



**Site and
Infrastructure
Development**
Sterrett Center
230 Sterrett Drive
Blacksburg, Virginia
24061

Virginia Tech MS4 Annual Report

Virginia Tech NPDES Phase II: Small MS4
VPDES Permit No. VAR 040049
Reporting Period: July 1, 2021 – June 30, 2022

**CERTIFICATION STATEMENT AND SIGNATORY REQUIREMENTS
FOR MS4 PERMIT APPLICATIONS AND REPORTS**

As required by 9VAC25-870-370 B, all reports required by state permits, and other information requested by the State Water Control Board shall be signed by a responsible official or by a duly authorized representative of that person. A responsible official is:

1. *For a corporation: a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-making or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for state permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;*
2. *For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or*
3. *For a municipality, state, federal, or other public agency: either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.*

A person is a duly authorized representative only if:

1. *The authorization is made in writing by a person described above;*
2. *The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. A duly authorized representative may thus be either a named individual or any individual occupying a named position; and*
3. *The written authorization is submitted to the department.*

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Dr. Christopher H. Kiwus

DocuSigned by:
Christopher H. Kiwus
C798F8A4B5E4DE

Date 12/19/2022

Vice President for Campus Planning, Infrastructure and Facilities

Interim Senior Vice President and Chief Business Officer

Permit Number: VAR040049

MS4 Name: Virginia Tech

Table of Contents

Table of Contents	3
Program Plan	4
MCM 1	4
MCM 2	5
MCM 3	9
MCM 4	10
MCM 5	14
MCM 6	14
TMDL	17
Appendix A	20

Program Plan

Changes to the program plan during the reporting year included:

- Changed primary media material from VTSID (Virginia Tech Site and Infrastructure Development) Facebook page to CPIF (Campus Planning, Infrastructure, and Facilities) Twitter page.
- Changed sediment written materials from dining table cards to memos on education platforms and university TVs.
- Changed pollution prevention project from The Big Event to Stormwater Days.
- Added microplastic information to the educational material targeting trash.
- Updated organizational chart to add Mary-Ann Ibeziako as Assistant Vice President for Infrastructure, Matt Stolte as Director of Engineering Services, and Richard Hale as Infrastructure Health & Safety Coordinator.

MCM 1

High-priority stormwater issues addressed by the permittee included:

1. Sediment
2. Animal Waste
3. Trash

Strategies used to communicate each high-priority stormwater issue included:

1. Sediment
 - a. Speaking engagements: (2/21/2022) Chuck Dietz taught 11 Virginia Tech students in a Hydraulic Structures class. His presentation covered a description of the duties and responsibilities of our department and included a field trip to an on-campus stormwater facility to discuss maintenance and how the facility operates to protect water quality and remove pollutants like sediment.
 - b. Alternative Materials: Educational magnets that highlight the importance of water quality and harmful pollutants like sediment, animal waste and trash were distributed to stream clean-up volunteers; approximately 75 magnets and stickers were given out.
 - c. Traditional Written Materials: The VT Magazine featured an article titled "The Influence of Water," in which MS4 Program Manager Katelyn Muldoon discussed the current impairments within the MS4 and the department's work to address those impairments and prevent stormwater pollution. Distribution of this magazine includes approximately 130,000 Virginia Tech alumni and friends. A digital version was also posted online.

2. Animal Waste

- a. Signage: Permanent signage exists on 36 different pet waste stations scattered around campus. These signs discuss pet waste's ability to transmit disease and pollute stormwater and encourage the Virginia Tech campus to pick up after their pets.
- b. Alternative Materials: Educational magnets that highlight the importance of water quality and harmful pollutants like sediment, animal waste and trash were distributed to stream clean-up volunteers. Approximately 75 magnets and stickers were given out.
- c. Traditional Written Materials: The VT Magazine featured an article titled "The Influence of Water," in which MS4 Program Manager Katelyn Muldoon discussed the current impairments within the MS4 and the department's work to address those impairments and prevent stormwater pollution. Distribution of this magazine includes approximately 130,000 Virginia Tech alumni and friends. A digital version was also posted online.

3. Trash

- a. Speaking Engagement: (4/27/2022) Katelyn Muldoon gave a brief presentation at a New River Round Table meeting to 22 individuals about stormwater awareness. The presentation was an overview of Virginia Tech's MS4 Education and Outreach program and explained the importance of water quality and pollution prevention.
- b. Alternative Materials: Educational magnets that highlight the importance of water quality and harmful pollutants like sediment, animal waste and trash were distributed to stream clean-up volunteers, approximately 75 magnets and stickers were given out.
- c. Traditional Written Materials: The VT Magazine featured an article titled "The Influence of Water," in which MS4 Program Manager Katelyn Muldoon discussed the current impairments within the MS4 and the department's work to address those impairments and prevent stormwater pollution. Distribution of this magazine includes approximately 130,000 Virginia Tech alumni and friends. A digital version was also posted online.

