CITY OF CHARLOTTESVILLE

Department of Public Works
Environmental Sustainability Division

305 4th Street NW • Charlottesville, Virginia 22903
Telephone 434-970-3631
Fax 434-970-3659

October 1, 2021

Department of Environmental Quality
Megan O'Gorek
DEQ Valley Regional Office
4411 Early Road
Harrisonburg, VA 22801

Re: Submittal of the Permit Year 3 Annual Report for General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems, Permit # VAR040051

Ms. O'Gorek,

In accordance with Permit VAR040051 effective November 1, 2018, the City of Charlottesville has compiled an Annual Report addressing the status of our Stormwater Management Program for the permit year covering July 1, 2020 through June 30, 2021.

If you have any questions or comments, please contact me at 434-970-3631 or Dan Frisbee, Water Resources Specialist, at 434-970-3997.

Respectfully,

City of Charlottesville

Kristel Riddervold
Environmental Sustainability and Facilities Development Manager

CITY OF CHARLOTTESVILLE
"To be One Community Filled with Opportunity"

Office of the City Manager

P.O. Box 911 • Charlottesville, Virginia 22902
Telephone 434-970-3101
Fax 434-970-3890
www.charlottesville.gov

October 1, 2021

Megan O'Gorek
Department of Environmental Quality
DEQ Valley Regional Office
4411 Early Road
Harrisonburg, VA 22801

Re: Certification of MS4 Annual Report for Permit # VAR040051

Ms. O'Gorek,

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,

CP Boyles II — 10/4/2021

Charles P. Boyles II, Date
City Manager
City of Charlottesville, Virginia

VAR040051 — City of Charlottesville
Permit Number — MS4 Name

City of Charlottesville

Permit Year 3 Annual Report

General Permit for Stormwater Discharges

From Small Municipal Separate Storm Sewer Systems (MS4)

VAR040051

Submitted to:

Department of Environmental Quality
DEQ Valley Regional Office
4411 Early Road
P.O. Box 3000
Harrisonburg, VA 22801

October 1, 2021

Introduction

In compliance with the City of Charlottesville's coverage under the General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems, VAR040051, this Permit Year 3 (July 1, 2020 – June 30, 2021) Annual Report summarizes the status of permit compliance and stormwater management program elements pertaining to the six required Minimum Control Measures (MCMs).

As required by Part I.D.2.e, the City evaluated the MS4 Program implementation, including a review of each MCM, to determine the MS4 Program's effectiveness. This included an assessment of the selection of best management practices (BMP) that constitute the MS4 Program Plan. The City has determined that the identified BMPs represent an appropriate selection and implementation of an iterative stormwater management program as defined by the General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems. The City did not receive any written comments regarding the MS4 Program Plan or any modifications.

The City revised our MS4 Program Plan as follows: to incorporate new forms utilized in the implementation of the City's local Virginia Stormwater Management Program (VSMP).

The City entered into a contract with the Thomas Jefferson Soil and Water Conservation District to perform dry weather screening of City MS4 outfalls during the permit year.

The City is utilizing its local VSMP to satisfy pertinent requirements of MCM 4, Construction Site Stormwater Runoff Control, and MCM 5, Post-construction Stormwater Management for New Development and Development on Prior Developed Lands.

As required by Part II.A.13.c, Attachment C of the Annual Report is an updated Chesapeake Bay TMDL Summary Ledger, which details the City's progress toward meeting the required cumulative reductions for total nitrogen, total phosphorus, and total suspended solids. In accordance with Part II.A.13.d, the City currently envisions implementing the following BMPs during the next reporting period: street sweeping and urban nutrient management.

As described in the City's DEQ-approved *Combined Benthic and Bacteria TMDL Action Plan for the Rivanna River* and in the City's *Sediment TMDL Action Plan for Moores Creek, Lodge Creek, Meadow Creek, and Schenks Branch,* the City intends to demonstrate its progress on implementation of the Action Plans by tracking and reporting on BMPs in its MS4 Annual Reports. As such, this Annual Report details the implementation status of the BMPs identified in the Action Plans and provides the summary of actions conducted to implement the Action Plans as required by Part II.B.9. These BMPs are notated "*Local TMDL Action Plan BMP" in the Annual Report.

Report Format

The information summarizing program status is presented in a matrix format with a separate section for each of the six MCMs.

Under each MCM is a series of BMPs and associated measurable goals. A column is provided for each of the five years of the permit term. For the purposes of this Year 3 Annual Report, results are posted in the column labeled "FY21".

Results are presented in one of three colors indicating the status of that program element:

- Green – activity/action proposed has been successfully completed in the proposed timeframe.
- Yellow – activity/action has been partially completed in the proposed timeframe.
- Red – activity/action has not been completed in the proposed timeframe.

Cells in the various annual columns that are shaded grey indicate program elements that are not applicable in those permit years.

