

**Albemarle County
2018- 2023
MS4 Program**

- **Year 5 Annual Report**
- **Chesapeake Bay TMDL Action Plan Update**
- **Local TMDL Action Plan Update**

**Coverage under VPDES General Permit for
Small Municipal Separate Storm Sewer Systems (MS4)
VAR040074**

Albemarle County
[Environmental Services Division](#)
401 McIntire Road
Charlottesville, Virginia 22902
(434) 296-5816



October 1, 2023

Albemarle County, Virginia is authorized to discharge stormwater into the State's surface waters through a General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4s) under the Virginia Stormwater Management Program.

This document is submitted to the Virginia Department of Environmental Quality as fulfillment of its responsibility to annually report on activities and program updates.

CERTIFICATION STATEMENT

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.

Sincerely,



Jeffrey B. Richardson, County Executive

11/9/22/23

Date

Contents

Contents.....	1
List of Abbreviations	2
Introduction	3
Roles and Responsibilities.....	3
Section 1: Minimum Control Measures #1 — #6, Activities in Year 5	4
MCM1 – Public Education and Outreach (Permit Sec. Part I.E.1.g(1) – (2))	4
MCM2 – Public Involvement and Participation (Permit Sec. Part I.E.2.f).....	7
MCM3 – Illicit Discharge Detection and Elimination (Permit Sec. Part I.E.3.e)	8
MCM4 – Construction Site Stormwater Runoff Control (Permit Sec. Part I.E.4).....	12
MCM5 – Post-Construction Stormwater Management (Permit Sec. Part I.E.5.i).....	13
MCM6 – Pollution Prevention & Good Housekeeping (Permit Sec. Part I.E.6.q (1)).....	14
Evaluation of MS4 Program Implementation (Permit Sec. Part I.D.2.e).....	16
Section 2: Chesapeake Bay TMDL Action Plan Activities (Permit Sec. Part II.A.13).....	17
Chesapeake Bay TMDL - New BMPs installed (Permit Sec. Part II.A.13.a-b)	17
Chesapeake Bay TMDL - POC Accounting Update (Permit Sec. Part II.A.13.c).....	17
Chesapeake Bay TMDL - Future Projects Update (Permit Sec. Part II.A.13.d).....	18
Section 3: Local TMDL Action Plan Activities (Permit Sec. Part II.B.9).....	19
Bacteria Reduction Activities	19
Sediment Reduction Activities	20

List of Abbreviations

ACSA	Albemarle County Service Authority
BMP	Best Management Practice
DEQ	Department of Environmental Quality
EMS	Environmental Management System
ESD	Environmental Services Division (of Albemarle County)
GIS	Geographic Information System
IDDE	Illicit Discharge Detection and Elimination
MCM	Minimum Control Measure
MS4	Municipal Separate Stormwater Sewer System
MWEE	Meaningful Watershed Education Experience
POC	Pollutant of Concern
RCA	Rivanna Conservation Alliance
RRBC	Rivanna River Basin Commission
RSEP	Rivanna Stormwater Education Partnership
SMF	Stormwater Management Facility
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
TJSWCD	Thomas Jefferson Soil and Water Conservation District
VDOT	Virginia Department of Transportation
VEEP	Virginia Environmental Excellence Program
VESCP	Virginia Erosion and Sediment Control Program
VPDES	Virginia Pollutant Discharge Elimination System
VSMP	Virginia Stormwater Management Program
WLA	Waste Load Allocation

Introduction

This report documents activities conducted by Albemarle County’s MS4 Program in Year 5 (between July 1, 2022 and June 30, 2023) in accordance with the [2018 - 2023 General Permit for Small MS4s \(VAR040074\)](#). Section 1 of the report is a review of the year’s activities falling under each of the six Minimum Control Measures (MCM) described in the County’s [MS4 Program Plan](#). Sections 2 and 3 include the required annual updates related to our Chesapeake Bay TMDL Action Plan and Local TMDL Action Plan, respectively.

Roles and Responsibilities

Most program activities are carried out by staff from Albemarle County Local Government and/or Albemarle County Public Schools. Additional activities are performed per contractual arrangements with the Thomas Jefferson Soil and Water Conservation District (TJSWCD) and Rivanna Conservation Alliance (RCA). Key County staff associated with each Minimum Control Measure are listed in the table below.

Minimum Control Measure	Albemarle Staff Contacts
1) Public education and outreach	Laurel Williamson, Watershed Stewardship Manager Department of Facilities and Environmental Services lwilliamson2@albemarle.org / 434-296-5816 x3411
2) Public involvement and participation	
3) Illicit discharge detection and elimination	
4) Construction site stormwater runoff control	Frank Pohl, County Engineer Community Development Department fpohl@albemarle.org / 434-296-5832 x7914
5) Post-construction stormwater management	Laurel Williamson, Watershed Stewardship Manager
6) Pollution prevention/good housekeeping	Laurel Williamson, Watershed Stewardship Manager Lindsay Check Snoddy, Director of Building Services Albemarle County Public Schools lcsnoddy@k12albemarle.org / 434-975-9340

Section 1: Minimum Control Measures #1 — #6, Activities in Year 5

MCM1 – Public Education and Outreach (Permit Sec. Part I.E.1.g(1) – (2))

In Year 5, Albemarle County (often in partnership with other local organizations) was able to reach members of the public on stormwater-related topics through a wide variety of strategies. Our activities and materials addressed one or more of the high-priority stormwater issues listed in the County’s public education and outreach plan for 2018-2023: runoff volume reductions, potential runoff pollutants, and TMDL impairments (bacteria, sediment, nitrogen, phosphorus).