Evaluation of MCM 1: Last reporting year traditional written materials used to target trash, animal waste and sediment reached approximately 200 individuals and this year that number was drastically larger due to the VT Magazine article.

MCM 2

Public input on the MS4 program including stormwater complaints and a brief explanation of how the permittee responded can be seen in the table below.

Summary of Comments and Complaints			
Date Received	Who	Date Responded	How VTSID Responded
11/10/21	Karsten Suidema (VT Student)	11/10/21	Request for information about Stormwater Facilities on campus for a class project. Resources were provided on 11/19/21 and follow-up questions were answered via email on 4/1/21.
4/21/22	Megan Harris (VT Student)	4/22/22	Request for a phone call with both Katelyn Muldoon and Chuck Dietz to ask stormwater-related questions. Phone conversations took place on 4/22 along with a follow-up email of helpful resources.
4/24/22	Bill Knocke (VT Professor)	4/26/22	Concern about algae growth in the Vet Med Pond and the Duck Pond on campus. Chuck Dietz explained that algae growth is common in warm weather months and has tasked a departmental intern to do research around the impacts of algae growth and fish health.
6/2/22	Anonymous Through VT Repair	6/3/22	Notification of 2 Pet Waste stations on campus that were out of Pet Waste bags. Pet Waste Stations were filled the next day.

The permittee's MS4 program plan and stormwater website can be accessed at [Site and Infrastructure Development](#). The permittee's Facebook page was hacked during the reporting year and was unable to be recovered for quantifying posts that occurred from July to October 2021. A new and updated Facebook page is in the works but the Virginia Tech Facilities Twitter page has been utilized to reach 2,070 followers through educational posts during this reporting year.

Public Involvement activities implemented include:

1. Restoration:
 - (8/28/2021) ReNew the New took place at several locations along the New River and included Virginia Tech Faculty and Staff and Students as

some of the volunteers. The group was able to remove 114 tires and 9815 pounds of trash.

- i. Metric: Roughly 539 volunteers participated
- (10/2/2021) Virginia Tech Students from EWRI-CORPI AWWA participated in a stream clean-up around the Duck Pond and removed 9 bags of trash.
 - i. Metric: 20 Virginia Tech students volunteered
- (10/9/2021) Virginia Tech students from the Student Alumni Association participated in a stream clean-up by Stroubles Creek and picked up 1 bag of trash.
 - i. Metric: 2 Virginia Tech students volunteered
- (10/11/2021) Virginia Tech students from ASABE participated in a clean-up in Stadium Woods and removed 6 bags of trash.
 - i. Metric: 15 Virginia Tech students volunteered
- (11/14/2021) Virginia Tech students from the class of 2023 participated in a clean-up to remove 2 bags of trash.
 - i. Metric: 5 Virginia tech Students Volunteered
- (4/2/2022) Virginia Tech students volunteered in a stream clean-up at the Duck Pond and worked for 1.5 hours to collect 12 bags of trash.
 - i. Metric: 13 Virginia Tech students volunteered
- (4/13/2022) Virginia tech students volunteered in a stream clean-up at Stroubles Creek and collected 1.5 bags of trash.
 - i. Metric: 9 Virginia Tech students volunteered
- (2/26/2022) During the Big Plant Event VTSID partnered with The Environmental Coalition and the local Save Stroubles group to plant around 9,650 live stake trees on tributaries of Stroubles Creek. Volunteers came out to work to plant the stakes and learn about riparian buffers and stream restoration.
 - i. Metric: Around 500 volunteers participated in this event.

Evaluation of Restoration as public involvement activities: Last reporting year over 150 volunteers participated in restoration events while this reporting year over 500 volunteers participated. The increase in the number of volunteers in riparian areas is viewed as a benefit for water quality, and the increase in events and volunteers results in more individuals being educated about stormwater awareness and more trash being removed.

