North 8th Road Arlington, VA 22205	Potomac River - Four Mile Run	PL25	6.92
6	Barcroft Elementary School	625 South Wakefield Street Arlington, VA 22204	Potomac River - Four Mile Run	PL25	5.12
7	Barrett Elementary School	4401 North Henderson Road Arlington, VA 22203	Potomac River - Four Mile Run	PL25	4.92
8	Campbell Elementary School	737 South Carlin Springs Road Arlington, VA 22204	Potomac River - Four Mile Run	PL25	8.48
9	Carlin Springs Elementary School	5995 South 5th Road Arlington, VA 22204	Potomac River - Four Mile Run	PL25	7.78
10	Claremont Elementary School	4700 South Chesterfield Road Arlington, VA 22206	Potomac River - Four Mile Run	PL25	14.79
11	Discovery Elementary School	5241 North 36th Street Arlington, VA 22207	Potomac River - Pimmit Run	PL24	10.01
12	Drew Elementary School	3500 South 23rd Street Arlington, VA 22206	Potomac River - Four Mile Run	PL25	7.81
13	Glebe Elementary School	1770 North Glebe Road Arlington, VA 22207	Potomac River - Four Mile Run	PL25	7
14	Gunston Middle School	2700 South Lang Street Arlington, VA 22206	Potomac River - Four Mile Run	PL25	19.66

#	FACILITY	ADDRESS	WATER BODY	HYDROLOGIC UNIT CODE	ACRES
15	H-B Woodlawn Secondary Program	4100 North Vacation Lane Arlington, VA 22207	Potomac River - Pimmit Run	PL24	9.08
16	Patrick Henry Elementary School	701 South Highland Street Arlington, VA 22204	Four Mile Run - Pimmit Run	PL25	4.78
17	Hoffman-Boston Elementary School	1415 South Queen Street Arlington, VA 22204	Potomac River - Four Mile Run	PL25	8.6
18	Jamestown Elementary School	3700 North Delaware Street Arlington, VA 22207	Potomac River - Pimmit Run	PL24	10.15
19	Jefferson Middle School	125 South Old Glebe Road Arlington, VA 22204	Potomac River - Four Mile Run	PL25	8.62
20	Kenmore Middle School	200 South Carlin Springs Road Arlington, VA 22204	Potomac River - Four Mile Run	PL25	23.09
21	Key Elementary School	2300 Key Boulevard Arlington, VA 22201	Potomac River - Pimmit Run	PL24	4.76
22	Langston High School Continuation Program	2121 North Culpepper Street Arlington, VA 22207	Potomac River - Four Mile Run	PL25	2.53
23	Long Branch Elementary School	33 North Filmore Street Arlington, VA 22201	Potomac River - Pimmit Run	PL24	2.51
24	McKinley Elementary School	1030 North McKinley Road Arlington, VA 22205	Potomac River - Four Mile Run	PL25	7.15
25	Nottingham Elementary School	5900 North Little Falls Road Arlington, VA 22207	Potomac River - Pimmit Run	PL24	8.93
26	Oakridge Elementary School	1414 South 24th Street Arlington, VA 22202	Potomac River - Four Mile Run	PL25	8.08
27	Randolph Elementary School	1306 South Quincy Street Arlington, VA 22204	Potomac River - Four Mile Run	PL25	6.91
28	Reed-Westover	1644 North McKinley Road Arlington, VA 22205	Potomac River - Four Mile Run	PL25	8.51
29	Swanson Middle School	5800 North Washington Blvd Arlington, VA 22205	Potomac River - Four Mile Run	PL25	6.71
30	Taylor Elementary School	2600 North Stuart Street Arlington, VA 22207	Potomac River - Pimmit Run	PL24	9.70
31	The Trade Center	2770 South Taylor Street Arlington, VA 22206	Potomac River - Four Mile Run	PL25	5.95
32	Tuckahoe Elementary School	6550 North 26th Street Arlington, VA 22213	Potomac River - Four Mile Run	PL25	4.68
33	Vacant Residential Lot	5721 South 4th Street, Arlington VA 22204	Potomac River - Four Mile Run	PL25	0.13

#	FACILITY	ADDRESS	WATER BODY	HYDROLOGIC UNIT CODE	ACRES
34	Wakefield High School	1325 South Dinwiddie Street Arlington, VA 22206	Potomac River - Four Mile Run	PL25	34.79
35	Washington-Lee High School	1301 North Stafford Street Arlington, VA 22201	Potomac River - Pimmit Run	PL24	22.61
36	Williamsburg Middle School	3600 North Harrison Street Arlington, VA 22207	Potomac River - Pimmit Run	PL24	15.05
37	Wilson School	1601 Wilson Boulevard Arlington, VA 22201	Potomac River - Pimmit Run	PL24	2.70
38	Yorktown High School	5200 Yorktown Boulevard Arlington, VA 22207	Potomac River - Pimmit Run	PL24	10.84
TOTAL APS PROPERTY ACREAGE:					**350.43**

Table 1 - Arlington Public School Properties and Respective Receiving Watershed

The reporting elements in this annual report follow the information provided in APS' initial MS4 Program Plan submitted with the permit registration statement and with the Program Plan updated in 2018. Background and detailed information about APS' stormwater and watershed management program are found on the APS Stormwater Management website[1]. APS has paid the Phase II MS4 annual permit maintenance fee for permit number VAR040127 by check number 8028034 dated 9/07/18. Table 2 identifies a list of agency acronyms used throughout this report.

Agency	Acronym
Arlington County Fire Department	ACFD
Arlington County Government	ACG
Arlington County Police Department	ACPD
Arlington Public Schools	APS
Arlington County Department of Parks and Recreation	DPR
Arlington County Department of Environmental Services	DES
Virginia Department of Environmental Quality	DEQ

Table 2 - Agency Acronyms

There were no changes to measurable goals for any minimal control measures. Progress toward goals is documented in the following sections of this Annual Report. As explained in Section 4 (MCM 5) of this report, a separate spreadsheet listing the BMPs installed during the associated reporting period (July 1, 2017 - June 30, 2018) has been submitted along with this Annual Report.

