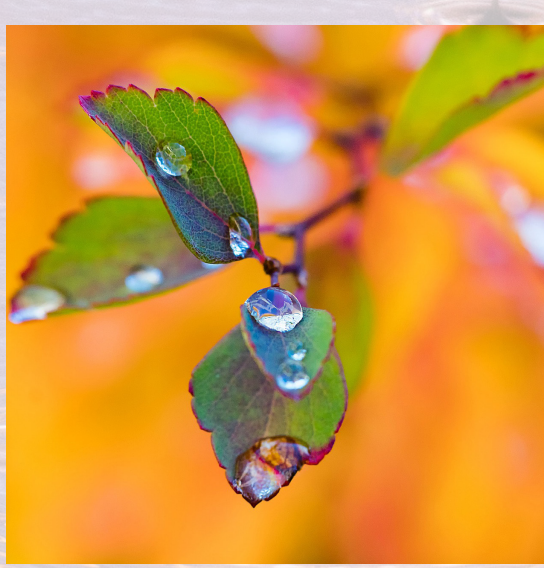
2021 MS4 PROGRAM PLAN



Engineering and Environmental Services Department • VPDES Permit #VAR040134

MONTGOMERY COUNTY VIRGINIA
EST. 1776

Executive Summary

Montgomery County is committed to the development, implementation, and enforcement of a Municipal Separate Storm Sewer System (MS4) Program Plan (Plan) to reduce the discharge of pollutants from the regulated MS4 service area to the maximum extent practicable (MEP) in accordance with VPDES Permit No. VAR040134. The focus of the proposed program will be to 1) protect water quality, 2) improve waters into which the regulated small MS4 discharges, and 3) meet the requirements of state and federal regulations.

Note that this is a planning document and that all enforceable provisions of the MS4 program are contained within the General VPDES Permit for Discharges of Stormwater from Municipal Separate Storm Sewer Systems (MS4 Permit). Virginia Department of Environmental Quality (DEQ) retains the right to review the Program Plan to determine if it includes the required elements as prescribed in the MS4 Permit.

The Montgomery County MS4 Program Plan identifies the roles and responsibilities of Montgomery County and Montgomery County Public Schools staff in implementing permit requirements in an organizational chart located in Appendix A, in conformance with Part 1.C.a. Each Best Management Practice (BMP) within the Program Plan may also identify responsible parties in additional detail.

A copy of a written agreement between Montgomery County and Montgomery County Public Schools (MCPS) acknowledging the MCPS role in implementing portions of the Program Plan is provided in Appendix B in conformance with Part 1.C.b.

The plan addresses permit requirements for the following minimum control measures (MCMs):

(1) Public Education and Outreach
(2) Public Involvement and Participation
(3) Illicit Discharge Detection and Elimination
(4) Construction Site Stormwater Runoff Control
(5) Post-Construction Runoff Control Management for New Development and Development on Prior Developed Lands
(6) Pollution Prevention and Good Housekeeping for Facilities Owned or Operated by the Permittee within the MS4 Service Area

The program plan meets the permit part 1.C.c or each MCM by including the following:

- Each specific requirement as listed in Part I E of the permit for each MCM
- A description of the BMPs or strategies that the permittee anticipates will be implemented to demonstrate compliance with the permit conditions in Part I.E. Note that this plan is iterative in nature and changes to the anticipated Best Management Practices and strategies are possible over the MS4 permit term.

- All standard operating procedures (SOPs) or policies necessary to implement the BMPs. Note that procedures and policies developed for the program are internal documents that are intended to give guidance to staff in addressing permit requirements. The County reserves the right to revise SOPs and policies at any time as a part of an iterative process of plan improvement.
- The measurable goal by which each BMP or strategy will be evaluated
- The persons, positions, or departments responsible for implementing each BMP or strategy
- A list of documents incorporated by reference. Documents accessible via hyperlinks or contained in the plan appendices denote the current revision date.

In accordance with Part II of the permit, the Plan will address special conditions for approved total maximum daily loads (TMDLs) when a wasteload allocation (WLA) is assigned to Montgomery County. There are no WLAs currently assigned to the county in any TMDL approved by the Environmental Protection Agency prior to June 30, 2018.

Any modifications to this Program Plan will be documented as part of the annual report submittals in conformance with Part 1.D.2e of the permit.

Publication Data
September 30, 2021

MCM 1: PUBLIC EDUCATION AND OUTREACH

This minimum control measure is intended to implement a diverse public education program targeting individuals or groups most likely to have significant stormwater impacts, to increase public audience knowledge about the steps that can be taken to reduce stormwater pollution and the hazards associated with illegal discharges and improper disposal of waste.

Public Education and Outreach Program

The following general discussion of water quality issues, a county household and population discussion, a county watershed impairment status table, and three specific water quality issue discussions comprise the county high-priority public education and outreach program and clarify the rationale for the selection of the three high-priority stormwater issues identified in this plan.

Water Quality Issues

The Virginia Department of Environmental Quality (DEQ) evaluates water quality based on the ability to support four beneficial use categories; recreation, wildlife, the growth of a balanced population of aquatic life, and the production of edible and marketable fish and shellfish. Table 1 lists stream sections within the unincorporated areas of Montgomery County that are identified as impaired for one or more beneficial uses by the Virginia Department of Environmental Quality (DEQ) in the 2016 305(b)/303(d) Water Quality Assessment Integrated Report. The table also lists the assigned impairment cause as identified by DEQ, as well as the status of any total Maximum Daily Load (TMDL) studies. This information will be discussed below and used in part in the selection of high-priority water quality issues.

Bacteria/Fecal Coliform/E. Coli impairments occur on stream sections in fourteen of the nineteen sixth order watersheds wholly or partially within Montgomery County. Bacteria is also an identified pollutant of concern in Total Maximum Daily Load (TMDL) studies that include streams and watersheds of Montgomery County, although there are no Waste Load Allowances (WLAs) currently assigned to the county that would trigger the permit special conditions requirement to develop any Action Plan(s). The extent to which bacteria impairments exist and the expectation that future TMDL studies may allocate WLAs to the county make a bacteria related high-priority water quality issue appropriate to Montgomery County's MS4 Program.