In every case, a further explanation of the BMP status is provided in the rows directly below the subject program element. The previous year's BMP status is included in grey to provide context to DEQ in your review.

City of Charlottesville, Virginia

PERMIT NUMBER VAR040051

MS4 PERMIT YEAR 3 (JULY 1, 2020 - JUNE 30, 2021) ANNUAL REPORT

MCM #1: PUBLIC EDUCATION AND OUTREACH ON STORMWATER IMPACTS

Best Management Practice	Measurable Goal	FY19	FY20	FY21	FY22	FY23
1.1 - Regional Stormwater Partnership **Local TMDL Action Plan BMP*	*Participate in a Minimum of Six Meetings, Summarize Activities, Maintain Website, One Major Event/Activity Per Permit Cycle*					

FY21 - The City continued its involvement in the Rivanna Stormwater Education Partnership (RSEP) this permit year. The RSEP exceeded its meeting frequency commitment, meeting seven times during the permit year. The RSEP continued to conduct public education campaigns to educate the general public and the local business community on steps they can take to reduce their impacts on stormwater quality. A range of outreach strategies were utilized this year, including utility bill inserts, posters on local public transportation buses, an expanded social media and online presence, a newspaper advertisement, and brochures. The RSEP continued to host its website (www.rivanna-stormwater.org), and its GIS-based Story Map website, The Rivanna River Watershed (www.tinyurl.com/RivannaStoryMap). The Love Your Watershed campaign (www.rivanna-stormwater.org/love-your-watershed) continued as a social media and online campaign designed to motivate residents of the greater Charlottesville area to reduce their impact on waterways and ultimately improve local water quality. The campaign will continue for the foreseeable future. The RSEP partners coordinated on the implementation of the regional Public Education and Outreach Plan for the current five year MS4 permit cycle.

FY20 - The City continued its involvement in the Rivanna Stormwater Education Partnership (RSEP) this permit year. The RSEP met its meeting frequency commitment, meeting six times during the permit year. The RSEP continued to conduct public education campaigns to educate the general public and the local business community on steps they can take to reduce their impacts on stormwater quality. A range of outreach strategies was utilized this year, including an expanded social media and online presence, a newspaper advertisement, a speaking engagement, and brochures. A RSEP partner staffed an informational table with educational materials at two public events during the permit year, delivered a presentation about stormwater and residential best management practices (BMP) to help improve water quality, and distributed brochures for the Virginia Conservation Assistance Program (a program that is supported by the City and RSEP) to residents. The redesigned RSEP website, www.rivanna-stormwater.org, launched during the permit year. The partnership also completed the design for and launched the GIS-based Story Map website, *The Rivanna River Watershed* (www.tinyurl.com/RivannaStoryMap), which provides interactive information on the Rivanna River and its watershed, local stream health, community water quality monitoring programs, projects and programs local MS4 permit holders are undertaking, and things residents can do at home and work to improve stream health and water quality. Finally, the RSEP conceived of, planned, and launched the Love Your Watershed campaign (www.rivanna-stormwater.org/love-your-watershed). Love Your Watershed launched as a social media and online campaign designed to motivate residents of the greater Charlottesville area to reduce their impact on waterways and ultimately improve local water quality. The campaign will continue for the foreseeable future. The RSEP partners coordinated on the implementation of the regional Public Education and Outreach Plan for the current five year MS4 permit cycle.

1.2 - City Environmental Webpages **Local TMDL Action Plan BMP*	*Maintain Website, Provide Stormwater Education Information*					

FY21 - The City continued to maintain several pages of stormwater, green infrastructure, and environmental content on the official City website, www.charlottesville.gov. The website contains information on stormwater, local waterways and watersheds, the City's stormwater management program (including the MS4 Program Plan, current MS4 Permit and coverage letter, and most recent Annual Reports), the City's Water Resources Protection Program (WRPP) and Stormwater Utility (SWU), green stormwater infrastructure, and the Adopt-A-Stream program. Online reporting of illegal dumping, illicit discharges, or other environmental problems is also available through the City website, as well as through the MyCville app, which enables real-time reporting and tracking of water pollution concerns. The website also provides a mechanism for the public to provide input on the City's MS4 Program Plan. The webpages are www.charlottesville.gov/380/Stormwater-Management-Program, www.charlottesville.gov/wrpp, www.charlottesville.gov/greencity, and www.charlottesville.gov/greeninfrastructure.
The City continued to host CityGreen, an interactive, online mapping tool that shows "green" projects and resources around Charlottesville that contribute to making Charlottesville "A Green City". CityGreen can be found at www.charlottesville.gov/citygreenmap.