The County continues its fruitful collaboration with other local MS4 permit holders and partners – the City of Charlottesville, the University of Virginia, the Thomas Jefferson Planning District Commission, Rivanna Conservation Alliance, and others – in implementing education and involvement efforts through the Rivanna Stormwater Education Partnership (RSEP). The TJSWCD serves as the partnership’s coordinating body. The partnership website is <http://www.rivanna-stormwater.org/>. RSEP met seven times during the reporting period to discuss and organize initiatives and share information pertaining to stormwater stewardship and permit compliance.

Educational outreach activities conducted by Albemarle County and RSEP during Year 5 are listed in the table below.

Albemarle County & RSEP Education and Outreach Activities		Strategy Type	High Priority Issues Addressed		
			Runoff Volume	Runoff Pollutants	TMDL Pollutants
(07/01/22 – 06/30/23)					
8/1/2022	Piedmont Master Gardeners brochures – Building on the success of last year's efforts, provided an additional 200 "Stormwater Pollution Prevention: A Lawn and Landscape Guide" brochures with yard related tips for PMG to hand out at their events, site visits, and workshops. Also provided Love Your Watershed and other stormwater pollution prevention magnets and stickers.	Traditional written materials; Alternative materials		X	X
9/20/2022	Social Media Post – It is SepticSmart Week, an annual event focused on educating homeowners on proper care and maintenance of septic systems. (137 social media users reached)	Media materials			X
9/24/2022	Rivanna River Round-Up Sponsorship – RSEP provided sponsorship funds to Rivanna Conservation Alliance to help provide supplies for City wide river clean up events. RSEP "love your watershed" logo was included on t-shirts and other promotional items for the event.	Signage; Alternative materials		X	
9/28/2022	Sean Tubbs Newsletter - Rivanna River Basin Commission Annual Conference – Inclusion of RRBC Conference description and interview with RSEP member Isabella O'Brien in local newsletter with 1,200 views.	Media materials	X	X	X

9/29/2022	Rivanna River Basin Commission Annual Conference – Conference on the status of stormwater and water quality in the Rivanna watershed including WIP Plan Updates, Stormwater BMP updates, and local updates related to the Chesapeake Bay. Local elected officials participated. Shared Love Your Watershed campaign efforts and link to RSEP website. Members from all 6 localities of the Planning District Commission shared content on their social media pages and took information back to their regional environmental groups. RSEP had a booth at the event with Love Your Watershed information, including magnets and stickers.	Speaking engagements; Alternative materials			X
9/29/2022	Rain Barrel brochures – Printed and provided 200 brochures with information on using and constructing rain barrels at home. Handed out to Piedmont Master Gardeners and at rain barrel workshop in spring	Traditional written materials	X		
10/4/2022	Social Media Post – Interested in learning how to best take care of your lawn in the fall? The guide below should help to refresh your autumn gardening knowledge! (137 social media users reached)	Media materials	X	X	X
10/19/2022 to 10/25/2022	C-Ville Weekly ad – half-page ad in local weekly paper with distribution of 10,000 urging readers to "Leave it or rake it, but don't blow it!" The posted graphic includes a list of Dos and Don'ts for managing leaf litter, grass, and yard debris. Ad also ran on the C-ville Weekly website.	Media materials		X	X
10/25/2022	Social Media Post – "This fall ditch your leaf blower!" The posted graphic includes a list of Dos and Don'ts for managing leaf litter, grass, and yard debris. (304 social media users reached)	Media materials		X	X
11/21/2022	Social Media Post – #EnjoyTheFeastRecycleTheGrease: This Thanksgiving, consider recycling your grease. When poured down the drain, cooking oil and grease combine with other ingredients like food waste and non-flushable items to create large clogs in our sewer systems (like the one pictured here). These clogs block the sewer lines and cause costly and unsafe overflows into backyards, forests, and streams. (137 social media users reached)	Media materials			X
Fall 2022	Fall BMP posters on Charlottesville Area Transit buses – Messages about fertilizing in fall, leave the leaves, and other fall BMPs. CAT buses travel throughout the greater-Charlottesville area	Signage		X	X
Fall 2022 & Spring 2023	4th Grade Watershed Education Program – The Thomas Jefferson Soil and Water Conservation District hosted 16 days of watershed education field trips for 1,105 Albemarle County fourth grade students at Camp Albemarle during the 2023 school year. Activities included a Stream Study, Enviroscape Watershed Model, and a Nature Hike. On days with larger student attendance, a fourth station was added (the Project WET game, the Incredible Journey: Journey of a Water Molecule). Virtual watershed education activities remain available on our website. Furthermore, TJSWCD engaged with Hollymead Elementary's 4th grade class of 25 students by donating a rain barrel to them that they can use to water their school garden. The class painted the barrel and TJSWCD staff helped with installation.	Speaking engagements; Curriculum materials	X	X	X