[1] https://www.apsva.us/aps-goes-green/stormwater-management-program/

1. Local TMDL and Chesapeake Bay TMDL

For this reporting period, no local TMDL waste load allocations (WLAs) have been assigned to APS. APS shall continue to monitor updates to Local TMDLs for WLAs.

During this reporting period, APS submitted its registration application for the next permit cycle, July 1, 2018 through June 30, 2023. The registration application included a draft Chesapeake Bay TMDL Action Plan to address 40% reductions at the end of the next permit cycle. The action plan included a list of existing control measures, proposed control measures, and identified an agreement for Chesapeake Bay Nutrient Credits with Arlington County's Waste Water Treatment Plant (in progress) to meet the 40% nutrient reduction requirement. The following table provides the cumulative progress toward meeting the compliance targets for TN, TP, and TSS based on BMPs installed 2009-17[2], and DEQ-approved historic BMPs installed 2006-09.

Progress Toward Compliance Targets for Control Measures Implemented to Date (2006-Present)			
Control Measures Implemented	**Estimated Pollutant Reduction (lbs/yr)**		
	TN	**TP**	**TSS**
BMPs Installed 2009-2017	1.86	0.18	136.84
2006-2009 Historic BMPs	11.58	0.92	955.15
Total Pollutant Reduction Credits to Date	**13.44**	**1.10**	**1091.99**
40% Compliance Targets	130.28	16.64	14,162.23
Remaining Reduction Required to Meet 40% Compliance Targets	**116.84**	**15.54**	**13,070.24**

Table 3 - Progress Toward Compliance Targets

The following list identifies control measures that are expected to be implemented during the next reporting period to demonstrate additional progress toward meeting the 40% compliance targets:

- Eight (8) permeable pavement locations at Abingdon Elementary School;
- Five (5) planter boxes meeting design criteria for Bioretention #1 at Abingdon Elementary School;
- Four (4) bioretention areas meeting design criteria for Bioretention #2 at Abingdon Elementary School; and
- Arlington County's Waste Water Treatment Plant Nutrient Credits.

[2] BMPs installed as of the date that the Draft 40% Chesapeake Bay TMDL Action Plan was submitted to DEQ with the registration statement for application for coverage under the 2018-23 Small MS4 Permit.

2. Public Education and Outreach on Stormwater Impacts (MCM 1) & Public Involvement and Participation (MCM 2)

For this reporting period, APS has a student population of 26,941 and a full-time equivalent (FTE) staff population of approximately 5,000.

APS' three priority issues for outreach and education are: using techniques that keep water onsite and or reduce imperviousness; litter prevention; and the importance of native plans for preventing soil erosion. In this reporting period, APS educated and involved more than 20% of their target audience which include students, teachers, and other non-teaching staff on issues and or in events related to the reduction of stormwater pollution and the three priority issues.

High priority APS staff have been identified to include our maintenance, custodial, and transportation staff. These staff members participate annually in our stormwater training.

Table 4 summarizes by priority issue, the corresponding educational program, the corresponding standards of learning for students, its target audience, the estimated number of students and staff educated or that participated in an education initiative, and the estimated percentage of engagement. Following the table is a summary of each APS education and participation initiative.

Issue	Corresponding Program	Corresponding SOLs	Target Audience	Estimated Number of Students and Staff Reached	Estimated Percentage of Student and Staff Engagement
Reduce Imperviousness / Keep Water on Site	NOAA Chesapeake B-WET Program	K.5b; K.11c; 1.8a-b; 3.6d; 3.9a-e; 4.5f; 4.9a; 6.1, 6.5e-f; 6.7a; 6.7f; 6.9a; 6.9c-d; LS.1, LS.6a-c; LS.9, LS.10, LS.11, ES.1, ES.2, ES.6, ES8c-e; BIO.1, BIO.2, BIO.6, BIO.7, BIO.8	Students, Teachers – Year 2	1820	> 20%
	Wetlands Learning Lab		Students, Teachers	448	
	Outdoor Lab		Students, Teachers	7,307	
	Meaningful Watershed Education Experience (MWEE) – Middle School		Students, Teachers	1,800	
	Green Scene		Students, Staff, Community	1,250	
	Sustainability Liaisons		Students, Staff	750	
	Stormwater Pollution Prevention Plan (SWPPP) Training	NA	Staff	296	

Issue	Corresponding Program	Corresponding SOLs	Target Audience	Estimated Number of Students and Staff Reached	Estimated Percentage of Student and Staff Engagement
Litter Prevention	Meaningful Watershed Education Experience (MWEE) – Middle School	1.8b-c; 3.10a-b; 3.10d; 4.5f; 5.7g; 6.7a; 6.9b-c; LS.6a-c; LS11d-e; ES8d; BIO8d	Students, Teachers	1,800	> 20%
	Green Scene		Students, Staff, Community	1,250	
	Outdoor Lab		Students, Teachers	7,307	
	Sustainability Liaisons		Students, Staff	750	
	SWPPP Training	N/A	APS Staff	296	
Native Plants for Erosion Control	NOAA Chesapeake B-WET Program	K.5b; K.11c; 1.8a-b; 3.6d; 3.9a-e; 4.5f; 4.9a; 6.1, 6.5e-f; 6.7a; 6.7f; 6.9a; 6.9c-d; LS.1, LS.6a-c; LS.9, LS.10, LS.11, ES.1, ES.2, ES.6, ES8c-e; BIO.1, BIO.2, BIO.6, BIO.7, BIO.8	Students, Teachers – Year 2	1820	> 20%
	Outdoor Lab		Students, Teachers	7,307	
	Meaningful Watershed Education Experience (MWEE) – Middle School			1,800	
	Native Habitats and Outdoor Learning Environments		Students, Teachers	700	
	Wetlands Learning Lab		Students, Teachers	448	
	Sustainability Liaisons		Students, Staff	750	
	Green Scene		Students, Staff, Community	1,250	