FY20 - The City launched a new website during the permit year, www.charlottesville.gov. The new website contains several pages of environmental, green infrastructure, and stormwater content including information on stormwater, local waterways and watersheds, the City's stormwater management program (including the MS4 Program Plan, current MS4 Permit and coverage letter, and most recent Annual Report), the City's Water Resources Protection Program (WRPP) and Stormwater Utility (SWU), green stormwater infrastructure, and the Adopt-A-Stream program. Online reporting of illegal dumping, illicit discharges, or other environmental problems is also available through the City website, as well as through the MyCville app, which enables real-time reporting and tracking of water pollution concerns. The website also provides a mechanism for the public to provide input on the City's MS4 Program Plan. The webpages are www.charlottesville.gov/greencity, www.charlottesville.gov/wrpp, and www.charlottesville.gov/greeninfrastructure.
The City completed updates to the data presented in CityGreen, an interactive, online mapping tool that shows "green" projects and resources around Charlottesville that contribute to making Charlottesville "A Green City". CityGreen can be found at www.charlottesville.gov/citygreenmap. In collaboration with the Green Infrastructure Center (GIC), the City also produced *City GreenPrint 1.0, Charlottesville's Green Infrastructure Guide* . This document supports the conservation and restoration of Charlottesville's green infrastructure. It provides an introduction to what green infrastructure is and presents Charlottesville's green infrastructure baseline. The document and its numerous maps are included on the City GreenPrint 1.0 webpage, www.charlottesville.gov/1356/City-GreenPrint-10.

1.3 - Youth Stormwater Education **Local TMDL Action Plan BMP*	*Document and Describe Number of Activities Targeting Youths*					

FY21 - The City was active in engaging youth in stormwater education activities during the permit year. The City's Department of Parks and Recreation (DPR) continued to engage youths in active outdoor environmental education in parks and natural areas through their Park Explorers, Nature Seek & Peek, Voices from the Land, and Intro to Kayaking the Rivanna River programs. These programs provided opportunities to explore and learn about natural environments through visits to local parks and kayaking the Rivanna River and served 35 children this permit year. DPR also facilitated tours for small groups of preschool and elementary children to explore new trails built on newly acquired City parkland near the Ragged Mountain Reservoir to learn about forests, geology, and stream ecology. The children then drew hand-made pictures of what they saw on their hike along with making thank you cards for the former property owner who generously donated half its value to the public as parkland. Finally, the City again partnered with Charlottesville City Schools (CCS) and the Thomas Jefferson Soil and Water Conservation District (TJSWCD) to provide a Meaningful Watershed Educational Experience (MWEE) to 329 City fourth grade students, encouraging and engaging students' participation in environmental learning about the Rivanna River Watershed and our place in the Chesapeake Bay Watershed. The watershed education programs featured an online Educational Resource Library available from the TJSWCD website, www.tjswcd.org/education-resources/. This provided students, families, and teachers resources to explore on a weekly basis while students finished their school year learning from home.

FY20 - The City was active in engaging youth in stormwater education activities during the permit year. The City's Department of Parks and Recreation (DPR) continued to engage youths in active outdoor environmental education in parks and natural areas through their Summer Camp programs. These camps provided opportunities to explore and learn about natural environments through field trips to a local natural playscape park and kayaking at local reservoirs and served 335 children and 54 adults this permit year. The City again partnered with Charlottesville City Schools (CCS) and the Thomas Jefferson Soil and Water Conservation District (TJSWCD) to provide a Meaningful Watershed Educational Experience (MWEE) to 375 City fourth grade students, encouraging and engaging students' participation in hands-on environmental learning about the Rivanna River Watershed and our place in the Chesapeake Bay Watershed. Each student participated in a rotation of field investigations that include three core stations: 1) A nature study hike highlighting a variety of habitats; 2) a stream study and a biological water quality assessment of Moormans River benthic macroinvertebrates; and 3) a watershed station including watershed maps, soil box experiments, and an Enviroscape demonstration that allows students (and adults) to gain a better understanding of how our day-to-day activities impact the environment.

1.4 - Illicit Discharge and Pollution Prevention Education **Local TMDL Action Plan BMP*	*Document and Describe Number and Type of Education Efforts*					

FY21 - Illicit discharge educational information was targeted to various audiences again this permit year, including the general public, local businesses, and City employees. As described above in BMP 1.1, the RSEP continued to provide educational messages through various media to the general public that stress the connection of the stormwater drainage system to local waterways, as well as best management practices that citizens can employ to prevent stormwater pollution. The PSA that was created by the City's Communications Office and Department of Public Works (DPW) continued to air on the City's public access TV10 station during the permit year. The sixty second video features a man and his son embarking on a fishing trip just after a storm. The son asks his father a series of questions as they journey to the river, following the path of the stormwater from the sky, to the parking lot, into the stormwater drainage system, through small streams, and finally into the Rivanna River. The video is also featured online at the City's video hosting site, Vimeo.com/Cvilletv10. PSA slides developed by the RSEP on pet waste management, car washing, and lawn care were also aired on the City's TV10.