2. Educational Events:

- (8/6/21 & 8/7/21) Local MS4s partnered to run an educational booth at the local festival Steppin Out.
 - i. Metric: Roughly 183 freebies were given out to promote water quality and prevent stormwater pollution.
- (9/17/21 & 4/22/22) Katelyn Muldoon presented at field trips hosted by the New River Land Trust. Students were given the opportunity to create their own stormwater filter and learn about pollution prevention.
 - i. Metric: 78 4th graders and 65 5th graders
- (2/21/22) Chuck Dietz taught Virginia Tech students in a Hydraulic Structures class. His presentation covered a description of the duties and responsibilities of our department and included a field trip to an on-campus stormwater facility to discuss maintenance and how the facility operates to protect water quality and remove pollutants like sediment.
 - i. Metric: 11 Virginia Tech Students were educated
- (4/13/2022) Katelyn Muldoon taught a Lecture for Dr. Krometis' BSE Class about the department's role at the university and the importance of stormwater regulations and protection of water quality.
 - i. Metric: 19 Virginia Tech Students were educated
- (Fall semester 2021 & Spring Semester 2022) Katelyn Muldoon mentored 4 Office of Sustainability Student interns in the Water Resources group. These students learned about Virginia Tech's MS4 permit and program while helping educate the public about water conservation and the use of rain barrels.
 - i. Metric: 4 Virginia Tech Students participated in this program.
- (4/11/22 & 4/12/22) Katelyn Muldoon presented at Stormwater Days put on by local MS4s to educate 7th graders from Montgomery County. Students learned about stormwater filters and pollution prevention.
 - i. Metric: Over 500 students attended over the two days and approximately 40 of the volunteers were Virginia Tech faculty and staff or students.
- (9/18/21 & 6/18/22) An educational booth was set up at two separate Native Plant Sales.
 - i. Metric: 83 freebies were given out to promote water quality and prevention of stormwater pollution.
- (6/23/22) Site and Infrastructure led an educational demonstration about water quality and stormwater facilities on campus with 4-H campers. Some students were given the opportunity to create their own stormwater filter and learn about pollution prevention. Students helped with different projects around campus to improve several BMPs.
 - i. Metric: 250 Campers participated.

Evaluation of Educational Events as public involvement activities: An improvement in water quality can be expected due to the heightened stormwater pollution prevention awareness from the information delivered to roughly 1,233 individuals this reporting year, in comparison to 900 during the last reporting year through educational events.

3. Pollution Prevention:

- Unmarked storm drains were marked by the department's interns across campus with educational messages about protecting water quality.
 - i. Metric: Roughly 72 storm drain markers were put out during the reporting year
- 36 pet waste stations are scattered around campus for the public's use.
 - i. Metric: During the reporting year roughly 19000 bags were used to pick up pet waste on campus, including the vet school.

Evaluation of Pollution Prevention as public involvement activities: An improvement in water quality can be expected due to the increase in storm drain markers that were put out in comparison to the last reporting year.

VTSID collaborated with the following MS4 programs for public involvement opportunities during the reporting year.

1. Town of Blacksburg
2. Town of Christiansburg
3. Montgomery County

MCM 3

The up to date MS4 map is available on the permittee's website and at <https://www.arcgis.com/home/webmap/viewer.html?webmap=d5896391f66f4ba7bf49e59469b66a30&extent=-80.4581,37.2127,-80.3947,37.2462>

During the reporting year the 3 new BMPs that were added to the BMP warehouse were also added to this map.

The total number of outfalls screened during the reporting period as part of the dry weather screening program was 52. Inspection reports can be provided upon request.

A list of illicit discharges to the MS4 can be seen in the table below.

Summary of Illicit Discharges					
Observed Date	Date Closed	Illicit Discharge Description	Location	Who Discovered	Resolved/Follow-Up Activities
8/31/2021	8/31/2021	Muddy branch draining into the Duck Pond	Virginia Tech Duck Pond	Scott Durelle	Nearby construction sites were inspected and determined to not be discharging any pollutants. This ID was suspected to come from the Town of Blacksburg, not on campus.
4/25/2022	5/2/2022	Duck Pond was reported to have a milky appearance.	Virginia Tech Duck Pond	William Knocke	Contractor producing the illicit discharge from cutting concrete pipes within the stream were now going to divert all flow around the activity. They also added containment for debris coming from the wet saw used to cut the pipes.
5/25/2022	5/26/2022	Sawdust got into an unprotected drop inlet draining to an underground stormwater BMP	BETR Facility	VTSID Employee Charles Dietz	Drop inlet was cleaned out from the sawdust. The stockpile of sawdust was moved to a new location outside the drainage area of the BMP.

Evaluation of MCM 3: Last reporting year there were 5 reported illicit discharges and this reporting year there was a decrease to 3 illicit discharges.

MCM 4

The Virginia Tech Annual Standards and Specifications for Erosion and Sediment Control (ESC) and Stormwater Management (SWM) are integral components of Virginia Tech's design, construction, and maintenance of the University's facilities and campuses. The Virginia Tech Annual Standards and Specifications for ESC and SWM are administered by Virginia Tech Site & Infrastructure Development and apply to all design, construction, and maintenance activities on property owned by Virginia Tech, either by its internal workforce or contracted to external entities. The Virginia Tech Annual Standards and Specifications for ESC and SWM are submitted to the Virginia Department of Environmental Quality (DEQ) for review and approval on an annual basis. Virginia Tech shall ensure that project-specific plans are developed and implemented in accordance with the Virginia Tech Annual Standards and Specifications for ESC and SWM.

The total number of inspections conducted on active construction sites within the reporting year are listed in the table below.