Table 4 - Programs and Engagement

NOAA Chesapeake Bay B WET Program: Sustainable Solutions for Urban Stormwater Management through Project Base Learning (MCMs 1 and 2)

The National Oceanic and Atmospheric Administration (NOAA) Bay Watershed Education and Training (B-Wet) program provides local grants to K-12 districts in the Bay Watershed to focus on project based learning through Meaningful Watershed Educational Experiences (MWEE). APS is in the second of a three-year grant for its proposal on Sustainable Solutions for Urban Stormwater Management through Project Based Learning. The goal for this program is to provide all high school biology students with a comprehensive understanding of how stormwater runoff affects the local watersheds and to assist students in developing solutions through project based learning.

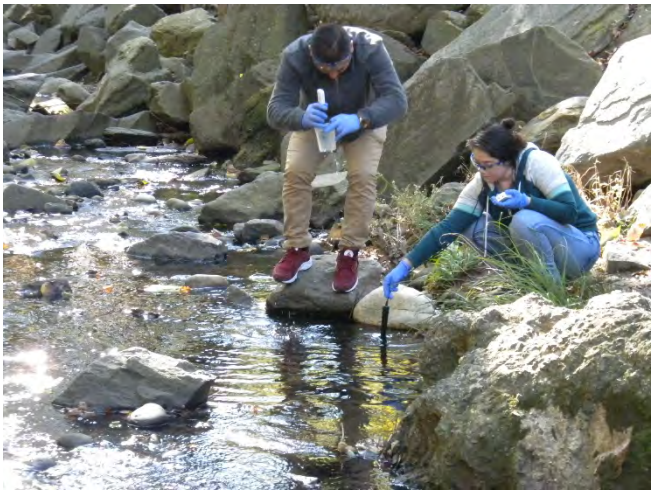

Figure 1 - Arlington Community High School Stream Study

The project seeks to accomplish the following objectives:

- By July 2019, 5,400 students and 50 teachers will engage in MWEE;
- By July 2019, pollutants discharged in local streams will be significantly reduced;
- 1,800 students per grant year will gain a comprehensive understanding of stormwater management, watershed stewardship, and human impacts to the environment; and
- Six APS high schools and secondary schools will participate in the NWF Eco-Schools USA program and address the Watersheds, Oceans, and Wetlands Pathways, making them eligible for the Eco-Schools USA Silver award level.

Wetlands Learning Lab (MCMs 1 and 2)

Campbell Elementary School takes advantage of a unique opportunity to expand its hands-on, inquiry-based approach to education by converting a wet and swampy area of their schoolyard into a Wetlands Learning Lab[3]. Overflow from a wetlands spring goes into a dry stream leading to a rain garden and then into a 60x20 foot vegetated bioswale. The bioswale collects ground water from the natural seeps that occur throughout the area. All the students and staff at Campbell are engaged in the wetlands learning lab.

[3] http://campbellschool.org/campbell-outdoor-classroom/

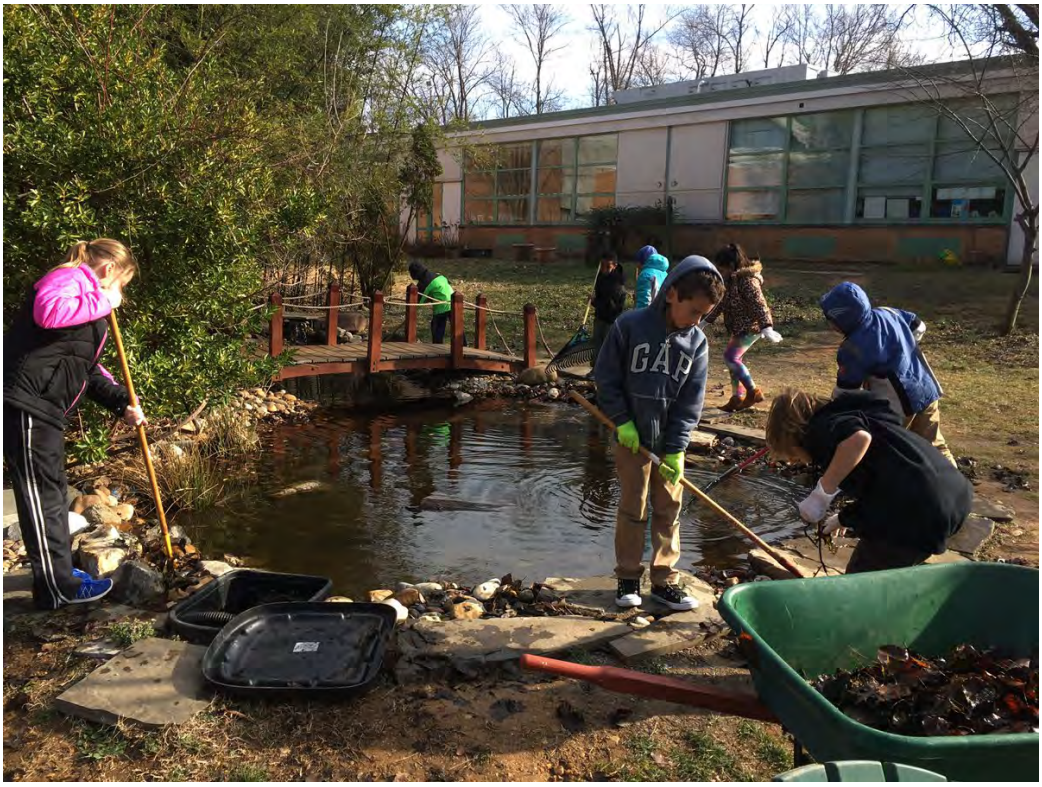

Figure 2 - Campbell Elementary Wetlands Learning Lab

Outdoor Lab (MCMs 1 and 2)

The Phoebe Hall Knipling Outdoor Laboratory, located in Fauquier County, is a 210-acre property, owned by the Arlington Outdoor Education Association (AOEA) and leased by APS. The Outdoor Lab is made available to APS as an outdoor science laboratory during the academic year and as an environmental education camp for three weeks each summer. APS provides instruction, financial, and staff support to maintain the Outdoor Lab. Appendix A lists the Outdoor Lab schedule for this reporting period and for next year.