FY20 - Illicit discharge educational information was targeted to various audiences again this permit year, including the general public, local businesses, and City employees. As described above in BMP 1.1, the RSEP continued to provide educational messages through various media to the general public that stress the connection of the stormwater drainage system to local waterways, as well as best management practices that citizens can employ to prevent stormwater pollution. The PSA that was created by the City's Communications Office and Department of Public Works (DPW) that is described below in last year's annual report continued to air on the City's public access TV10 station during the permit year. The video is also featured online at the City's video hosting site, Vimeo.com/Cvilletv10. PSA slides developed by the RSEP on pet waste management, car washing, and lawn care were also aired on the City's TV10.

1.5 - Public Education and Outreach Plan **Local TMDL Action Plan BMP*	*Identify high priority issues; select strategies for public education and outreach; identify public audiences; delivery of high-priority messages.*					

FY21 - The updated Public Education and Outreach Plan that was developed in coordination with the RSEP continued to be implemented this permit year. Education and outreach activities were conducted using the following strategies to communicate and address the high-priority issues of runoff volume reductions, potential runoff pollutants, and TMDL impairments (bacteria, sediment, nitrogen, phosphorus): media materials (newspaper advertisement in the CVille Weekly, PSAs on public access TV, City and RSEP websites including stormwater, green infrastructure, and Love Your Watershed content, Rivanna River Watershed Story Map, CityGreen Map, and social media posts), traditional written materials (utility bill inserts, RSEP brochures, posters on local public transportation buses), and alternative materials (Love Your Watershed stickers).

FY20 - The updated Public Education and Outreach Plan that was developed in coordination with the RSEP continued to be implemented this permit year. The Plan was revised to acknowledge challenges presented by the COVID-19 pandemic. Education and outreach activities were conducted using the following strategies to communicate and address the high-priority issues of runoff volume reductions, potential runoff pollutants, and TMDL impairments (bacteria, sediment, nitrogen, phosphorus): media materials (newspaper advertisement in the CVille Weekly, PSAs on public access TV, RSEP website including Love Your Watershed content, Rivanna River Watershed Story Map, and social media posts), traditional written materials (RSEP and VCAP brochures), and a speaking engagement (presentation at Chesapeake Bay Foundation event).

MCM #2: PUBLIC INVOLVEMENT / PARTICIPATION

Best Management Practice	Measurable Goal	FY19	FY20	FY21	FY22	FY23
2.1 - Volunteer Stream Clean Up **Local TMDL Action Plan BMP*	*Support At Least Two Events, Document Number of Events and Volunteers*	■	■	■		

FY21 - The City supported eight stream clean-up events over the course of the permit year. The City partnered with the Rivanna Conservation Alliance (RCA), The Nature Conservancy (TNC), Charlottesville Pavilion, Sun Tribe Solar, and the general public on the clean-ups. The events involved 169 volunteers and collected one dump truck load, two pick-up truck loads, and 80 bags of trash and debris,149 tires, as well as other items such as two couches, a bed frame, a hubcap, and an air conditioner. The City is counting these stream clean-ups as the first of the four activities required by the MS4 General Permit that are meant to provide an opportunity for public involvement to improve water quality and support local restoration and cleanup projects. The metric to determine if the activity is beneficial to water quality is the amount of trash and debris removed; based upon the large amount removed, the City has determined that the activity is beneficial to improving water quality.

FY20 - The City supported three stream clean-up events over the course of the permit year. The City partnered with the Rivanna Conservation Alliance (RCA), The Nature Conservancy (TNC), and the general public on the clean-ups. The events involved over 15 volunteers and collected 24 bags of trash and debris, numerous tires, as well as other items such as pieces of pipe, a 55 gallon drum, and car parts.

2.2 - Adopt-A-Stream Program **Local TMDL Action Plan BMP*	*Document Number of Events, Volunteers, Volunteer Hours, Debris Collected*	■	■	■		

FY21 - The Adopt-a-Stream Program continues to be administered by the Environmental Sustainability Division of the DPW. During the permit year, 2 clean-ups were conducted, which involved 12 volunteers and 24 volunteer hours, collecting 6 bags of trash.

FY20 - The Adopt-a-Stream Program continues to be administered by the Environmental Sustainability Division of the DPW. During the permit year, 2 clean-ups were conducted, which involved 21 volunteers and 40.5 volunteer hours, collecting 10 bags of trash. A new participant was also added to the program.

2.3 - Tree Planting Program **Local TMDL Action Plan BMP*	*Hold At Least Two Events, Document Number of Events, Volunteers, and Trees Planted*	■	■	■		

FY21 - The City partnered with the Charlottesville Area Tree Stewards (CATS) to plant 10 native trees and shrubs on the campus of Jackson-Via Elementary School, including hackberries, redbuds and red twig dogwoods. A London Plane tree was donated by Dominion Energy and planted in Washington Park by a local Girl Scout troop on Arbor Day.