1/11/2023	Social Media Post – Using excess salt harms plants and animals, pollutes water, damages buildings, and corrodes vehicles, roads, and bridges. (137 social media users reached)	Media materials		X	
Spring 2023	6th Grade Watershed Field Investigation – Rivanna Conservation Alliance staff and community volunteers launched a new watershed education program for every 6 th grade class in all six of the County’s middle schools. Each class attended a full day field experience with three stations: Biological Assessment, Visual Chemical Assessment, and Macroinvertebrate Mayhem. RCA hosted 10 field days with 960 6 th graders in attendance.	Speaking engagements; Curriculum materials	X	X	X
4/24/2023	Social Media Post – Captured rainwater is perfect for irrigating landscaped beds, watering potted plants, and outdoor chores like bike or car washing. Rain barrels can reduce stormwater runoff from your property, which is beneficial to local waterways. <i>Advertising for Rain Barrel Workshop and rain barrel rebates.</i> (138 social media users reached)	Media materials	X		
4/29/2023	Kid*Vention – An annual family science festival that features local exhibitors. RSEP tabled with "Love Your Watershed" information and handouts. Estimated 500 visitors.	Speaking engagements; Traditional written materials; Alternative materials	X	X	X
5/21/2023	Rivanna RiverFest – RSEP had an information table for attendees to learn about how to reduce stormwater runoff on their properties (and VCAP cost-share opportunities), native plants, picking up pet waste, and more! Games for kids included Spin the Wheel, bioretention cornhole, and watershed coloring pages. Estimated 1000 attendees.	Speaking engagements; Traditional written materials; Alternative materials	X	X	X
6/5/2023	Social Media Post – Did you know that you live in the Rivanna watershed, which is part of the greater Chesapeake Bay watershed? Chesapeake #BayAwareness Week began this weekend and is a time to celebrate the cultures, history and natural beauty of the nation’s largest estuary. Discover your connection to the Bay by attending one of these events. (138 social media users reached)	Media materials	X	X	X
6/6/2023	Social Media Post –Today, as part of Chesapeake #BayAwarenessWeek, we are focusing on restoration projects in the watershed. Restoration projects in the watershed come in many varieties, from repairing an eroded stream bank, planting trees along streams, planting a conservation landscape, and more! (138 social media users reached)	Media materials	X	X	X
Summer 2023	Conservation Mowing signage & website – Albemarle County Public Schools Building Services department began to implement Conservation Mowing (1x a year mowing) on 40 acres across several school campuses. Signage has been put up next to these plots to explain to passers-by the purpose and benefits of conservation mowing, including water quality benefits. ACPS has also established this website for additional outreach: Conservation Mowing - Albemarle County School District (k12albemarle.org)	Signage; Media materials	X	X	X

MCM2 – Public Involvement and Participation (Permit Sec. Part I.E.2.f)

Public Input on MS4 Program (Permit Sec. Part I.E.2.f(1)) – Albemarle County Environmental Services Division (ESD) staff tracks stormwater, drainage, and other water resources issues in a “Water Resources Issue Tracking” database. Records in this database show that in this reporting year, ESD staff received 32 stormwater/drainage alerts, questions, or complaints from the public or other County staff, many of which were about issues in the MS4 area. Staff responded to all of these with a site visit, phone call, and/or email communication to evaluate each specific situation as appropriate. Also, the [RSEP Water Pollution hotline and online reporting form](#) received 11 reports from the public, several of which involved issues within Albemarle County.

After several small changes were made to the MS4 Program Plan in July 2022, the updated plan was posted on our website for input and feedback from the public. No input was received.

MS4 Program Webpage (Permit Sec. Part I.E.2.f(2)) – The following webpage is available for anyone to view Albemarle County’s MS4 Program plan, latest MS4 annual report, TMDL Action Plans, or to report a stormwater problem: <https://www.albemarle.org/government/facilities-environmental-services/environmental-services/water-resource-protection>.

Public Involvement Activities (Permit Sec. Part I.E.2.f(3) – (5)) – The following stormwater and watershed activities conducted in Year 5 involved the participation of members of the public and were supported by Albemarle County staff and/or funds and/or RSEP members.

Albemarle County & RSEP Public Involvement and Participation Activities (07/01/22 – 06/30/23)				
Date	Activity	Category	Metric	Value
9/24/2022	Rivanna River Round-up: Stream cleanup event organized by Rivanna Conservation Alliance (RSEP member). 243 members of the community participated in stream cleanups throughout the Albemarle-Charlottesville area, collecting 148 bags of trash, 173 tires, and covering over 27 miles of river and trail.	Restoration	# of participants	243
3/4/2023 & 4/15/2023	Litter pickups – Spring litter pickups along several roads in southern Albemarle County, organized by Albemarle's Yancey School Community Center.	Restoration	# of bags collected	72+
4/29/2023	Kid*Vention – An annual family science festival that features local exhibitors. RSEP tabled with "Love Your Watershed" information and handouts. Estimated 500 visitors.	Educational; Pollution prevention	# of participants	500
5/11/2023	Rain Barrel Workshop – Workshop for local residents on how to assemble a rain barrel to collect rainwater from gutters. Collaboration between TJSWCD, City of Charlottesville, RSEP, and James River Association. 25 participants.	Educational; Pollution prevention	# of participants	25
5/21/2023	Rivanna RiverFest – Organized by RCA and partners. RSEP had an information table for attendees to learn about how to reduce stormwater runoff on their properties (and VCAP cost-share opportunities), native plants, picking up pet waste, and more! Games for kids included Spin the Wheel, bioretention cornhole, and watershed coloring pages. Estimated 1000 festival attendees.	Educational; Pollution prevention	# of participants at RSEP table	250+