The 2017 - 18 school year included 7,019 students and 288 staff scheduled for day or overnight visits for specific learning activities. Programs conducted at the laboratory are aligned to grade level science curriculum[4] from grade 3 through grade 12. Students learn how their decisions and behavior affect other living things. As they acquire knowledge and understanding from and about the environment, students develop competence in evaluating alternatives for using and managing resources.

[4] http://www.outdoorlab.org/education

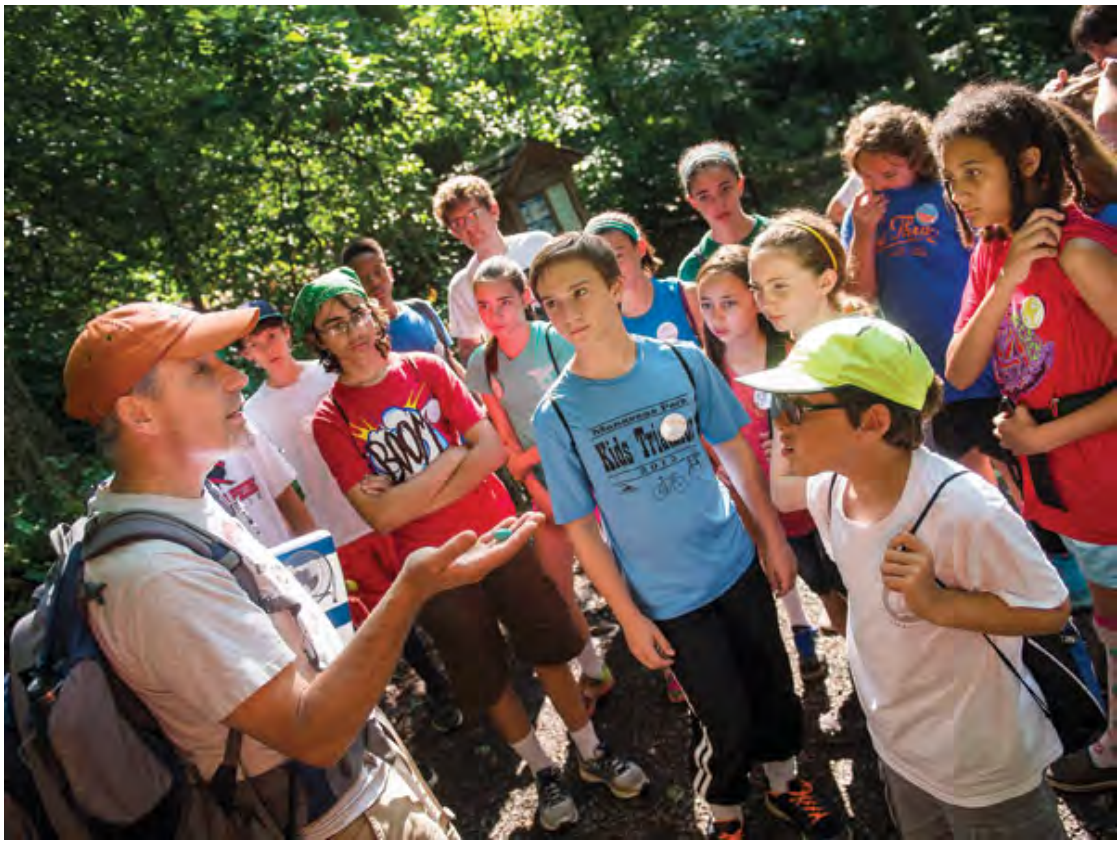

Figure 3 - Students Visit the Outdoor Lab

Relevant curriculum for 5th grade[5] overnight trips incudes a stream study in which students catch aquatic animals and assess water quality. High school curriculum[6] includes field comparison of biotic and abiotic components in aquatic habitats (pond vs. stream) and terrestrial habitats (forest vs. meadow).

Figures 4 - 6 summarize the elementary, middle, and high school students and staff that received watershed education at the Outdoor Lab.

[5] http://outdoorlab.org/education/fifth
[6] http://outdoorlab.org/education/hs

Elementary School	Grade 3 Students	Grade 5 Students	Totals Students	Staff
Abingdon	98	107	205	8
Arlington Science Focus	115	105	220	9
Arlington Traditional	72	95	167	7
Ashlawn	140	95	235	9
Barcroft	70	69	139	6
Barrett	76	97	173	7
Campbell	62	56	118	5
Carlin Springs	86	95	181	7
Claremont	113	104	217	9
Discovery	83	119	202	8
Drew Model	95	81	176	7
Glebe	95	112	207	8
Hoffman-Boston	60	64	124	5
Jamestown	108	90	198	8
Key	119	87	206	8
Long Branch	94	76	170	7
McKinley	132	145	277	11
Nottingham	83	75	158	6
Oakridge	134	124	258	10
Patrick Henry	100	85	185	7
Randolph	70	74	144	6
Taylor	112	116	228	9
Tuckahoe	85	93	178	7
Grand Total	**2202**	**2164**	**4366**	**175**