FY20 - The City's DPR supported two public tree planting events during the permit year. These events partnered with the Charlottesville Area Tree Stewards (CATS), the City Tree Commission, and J.W Townsend, a local business. Over 20 members of the public were involved and 32 trees were planted. The City is counting these tree planting events as one of the four activities required by the MS4 General Permit that are meant to provide an opportunity for public involvement to improve water quality. The metric to determine if the activity is beneficial to water quality is the number of trees planted; based upon the number of trees planted, 32, the City has determined that the activity is beneficial to improving water quality.

2.4 - Watershed and Water Quality Activities **Local TMDL Action Plan BMP*	*Document Number and Description of Activities*					

FY21 - The City was active in organizing, participating in, promoting, and sponsoring watershed and water quality activities in the community this permit year. The City continued the Pollocks Branch Walkable Watershed process. During the permit year coordination continued amongst the City and the Charlottesville Redevelopment and Housing Authority (CRHA) for construction of the bridge which will be used to provide a pedestrian crossing of Pollocks Branch, as well as for the installation of a natural plant community-based landscape that will treat stormwater from a residential street; stream clean-ups of Pollocks Branch were performed; and collaboration continued with the University of Virginia (UVA) and South First Street residents on the reuse of an ash tree that will be felled as part of the bridge construction.

The City's DPR held Healthy Hike Breaks and Winter Bird Walks, engaging community members on the trails in local parks to learn about Rivanna watershed flora and fauna. These programs served 56 adults. The City is counting this support as the second of the four activities required by the MS4 General Permit that are meant to provide an opportunity for public involvement to improve water quality and support local restoration and cleanup projects. The metric to determine if the activity is beneficial to water quality is the number of participants; based upon the number of participants, 56, the City has determined that the activity is beneficial to improving water quality. DPR staff also worked with the Rivanna River Company, RCA, and community volunteers to rebuild a critical Rivanna River access point in the City's Riverview Park.

The City continued to provide financial and technical support to RCA and its community-based water quality monitoring program StreamWatch. The City is counting this support as the third of the four activities required by the MS4 General Permit that are meant to provide an opportunity for public involvement to improve water quality and support local restoration and cleanup projects. The metric to determine if the activity is beneficial to water quality is the number of sites monitored by StreamWatch; based upon the number of sites monitored, 68, the City has determined that the activity is beneficial to improving water quality.

The City's Water Resources Specialist collaborated with the Chesapeake Bay Landscape Professional (CBLP) program to arrange for and provide a tour of green stormwater infrastructure at Charlottesville High School (CHS) for a CBLP Level 1 certification class. The tour provided insights into the planning, construction, and maintenance of a bioretention basin, rainwater harvesting system, vegetated filter strip, and permeable paver system that the City has installed to treat stormwater from the CHS campus.

City staff continue to serve on and support several public boards and bodies. The City's Water Resources Specialist sits on RCA's Science Advisory Committee. The standing Water Resources Protection Program (WRPP) Advisory Committee, appointed by the Charlottesville City Council to provide oversight of the WRPP, did not meet during the permit year because of the COVID-19 pandemic, but did continue to communicate via email and received DPW staff support. The City's Urban Forester continued to provide staff support to the City Tree Commission. DPR staff also provide support to the Parks and Recreation Advisory Board, CATS, and the Botanical Garden of the Piedmont. The City continued its rain barrel rebate program, which provides $30 back to residents who purchase and install a rain barrel; rebates for 32 rain barrels were issued, for a total of $960. The City is counting this support as the fourth of the four activities required by the MS4 General Permit that are meant to provide an opportunity for public involvement to improve water quality and support local restoration and cleanup projects. The metric to determine if the activity is beneficial to water quality is the number of rebates issued; based upon the number of rebates, 32, the City has determined that the activity is beneficial to improving water quality.

City staff participated in the Urban Rivanna River Corridor Plan, a joint effort between the City and Albemarle County, along with other stakeholders, to develop a vision and action plan for the Rivanna River. The process is intended to facilitate coordination on making a cleaner, safer, and more livable waterway that serves as a catalyst for community investment. Environmental protection of the riparian system has been established as paramount in all activities and land uses in the river corridor.

The City is also continuing the process of updating the Comprehensive Plan, a general framework that defines broad policy recommendations to guide decision-making. The following specific goals are included: Improving and maintaining stormwater conveyance infrastructure to provide a safe and effective public drainage system while mitigating related impacts to water resources; and Protect, enhance, and restore the integrity of the city’s water resources. Both of these planning efforts had a significant public engagement component.