The health of aquatic life is typically evaluated in the form of Benthic-Macroinvertebrate Assessments. Five of nineteen County watersheds have aquatic life impairments. Sediment, toxics, low dissolved oxygen, nutrients, pH, metals, conductivity, temperature and organic matter are all potential stressors affecting aquatic life. Four TMDL studies identify sediment as a primary stressor of aquatic life in waters within Montgomery County. Nutrients can lead to algal growth and subsequent low dissolved oxygen levels and reduced light for submerged aquatic vegetation, while trash can transport toxics, metals, as well as nutrients to aquatic systems. Sediment, Nutrients (Nitrogen and Phosphorous), and Trash/Refuse are therefore collectively appropriate as a high-priority water quality issue.

An additional consideration for this program in selecting appropriate high-priority issues is the fact that the Montgomery County Public Schools (MCPS) is participating in the County MS4 program. The effective date of MS4 coverage for the county was May 21, 2014. A memorandum of agreement

between Montgomery County and the County School Board of Montgomery County to conduct the school's MS4 operations under the county permit was signed on February 17, 2016. The education of the school age youth of the county on water quality issues has the potential for significant future positive impacts on water quality. An appropriate Montgomery County Public School System grade level that has a focus on watersheds and the environment would provide an appropriate high-priority issue public audience.

Table 1. Impairment Status for Waters of the Unincorporated Areas of Montgomery County, Virginia, In the 2016 305(b)/303(d) Water Quality Assessment Integrated Report

Watershed Name	4 digit and 12 Digit HUC Code	Impairment	Total Maximum Daily Load Date (if applicable)	Comments
Little River-Brush Creek	NE52 050500011701	E. Coli		Approximately 6 miles of Brush Creek upstream of the Little River.
Little River-Lost Bent Creek	NE53 050500011702	Fecal Coliform/E. Coli		8.8 & 8.4 sections of the Little River on the Montgomery/Floyd County line from Brush Creek to the NE55 watershed.
Little River-Big Laurel Creek	NE55 050500011704	E. Coli	2013 for Bacteria, Benthic, Temperature	12.3 miles of the Little River from NE53 to NE56.
Little River-Meadow Creek	NE56 050500011705	Fecal Coliform	2004 for fecal Coliform in Mill Creek and Tributaries	A 2004 E. Coli TMDL addresses 15.3 miles of Mill Creek, Poplar Creek, and tributaries. 1.9 total miles of the Little River from NE56 to the New River for E. Coli or coliforms. 4.6 miles of Meadow Creek is impaired for E. Coli.
New River-Connellys Run	NE57 050500011801	E. Coli, PCB		4.7 miles of Plum Creek for E. Coli. 9.1 miles of the New River for PCB.
Crab Creek	NE58 050500011802	E. Coli, Benthic-Macroinvertebrate Assessment	2004 for E. Coli, Sediment	Approximately 6.0 miles of Crab Creek from the New River to Christiansburg.
New River-Stroubles Creek	NE59 050500011803	E. Coli, Benthic-Macroinvertebrate Assessment, PCB	2004 (3.3 mile section, for Benthic)	Approximately 2.1 miles upstream of the New River for E. Coli. Approximately 3.3 from the E. Coli section to Blacksburg for E. Coli and Benthic-Macroinvertebrate Assessment. 9.9 miles of the New River for PCB.
Toms Creek-Poverty Creek	NE60 050500011804	E. Coli, Temperature		16.4 miles of Toms Creek.
New River-Dry Branch	NE62 050500011806	PCB		6.8 miles of the New River.
Goose Creek-Lick Fork	RU01 030101010101	E. Coli		0.36 miles of Goose Creek for E. Coli. Less than 60 acres of this watershed is within the County.
Bottom Creek	RU02 030101010102	Temperature		4.5 miles of Bottom Creek for temperature.
South Fork Roanoke River-Purgatory Creek	RU03 030101010103	E. Coli, Temperature		4.6 miles of the S. F. Roanoke river to RU05.
Elliot Creek	RU04 030101010104	Benthic-Macroinvertebrate Assessment		An unnamed tributary of Smith Creek is impaired for aquatic life use.
South Fork Roanoke River-Brake Branch	RU05 030101010105	E. Coli, Temperature		12.7 miles of the S. F. Roanoke river to RU09.
North Fork Roanoke River-Dry Run	RU06 030101010201	E. Coli		9.2 miles of the N. F. Roanoke River upstream from the confluence with Wilson Creek at RU07.
North Fork Roanoke River-Wilson Creek	RU07 030101010202	E. Coli, PCB	E. Coli 2007	13.9 miles of N. F. Roanoke River downstream from the confluence of Wilson Creek.
North Fork Roanoke River-Bradshaw Creek	RU08 030101010203	E. Coli, pH		Approximately 6.5 miles of Bradshaw Creek from the Roanoke County line to the N. F. Roanoke River.
Roanoke River-Sawmill Hollow	RU09 030101010204	PCB	E. Coli 2007 PCB 2010 Benthic 2006	1.27 miles of the S. F. of the Roanoke River from RU05 to the Roanoke County line.
Craig Creek-Trout Creek	JU41 020802011001	None		

Montgomery County Population, Household Distribution, and Public Audience Identification

Identifying and estimating the population size of an appropriate general public audiences within the Montgomery County MS4 regulated service area is challenging. Although the current permit revises the previous permit conditions and eliminates a strict numerical target outreach for audiences, it remains worthwhile to estimate public audience size for education, outreach, and participation both to determine if the audience outreach is of a scope that may have a positive impact on stormwater discharges and for planning and scoping purposes. Montgomery County is unique as a regulated small municipal separate storm sewer system (MS4) permittee in that the county's urbanized area contains the incorporated towns of Blacksburg and Christiansburg that are respectively the second and fourth largest towns in Virginia. The MS4 permit requires that public education and outreach strategies are "targeted towards individuals or groups most likely to have significant stormwater impacts" and requires "identification of the public audience to receive each high-priority message".