ESC CONSTRUCTION INSPECTIONS		
Project Name	Total Inspections	Final Inspection Date
Tom's Creek Landfill	28	Active
MRL	18	Active
CID	26	4/14/2022
Athletic Soil Stockpile	21	Active
Airport Runway (3 phases)	51	Active
Alumni Mall Tree Planting	31	Active
BETR	19	Active
CALS Grain Bin Relocation	20	12/8/2021
Catawba Greenway Trailhead	1	9/20/2021
Hitt Hall	15	Active

ESC CONSTRUCTION INSPECTIONS		
Project Name	Total Inspections	Final Inspection Date
Holden Hall	29	Active
Chiller (Phase 2)	24	Active
CLMS	5	Active
Contractor Laydown	13	Active
D&DS	29	Active
Harper Hall Heat Box Replacement	21	1/26/2022
Kentland Farms Stockpile Area	4	9/21/2021
LPRF Beef Nutrition	29	Active
LPRF Equine Barn	25	Active
LPRF Swine	11	Active

ESC CONSTRUCTION INSPECTIONS		
Project Name	Total Inspections	Final Inspection Date
LPRF Equipment Storage	26	Active
LPRF Turkey Grow	30	Active
MMTF	28	Active
Perry Street Improvements	32	11/12/2021
Non-Permanent Gym Facility	1	Active
NUQRH	29	Active
Outfield Pitching Lab	10	Active
Undergraduate Science Lab Building	5	Active
Vet Med ADA Pathway	22	Active
Vet Med Equine Sports Arena	13	Active

ESC CONSTRUCTION INSPECTIONS		
Project Name	Total Inspections	Final Inspection Date
Total Inspections	622	

Enforcement actions:

3/17/22: A Notice to Comply was issued to Jarod Simmons (SIMCON Company, LLC) for the active construction LPRF Swine Facility project.

Evaluation of MCM 4: Even though there was a minor decrease in overall number of inspections conducted it was determined that this was due to staffing changes, rainfall events and project load. The Erosion and Sediment control program was in compliance and no program plan changes are necessary.

MCM 5

217 total inspections were conducted during the reporting year for stormwater management facilities owned and operated by Virginia Tech. Detailed inspection reports can be provided upon request. Attached in Appendix A is the spreadsheet of all stormwater management facilities.

The BMP Warehouse was updated on June 23rd with the addition of three new BMPs and the latest inspection date for each BMP.

BMP 44 Roller Hockey Rink Water Quality Unit was extensively cleaned out during routine maintenance in August 2021.

Evaluation of MCM 5: Last reporting year 162 inspections were conducted during the reporting year and this year an increase to 217 were conducted which will ensure maintenance and repairs are kept up to protect water quality.

MCM 6

Updated dates of all approved Nutrient Management Plans can be found in the table below:

Nutrient Management Plans						
Department	Area (Acres)	Issue Date	Expiration Date	Category	Contact Name	Contact Information
CALS Livestock Plan for Campus and Montgomery County Lands	1545.5	4/1/2021	9/1/2023	Agriculture	Dr. Allen Grant	540-231-4152 kentland@vt.edu
Virginia Tech Athletic Department	31.3	7/1/2022	7/1/2025	Turf & Landscape	Casey Underwood Emerson Pulliam	540-231-6067 caunderw@vt.edu 540-231-2840 emerson@vt.edu
Golf Course	18.5	1/1/2022	1/1/2025	Turf & Landscape	Jason Ratcliff	540-231-5619 jratclif@vt.edu
Virginia Tech Campus Grounds	174	2/1/2022	2/1/2025	Turf & Landscape	Robert Perfater	540-200-7163 rperfatr@vt.edu
Hahn Horticulture Garden	3	8/1/2021	8/1/2024	Turf & Landscape	Scott Douglas	540-231-7432 dsd1@vt.edu
Virginia Tech Recreational Sports	27	2/1/2022	2/1/2025	Turf & Landscape	Coty Skaggs	540-231-3045 coty36@vt.edu
Virginia Tech Dairy and Animal and Poultry Sciences	1429	4/1/2021	9/1/2023	Agriculture	Dr. Allen Grant	540-231-4152 kentland@vt.edu
Turfgrass Research Center	20	5/1/2022	5/1/2025	Turf & Landscape	Clint Steger	540-3922247 jasteger@vt.edu
Northern Piedmont AREC	268	9/1/2021	9/1/2024	Turf & Landscape	Steve Gulick	540-672-2660 sgulick@vt.edu
Urban Horticulture Center	15	7/19/2022	7/19/2025	Turf & Landscape	Clint Steger	540-3922247 jasteger@vt.edu
Kentland Managed Lands	85.6	4/8/2022	4/8/2025	Turf & Landscape	Patrick Hilt	540-231-9405 philt@vt.edu