Figure 4 - APS Elementary School Students and Staff 2017-18 participation at the Outdoor Lab

Middle School	Grade	Students	Staff
Gunston	7	333	13
H-B Woodlawn	7	84	3
Jefferson	7	368	15
Kenmore	7	307	12
Swanson	7	428	17
Williamsburg	7	449	18
Grand Total		**1,969**	**79**

Figure 5 - APS Middle School Students and Staff 2017-18 participation at the Outdoor Lab

School	Grades	Students	staff
H-B Woodlawn	various	75	3
Wakefield	various	100	3
Washington-Lee	various	100	3
Yorktown	various	100	3
Arlington Community	various	100	4
Career Center	various	75	3
Langston	various	61	2
New Directions	various	25	1
Stratford Program	various	48	12
Grand Total		**684**	**34**

Figure 6 - APS High School Students and Staff 2017-18 participation at the Outdoor Lab

Meaningful Watershed Education Experience (MCMs 1 and 2)

A Meaningful Watershed Education Experience (MWEE) integrates field work in the Chesapeake Bay watershed with multidisciplinary classroom activities and instruction. Students then share their discoveries within their schools and communities, both orally and in writing. MWEEs have an intentional connection to the watershed. Experiences focus not only on the Chesapeake Bay, rivers, and streams, but also on terrestrial issues such as native plant species, erosion control, buffer creation, groundwater protection, and pollution prevention.

APS partners with several local and outside organizations to provide support and educational materials to support our MWEE in our middle school curriculum. Our partners include EcoAction Arlington, Bay Backpack, the Chesapeake Bay Program, and Earth Force. Our partners support our teachers as they create projects and curriculum for our students to put them in the driver's seat towards creating sustainable solutions.

APS Green Scene (MCM 1)

Green Scene[7] is an APS produced outreach program that highlights sustainability efforts throughout our school district. Many of the videos produced every year focus on projects our students and staff are working on or participating in that emphasize the importance of our watershed, litter reduction, and native plant species. Green Scene highlights our students' Meaningful Watershed Education Experience, native outdoor learning environments and gardens, and the Chesapeake Bay. Green Scene is produced by the Arlington Educational Television Department (AETV) in cooperation with APS' Department of School and Community Relations.

[7] https://www.apsva.us/aps-green-scene/

Native Habitats and Outdoor Learning Environments (MCMs 1 and 2)

Most of our elementary schools have outdoor gardens or outdoor learning environments that include native plant species as part of their elementary curriculum. One example is Tuckahoe Elementary's Discovery School Yard[8]. Another elementary school, Arlington Traditional, uses curriculum[9] from the Virginia Master Gardener program to teach students about native species and environmental conservation.

Many of our schools have rain gardens and other stormwater detention facilities that have been incorporated into a school's instruction. Figure 4 shows Henry Elementary students composting in their garden.

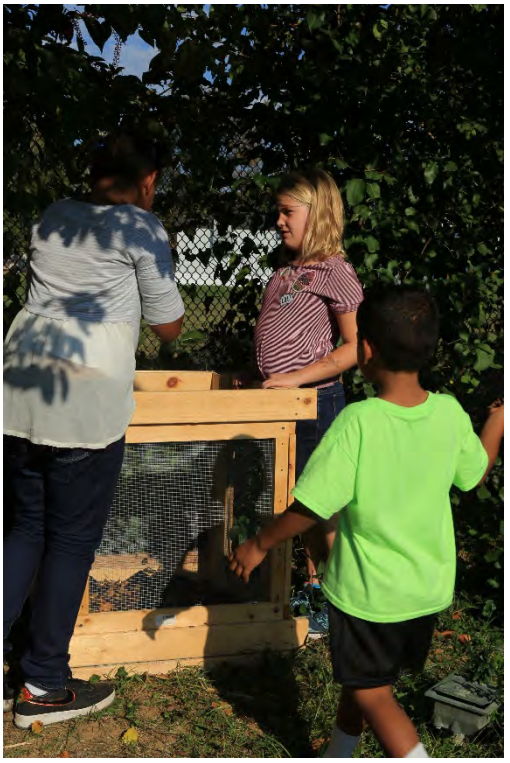

Figure 7 - Henry Elementary Outdoor Learning

Sustainability Liaisons (MCMs 1 and 2)

APS launched a sustainability liaison pilot program in 2016-17 on the recommendation of its Superintendent's Advisory Committee on Sustainability. The sustainability liaisons are school-based stipend positions that support and coordinate sustainability efforts at their school. The goals for these liaisons are to facilitate communication for APS' sustainability efforts, support stormwater initiatives especially in outreach and education, and support all learners with sustainability activities that address the well-being of the "whole child", a school board top priority.

In our second year, we had seventeen (17) liaisons supporting fifteen (15) schools. Sustainability projects and outreach efforts include:

- growing plants from seedlings,
- investigating erosion and projects to mitigate erosion,
- reducing single use plastic bottles,
- starting a 4H Junior Masters After School Club,
- teaching the importance of honeybees and our students impact on their community,
- teaching students the importance of reducing trash and promoting recycling,
- learning about composting, and
- promoting alternative modes of transportation to reduce our air pollution and showing our students how air pollution negatively impacts people, plants, and animals in our watershed.