Both the bacteria and sediment/nutrient/trash high-priority issues will be directed to all households of the county based on the following considerations. The unincorporated area of the county that is also an urbanized area as defined by census represents just 3.3% of the total County area (12.85 square miles out of the total county area of 388.5 square miles). The area delineated as MS4 Service Area, as found on the required public MS4 Outfall Map, totals 449 acres, or 0.70 square miles, out of the 338.5 square mile total county area, and the MS4 service areas contain both unincorporated urbanized areas of the county. It is possible that residents that reside outside of the specific MS4 Service Areas will participate in actions inside the Service Areas that may impact stormwater quality. Town incorporated areas within the drainage areas of county MS4 outfalls typically are a part of headwaters of streams that flow to the county areas, therefore the actions of county residents residing outside the MS4 Service Areas will likely have impacts on water quality in the Service Areas.

The US Census Bureau reports a 2018 Montgomery County population estimate of 98,985 persons and 35,577 households.
https://www.census.gov/quickfacts/fact/table/montgomerycountyvirginia/PST045218#PST045218
The county data includes the population and households in the incorporated towns of Blacksburg and Christiansburg. The data indicates that 32,802 residents in approximately 12,272 households are estimated to live in the unincorporated area of the county. The population and households in the County MS4 regulated areas is a further subset of the county population figures.

In consideration of the potential benefit of school participation in public education, outreach, and participation, the middle school science curriculum of MCPS in particular has a focus on water quality, the water cycle, and water conservation that are also components of the standards of learning testing for that student population. The school system Comprehensive Six Year Plan estimates each grade population to vary from 750 to 850 students over the 2014-2020 time period. An emphasis on school age youth and the middle school students in particular will result in a continuing new annual audience to address. Closures and social distancing impacts related to Covid-19 resulted in a disruption in school participation in the 2019-2020 permit year. As a result, this Program Plan revises the identified audience for the third high-priority issue of stream and watershed education to include the general population of the county while emphasizing youth education as a significant subset of the target group.

In summary, the outreach efforts of the MS4 program will be oriented towards a County-wide outreach on the three identified high-priority issues. Opportunities for outreach to the middle school student population will be a consideration for the stream and watershed education as a high-priority issue.

Available Public Information: The county stormwater website (https://montva.com/stormwater/ms4-permit) contains information about the minimum control measures and an education and outreach library with educational materials and resources. A link is available to report stormwater problems, inquire about the MS4 program, and to comment on the program. The Montgomery County webpage (https://montva.com/home) will provide information on public participation events and the Public Information Office will maintain social media accounts that will convey public education and outreach on stormwater issues.

BMP 1-1: Water Quality Issue Number 1: Pet Waste

High-priority stormwater issues identification: Public education and outreach on bacteria impairment due to pet waste is selected as a high-priority issue #1.

The importance and rationale for selection of the high-priority stormwater issues: This prevalence of bacterial impairments within the County watersheds as shown in Table 1 and discussed in the previous Water Quality Issues section provide justification for this issue selection. Pet waste management in particular will be the outreach focus based on the fact that the predominant land uses in the MS4 service drainage areas are categorized as follows; 26 suburban/residential, 21 institutional, 13 commercial, and 2 open space.

Identified public audience, measures or actions the public can take, and intent for positive impact on stormwater discharges: The selected public audience for this water quality issue is the general population of the entire County. The timely collection of pet waste and proper disposal by the general population can minimize the impact of pet waste as a source of bacterial impairment within county watersheds.

Relevant Message: Inform pet owners about the effects of pet waste on water quality and encourage pet owners to pick up and properly dispose of pet waste. Provide information on public areas where pet waste bags and waste receptacles are available. Communicate that pet waste bags and dispensers may be periodically available from the county or other sources. Distribute pet waste dispensers and replacement bags at public events.

The MS4 General Permit requires a minimum of two total strategies to be employed for MCM 1. The menu below provides for a variety of strategies to meet this permit requirement specific to this water quality issue. Annual reporting will document the specific number and type of strategies employed each year.

Responsible Party: Director of Environmental Services/County Engineer

Strategies for Public Education and Outreach:

Pet waste reduction messaging will be conveyed by a combination of the following strategies as listed in of the MS4 Permit Table 1 provided in Part I.E.1.d:

Category	Strategy	Anticipated Timeline and Measurable Goal for Evaluation
Media materials	Social media messaging	Publish social media messaging a minimum two times per year. Measurable goal will be the reported viewing statistics.
Media Materials	Information disseminated through television or newspaper	Seek media coverage after development of ESRI StoryMap applications to message about the MS4 program in general and the program adaptions in response to social distancing requirements. Measurable goal will be the reported audience of the medium and StoryMap access numbers.
Media Materials	GIS story map application	Post and promote a StoryMap as an educational tool. Include a link to add MCM2 events via a Survey application.
Signage	Posters in municipal buildings frequented by the public	Promote access to the website and created StoryMap applications. Measurable goal will be the reported traffic estimates of the locations of the postings and StoryMap access numbers.
Traditional written materials	Informational brochures or Fact Sheets	Distribute at appropriate public participation events per year and make available for distribution at the county Animal Care and Adoption Center year round. Measurable goal will be the number of brochures printed and estimated number distributed annually.
Traditional written materials	Real estate tax bill inserts (semi-annual in Fall and Spring)	Include issue messaging in coordination with other issues. Measurable goal will be the number of inserts included with mailed real estate bills.
Alternative materials	Refrigerator magnets	Distribute at a minimum of two appropriate public participation events per year and make available for distribution at the county Animal Care and Adoption Center year round. Measurable goal will be the estimated number distributed annually.
Alternative materials	Pet waste dispensers and dispenser replacement bags	Distribute at a minimum of two appropriate public participation events per year and make available for distribution at the county Animal Care and Adoption Center year round. Measurable goal will be the estimated number distributed annually.

BMP 1-2: Water Quality Issue Number 2: Sediment, Nutrients (Nitrogen and Phosphorous), and Trash/Refuse

High-priority stormwater issues identification: Public education and outreach on sediment impairments, nutrient (Nitrogen and Phosphorous) impacts, and trash/refuse impacts is selected as a high-priority issue #2.