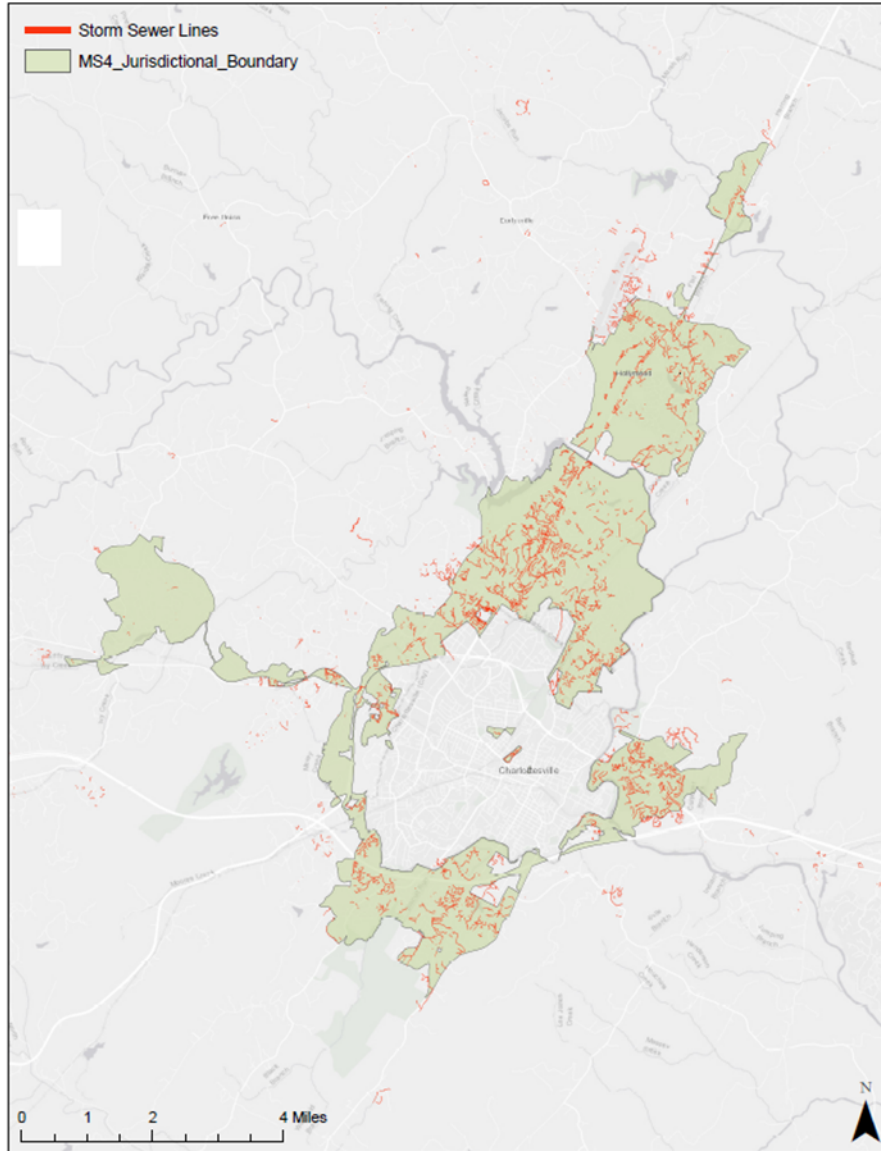
Spring, Summer, Fall	Funding for RCA Water Monitoring Program – For many years, the County has helped fund the Rivanna Conservation Alliance’s (RCA) community-based stream monitoring program. This program is certified Level III by DEQ; the data collected by this program is incorporated into DEQ’s water quality testing program. With the help of trained volunteers, RCA conducts extensive benthic monitoring throughout the Rivanna basin, as well as bacterial monitoring in the Charlottesville and Albemarle MS4 areas.	Monitoring	Funds provided to RCA during reporting year	\$20,900
			# of sampling sites in Albemarle County	5 bacteria sampling sites; 33 benthic sampling sites
Quarterly	Leadership/Guidance for RCA’s Water Quality Monitoring Program – In addition to offering funding, Albemarle County staff sits on the RCA’s Science Advisory Committee and actively provides water-quality monitoring and reporting guidance.	Educational	# Science Advisory meetings attended	4
Ongoing	Albemarle Conservation Assistance Program (ACAP) – This program assists property owners in Albemarle County with financing and technical assistance for the installation of new water quality best management practices. It serves to fill in gaps in the state-wide Virginia Conservation Assistance Program. The program is administered by TJSWCD. In FY23, 8 projects were approved and/or completed in Albemarle County, using ACAP funding and another 9 projects were completed with VCAP funds.	Restoration; Pollution prevention	Coverage Area of projects (ACAP)	60,393 s.f.
			Landowner match (ACAP)	\$3,239
			Total cost-share awarded (ACAP)	\$14,352
August 2023	Street Sweeper name survey: Via the Albemarle County News e-newsletter, Albemarle County community members were asked to vote to name our first street sweeper! In the solicitation, it was explained that street sweeping helps reduce water pollution and improve public safety. (The winning name was “Sweeping Beauty”.)	Educational	# of votes	1239

MCM3 – Illicit Discharge Detection and Elimination (Permit Sec. Part I.E.3.e)

Map & Information Table (Permit Sec. Part I.E.3.e(1)) – Any known changes to MS4 stormwater infrastructure that occurred on or before June 30, 2023 have been updated in our GIS. No changes were made to the MS4 area boundary during this reporting year. All the stormwater infrastructure mapped in FY 23 consisted of filling in gaps in the existing drainage networks, not new construction. None of the infrastructure mapped in FY 23 discharges to waters of the state and thus no new outfalls were discovered during infrastructure mapping.