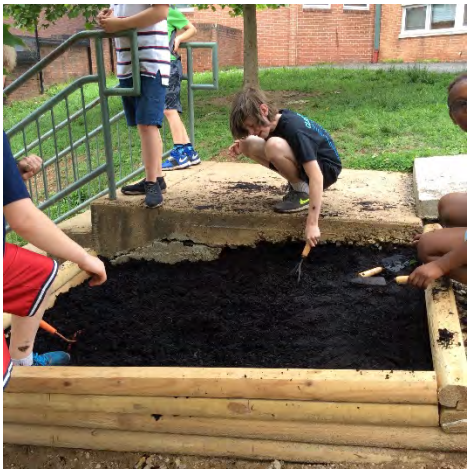

Figure 8 - Oakridge Elementary Erosion Project

[8] https://tuckahoe.apsva.us/discovery-schoolyard/
[9] http://www.ext.vt.edu/topics/lawn-garden/master-gardener/index.html

Stormwater Pollution Prevention Plan (SWPPP) Training for Staff (MCMs 1 and 2)

For this reporting period, APS has trained the staff on the following procedures:

- August 2017: "Stormwater Pollution Prevention." 190 bus drivers and attendants and 50 custodial supervisors were trained on the connection between stormwater pollution and stream water quality and health both for local streams and the Chesapeake Bay. This included regulatory requirements and context, authorized discharges, IDDE, good housekeeping practices, spill reporting, and other requirements of the Phase II MS4 permit, and included excellent visual representations of stormwater pollution.

- September 2017: "Stormwater Pollution Prevention." 56 Facilities and Operations Personnel were trained on the connection between stormwater pollution and stream water quality and health both for local streams and the Chesapeake Bay. This included regulatory requirements and context, authorized discharges, IDDE, good housekeeping practices, spill reporting, and other requirements of the Phase II MS4 permit, and included excellent visual representations of stormwater pollution.

The 2018-19 School Year Education and Outreach Programs and Public Involvement and Participation (MCM 1 and MCM2)

For our next 12-month reporting period, APS intends to continue its current programs. We will work with our partners on expanding curriculum to meet our three priority areas with the goal of reaching over 20% of our population in each priority area. We will continue to implement the Sustainable Solutions for Urban Stormwater Management through Project-Based Learning for grade 9 students, participating middle school grades 6-7, and some earth science and environmental science classes. Table 7 lists all the programs we plan for the next 12-month reporting period.

Issue	Corresponding Program	Target Audience	Estimated Number of Students and Staff Reached	Estimated Percentage of Student and Staff Engagement
Reduce Imperviousness / Keep Water on Site	NOAA Chesapeake B-WET Program	Students, Teachers	1861 students and staff	> 20%
	Wetlands Learning Lab	Students, Teachers	560 students and staff	
	Meaningful Watershed Education Experience (MWEE)	Students, Teachers	1875 students and staff	
	Outdoor Lab	Students, Teachers	6300 students, 275 teachers	
	Outdoor Learning Environments	Students, Teachers	600 students and staff	
	Sustainability Liaisons	Students, Teachers	750 students and staff	
	Green Scene	Students, Staff, Community	1200 students, staff, and community	
	SWPPP Training	APS Staff	300 staff	
Litter Prevention	Sustainability Liaisons	Students, Teachers	750 students and staff	> 20%
	Meaningful Watershed Education Experience (MWEE)	Students, Teachers	1875 students and staff	
	Green Scene	Students, Staff, Community	1200 students, staff, and community	
	Outdoor Lab	Students, Teachers	6300 students, 275 teachers	
	SWPPP Training	APS Staff	300 staff	
Native Plants for Erosion Control	Meaningful Watershed Education Experience (MWEE)	Students, Teachers	1875 students and staff	> 20%
	NOAA Chesapeake B-WET Program	Students, Teachers	1861 students and staff	
	Outdoor Lab	Students, Teachers	6575 students and staff	
	Green Scene	Students, Staff, Community	1200 students, staff and community	
	Outdoor Learning Environments	Students, Teachers	600 students and staff	
	Sustainability Liaisons	Students, Teachers	750 students and staff	
	Wetlands Learning Lab	Students, Teachers	560 students and staff	

Table 5 - Proposed 2018-19 School Year Education and Outreach Programs and Estimated Targets

Publication of Annual Reports and Phase II MS4 Program Plan

APS publishes its Phase II MS4 Permit, annual reports, and program objectives on its dedicated Stormwater Management Program webpage[10].

3. Illicit Discharge Detection and Elimination, IDDE (MCM 3)

Notification of Physical Interconnections

No interconnections were identified in 2017-18; consequently, no written notifications of physical interconnection were provided to other MS4s. APS provided ACG with written notification of MS4 interconnection in 2015, as identified in the APS 2015 MS4 Annual Report.

IDDE Program

In this permit cycle for dry weather screening, APS with its consultant, AECOM, screened nine (9) outfalls. Flowing water was observed at only one of the 9 screened MS4 outfalls. The flowing outfall (ID #16733) at Campbell Elementary School was field screened for chlorine, fluoride, ammonia, and surfactants/detergents. All parameters fell within acceptable ranges as identified in the APS IDDE Program Plan. The source of the flow from the outfall appears to be the Campbell Elementary Wetlands Learning Lab. This outdoor educational area and wildlife study zone has been designed to maintain continually wet conditions due to a naturally occurring springhead and stormwater retention. No illicit connections are present. Appendix B presents a summary of the testing results for all 9 outfalls.

Our IDDE Program Plan may be found on our Stormwater Management Program webpage[11].

Outfall Map

APS' outfall map has been updated in Arlington County Government's (ACG) stormwater GIS this permit year. APS continues to work with ACG on updating and revising stormwater maps as new facilities come online.

4. Construction Site Stormwater Runoff Control (MCM 4)

APS had four (4) regulated land-disturbing activities in this reporting period – construction activities at Abingdon Elementary, McKinley Elementary, Alice West Fleet Elementary, and the Wilson School as highlighted in Table 6. ACG is APS' permitting authority, and ACG performed plan reviews, formal inspections, and enforcement actions on these construction projects. Table 7 summarizes the total number of inspections and enforcement actions performed by ACG.