The importance and rationale for selection of the high-priority stormwater issues: Elevated levels of sediment and nutrients in streams can affect aquatic life and ecosystems as well as humans and livestock. Sediment is listed as typically a primary stressor for benthic impairments. Eutrophication resulting from excess nutrients can result in unhealthy dissolved oxygen and pH levels that effect aquatic life, and produce odors and aesthetic issues. High levels of nitrate in drinking water can be harmful or even fatal to infants and to livestock. Trash negatively impacts the watershed environment by transporting chemical pollutants and physically impacting aquatic habitats, and interfering with human uses of waterbodies. Plastic debris has emerged as a physical and toxicological hazard to birds, fish, and aquatic invertebrates, mammals, and reptiles.

Identified public audience, measures or actions the public can take, and intent for positive impact on stormwater discharges: The selected public audience for this water quality issue is the general population of the entire County. The proper care of lawns, application of fertilizers, pesticides, and herbicides by the general population can minimize the impact of the identified pollutants as a source of stormwater pollution within county watersheds. The proper disposal of trash and refuse will have positive impacts by reducing the potential for impact from the identified pollutants, provide the opportunity to encourage public participation, and more easily quantify pollutant removal through the reporting of trash collection at community events and through recycling programs.

Relevant Message: Inform residents about the effects of excess sediment and nutrients on water quality and encourage residents to mow lawns, mulch trees, and water lawns properly, apply fertilizers and lawn chemicals properly, plant native or other appropriate species to hold soil and minimize fertilizer needs, and use commercial car washes to minimize the transport of sediment and nutrients to streams.

Convey information about the impacts of trash and refuse on water quality and ways to reduce trash impacts on watersheds and waterways. Promote, organize, or participate in recycling or clean up events and convey messaging to the program participants.

The MS4 General Permit requires a minimum of two total strategies to be employed for MCM 1. The menu below provides for a variety of strategies to meet this permit requirement specific to this water quality issue. Annual reporting will document the specific number and type of strategies employed each year.

Responsible Party: Director of Environmental Services/County Engineer

Strategies for Public Education and Outreach:

Sediment, nutrients (Nitrogen and Phosphorous), and trash/refuse reduction messaging will be conveyed by a combination of the following strategies as listed in of the MS4 Permit Table 1 provided in Part I.E.1.d:

Category	Strategy	Anticipated Timeline and Measurable Goal for Evaluation
Media materials	Social media messaging	Publish social media messaging a minimum two times per year. Measurable goal will be the reported viewing statistics.
Media Materials	Information disseminated through television or newspaper	Seek media coverage after development of ESRI StoryMap applications to message about the MS4 program in general and the program adaptions in response to social distancing requirements. Measurable goal will be the reported audience of the medium and StoryMap access numbers.
Media Materials	GIS story map application	Post and promote a StoryMap as an educational tool. Include a link to add MCM2 events via a Survey application.
Traditional written materials	Informational brochures or Fact Sheets	Distribute at appropriate public participation events per year and make available for distribution at the county government center. Measurable goal will be the number of brochures printed and estimated number distributed annually.
Signage	Posters in municipal buildings frequented by the public	Promote access to the website and created StoryMap applications. Measurable goal will be the reported traffic estimates of the locations of the postings and StoryMap access numbers.
Traditional written materials	Real estate tax bill inserts (semi-annual in Fall and Spring)	Include issue messaging in coordination with other issues. Measurable goal will be the number of inserts included with mailed real estate bills.

BMP 1-3: Water Quality Issue Number 3: Stream and Watershed Education

High-priority stormwater issues identification: Public education and outreach on stream and watershed education is selected as a high-priority issue #3.

The importance and rationale for selection of the high-priority stormwater issues: Understanding the geography, physical processes, and human activities that impacts stream and wetland ecology and health can convey the importance of the human role in maintaining and improving watershed conditions and protecting beneficial uses. Along with education, a focus of this issue is useful in promoting actions to reduce the impacts of pollutants. The program will encourage public participation in activities that the public, and particularly students and their families, can take to have a positive impact on stormwater issues.

A curriculum shift in watershed education from sixth grade to seventh grade is in process at the Montgomery County Public School (MCPS) system

Key concepts of the curriculum, as listed below, are relevant to an understanding the importance of healthy streams and watersheds:

- Human interactions affect ecosystem dynamics
- Watershed systems are dynamic and complex; interactions within these systems may influence the overall health of the watershed
- As conditions change, organisms, populations, communities, and ecosystems respond to those changes in order to survive
- Both biotic and abiotic factors affect the movement of matter and energy within an ecosystem

Identified public audience, measures or actions the public can take, and intent for positive impact on stormwater discharges: The selected public audience for this water quality issue is the general population of Montgomery County. The middle school student population is identified as a subset of the county population that will be a focus of outreach on this issue when school operations and social distancing conditions are favorable for MCM 1and MCM 2 efforts to reach this audience segment.

The annual education of successive seventh grade student classes can be expected to promote an appreciation for the benefits of good stewardship of our watershed resources. Learning assignments through an interactive GIS story map application can promote education on the impacts of pollutants and steps that students and their families can take to have a positive impact on stormwater issues, including:

Relevant Message: The general public can be made aware of the importance of watershed health and can take specific actions to positively impact watershed health:

- Maintain healthy lawns and application of nutrients and chemicals.
- Minimize and collect litter.
- Manage pet waste.
- Promote pollinator gardens and native plantings.

The MS4 General Permit requires a minimum of two total strategies to be employed for MCM 1. The menu below provides for two strategies to meet this permit requirement specific to this water quality issue. Annual reporting will document the specific number and type of strategies employed each year.