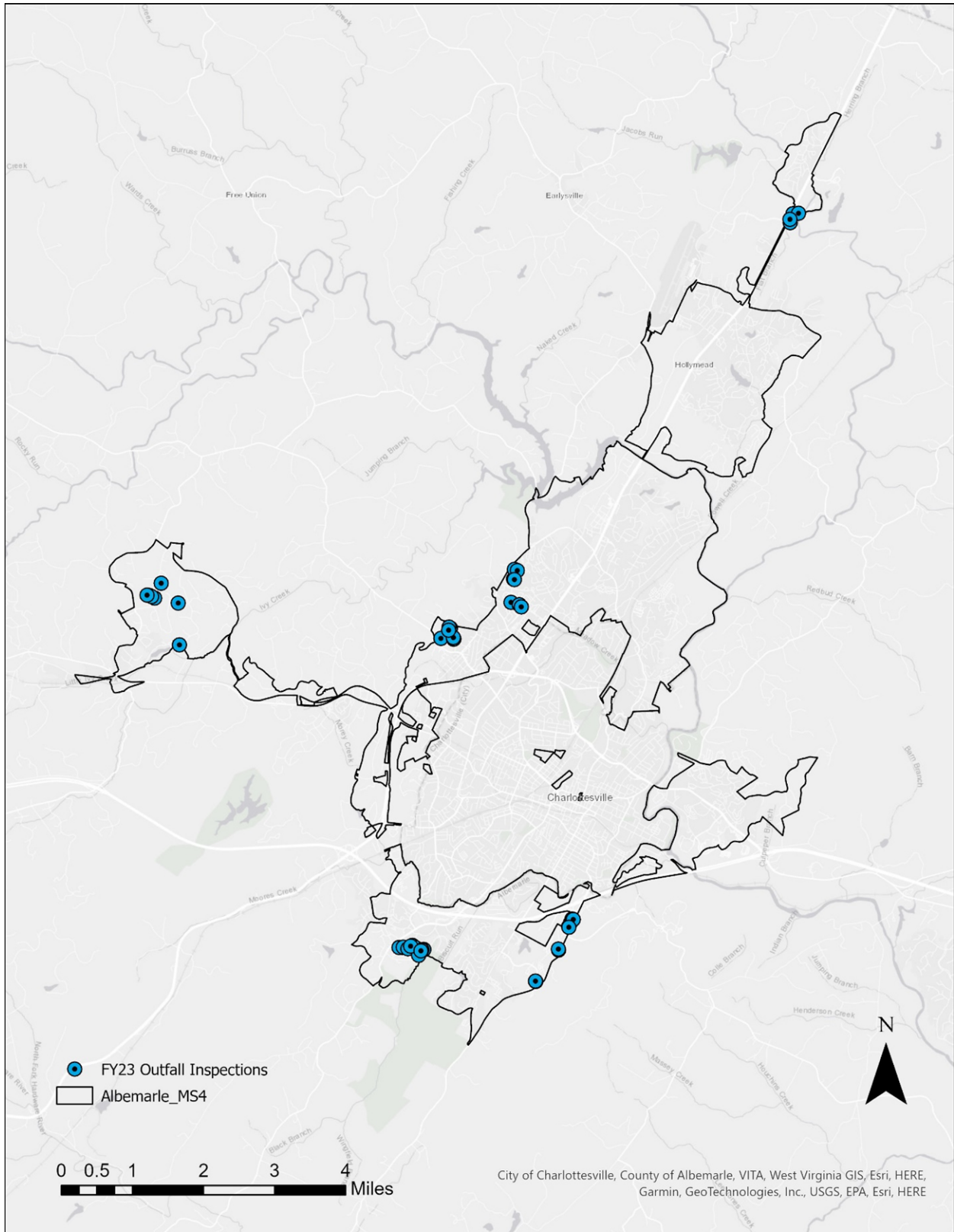
Albemarle County does not own and maintain a traditional, interconnected storm sewer system, as is typically the case in cities. Public roadways in the County – and the drainage infrastructure within the rights-of-way (ROW) – are operated by Virginia Department of Transportation (VDOT). Most of the infrastructure outside of VDOT ROW is located on private property. The County has historically been responsible for infrastructure on its own properties – including school and park properties – and within public easements on private properties.

Recently, the County began to clean, assess, and repair discovered issues with infrastructure located within the County’s urban areas and outside VDOT ROW and that serves more than one property. We have mapped approximately 90% of stormwater infrastructure within our MS4 area, irrespective of ownership and assessed approximately 20%. The map below indicates the current extent of mapped infrastructure.



Above: Storm sewer infrastructure (red) in Albemarle MS4 area (pale green).

Outfall Screening (*Permit Sec. Part I.E.3.e(2)*) – During the Year 5 reporting period, 53 stormwater outfalls (shown in map below) located within the County’s MS4 area were surveyed by County staff, using our dry weather screening protocols. The survey includes updating storm sewer outfall locations in our mapping system and conducting a visual screening for signs of illicit discharges. No active illicit discharges were identified during the annual dry weather outfall screening process.



Above: Outfalls surveyed during Year 5, in MS4 area.

Illicit Discharge Summary (Permit Sec. Part I.E.3.e(3)) – County MS4 and Fire Marshal staff respond to reports of suspected illicit discharges – in coordination with DEQ pollution response staff, as necessary. Reports typically reach MS4 staff via emails or phone calls from the public, other County staff, the RSEP illicit discharge hotline, and/or by discovering them while in the field. A record of reported suspected illicit discharges and other types of inquiries and complaints is maintained in the Environmental Services Division’s files and in our “Water Resources Issue Tracking” database.

During this reporting period, the County investigated four illicit discharges within the MS4 service area (and several outside of the MS4 area). Details of each incident are shown in the table below:

Illicit Discharge Investigations in MS4 Area, Year 5			
Date Observed/ Recorded	Description of Discharge & Investigation	Follow-up / Resolution	Date Closed
12/13/2022	Albemarle County Service Authority contacted County MS4 staff to report kitchen grease spillage on pavement behind several restaurants located at a shopping center. MS4 staff visited the site on two occasions to investigate the extent of the discharge. Grease had flowed across the parking lot and into tree box filters, but no signs of grease reaching the outfall at Moore’s Creek.	MS4 staff contacted the property management company of the shopping center who said they would speak with the restaurant owners about cleaning up the spill. The tree box filters were to be serviced and the tainted soil media replaced.	12/28/2022
2/3/2023	A community member called the RSEP pollution hotline to report a dump truck filling in an eroded gully on a hillside adjacent to Moore’s Creek near Avon Street. Loose soil was eroding into the creek. After receiving the message, MS4 staff contacted County erosion and sediment control staff to investigate the situation.	County E&SC staff visited the site and then decided to report it to DEQ since there were clearly impacts to State Waters, yet the land disturbance activity was below the minimum threshold for a land disturbance permit from the County (10,000 s.f.).	3/2/2023
4/26/2023	A community member called the RSEP pollution hotline in the evening to report large mounds of suds in a small tributary to Moore’s Creek. MS4 staff received the report the next morning, contacted the caller to get more information, and then reported the incident to DEQ pollution response staff. DEQ and MS4 staff visited the site together to track down the likely source of the suds, which had since dissipated.	No signs of ecological damage were visible in the stream. Tracking the drainage upstream led MS4 and DEQ staff to a firefighting training facility. Albemarle County Fire Rescue personnel were on site at the time. They explained that the local technical high school’s fire training program was using the site on the previous day and some participants had washed foam into a stormwater basin at the site. This was clearly the source of the suds that had been reported by the community member on the previous evening. DEQ staff followed up with the County’s Fire Marshal and others to discuss how to prevent further discharges and to request the MSDS for the discharged product (Knockdown – Class A foam).	4/28/2023