FY20 - The City was active in organizing, participating in, promoting, and sponsoring watershed and water quality activities in the community this permit year. The City continued the Pollocks Branch Walkable Watershed process. During the permit year planning and design work continued for the bridge which will be used to provide a pedestrian crossing of Pollocks Branch; planning and design work continued for a natural plant community-based landscape installation that will treat stormwater from a residential street; a stream clean-up of Pollocks Branch was performed; and collaboration continued with the University of Virginia (UVA) and South First Street neighborhood youth on the reuse of an ash tree that will be felled as part of the bridge construction. The City's Water Resources Specialist was awarded the Golden Trowel Outstanding Partner Award by Cultivate Charlottesville for his work partnering with and supporting the Urban Agriculture Collective of Charlottesville and their urban farms. This award recognized work to support the community garden in the South First Street neighborhood described below in last year's annual report.

The City's DPR continued its Adaptive Recreation Program, which serves individuals with physical and/or mental disabilities whose recreational needs cannot be met by regular programs. The program included hiking, paddling, tubing, stand-up paddle boarding, swimming, exploring, adventuring, and learning in, on, and along the Rivanna River and Trail, Chris Greene Lake, Beaver Creek Reservoir, Walnut Creek Park, Ivy Creek Natural Area, Mint Springs Park, and Shenandoah Caverns. The program served 225 individuals during the permit year. The City is counting this program as one of the four activities required by the MS4 General Permit that are meant to provide an opportunity for public involvement to improve water quality. The metric to determine if the activity is beneficial to water quality is the number of participants; based upon the number of participants, 225, the City has determined that the activity is beneficial to improving water quality. DPR also held a nature camp for older adults that included education on invasive and native plant species, astronomy, and geology. The camp served five individuals.

The City's Water Resources Specialist gave a tour of the Meadow Creek restoration project to a UVA Landscape Architecture class as well as a tour of City green stormwater infrastructure to a professor and students from Longwood University; and the City's Environmental Sustainability Manager provided a tour of the City Hall vegetated roof to a group of UVA Engineering students.

The City continued to provide financial and technical support to RCA and its community-based water quality monitoring program StreamWatch. The City is counting this support as one of the four activities required by the MS4 General Permit that are meant to provide an opportunity for public involvement to improve water quality. The metric to determine if the activity is beneficial to water quality is the number of sites monitored by StreamWatch; based upon the number of sites monitored, 68, the City has determined that the activity is beneficial to improving water quality.

The City sponsored and supported FLOW: The Rivanna River Arts Festival, a celebration of art, music, song and dance inspired by the Rivanna River. It is estimated that more than 400 people attended the event along the Rivanna River. The City is counting this event as one of the four activities required by the MS4 General Permit that are meant to provide an opportunity for public involvement to improve water quality. The metric to determine if the activity is beneficial to water quality is the number of participants; based upon the number of participants, over 400, the City has determined that the activity is beneficial to improving water quality. City staff also participated in the planning of the 2020 Rivanna RiverFest, which was set to include the Fix-a-Leak Family 5K, Rivanna River Race, community tabling, and a celebration at the Rivanna River Company. Unfortunately the event was cancelled due to the COVID-19 pandemic. The City continued its rain barrel rebate program, which provides $30 back to homeowners who purchase and install a rain barrel; rebates for 26 rain barrels were issued, for a total of $780 during the permit year.

City staff continue to serve on and support several public boards and bodies. The City's Water Resources Specialist sits on RCA's Science Advisory Committee. The standing Water Resources Protection Program (WRPP) Advisory Committee, appointed by the Charlottesville City Council to provide oversight of the WRPP, met one time during the permit year with DPW and Department of Utilities (DU) staff support. A presentation on the status of the City's MS4 Program was delivered to the WRPP Advisory Committee by the City's Water Resources Specialist. The City's Urban Forester continued to provide staff support to the City Tree Commission. DPR staff also provide support to the Parks and Recreation Advisory Board, CATS, and the McIntire Botanical Garden.

2.5 - Public Involvement **Local TMDL Action Plan BMP*	*MS4 Program Plan and Annual Reports Posted to City Website, Provide for Public Comment on Proposed MS4 Program Plan*					

FY21 - The City has maintained its MS4 Program Plan in accordance with the MS4 General Permit. The City keeps a copy of the most current version of the MS4 Program Plan posted to its website. The City also keeps copies of the Annual Reports required by the MS4 General Permit posted to its website; a copy of the most current Annual Report is posted within 30 days of submittal of the report to DEQ. The MS4 Program Plan and Annual Reports can be found at the following webpage: www.charlottesville.gov/380/Stormwater-Management-Program. The public can provide input on the MS4 program via this webpage; no public input was received during the permit year.

FY20 - The City has maintained its MS4 Program Plan in accordance with the MS4 General Permit. The City keeps a copy of the most current version of the MS4 Program Plan posted to its website. The City also keeps copies of the Annual Reports required by the MS4 General Permit posted to its website; a copy of the most current Annual Report is posted within 30 days of submittal of the report to DEQ. The MS4 Program Plan and Annual Reports can be found at the following webpage: www.charlottesville.gov/380/Stormwater-Management-Program. The public can provide input on the MS4 program via this webpage; no public input was received during the permit year.