Responsible Party: Director of Environmental Services/County Engineer

Strategies for Public Education and Outreach:

Stream and watershed education messaging will be conveyed by a combination of the following strategies as listed in of the MS4 Permit Table 1 provided in Part I.E.1.d:

Category	Strategy	Anticipated Timeline and Measurable Goal for Evaluation
Media materials	Social media messaging	Publish social media messaging a minimum two times per year. Measurable goal will be the reported viewing statistics.
Media Materials	Information disseminated through television or newspaper	Seek media coverage after development of ESRI StoryMap applications to message about the MS4 program in general and the program adaptions in response to social distancing requirements. Measurable goal will be the reported audience of the medium and StoryMap access numbers.
Media Materials	GIS Watershed story map application	Promote the Watersheds of Montgomery County StoryMap as an educational tool.
Media Materials	GIS story map application	Post and promote a StoryMap as an educational tool. Include a link to add MCM2 events via a Survey application.
Signage	Posters in municipal buildings frequented by the public	Promote access to the website and created StoryMap applications. Measurable goal will be the reported traffic estimates of the locations of the postings and StoryMap access numbers.
Traditional written materials	Informational brochures or Fact Sheets	Distribute at appropriate public participation events per year and make available for distribution at the county Animal Care and Adoption Center year round. Measurable goal will be the number of brochures printed and estimated number distributed annually.
Traditional written materials	Real estate tax bill inserts (semi-annual in Fall and Spring)	Include issue messaging in coordination with other issues. Measurable goal will be the number of inserts included with mailed real estate bills.
Curriculum materials	GIS story map application and assignment	An annual middle school student assignment guided by the story map application. Measurable goal will be the number of students participating annually.
Curriculum materials	Stormwater day handout	Distribute watershed information relevant to the demonstrations at the middle school student stormwater days. Measurable goal will be the number of students participating and receiving the handout annually.
Traditional written materials	QR code Flyer	Distribute flyer with the QR code link to the MCM2 Public Participation Application to the public.

MCM 2: PUBLIC INVOLVEMENT AND PARTICIPATION

BMP 2-1: Montgomery County Stormwater Management Website

Maintain a Montgomery County Stormwater Management website

- Where the public can report potential illicit discharges, improper disposal, or spills to the MS4, complaints regarding land disturbing activities, or other potential stormwater pollution concerns
- The public can provide input on the permittee's MS4 program plan

Website statistics and documentation of public input received on the MS4 program and associated MS4 program plan, and the permittee's response, will be provided in the Annual Report available on the Stormwater Resources webpage

Responsible Party: Director of Environmental Services/County Engineer

BMP 2-2: Annual Local Outreach Activities

The permittee shall implement no less than four activities per year from two or more of the categories listed in The MS4 Permit Table 2 provided in Part I.E.2.dc to provide an opportunity for public involvement to improve water quality and support local restoration and clean-up projects.

Public Involvement Opportunities	Activity	Anticipated Timeline and Metric for Evaluation
Restoration	'ReNew the New' river cleanup	An annual event. Measurable goal will be the number of persons participating and the weight of trash collected annually.
Restoration	Broomin' and Bloomin' cleanup	An annual event. Measurable goal will be the number of persons participating and the weight of trash collected annually.
Restoration	Citizen initiated Planting Native Plants, Trees, or Pollinator Gardens and logged into the county crowdsource survey	A year round opportunity for information on grassroots efforts to be collected through an ESRI Survey, with activities illustrated on a website map application. Measurable goal will be the number of activities generated each permit year.
Pollution Prevention	Citizen initiated Pet Waste Pickup by individuals or organizations and logged into the county crowdsource survey	A year round opportunity for information on grassroots efforts to be collected through an ESRI Survey, with activities illustrated on a website map application. Measurable goal will be the number of activities generated each permit year.
Pollution Prevention	Citizen initiated Trash/Litter Cleanup by individuals or organizations and logged into the county crowdsource survey	A year round opportunity for information on grassroots efforts to be collected through an ESRI Survey, with activities illustrated on a website map application. Measurable goal will be the number of activities generated each permit year.
Educational events	Blacksburg Steppin' Out Festival	An annual event. Measurable goal will be the number of persons attending annually
Educational events	New River Homebuilders Association Homebuilder's expo Booth Participation	An annual event. Measurable goal will be the number of persons attending annually.
Educational events	MCPS Stormwater Days	Three days annually. Measurable goal will be the number of students and the number of volunteers attending.
Education Events	New River Watershed Roundtable	A quarterly event. Measurable goal will be the number of persons from the county attending quarterly.

Responsible Party: Director of Environmental Services/County Engineer

MCM 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION
This minimum control measure is intended to detect and eliminate illicit discharges to the MS4 storm system.

The Montgomery County MS4 Program Plan for MCM 3 meets the following criteria:

(1) Identify MS4 Outfalls and develop a storm sewer system map and associated table of information for each outfall;
(2) Effectively prohibit, through ordinance or other legal mechanism, non-stormwater discharges into the storm sewer system;
(3) Develop, implement, and update, when appropriate, written procedures to detect, identify, and address unauthorized non-stormwater discharges, including illegal dumping; and
(4) Promote, publicize, and facilitate public reporting, inspections, and corrective measures of illicit discharges into or from any MS4.

BMP 3-1: Storm Sewer and Outfall Map and Database

Develop, maintain, and update a Storm Sewer and Outfall Map and Database to include the following information as required by the MS4 General Permit (9VAC25-890-40).

Supporting Documents: Outfall mapping application: The County MS4 Outfall Map contains the all outfall information required under the permit as well as inspections results presented electronically from the 2017-2018 permit year and onward.

Copies of MS4 Interconnection Notifications are maintained on the Stormwater MS4 permit website under MCM 3 and incorporated into this Program Plan by reference.

Responsible Party: Director of Environmental Services/County Engineer

BMP 3-2: Illicit Discharge Ordinance
Establish a program to detect and eliminate illicit discharges in to the Municipal Separate Storm Sewer System by developing and adopting regulations and an enforcement program to prevent illegal discharges into the MS4 storm drain system.

Supporting Documents: The County Illicit Discharge Ordinance is located in chapter 8, Article III, Division 3 of the Montgomery County, VA Code of Ordinances. The County MS4 Illicit Discharge Program guidance document is available on the website in MCM3 of the Stormwater MS4 Permit page, and an IDDE Field Guide used in training and by County staff is available at the same location. Note that the development of these procedures fulfills the MS4 Permit requirements, during specific investigations the procedures executed may vary due to the relative complexity of the inspection or investigation. The County MS4 Outfall Map contains the required outfall information for reference in performing and responding to illicit discharge incidents.