5/5/2023	During a site visit to a County-operated detention basin, grounds maintenance staff discovered that personnel at a newly built commercial car wash facility were pre-washing vehicles by hand in their parking lot. This wash water was flowing into a grate inlet that drains to the detention basin. Grounds maintenance staff informed County MS4 staff of the discharge.	County MS4 staff visited the car wash business and spoke with employees who were doing the washing in the parking lot and with the assistant manager. The assistant manager was under the impression that water flowing into the grate inlet gets captured in a tank and recycled. As a follow-up, MS4 staff researched the site plan and confirmed that the outdoor grate inlet indeed flows to the detention basin. MS4 staff returned with the plan and provided it to the head manager, explaining that they may only wash vehicles inside the car wash facility and not in the parking lot. The discharging practice ceased after this.	6/13/2023
----------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------

MCM4 – Construction Site Stormwater Runoff Control (Permit Sec. Part I.E.4)

Albemarle County’s construction site stormwater runoff program is implemented in accordance with Part I.E.4.a (1) of the MS4 General Permit. Albemarle County has been authorized by DEQ as a local authority of the Virginia Erosion and Sediment Control Program (VESCP) and the Virginia Stormwater Management Program (VSMP). Property owners preparing to engage in land disturbing activities must obtain a permit from the Community Development Department prior to the commencement of land disturbance. Land disturbing activities are also regulated by Albemarle’s Water Protection Ordinance. The standards and specifications for erosion and sediment control are no different than State regulations, except the County is more stringent in at least four respects:

- the land disturbance threshold for small construction activities is 10,000 square feet, as opposed to one acre
- denuded areas must be stabilized with permanent vegetation within nine months after commencing land disturbing activity (with caveats and opportunities for extensions)
- the zoning ordinance limits the use of fill or waste areas to one year
- a 100-foot vegetated buffer on qualifying streams must be designated and maintained in perpetuity where a regulated land disturbing activity occurs

Inspections and Enforcement Actions (Permit Sec. Part I.E.4.d(2) – (3)) – The following table is a summary of inspections and enforcement actions for regulated land-disturbing activities in Albemarle County during the reporting year.

Albemarle County enforcement of state and local laws regulating land-disturbing activities. (07/01/22 – 06/30/23)						
	Number of new land-disturbing activities	Total disturbed area (acres)	Number of inspections conducted	Number of written warnings	Number of notices to comply	Number of stop work orders
Regulated land-disturbing, <i>not</i> single-family homes	40	281.48	1,089	90	36	13
Regulated land-disturbing, single-family homes	286	N/A for building permits	2,646	154	22	4

MCM5 – Post-Construction Stormwater Management (Permit Sec. Part I.E.5.i)

Per VSMP and County requirements, Albemarle staff inspect permanent privately and publicly owned stormwater management facilities (SMFs). As of the end of the reporting year, there were 1,245 regulated SMFs in the County; 714 are located within the MS4 area. The locations of SMFs are maintained in a GIS and other data are maintained in a linked database.

Private SMF Inspections (Permit Sec. Part I.E.5.i(1)) – The table below summarizes our post-construction inspection activity of *private* SMFs throughout the whole County during this reporting year:

Inspections of <i>private</i> stormwater management facilities in Albemarle County (07/01/22 – 06/30/23)	
Number of inspections during reporting period	348
Outcome = "compliant"	160
Outcome = "maintenance or repairs needed"	188

Public SMF Inspections (Permit Sec. Part I.E.5.i(2)) – The County owns/operates 90+ SMFs throughout the County, approximately half of which are located within the MS4 area. County staff inspected 92 public facilities within the reporting period, many of which were inspected multiple times throughout the year.

Significant Maintenance/Repairs of Public SMFs (Permit Sec. Part I.E.5.i(3)) – In addition to routine maintenance of County-operated stormwater facilities (e.g., mowing, trash removal) during this reporting year, Albemarle County conducted the following repairs and significant maintenance:

- We installed a rip-rap outfall protection apron and ditch bank stabilization at the Rio Hill Shopping Center detention basin.
- At the Four Seasons lower pond, we removed a few large pine trees from the embankment in compliance with DEQ requirements, which included stump grinding, grading, and re-seeding.
- Bamboo removal was also accomplished at the Four Seasons lower pond site which involved cutting, removing the bamboo, grading, and incorporating the area into our regular mowing schedule.
- At the Monticello High School Lake/Hillcrest Dam, accumulated debris was removed from the mouth of the spillway and trees and stumps were removed from the end of the earthen dam.
- At Ivy Elementary School we removed both of the degraded stormwater flumes and replaced them with riprap channels.
- At Albemarle High School, in the detention basin between the Football Stadium and the Building Services Office, we removed trash and vegetation overgrowth, constructed a maintenance road, and repaired the undermined 42" headwall and laid riprap from the headwall into the facility.
- At the Western Albemarle High School Level Spreader, we repaired erosion channels.
- Also at Western Albemarle, we repaired and filled a sinkhole at the bioretention near the driving course.
- At Crozet Elementary School, during construction, a biofilter facility that was in need of repair was completely replaced.

Construction Database Submittal (Permit Sec. Part I.E.5.i(4)) – Albemarle County electronically reported SMF information through the Virginia Construction Stormwater General Permit (CGP) database for land disturbing activities for which coverage under the General VDPES Permit for Discharges of Stormwater was obtained in accordance with Part I.E.5.f of the MS4 General Permit.