MCM #3: ILLICIT DISCHARGE DETECTION AND ELIMINATION

Best Management Practice	Measurable Goal	FY19	FY20	FY21	FY22	FY23
3.1 - Illicit Discharge Detection and Elimination Program **Local TMDL Action Plan BMP*	*Develop Procedures, Keep Records of IDDE Program, Including Number of Outfalls Screened and Illicit Discharges Addressed*					

FY21 - The City continued to implement its illicit discharge detection and elimination (IDDE) program this permit year. The City responded to several reports of water pollution from internal City staff and the public; see Attachment A for a list of illicit discharges to the City's MS4. Additionally, dry weather screening of 60 of the City's MS4 outfalls was conducted using a tailored version of the Center for Watershed Protection's Outfall Reconnaissance Inventory. The dry weather screening did not detect any illicit discharges and as a result no follow up actions were necessitated. The City contracted with the TJSWCD to conduct the dry weather screening this permit year.

FY20 - The City continued to implement its illicit discharge detection and elimination (IDDE) program this permit year. The City responded to several reports of water pollution from internal City staff and the public; see Attachment A for a list of illicit discharges to the City's MS4. Additionally, dry weather screening of 53 of the City's MS4 outfalls was conducted using a tailored version of the Center for Watershed Protection's Outfall Reconnaissance Inventory. The dry weather screening did not detect any illicit discharges and as a result no follow up actions were necessitated. The City contracted with the TJSWCD to conduct the dry weather screening this permit year.

3.2 - Maintenance of GIS Data, MS4 Map, and Information Table **Local TMDL Action Plan BMP*	*Document Efforts Related to Maintenance of GIS Data, Up-to-date MS4 Map and Information Table*					

FY21 - The City continued to maintain GIS data layers of its stormwater infrastructure system, areas where streams flow through the stormwater infrastructure system, waters receiving discharges from the City’s MS4, the outfalls of the City’s MS4 and their drainage areas, the MS4 regulated service area, and stormwater management facilities (SMF) owned or operated by the City. The City MS4 Map and associated Information Table were updated to reflect changes to the MS4 occurring on or before June 30 of the reporting year.

FY20 - The City continued to maintain GIS data layers of its stormwater infrastructure system, areas where streams flow through the stormwater infrastructure system, waters receiving discharges from the City’s MS4, the outfalls of the City’s MS4 and their drainage areas, the MS4 regulated service area, and stormwater management facilities (SMF) owned or operated by the City. The City MS4 Map and associated Information Table were updated to reflect changes to the MS4 occurring on or before June 30 of the reporting year.

3.3 - Notification of Physically Interconnected MS4s	*Document Existence of Physical Interconnections and Written Notification*					
FY21 - No known physical interconnections to any downstream MS4s were established or discovered after the effective date of the MS4 General Permit.						
FY20 - No known physical interconnections to any downstream MS4s were established or discovered after the effective date of the MS4 General Permit.						
3.4 - Online Reporting of Environmental Concerns and Illicit Discharges **Local TMDL Action Plan BMP*	*Track Problems Reported and City Responses*					
FY21 - The City continues to maintain online reporting features on the City website and has worked with the RSEP to administer the regional Water Pollution Hotline. These features allow public reporting of potential illicit discharges. The City conducts investigations of the reports to ensure that the discharges are addressed and proper corrective actions are taken by the responsible party.						
FY20 - The City continues to maintain online reporting features on the new City website and has worked with the RSEP to administer the regional Water Pollution Hotline. These features allow public reporting of potential illicit discharges. The City conducts investigations of the reports to ensure that the discharges are addressed and proper corrective actions are taken by the responsible party.						

MCM #4: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

Best Management Practice	Measurable Goal	FY19	FY20	FY21	FY22	FY23
4.1 - Erosion and Sediment Control Program **Local TMDL Action Plan BMP*	*Track Number of Inspections Conducted and Type and Number of Enforcement Actions, Status of E&S Control Program*					

FY21 - The City's Erosion and Sediment Control (E&S) Program continues to be administered by DPW in accordance with, and is currently considered “consistent” with, state standards. The City's E&S Program is implemented in accordance with Part I.E.4.a (1) of the MS4 General Permit. A total of 2,123 E&S and Virginia Stormwater Management Program (VSMP) inspections were conducted during the permit year. Enforcement actions stemming from these inspections included the issuance of 772 Corrective Action Reports, six Notices to Comply, and six Stop Work Orders.
No formal procedural changes to the E&S Program were made this past permit year; however the City continued to develop the new “Dirt Watcher” application, which is currently being used on project sites. The City is further developing management dashboards for E&S inspections. The City is excited about the potential for this system and looks forward to continued development and formalizing of standard operating procedures in FY22.