Nutrient Management Plans						
Department	Area (Acres)	Issue Date	Expiration Date	Category	Contact Name	Contact Information
Glade Road Research Center	6.3	*	*	Turf & Landscape	Clint Steger	540-392-2247 jasteger@vt.edu
Alson H. Smith, Jr AREC - Winchester	52.4	12/1/2021	12/1/2024	Turf & Landscape	Dr. Tony Wolf	540-869-2560 vitis@vt.edu
Eastern Shore AREC	117	*	*	Turf & Landscape	Clint Steger	540-392-2247 jasteger@vt.edu
Eastern Virginia AREC	152	9/3/2021	9/3/2024	Turf & Landscape	Joseph Oakes	804-333-3485 jcoakes@vt.edu
Hampton Roads AREC	40.25	7/1/2021	7/1/2024	Turf & Landscape	Dr. Pete Shultz	757-363-3900 jderr@vt.edu
Middleburg AREC	268.6	7/1/2021	7/2/2024	Turf & Landscape	Ryan Brooks	540-687-3521 tgolight@vt.edu
Reynolds Homestead AREC	2.73	12/1/2021	12/1/2024	Turf & Landscape	Dr. Kyle Peer	276-694-4135 krpeer@vt.edu
Shenandoah Valley AREC	616.1	2/24/2022	12/31/2024	Agriculture	Gabriel Pent	540-377-2255 gpent@vt.edu
Southern Piedmont AREC	340	7/11/2022	7/11/2025	Agriculture	Clint Steger	540-392-2247 jasteger@vt.edu
Southwest AREC	106.4	7/26/2022	7/26/2025	Agriculture	Lee Wright	276-944-2203 lrite@vt.edu
Tidewater AREC	245	1/1/2021	12/31/2023	Agriculture	David Langston	757-657-6450 whframe@vt.edu

*The responsible party has been contacted and will be providing an estimated timeline for a current NMP. This annual report will be updated once it is received.

The training events conducted within the reporting year can be found in the table below:

Stormwater Training			
Training Event Title	Objective	Date of Event	Number of Individuals Trained
Power House SWPPP Training	Train employees about the SWPPP and describe the employee's responsibility to prevent stormwater pollution.	December, 2021	21
Quarry SWPPP Training	Train employees about the SWPPP and describe the employee's responsibility to prevent stormwater pollution.	March, 2022	14
Stormwater Training for Housekeeping Services Staff	Educate Housekeeping Staff about stormwater runoff, as well as how to reduce and prevent stormwater pollution.	February 2022	116
Grounds and Facilities SWPPP Training	Train employees about the SWPPP and describe the employee's responsibility to prevent stormwater pollution.	March 27, 2022	9
Stormwater Training for Dining Hall Employees	Educate the dining hall staff about stormwater runoff, as well as how to reduce and prevent stormwater pollution.	Year-round	1,865

No operational procedures were developed or modified during the reporting year.

No new SWPPPs were developed, and there were no SWPPP modifications during the reporting period.

Evaluation of MCM 6: Last reporting year 1,279 employees were educated on stormwater awareness and this reporting year 2,025 employees were educated to increase stormwater awareness.

TMDL

Status report on the implementation:

- Training was delivered to those operating Street Sweepers and cleaning out storm sewer inlets on May 27th, 2022 and will occur again in the next reporting year.
- The Lane Mile Approach for tracking was continued.

Actions conducted to implement local TMDL action plan:

- Street Sweeping: 16,380 pounds were removed through street sweeping during the reporting year. Approximately 455 miles were logged by the Street Sweeper during the reporting year. Street sweeper logs can be provided upon request.



Site and Infrastructure Development

Sterrett Center
230 Sterrett Drive
Blacksburg, Virginia
24061

Appendix A

BM P	BMP Name	BMP Status	BMP Type	Lat	Long	Perv. Drain Area	Imperv. Drain Area	Total Acres	Date Added	HUC	Impaired Water	Ownership	Maint. Agreement	Date of Last Insp.
1	Lane Stadium - Extended Detention Basin	Existing	Extended Detention	37.2190N	80.4169W	1.06	0.05	1.11	06/2010	NE59	Stroubles Creek	Operator-owned	N	6/8/2022
2	Chicken Hill Underground Detention Basin	Existing	Underground Stormwater Detention	37.2173N	80.4183W	3.35	7.15	10.5	01/2012	NE59	Stroubles Creek	Operator-owned	N	12/21/2021
4	Vet Med - Retention Pond	Existing	Retention Pond	37.2164N	80.4259W	312.2	119.5	431.7	06/2005	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
5	Vet Med - Detention Pond	Existing	Detention Pond	37.2158N	80.4309W	457.5	148.3	605.8	06/2005	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
7	Smithfield Lot Bioretention Pretreatment	Existing	Bioretention Pretreatment	37.2229N	80.4295W	0.36	1.03	1.39	06/2010	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
8	Smithfield Lot Bioretention	Existing	Bioretention	37.2230N	80.4296W	0.49	1.04	1.53	07/2007	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
9	Smithfield Lot Extended Detention 1	Existing	Extended Detention	37.2233N	80.4295W	0.09	0.16	0.25	07/2007	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
10	Smithfield Lot Extended Detention 2	Existing	Extended Detention	37.2238N	80.4292W	0.22	0.27	0.49	07/2007	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
11	Duck Pond Overflow Lot - Extended Detention	Existing	Extended Detention	37.2230N	80.4307W	0.43	1.83	2.26	06/2005	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
13	Oak Lane (SPH) - Extended Detention Basin	Existing	Extended Detention	37.2248N	80.4381W	6.89	4.31	11.2	06/2005	NE59	Stroubles Creek	Operator-owned	N	6/8/2022
14	Alumni Pond	Existing	Enhanced Extended Detention	37.2282N	80.4281W	15.8	28.0	43.78	01/2012	NE59	Stroubles Creek	Operator-owned	N	6/8/2022