BMP Warehouse Submittal (Permit Sec. Part I.E.5.i(5)) – Part I.E.5.g of the MS4 permit requires that “no later than October 1 of each year, the permittee shall electronically report the stormwater management facilities and BMPs implemented between July 1 and June 30 of each year using the DEQ BMP Warehouse and associated reporting template for any practices not reported in accordance with Part I.E.5.f including stormwater management facilities installed to control post-development stormwater runoff from land disturbing activities less than one acre in accordance with the Chesapeake Bay Preservation Act regulations (9VAC25-830) and for which a General VPDES Permit for Discharges of Stormwater from Construction Activities was not required.” The County submitted the required data for this reporting period into the BMP Warehouse web portal on September 11, 2023.

MCM6 – Pollution Prevention & Good Housekeeping (Permit Sec. Part I.E.6.q (1))

Through our Environmental Management Policy, Albemarle County is committed to environmental compliance, pollution prevention, and continual environmental improvement both within and outside our MS4 area. Many of the efforts related to the County’s implementation of an Environmental Management System (EMS) satisfy requirements under this stormwater permit.

Additionally, we maintain E3 level certification in the DEQ's Virginia Environmental Excellence Program (VEEP) for the Department of Facilities and Environmental Services, Department of Parks and Recreation, and Public Schools fence lines.

Operation Procedures Summary (Permit Sec. Part I.E.6.q(1)) – The EMS program constitutes the written procedures for daily good housekeeping and pollution prevention activities. The EMS includes the following standard operating procedures (SOPs):

- Safer Chemical Procedure
- Integrated Pest Management
- Underground Storage Tank Management
- Spill Prevention and Response
- Hazardous Conditions

Stormwater-related highlights of the EMS program include:

- All waste materials from our facilities are disposed of properly and contained in covered dumpsters. Dumpsters at local government and school locations are in good repair and are required to be cleaned on a regular basis by waste haulers. Custodial staff receive periodic training on good housekeeping, spill prevention, spill reporting, and outdoor storage of materials.
- A contractor agreement is in place for the majority of our maintenance, grounds, and custodial contracts that states that any contractor doing work in/on our facilities will not dump anything down a storm drain. All contractors, including painters, general construction contractors, and carpenters, must sign this document before any work is conducted.
- The County has a Safer Chemical Management Policy which mandates the use of green certified cleaning agents, restricts the use of pesticides, and promotes the use of bio-based pesticides when there is no alternative to the use of pesticides.
- The County Public Schools and Local Government have developed an Integrated Pest Management program for indoor and outdoor pest/weed control. This minimizes the amount of pesticides and herbicides used on school properties and subsequently discharged in stormwater.
- Albemarle Public Schools has developed a program to save water and reduce unnecessary runoff by adjusting schedules and irrigation amounts based on monitored rainfall.
- Weekly inspections are performed at our permitted vehicle wash outfall. An interior automated wash bay reduces number of vehicles being washed at the exterior bay.
- Maintenance and custodial personnel at fuel site locations are trained on cleanup measures and emergency response.

None of these SOPs were modified and no new operational procedures were developed during the reporting period.

High-Priority Facilities & SWPPPs (Permit Sec. Part I.E.6.q(2)-(3)) – Albemarle County has no facilities identified as “high-priority facilities” in the MS4 area, as defined in the General Permit.

Nutrient Management Plans (Permit Sec. Part I.E.6.q(4)) – No new nutrient management plans were developed for facilities in the MS4 area during this reporting year.

Training (Permit Sec. Part I.E.6.q(5)) – The following summarizes relevant pollution prevention & good housekeeping training sessions undertaken by Albemarle County employees during the reporting period.

Training event	Date	Number of employees	Training objectives
OSHA Level II Chemical Spill Response Training (by Sigma Consulting)	Aug 3, 2022	7 Parks & Rec employees	Spill response procedures, decontamination, personal protective equipment, respiratory protection, chemical storage and handling, etc.
Albemarle County Public Schools Building Services Training Day	Sept 26, 2022	210 ACPS employees	In addition to personal safety topics, this training includes pollution prevention and spill response procedures.
Pesticide applicator Certification and Re-certification	February 15 & 16 2023	6 Parks & Rec employees	Safe and environmentally responsible pesticide and herbicide application
Certified Fertilizer Applicator Re-certification	February 15 & 16 2023	9 Parks & Rec employees	Best management practices for applying fertilizers
Preventing Stormwater Pollution Training	Mar 16, 2023 & Mar 22, 2023	34 Parks & Rec and Facilities & Envi Services employees	Recognizing & reporting illicit discharges; good housekeeping for County operations

Evaluation of MS4 Program Implementation (Permit Sec. Part I.D.2.e)

The preceding sub-sections summarize Year 5 activities and progress associated with each minimum control measure. MS4 programs are designed to be adaptive to changes in requirements, local and regional conditions, available resources, and the state of best practices. As such, the professionals responsible for implementing this program have and will, as needed, make adjustments to policies, procedures, or activities to improve the effectiveness in meeting permit requirements and the more fundamental goal of improving the health of local and regional waters.

As alluded to earlier in this report, a few changes were made to the County’s MS4 Program Plan and/or associated documents in July 2022. The following updates were made:

- Provided new web address in MS4 Program Plan for access to program documents.
- Incorporated the Chesapeake Bay TMDL Action Plan and Local TMDL Action Plans into the Program Plan (by reference).
- Revised the *Illicit Discharge Response and Dry-weather Outfall Screening Procedures* to reflect updated protocol for who responds to different types of discharge reports and how to use Survey123 app for outfall screening.