Responsible Party: Director of Environmental Services/County Engineer

BMP 3-3: Illicit Discharge Program

Develop, implement, and enforce a program to detect and eliminate illicit discharges, as defined in the MS4 General Permit (9VAC25-890-40). The Illicit Discharge Program will include the following components:

1. Written dry weather field screening methodologies to detect and eliminate illicit discharges to the MS4 that include field observations and field screening monitoring and that provide:
   a. A prioritized schedule of field screening activities;
   b. A determination of the minimum number of field screening activities the operator shall complete annually;
   c. Methodologies to collect the general information such as time since the last rain, the quantity of the last rain, site descriptions, estimated discharge rate, and visual observations;
   d. A time frame and priority listing upon which to conduct an investigation or investigations to identify and locate the source of any observed continuous or intermittent non-stormwater discharge;
   e. Methodologies to determine the source of all illicit discharges shall be conducted;
   f. Mechanisms to eliminate identified sources of illicit discharges including a description of the policies and procedures for when and how to use legal authorities;
   g. Methods for conducting a follow-up investigation in order to verify that the discharge has been eliminated; and
   h. A mechanism to track all investigations and document (i) the date or dates that the illicit discharge was observed and reported; (ii) the results of the investigation; (iii) any follow-up to the investigation; (iv) resolution of the investigation; and (v) the date that the investigation was closed.
2. Public reporting and inspections of reported illicit discharges into or from MS4s.

Supporting Documents: The County MS4 Outfall Map contains the all outfall information required under the permit as well as inspections results presented electronically from the 2017-2018 permit year and onward. The County MS4 Illicit Discharge Program guidance document is available on the website in MCM3 of the Stormwater MS4 Permit page, and an IDDE Field Guide used in training and by County staff is available at the same location. The Center for Watershed Protection IDDE Manual - provides additional guidance for county staff inspections The County Illicit Discharge Ordinance is located in chapter 8, Article III, Division 3 of the Montgomery County, VA Code of Ordinances.

Responsible Party: Director of Environmental Services/County Engineer

Objective & Expected Results: Develop a program that efficiently and effectively meets the MS4 General Permit Requirements. Document routine and suspected illicit discharge investigations. Public posting of the materials is expected to increase public awareness and reporting.

Measurement of Effectiveness: Completion of the illicit discharge program for implementation within the required timeframes and compliance of the Montgomery County codes and ordinances with the rules and regulations of the state and federal governments.

Annual Reporting Requirements: Summarize the status of the illicit discharge program development, including any schedule updates and a list of physical interconnection given by the operator to other MS4s. Subsequent annual reports shall provide a total number of outfalls screened during the reporting

period the screening results, and detail of any follow-up actions required; and a summary of each investigation conducted by the operator of any suspected illicit discharge.

MCM 4: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

This minimum control measure is intended to reduce pollutants in stormwater runoff from land disturbing activities to the MS4 storm system.

The following programs were previously established by Montgomery County to help meet the requirements of the MCM are as follows:

1. An Erosion and Sediment Control Ordinance to require erosion and sediment controls, as well as sanctions to ensure compliance, under local law for all land disturbances of 10,000 square feet or more.
2. Ordinance requirements for plan approval prior to land disturbance and construction site operators to implement appropriate erosion and sediment control best management practices.
3. Erosion and Sediment Control inspection procedures as required by the MS4 General Permit.

The Montgomery County MS4 Program Plan for MCM 4 meets the following criteria:

(1) The County has adopted a Virginia Erosion and Sediment Control Program (VESCP);

(2) The County Illicit Discharge Ordinance is located in chapter 8, Article III, Division 3 of the Montgomery County, VA Code of Ordinances

(3) Written inspection procedures and associated documents are utilized during inspection including the inspection schedule;

(4) Written procedures for compliance and enforcement, including a progressive compliance and enforcement strategy, where appropriate are in place;

(5) The roles and responsibilities of each of the operator's departments, divisions, or subdivisions are defined; and

(6) A tracking and reporting mechanism for regulated land-disturbing activities provides the required reporting in all subsequent annual reports.

BMP 4-1: Erosion and Sediment Control Program

Existing Erosion and Sediment Control Ordinance, Illicit Discharge Ordinance, and associated documents including written plan review procedures, written inspection procedures and schedule, written compliance and enforcement, certification of staff, and definition of roles and procedures are in place and maintained to comply with the requirements of the MS4 General Permit.

Supporting Documents: The Montgomery County Erosion and Sediment Control Ordinance. The County Illicit Discharge Ordinance is located in chapter 8, Article III, Division 3 of the Montgomery County, VA Code of Ordinances. The following Administrative Guidance Manual sections are relevant to this BMP:

(1) Section 5.1 and manual Appendix G for written Erosion and Sediment Control (ESC) plan submittal procedures
(2) Section 7.0, and manual appendices D and N for written ESC inspection procedures
(3) Section 11 for written ESC procedures for compliance and enforcement
(4) Erosion and Sediment Control Certifications are maintained for personnel that conduct inspections and are available for DEQ review.

Responsible Party: Director of Environmental Services/County Engineer

Objective & Expected Results: Develop a program that efficiently and effectively meets the MS4 General Permit Requirements. The program is expected to provide clear guidance to Operators and consistency in plan review, inspection and enforcement activities.

Measurement of Effectiveness: Permit issuance and enforcement actions as a result of administering the Erosion and Sediment Control program for compliance with regulations.

BMP 4-2: Erosion and Sediment Control Tracking and Reporting

Develop a tracking and reporting mechanism for regulated land-disturbing activities to provide the required reporting in all subsequent annual reports.

Supporting Documents: The current Annual Report section MCM 4 provides the required reporting of land disturbance activities and enforcement statistics and is available on the Stormwater Resources webpage. The County LDO Management Systems software provides a system for tracking the status and inspection requirements for regulated land disturbance activities

Responsible Party: Director of Environmental Services/County Engineer

Objective & Expected Results: Continue the program that tracks and reports regulated land-disturbing activities. Accurate tracking and reporting of regulated land-disturbing activities is expected.