BMP	BMP Name	BMP Status	BMP Type	Lat	Long	Perv. Drain Area	Imperv. Drain Area	Total Acres	Date Added	HUC	Impaired Water	Ownership	Maint. Agreement	Date of Last Insp.
15	Grove Lane Extended Detention	Existing	Extended Detention	37.2230N	80.4278W	33.5	28.2	61.7	06/2005	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
16	Life Sciences - Green Roof Extension 1	Existing	Green Roof	37.2211N	80.4245W	0	0.5	0.5	06/2010	NE59	Stroubles Creek	Operator-owned	N	6/10/2022
17	Life Sciences - Green Roof Extension 2	Existing	Green Roof	37.2208N	80.4246W	0	0.2	0.2	06/2010	NE59	Stroubles Creek	Operator-owned	N	6/10/2022
18	Payne Detention Basin	Existing	Underground Detention	37.2253N	80.4212W	3.16	2.13	5.29	06/2005	NE59	Stroubles Creek	Operator-owned	N	12/21/2021
19	Henderson Hall Bioretention Filter	Existing	Bioretention	37.2306N	80.4161W	2.32	1.26	3.58	07/2011	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
20	New Hall West 1	Existing	Bioretention	37.2221N	80.4228W	0	0.3	0.3	01/2012	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
21	New Hall West 2	Existing	Bioretention	37.2224N	80.4222W	0	0.4	0.4	01/2012	NE59	Stroubles Creek	Operator-owned	N	6/10/2022
22	Horse Exhibit - Livestock Arena	Existing	Extended Detention	37.2203N	80.4405W	4.93	0.87	5.8	06/2005	NE59	Stroubles Creek	Operator-owned	N	6/10/2022
23	VTES - Extended Detention	Existing	Extended Detention	37.2113N	80.4128W	28.32	8.58	36.9	06/2005	NE59	Stroubles Creek	Operator-owned	N	6/10/2022
24	Library Storage - Extended Detention	Existing	Extended Detention	37.2128N	80.4113W	10.97	2.73	13.7	06/2005	NE59	Stroubles Creek	Operator-owned	N	6/10/2022
27	ICTAS II- Bioretention	Existing	Bioretention	37.2218N	80.4261W	0.05	0.28	0.33	07/2011	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
28	HABBI Bioretention	Existing	Bioretention	37.2201N	80.4274W	0.7	0.69	1.39	7/2015	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
29	SWCP Extended Detention	Existing	extended detention	37.2213N	80.4306W	3.25	1.31	4.56	11/2013	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
30	IDRF Retention Pond	Existing	Retention Basin	37.2169N	80.4295W	6.61	8.17	14.78	05/2012	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
34	Lower Chicken Hill WQU	Existing	Underground WQU	37.2171N	80.4184W	3.35	7.15	10.5	01/2012	NE59	Stroubles Creek	Operator-owned	N	12/21/2021
35	New Hall West 3	Existing	Bioretention	37.2225N	80.4224W	0	0.3	0.3	01/2012	NE59	Stroubles Creek	Operator-owned	N	6/10/2022
36	New Hall West 4	Existing	Bioretention	37.2220N	80.4227W	0	0.3	0.3	01/2012	NE59	Stroubles Creek	Operator-owned	N	6/10/2022
37	McComas Filterra Unit	Existing	MTD Filterra Unit	37.2197N	80.4230W	0.3	0.4	0.7	07/2011	NE59	Stroubles Creek	Operator-owned	N	6/9/2022