Section 2: Chesapeake Bay TMDL Action Plan Activities (Permit Sec. Part II.A.13)

The General Permit requires that Albemarle County annually report new BMPs installed during the reporting period, the cumulative progress toward meeting the Chesapeake Bay TMDL compliance targets for nitrogen (TN), phosphorus (TP), and sediment (TSS), and a list of BMPs that are expected to be implemented during the next reporting period.

Chesapeake Bay TMDL - New BMPs installed (Permit Sec. Part II.A.13.a-b)

No BMPs that require reporting per General Permit Section Part II.A.13.a-b were installed during the reporting period.

Chesapeake Bay TMDL - POC Accounting Update (Permit Sec. Part II.A.13.c)

The MS4 permit requires permittees to provide – as part of this annual report – progress made towards meeting the required cumulative reductions for TN, TP, and TSS using the final design efficiency of the BMPs. The table below summarizes the total pollutant of concern (POC) reduction requirements and credits accumulated by Albemarle County through June 30, 2023.

Summary of Total POC Reduction Requirements and Credits (no changes from last year)				
	Type	P (lbs/yr)	N (lbs/yr)	TSS (lbs/yr)
Reduction Requirements				
(1st cycle – 5 %)		30.0	182.6	15,383.9
(2nd cycle – 40 %)		289.6	1527.5	109,133.9
(3rd cycle – 100%)		757.9	3,845.5	311,791.6

Reduction Credits	New and Grandfathered Sources	122.9	471.9	55,702.3
	Structural BMPs	70.4	268.7	33,558
	Stream Restorations	246.3	244.4	354,349.9
	BMPs installed between January 1, 2006 and July 1, 2009	253.3	2,601.4	228,654.0
	Connection of septic systems to sanitary sewer	0	373.5	0
	Nutrient Management Plans	0.1	0.9	0
	Total Reduction Credits	692.90	3,960.7	672,264.4
Total Reductions Remaining	65.0	N/A	N/A	
Total % Reductions Achieved	91.4%	103.0%	215.6%	

Chesapeake Bay TMDL - Future Projects Update (Permit Sec. Part II.A.13.d)

In Fall 2023, Albemarle County is planning to start construction on enhancements to the Woodbrook Lagoon constructed wetland site. This project will likely increase the nutrient and sediment reduction capacity of the wetland, although pollution reduction calculations have not yet been done.

In 2021 and 2022, the County conducted a master planning process for stream restoration projects in Biscuit Run Park (located south of Charlottesville) which identified four potential phases of restoration. The County has been approved for a SLAF grant to support the design and construction of the first phase of that restoration and design is well underway. Construction of the 1-mile stream restoration is due to begin in Fall 2024.

When implemented, these projects will achieve large quantities of pollutant removal credits in support of our Chesapeake Bay TMDL targets. The County’s Phase II Chesapeake Bay TMDL Action Plan provides descriptions of additional stormwater retrofits and stream restoration projects that are being considered by the County. As stated in the plan, the County reserves the right to modify the practices and projects described and to add, remove, and/or substitute practices and projects for the ones described in this annual report.

Section 3: Local TMDL Action Plan Activities (Permit Sec. Part II.B.9)

Albemarle County’s MS4 program has two Local TMDL Action Plans:

1. **Combined Local TMDL Action Plan:** Benthic TMDL for the Rivanna River and Bacteria TMDL for the Rivanna River Mainstem, North Fork Rivanna River, Preddy Creek and Tributaries, Meadow Creek, Mechums River, and Beaver Creek Watersheds (dated April 30, 2020)
2. **Local TMDL Action Plan:** Sediment TMDLs for Moores Creek, Lodge Creek, Meadow Creek, and Schenks Branch (dated April 30, 2021).

Bacteria Reduction Activities

Many of the bacteria pollution reduction strategies listed in the Combined Local TMDL Action Plan are ongoing and continued during the reporting period. The following table lists some of the activities, listed by bacteria source, conducted in Year 5.

Activities for Bacteria Reduction in Year 5, By Source	
Activities	Strategy Description
Domestic Pets:	
Leash ordinance	A County ordinance (Sec. 4-225) requires that dogs be on a leash when not on the owner’s property. This increases the likelihood that an owner will notice when his/her dog defecates and thus increases the likelihood that she/he will pick up and dispose of the pet waste.
Pet waste receptacles at parks	The County’s parks have receptacles into which dog owners are asked to dispose of their pet’s waste. Pet waste bags are also provided at designated dog parks.
Urban Wildlife/Birds:	
Signage against feeding wildlife	County-owned stormwater wet ponds in the MS4 area are posted with signs prohibiting the feeding of wildlife. This is to reduce the potential numbers of birds and other animals that would otherwise be attracted to those ponds.
Trash removal from stormwater ponds	At one of its stormwater wet ponds that receives a high volume of trash from an adjacent shopping center in the MS4 area, the County has installed a floating boom to collect floatables. The trash is removed regularly throughout the year, reducing the trash load downstream – a potential attractant of wildlife to streams.
Other Sources:	
Septage treatment for recreational vehicles	Rivanna Water and Sewer Authority accepts septage from RVs, motorhomes, campers, and charter buses at its wastewater treatment facility at no cost. This reduces the likelihood of raw septage being improperly disposed of in waterways or on land.
Enhanced maintenance of stormwater facilities	Many of the County’s stormwater management facilities are maintained in such a way as to provide a functional ecosystem that can process bacteria from wildlife and stormwater sources. This includes strategies to maintain plant diversity, reduce invasive species, and provide for floodplain and wetland functionality.

Sediment Reduction Activities

In this reporting year, the MS4 program did not implement any significant sediment reduction projects such as stream restoration projects or stormwater retrofits. However, as described at the end of Section 2 of this report, *planning* and *design* for stream restoration in Biscuit Run Park and enhancements at Woodbrook Lagoon did occur during the reporting period. Once constructed, those projects will contribute significantly towards our action plan targets for the Moore's Creek and Rivanna River sediment/benthic TMDLs.