[10] https://www.apsva.us/aps-goes-green/stormwater-management-program/
[11] https://www.apsva.us/aps-goes-green/stormwater-management-program/

School	Address	Acres Disturbed
Abingdon Elementary	3035. S. Abingdon Street, 22206	5.2
Alice West Fleet Elementary	1030 N. McKinley Road, 22205	5.59
H-B Woodlawn/Stratford	4100 Vacation Lane, 22207	6.25
Wilson School	1601 Wilson Blvd., 22201	2.8
	Total	**19.84**

Table 6 - Total Land Disturbing Activities in this Permit Year

Inspections and Enforcement Actions	
Inspections	94
Notice to Comply	26
Written Notice of Violation	1
Stop Work Order	0

Table 7 - Inspections and Enforcement Actions

5. Post-Construction Stormwater Management (MCM 5)

APS owns 87 stormwater management BMPs (or "facilities"). A master database containing all of APS' BMPs is managed by ACG. APS and ACG collaborate closely to make sure this database is up to date. APS inspects all its identified BMPs on an annual basis and conducts maintenance for these facilities at least annually based on our standard operating procedures (SOPs). A separate spreadsheet that lists the BMPs installed during this reporting period shall be submitted to the Department of Environmental Quality (DEQ) along with this annual report.

Inspection, operation, and maintenance verification of stormwater management facilities.

Arlington Public Schools (APS) conducts annual inspections and maintenance on all its stormwater facilities using a third party stormwater contractor. A list of sites and facilities are reviewed and evaluated at the start of each fiscal year. The contractor is required to schedule inspections and maintenance in a timely fashion and provide a detailed report for each site, including photos of the facilities during inspection and after maintenance has been completed. Any repair work needed is identified in the inspection report so that APS may evaluate and schedule required work. APS follows the guidelines established by ACG for the inspection and maintenance of stormwater facilities[12]. APS' standard operating procedures (SOPs) for inspection and maintenance closely follows ACG's inspection checklist. All inspection and maintenance reports are kept at APS' Department of Facilities and Operations.

[12] http://environment.arlingtonva.us/stormwater-watersheds/stormwater-at-home/stormwater-management-facility-inspections/

6. Pollution Prevention / Good Housekeeping for Municipal Operations (MCM6)

APS engages in good housekeeping at all its properties. APS trains custodial staff on proper disposal of wastewater. A Memorandum on "Use of Custodial Sinks" to all Custodial Building Supervisors reiterating the requirement to pour all wastewater into sinks and not into the MS4 was issued on October 18, 2013. This memo was included in our original registration package.

APS' Trades Center is located within Arlington County Government's (ACG) Trades Facility. ACG is the lead agency for managing the SWPPP under their VSMP Permit VA0088579. No new facilities requiring permit coverage were added during this reporting year.

Nutrient Management Plan Locations

ACG applies nutrients for APS' fields greater than one acre using nutrient management plans (NMPs). A certified turf and landscape nutrient management planner develops these plans. NMPs for school property are located at DPR and a copy is held at APS' Department of Facilities and Operations. Figure 9 identifies all APS fields requiring NMPs. NMPs have been developed and implemented for all locations.

APS lands where nutrients are applied to more than one contiguous acre								
Field Name	**Address**	**Zip Code**	**Acres**	**Proposed Year of Plan Developed**	**Year Plan Developed**	**Plan Start Date**	**Plan End Date**	**Prepared By**
Carver	1415 S. Queen St.	22204	1.46	2015	2015	6/11/2018	6/10/2021	Robert Benyo - 688
Drew School / Center	3500 24th Street South	22206	1.69	2016	2016	11/18/2016	11/17/2019	
Gunston Park #1	1401 28th St. S.	22202	1.41	2015	2015	6/11/2018	6/10/2021	Robert Benyo - 688
Gunston Park #3	1401 28th St. S	22202	1.29	2015	2015	6/11/2018	6/10/2021	Robert Benyo - 688
H-B Woodlawn Secondary School	4100 Vacation Lane	22207	1.37	2015	2015	6/11/2018	6/10/2021	Robert Benyo - 688
Jamestown Back	N. 36th St. & N. Delaware St.	22207	1.32	2015	2015	6/11/2018	6/10/2021	Robert Benyo - 688
Jamestown Front	N. 36th St. & N. Delaware St.	22207	1.08	2015	2015	6/11/2018	6/10/2021	Robert Benyo - 688
Kenmore Middle School #2	200 S. Carlin Springs Dr.	22204	2.01	2015	2015	6/11/2018	6/10/2021	Robert Benyo - 688
Nottingham #1	5900 Little Falls Rd.	22207	1.39	2016	2016	11/18/2016	11/17/2019	
Swanson Middle School	5800 N. Washington Bouleva	22205	1.02	2015	2015	6/15/2018	6/14/2021	Robert Benyo - 688
Wakefield High School	1325 S. Dinwidde St.	22206	1.79	2016	2016	11/18/2016	11/17/2019	
Washington-Lee HS (SB) and Practice Field	1301 N. Stratford St.	22201	5.72	2015	2015	6/11/2018	6/10/2021	Robert Benyo - 688
Total acreage of lands where NMP required.			21.54					
Total acreage of lands where NMP implemented.			21.54					

Figure 9 - APS sites with Nutrient Management Plans and date of plan development and implementation

Training

SWPPP Training

As covered under Section 2 of this document, 296 APS staff were given annual training on stormwater pollution prevention this permit year, which includes spill prevention and good housekeeping components. Descriptions of this training may be found on page 14.

Spill Response Training

Spill Response Training is handled by ACG with their safety personnel. Training is required for Arlington County Police Department and Arlington County Fire Department emergency response personnel. Please refer to ACG's annual report on spill response training.

Pesticide Application Certification

DPR hires a certified contractor who applies nutrients and pesticides on all County and School lands. ACG tracks the status of certifications as part of their MS4 permit obligation. Please refer to their program plan for details. Nutrient Management Plans for school properties are located at DPR and a copy is held at APS' Department of Facilities and Operations.