Measurement of Effectiveness: Develop and maintain current and accurate database of land-disturbing activities.

Annual Reporting Requirements: Provide information regarding the total number of regulated land-disturbing activities, total number of acres disturbed, total number of inspections completed; and summary of enforcement actions taken, including the total number and type of enforcement actions taken during a reporting period in the MCM 4 section of the Annual Report available on the Stormwater Resources webpage.

MCM 5: POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND DEVELOPMENT ON PRIOR DEVELOPED LANDS

This minimum control measure is intended to reduce pollutants in stormwater runoff from developed properties to the MS4 storm system. The post-construction stormwater management program will include the following elements:

(1) A Stormwater Management Ordinance;
(2) Written policies and procedures utilized to ensure that stormwater management facilities are designed and installed in accordance with Section II B 5 b of the MS4 General Permit;
(3) Written inspection policies and procedures utilized in conducting inspections;
(4) Written procedures for inspection, compliance and enforcement to ensure maintenance is conducted on private stormwater facilities to ensure long-term operation in accordance with approved design;
(5) Written procedures for inspection and maintenance of operator-owned stormwater management facilities;
(6) Roles and responsibilities for implementing MCM 5; and
(7) A stormwater management facility tracking and reporting mechanism.

BMP 5-1: Stormwater Management Ordinance and Manual

Enforcement of the ordinance and policies requiring stormwater quality and quantity controls for applicable land-disturbing activities in compliance with state and federal regulations fulfills the requirements of the MS4 General Permit. The policies and procedures manual will cover items 2 through 5 listed above.

Supporting Documents: The County Stormwater Management Ordinance is located in chapter 8, Article III, Division 2 of the Montgomery County, VA Code of Ordinances.
The following Administrative Guidance Manual sections and supporting documents are relevant to this BMP:
(1) Section 4.0 and 5.0 for written stormwater plan submittal procedures
(2) Section 8.0 for written inspection procedures for stormwater management facilities (SMFs) construction inspections
(3) Sections 6.1 and 9, section 8-79 of the Stormwater Management Ordinance, and the Stormwater Facilities Inspections and Maintenance Manual located under MCM 3 on the Stormwater MS4 permit page for written procedures to ensure SMF maintenance
(4) Section 7.0, administrative manual Appendix D and the Postconstruction Inspection Guidance located under MCM5 on the Stormwater MS4 Permit page for written procedures to ensure SMFs are designed and installed as required.
(5) Stormwater Certifications are maintained for personnel that conduct inspections and are available for DEQ review.

Responsible Party: Director of Environmental Services/County Engineer

Objective & Expected Results: Enforce the ordinance and the policies and procedures manual to prevent or minimize water quality and quantity impacts from new or re-developments.

Measurement of Effectiveness: Annual evaluation of the Stormwater Management ordinance and manual and continued compliance with state and federal regulations.

Annual Reporting Requirements: Summarize the status of the ordinance and manual.

BMP 5-2: Stormwater Management Tracking and Reporting System

Develop and maintain a database of all known operator-owned and privately-owned stormwater management facilities that discharge into the MS4 storm system for tracking and reporting. Database attributes for each stormwater management facility shall include the following:

1. Facility type and BMP Clearinghouse specification reference number;
2. Location (address or latitude and longitude);
3. Total area treated, including delineation of pervious and impervious area;
4. Completion date; if unknown, assume June 30, 2005;
5. The sixth order hydrologic unit code (HUC) where the facility is located;
6. Name of any impaired water segments within each HUC listed in the 2010 §305(b)/303(d) Water Quality Assessment Integrated Report to which the facility discharges;
7. Ownership information (private or public); and
8. Date of most recent inspection and name of inspector.

Supporting Documents: New stormwater management facilities added in a permit year are reported in an Annual Report available on the website Stormwater Resources page.
All public and private facilities located within the County MS4 Service Area are provided online under MCM 5 on the Stormwater MS4 Permit page.

Responsible Party: Director of Environmental Services/County Engineer

Objective & Expected Results: Develop a system to meet the requirements of the MS4 General Permit.

Measurement of Effectiveness: Use of electronic database of all stormwater management facilities for tracking and reporting with the annual report.

Annual Reporting Requirements: Submit an electronic database of all stormwater management facilities, including those completed during each reporting year, with the annual report.

BMP 5-3: Individual Lot Special Criteria

Develop and implement strategies other than maintenance agreements such as periodic inspections, homeowner outreach and education, and other methods targeted at promoting the long-term maintenance of stormwater control measures that are designed to treat stormwater runoff solely from the individual residential lot.

Supporting Documents: None – All currently completed single Family Detached Residential projects eligible for CGP coverage have recorded Maintenance Agreements on file.

Responsible Party: Director of Environmental Services/County Engineer

Objective & Expected Results: Increase homeowner awareness of the purpose and long-term maintenance of stormwater control measures that are designed to treat stormwater runoff solely from the individual residential lot.

Measurement of Effectiveness: The number of strategies used and the number of citizens reached.

Annual Reporting Requirements: Provide information regarding strategies employed, the means of advertisement, location of the event, and the number of citizens reached.

MCM 6: POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

This minimum control measure is intended to reduce pollutants in stormwater from daily operations and maintenance activities and municipal facilities, and from turf and landscape areas. The pollution prevention/good housekeeping plan will include the following elements:

(1) Written protocols being used to comply with the MS4 General Permit the daily operations and maintenance requirements;
(2) A list of all municipal high-priority facilities that identifies those facilities that have a high potential for chemicals or other materials to be discharged in stormwater and a schedule that identifies the year in which an individual stormwater pollution prevention plan (SWPPP) will be developed for those facilities required to have a SWPPP;
(3) A list of lands where nutrients are applied to a contiguous area of more than one acre;
(4) A turf and landscape nutrient management plan; and
(5) A written training plan for the next reporting cycle.

BMP 6-1: Household Hazardous Waste Event

Expand current program and encourage citizen participation in events to dispose of household materials that could be hazardous to dispose of in bulk landfills.