BMP	BMP Name	BMP Status	BMP Type	Lat	Long	Perv. Drain Area	Imperv. Drain Area	Total Acres	Date Added	HUC	Impaired Water	Ownership	Maint. Agreement	Date of Last Insp.
38	Football Locker Room WQU	Existing	Underground WQU	37.2226N	80.4178W	0.7	2.6	3.3	01/2012	NE59	Stroubles Creek	Operator-owned	N	12/21/2021
39	ICTAS II - Rain Garden	Existing	Bioretention	37.2221N	80.4258W	0	0.15	0.15	07/2011	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
41	MMF Bioretention Filter	Existing	Bioretention	37.2148N	80.4172W	10.25	1.37	11.62	09/2011	NE59	Stroubles Creek	Operator-Owned	N	6/9/2022
42	West End Bioretention Filter	Existing	Bioretention	37.2236N	80.4221W	0.1	0.19	0.29	01/2012	NE59	Stroubles Creek	Operator-owned	N	6/10/2022
43	West End Filterra	Existing	MTD Filterra Unit	37.2239N	80.4221W	0.06	0.59	0.65	01/2012	NE59	Stroubles Creek	Operator-owned	N	6/10/2022
44	Roller Hockey Rink WQU	Existing	MTD Stormceptor Underground WQU	37.2231N	80.4172W	2.6	4.2	6.8	01/2012	NE59	Stroubles Creek	Operator-owned	N	12/21/2021
45	Visitor's Center - Bioretention Filter 1	Existing	Bioretention	37.2306N	80.4351W	0.9	0.47	1.37	07/2012	NE59	Stroubles Creek	Operator-owned	N	6/8/2022
46	Visitor's Center - Bioretention Filter 2	Existing	Bioretention	37.2310N	80.4345W	0.34	0.14	0.48	07/2012	NE59	Stroubles Creek	Operator-owned	N	6/8/2022
47	Visitor's Center - Bioretention Filter 3	Existing	Bioretention	37.2301N	80.4348W	0.47	0.16	0.63	07/2012	NE59	Stroubles Creek	Operator-owned	N	6/8/2022
48	Visitor's Center - Bioretention Filter 5	Existing	Bioretention	37.2301N	80.4332W	1.53	0	1.53	07/2012	NE59	Stroubles Creek	Operator-owned	N	6/8/2022
49	ASA - Underground Storage Tank 1	Existing	MTD Underground Detention Center	37.2315N	80.4229W	0.11	1.15	1.26	01/2012	NE59	Stroubles Creek	Operator-owned	N	12/20/2021
50	ASA - Underground WQU 1	Existing	MTD Underground WQU	37.2315N	80.4229W	0.11	1.15	1.26	01/2012	NE59	Stroubles Creek	Operator-owned	N	12/21/2021
51	ASA - Underground Storage Tank 2	Existing	MTD Underground Detention Center	37.2312N	80.4231W	0.06	0.86	0.92	01/2012	NE59	Stroubles Creek	Operator-owned	N	12/21/2021
52	ASA - Underground WQU 2	Existing	MTD Underground WQU	37.2312N	80.4232W	0.06	0.86	0.92	01/2012	NE59	Stroubles Creek	Operator-owned	N	12/21/2021
53	ASA - Biofilter	Existing	MTD WQU - Contech Urbangreen Biofilter	37.2311N	80.4237W	0.1	0.18	0.28	01/2012	NE59	Stroubles Creek	Operator-owned	N	12/21/2021
54	SPE Filterra Unit 1	Existing	MTD Filterra Unit	37.2261N	80.4371W	0.11	0.42	0.53	08/2013	NE59	Stroubles Creek	Operator-owned	N	6/8/2022