Erosion and Sediment Control Certification

APS relies on ACG, as the local government regulatory authority, for permitting, inspection, and enforcement services related to erosion and sediment control. Figure 10 shows APS in-house staff and construction management staff certified as stormwater inspectors, ESC inspectors, and one combined stormwater and ESC program administrator.

Small MS4 Training And Certifications				
Name	**Certification**	**Certificate Number**	**Expiration Date**	**Organization**
Cathy Lin	Combined Stormwater and ESC Program Administrator	DPA0102	12/18/2020	APS
Renee Adams	Dual Inspector	DIN0715	12/1/2020	Heery
Matt Williams	Stormwater Inspector	SWIN1006	4/11/2020	Heery
Robin Hodges	Storwmater Inspector	SWIN0266	5/22/2018	APS
Robin Hodges	ESC Inspector	ESIN0216	5/22/2018	APS

Figure 10 - Summary of Training and Certifications for Plan Reviewers, Inspectors, Program Administrators and Construction Site Operators at Arlington Public Schools, Virginia

Appendix A: Outdoor Lab Schedule by School

2018-2019 Outdoor Lab Schedule

Elementary	
Abingdon	Sept 21, 28; **Mar 25-26, Mar 28-29**
Arlington Science Focus	Sep 13, 14; **Jun 10-11, Jun 13-14**
Arlington Traditional	Sept 10, **May 9-10**
Ashlawn	**Sep 24-25, Sep 27-28**; April 3, 24
Barcroft	Sep 5; **Sep 6-7**
Barrett	Oct 5, 12; **Oct 22-23, Oct 23-24**
Campbell	Sep 12; **Apr 11-12**
Carlin Springs	Mar 4, 5; **May 6-7, May 7-8**
Claremont	Mar 12,15; **Apr 4-5, Apr 22-23**
Discovery	Nov 19, 20; **Jun 3-4, Jun 6-7**
Drew Model	Apr 2, 10; **Apr 8-9, Apr 9-10**
Glebe	Oct 30, Nov 2; **Apr 25-26, Apr 29-30**
Henry	**Oct 4-5, Oct 11-12**; Mar 20, Mar 27
Hoffman-Boston	Sep 11; **May 2-3**
Jamestown	Sep 19, Sep 26; **May 13-14, May 14-15**
Key	**Nov 7-8, Nov 8-9**; Mar 1, Mar 6
Long Branch	**Oct 29-30, Nov 1-2**; Mar 29, May 1
McKinley	Oct 31, Nov 5; **Mar 18-19, Mar 21-22**
Nottingham	Nov 13, 14; **Sep 17-18, Sep 20-21**
Oakridge	**Oct 15-16, Oct 18-19**; Dec 7, Dec 14
Randolph	**Nov 15-16**; Nov 16
Taylor	Feb 14, 15; **Mar 11-12, Mar 14-15**
Tuckahoe	**Oct 1-2, Oct 2-3**; Oct 9, Oct 17
Middle	
Gunston	Jan 14, 15, Jan 17, 18, Jan 23, 24, 25
HB Woodlawn	Feb 11, 12
Jefferson	Dec 10, 11, Dec 13, Dec 17, 18, 19, 20, 21
Kenmore	Jan 31, Feb 1, Feb 4, 5, 6, 7, 8
Swanson	Feb 19, 20, 21, 22, Feb 25, 26, 27, 28
Williamsburg	Nov 26, 27, 28, 29, 30, Dec 3, 4, 5, 6
High and Other Programs	
Arlington Career Center	Jun 5
Arlington Tech.	Jan 7, Apr 2
Arlington Community HS	Nov 20, Mar 8
HB Woodlawn HS	Mar 20, Mar 27
Langston	Nov 19, Mar 7
New Directions	Jun 12
Stratford	Oct 25, 26
Wakefield	Sept 11, 13, 14, 19, 26, Oct 9, 17, 31, Nov 13, 14
Washington-Lee	Nov 5, Dec 7, 14, Jan 8, 9, 10, 11, 22, 29, 30
Yorktown	Feb 14, 15, Mar 1, 4, 5, 6, Apr 3, 24, May 1

All **bolded** dates are designated as 5th grade overnights

Appendix B: Dry Weather Screening Results

Site	Structure ID	Date Observed	Flow	Total Chlorine (mg/L)	Fluoride (mg/L)	Ammonia (mg/L)	Surfactants (mg/L)	pH	Visual Indicators of ID	Follow-up	Source Found?
Campbell Elementary	16733	4/20/2018	Yes	0.00	0.20	0.00	< 0.25	7.00	no	Parameters within acceptable range. No follow-up required.	Yes[1]
Campbell Elementary	16825	4/20/2018	No	NA	NA	NA	NA	NA	no	NA	NA
Claremont Elementary	25675	4/20/2018	No	NA	NA	NA	NA	NA	no	NA	NA
Claremont Elementary	35320	4/20/2018	No	NA	NA	NA	NA	NA	no	NA	NA
Claremont Elementary	30945	4/20/2018	No	NA	NA	NA	NA	NA	no	NA	NA
Claremont Elementary	25671	4/20/2018	No	NA	NA	NA	NA	NA	no	NA	NA
Claremont Elementary	35330	4/20/2018	No	NA	NA	NA	NA	NA	no	NA	NA
Randolph Elementary	24977	4/20/2018	No	NA	NA	NA	NA	NA	no	NA	NA
Randolph Elementary	35815	4/20/2018	No	NA	NA	NA	NA	NA	no	NA	NA

Notes:	
1.	*The source of the flow from outfall 16733 appears to be the Campbell Elementary Wetlands Learning Lab. This outdoor educational area and wildlife study zone has been designed to maintain continually wet conditions due to a naturally occurring springhead and stormwater retention.*
2.	*NA: Not Applicable*