Supporting Documents: The County Single Stream Recycling webpage provides Hazardous waste recycling information and a direct link to the Montgomery County Regional Solid Waste Authority permanent household hazardous waste disposal procedures.

Responsible Party: Waste Management Department

Objective & Expected Results: Advertise the Montgomery Regional Solid Waste Authority (MRSWA) Household Hazardous Waste Collection Days http://www.mrswa.com/household-hazardous-waste.html on the County website.

Measurement of Effectiveness: Maintenance of current hazardous waste disposal instructions.

Annual Reporting Requirements: Report the presence of recycling information on the County website and maintenance of active links to the Montgomery Regional Solid Waste Authority hazardous waste disposal information

BMP 6-2: Municipal Good Housekeeping Procedures

Develop and implement written procedures designed to minimize or prevent pollutant discharge from: (i) daily operations such as road, street, and parking lot maintenance; (ii) equipment maintenance; and (iii) the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers. The written procedures shall be utilized as part of the employee training. At a minimum, the written procedures shall be designed to:

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

Supporting Documents: Daily Good Housekeeping Procedures provide guidance to municipal staff operations and contracted work.
The IDDE Field Guide provides guidance in understanding allowable and illicit discharges as well as investigation and reporting guidance.

Responsible Party: Director of Environmental Services/County Engineer

Objective & Expected Results: Reduce the number of non-stormwater discharges in the MS4 storm system from municipal facilities.

Measurement of Effectiveness: Reduction of pollutant discharge from (i) daily operations such as road, street, and parking lot maintenance; (ii) equipment maintenance; and (iii) the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers.

Annual Reporting Requirements: Summarize the status of the good housekeeping procedures development including tasks completed to date and schedule updates.

BMP 6-3: Municipal SWPPPS

Develop and update SWPPPs for high-priority municipal facilities, including a training program. Each facility will be evaluated for the potential of illicit discharges from storage yards, outdoor storage areas, waste transfer stations, fleet or maintenance shops and other municipal facilities. The disposal method for waste materials will be evaluated. Any operation that has potential to discharge material into the municipal separate storm sewer system will be examined for potential for unwanted discharge.

Supporting Documents: Stormwater Pollution Prevention Plans (SWPPP) documents are developed for the MSPS Facilities site and accessed by the hyperlinked text below:
Montgomery County Public Schools Facilities Site

The Good Housekeeping Procedures and IDDE Field Guide documents linked in BMP 6-3 and the Municipal Training Plan found under MCM 6 of the Stormwater MS4 permit page are also supporting documents for this BMP

Responsible Party: Director of Environmental Services/County Engineer

Objective & Expected Results: Reduce the number of non-stormwater discharges in the MS4 storm system from municipal facilities.

Measurement of Effectiveness: Number of SWPPPs completed each year.

Annual Reporting Requirements: Summarize the status of the SWPPP development, including name and location of facilities where the plans are completed, in progress, and yet to be started, and schedule updates.

BMP 6-4: Municipal Nutrient Management Plans

Develop and implement Nutrient Management Plans on all required lands as per the schedule provided in 9VAC25-890-40. Nutrient Management Plans will be update as necessary in order to remain current.

Supporting Documents: 2018 Nutrient Management Plan and 2019 Nutrient Management Plan.
The DCR acceptance of these plans are documented under MCM 4 on the county Stormwater MS4 Permit website. The Urban Nutrient Management Handbook May 2011 edition provides additional guidance.
The applicable sites and associated acreage of sites having Nutrient Management Plans reported in BMP section 6-4 in an Annual Report available on the website Stormwater Resources page

Responsible Party: Director of Environmental Services/County Engineer

Objective & Expected Results: Reduce the amount of pollutants from landscaping treatments from municipal facilities.

Measurement of Effectiveness: Number of nutrient management plans completed and implemented each year. Documented applications of nutrients recorded in the NMP record keeping.

Annual Reporting Requirements: Provide a status of the program development and implementation, the total acreage of lands where turf and landscape nutrient management plans are required, and the acreage of lands upon which turf and landscape nutrient management plans have been implemented.

BMP 6-5: Municipal Training Program

Develop an annual written training plan, including a schedule of training events that ensures implementation of the training requirements as follows:

(1) Biennial training to applicable field personnel in the recognition and reporting of illicit discharges;
(2) Biennial training to applicable employees in good housekeeping and pollution prevention practices that are to be employed during road, street, and parking lot maintenance;
(3) Biennial training to applicable employees in good housekeeping and pollution prevention practices that are to be employed in and around maintenance and public works facilities;
(4) Pesticides and herbicides training or certification in accordance with the Virginia Pesticide Control Act (§ 3.2-3900 et seq. of the Code of Virginia);
(5) Plan reviewers, inspectors, program administrators, and construction site operators training and certification as required under the Virginia Erosion and Sediment Control Law and its attendant regulations;
(6) Biennial training to applicable employees in good housekeeping and pollution prevention practices that are to be employed in and around recreational facilities;
(7) Annual training for spill responses for the appropriate emergency response employees or documentation of a larger emergence response training certification; and
(8) Documentation on each training event including the training date, the number of employees attending the training, and the objective of the training event for a period of three years after each training event.

Supporting Documents: The Municipal Training Plan located under MCM 6 on the Stormwater MS4 permit webpage.
Training completed in any permit year is reported in an Annual Report available on the website Stormwater Resources page.

Responsible Party: Director of Environmental Services/County Engineer and County Administrator

Objective & Expected Results: Increase knowledge of good housekeeping and pollution prevention practices, standard operating procedures, applicable SWPPP requirements, and an understanding of illicit discharge identification to further prevent pollutant discharges into stormwater.

Implementation Schedule: Complete biannual training as provided in the Annual Training Plan.

Measurement of Effectiveness: The number of training opportunities provided and the number of employees reached.
Document:
(1) The date of the training event;
(2) The number of employees attending the training event; and
(3) The objective of the training event.

Annual Reporting Requirements: Provide a summary report on the required training, including a list of training events, the training date, the number of employees attending training and the objective of the training.
Provide certification of emergency response employees receiving alternate emergency response training for applicable personnel.
Provide ESC and SWM certifications for applicable personnel.