BM P	BMP Name	BMP Status	BMP Type	Lat	Long	Perv. Drain Area	Imperv. Drain Area	Total Acres	Date Added	HUC	Impaired Water	Ownership	Maint. Agreement	Date of Last Insp.
55	SPE Filtterra Unit 2	Existing	MTD Filtterra Unit	37.2254N	80.4367W	0.15	0.52	0.67	08/2013	NE59	Stroubles Creek	Operator-owned	N	6/8/2022
56	SPE Underground Detention Piping	Existing	Underground Detention	37.2252N	80.4353W	0.51	0.35	0.86	08/2013	NE59	Stroubles Creek	Operator-owned	N	12/21/2021
57	VMIA - Detention Swale	Existing	Detention Swale	37.2175N	80.4266W	0.09	0.25	0.34	11/2012	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
58	VMIA - Filtterra Unit	Existing	MTD Filtterra Unit	37.2180N	80.4266W	0.01	0.23	0.24	11/2012	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
59	Dairy Barn Extended Detention	Existing	Extended Detention	37.2005N	80.5775W	0	8.49	34.91	7/2016	NE60	Stroubles Creek	Operator-owned	N	6/10/2022
60	CFTA Water Quality Unit 1	Existing	MTD Stormceptor Underground WQU	37.2310N	80.4173W	2.9	4.43	7.33	07/2013	NE59	Stroubles Creek	Operator-owned	N	12/21/2021
61	CFTA Water Quality Unit 2	Existing	MTD Stormceptor Underground WQU	37.2316 N	80.4169W	1.94	1.82	3.76	07/2013	NE59	Stroubles Creek	Operator-owned	N	12/21/2021
62	CFTA Underground Detention	Existing	MTD Underground Detention	37.2317N	80.4170W	1.94	1.82	3.76	07/2013	NE59	Stroubles Creek	Operator-owned	N	12/21/2021
64	Oil/Water Separator at Perry Street Parking Garage	Existing	MTD Underground WQU Hydrodynamic Separator	37.2310N	80.4257W	0	-	-	05/2011	NE59	Stroubles Creek	Operator-owned	N	12/21/2021
65	VT Airport Extended Detention Basin	Existing	Extended Detention	37.2055N	80.4114W	5.69	2.44	8.13	06/2005	NE59	Stroubles Creek	Privately-owned	Y	6/9/2022
66	Upper Quad Bioretention 1	Existing	Bioretention	37.2304N	80.4190W	0	0.3	0.3	02/2018	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
67	Upper Quad Bioretention 2	Existing	Bioretention	37.2302N	80.4193W	0	0.4	0.4	02/2018	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
68	Upper Quad Underground Detention	Existing	MTD Underground Detention	37.2306N	80.4194W	0	0.9	0.9	02/2018	NE59	Stroubles Creek	Operator-owned	N	12/21/2021
71	Drillfield Road Improvements Filtterra Unit 1	Existing	MTD Filtterra Unit	37.2294N	80.4213W	0.06	0.24	0.3	4/2016	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
72	Drillfield Road Improvements Filtterra Unit 2	Existing	MTD Filtterra Unit	37.2279N	80.4198W	0.22	0.19	0.41	4/2016	NE59	Stroubles Creek	Operator-owned	N	6/9/2022

BM P	BMP Name	BMP Status	BMP Type	Lat	Long	Perv. Drain Area	Imperv. Drain Area	Total Acres	Date Added	HUC	Impaired Water	Ownership	Maint. Agreement	Date of Last Insp.
73	IATF Filtterra Unit 1	Existing	MTD Filtterra Unit	37.2212N	80.4173W	0	0.24	0.24	9/2015	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
74	IATF Filtterra Unit 2	Existing	MTD Filtterra Unit	37.2212N	80.4172W	0	0.19	0.19	9/2015	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
75	IATF Filtterra Unit 3	Existing	MTD Filtterra Unit	37.2181N	80.4167W	0	0.19	0.19	9/2015	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
76	IATF Filtterra Unit 4	Existing	MTD Filtterra Unit	37.2219N	80.4169W	0	0.24	0.24	9/2015	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
77	IATF Filtterra Unit 5	Existing	MTD Filtterra Unit	37.2221N	80.4171W	0	0.24	0.24	9/2015	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
78	IATF Filtterra Unit 6	Existing	MTD Filtterra Unit	37.2223N	80.4173W	0	0.24	0.24	9/2015	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
79	IATF Filtterra Unit 7	Existing	MTD Filtterra Unit	37.2224N	80.4175W	0	0.19	0.19	09/2015	NE59	Stroubles Creek	Operator-owned	N	6/9/2022
80	IATF Underground Detention	Existing	MTD Underground Detention	37.2213N	80.4174W	0	1.29	1.29	09/2015	NE59	Stroubles Creek	Operator-owned	N	12/21/2021
82	MARCHING VIRGINIANS Extended Detention	Existing	Extended Detention	37.1257N	80.2459W	12.79	2.72	15.51	07/2016	NE59	Stroubles Creek	Operator-owned	N	6/10/2022
83	MARCHING VIRGINIANS Extended Detention	Existing	Enhanced Extended Detention	37.1253N	80.2451W	32.16	6.23	38.39	07/2016	NE59	Stroubles Creek	Operator-owned	N	6/10/2022
84	BETR Underground Detention	Existing	Underground Detention	37.2184N	80.4411W	1.71	0.38	2.09	01/2021	NE59	Stroubles Creek	Operator-owned	N	12/21/2021
90	Smoot Drive Remote Parking Underground Detention Northwest	Existing	Underground Detention	37.210N	80.419W	0.21	0.57	0.78	07/2019	NE59	Stroubles Creek	Operator-owned	N	5/19/2022
91	Smoot Drive Remote Parking Underground Detention Southwest	Existing	Underground Detention	37.209N	80.416W	0.21	1.31	1.51	07/2019	NE59	Stroubles Creek	Operator-owned	N	5/19/2022
92	Holden Hall Underground Detention	Existing	Underground Detention	37.230N	80.423W	0.12	0.66	0.78	03/2022	NE59	Stroubles Creek	Operator-owned	N	5/19/2022