FY20 - During the permit year, administration of the Erosion and Sediment (E&S) Control program transitioned from the City’s Neighborhood Development Services (NDS) Department to the DPW's Engineering Division. The program continues to be administered in accordance with, and is currently considered “consistent” with, state standards. A total of 1,150 E&S and Virginia Stormwater Management Program (VSMP) inspections were conducted during the permit year. Enforcement actions stemming from these inspections included the issuance of 583 Corrective Action Reports, 7 Notices to Comply, and 6 Stop Work Orders. The process of updating the City's Standards and Design Manual, including the section on E&S, was completed during the permit year.

4.2 - General Permit for Discharges From Construction Activities **Local TMDL Action Plan BMP*	*Keep Evidence of Permit Issuance in Project File*					

FY21 - During the permit year, seven projects located in the city were issued initial coverage under the General VPDES Permit for Discharges of Stormwater from Construction (CGP) and one project was reissued coverage.

FY20 - During the permit year, five projects located in the city were issued initial coverage under the General VPDES Permit for Discharges of Stormwater from Construction (CGP); one project had transferred coverage due to the project changing ownership and operational control; and 28 projects were reissued coverage due to the beginning of the five year CGP cycle that began on July 1, 2019 and expires June 30, 2024.

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

Best Management Practice	Measurable Goal	FY19	FY20	FY21	FY22	FY23
5.1 - Stormwater Management Materials **Local TMDL Action Plan BMP*	*Keep Materials Available on City Website, Document Significant Changes, Updates, or New Materials*					

FY21 - The City has continued to make various stormwater management materials publicly available including Charlottesville City Code Chapter 10, Water Protection, and the City Standards and Design Manual (SADM), Chapter 5, Stormwater Management. In December 2020 several new checklists and charts were officially added to the SADM. The additions consisted of an “Outfall Accounting Form” and the “MS4 Reporting Chart”, or the MS4 Reporting Chart with Forested Open Space to be included on Stormwater Management (SWM) plans. This also included a new “Engineering Completeness Review Checklist” that will be required with SWM plan submissions. In addition, the process to perform changes to SADM details is in progress and moving towards the next phase of completion.
As a part of the City's requirement to administer a local Virginia Stormwater Management Program (VSMP), a guidance document was created to provide explanations of key SWM outfall requirements. This is identified as the City’s VSMP Technical Guidance Document DRAFT 1.0. In addition, BMP Pre-Inspection and Post-Inspection Template letters used by the City were updated.

FY20 - The City has continued to make various stormwater management materials publicly available including Charlottesville City Code Chapter 10, Water Protection, and the City Standards and Design Manual, Chapter 5, Stormwater Management. The process of updating the Standards and Design Manual section on Stormwater Management and adding a section on Green Stormwater Infrastructure was completed during the permit year. As the City administered the local VSMP during the permit year, several forms related to the Stormwater Management Facility (SMF) and Best Management Practice (BMP) Inspection and Maintenance Program were created or updated.

5.2 - Development Plan Review **Local TMDL Action Plan BMP*	*Document Number of Site Plans Reviewed*					

FY21 - The Neighborhood Development Services (NDS) Department continues to administer the site plan review process for the City. During the permit year, 11 site plans with a stormwater management component were received by DPW's Engineering Division. This is the number of plans that were initially submitted for review during the permit year. Many of these plans will eventually be approved, but some may end up being denied, on hold for a period of time, or potentially approved but never implemented.

FY20 - NDS continues to administer the site plan review process for the City. During the permit year, 15 site plans with a stormwater management component were reviewed by DPW's Engineering Division. This is the number of plans that were initially submitted for review during the permit year. Many of these plans will eventually be approved, but some may end up being denied, on hold for a period of time, or potentially approved but never implemented.

5.3 - Structural Stormwater Management Facility and Best Management Practice Inventory and Reporting **Local TMDL Action Plan BMP*	*Maintain Updated Database, Annual Certification Statements*					

FY21 - DPW's Engineering and Environmental Sustainability Divisions maintain a database of public and private structural stormwater management facilities (SMF) in the city; all best management practices (BMP) that the City implements to meet Chesapeake Bay TMDL pollutant of concern load reduction requirements are also tracked. The City electronically reported SMFs that were installed as part of a project that did not have coverage under the CGP to the DEQ BMP Warehouse. The City did not complete construction of any projects requiring coverage under the CGP.

FY20 - DPW's Engineering and Environmental Sustainability Divisions maintain a database of public and private structural stormwater management facilities (SMF) in the city; all best management practices (BMP) that the City implements to meet Chesapeake Bay TMDL pollutant of concern load reduction requirements are also tracked. The City electronically reported SMFs that were installed as part of a project that did not have coverage under the CGP to the DEQ BMP Warehouse. The City did not complete construction of any projects requiring coverage under the CGP.

5.4 - Structural Stormwater Management Facility Inspection and Maintenance Program **Local TMDL Action Plan BMP*	*Track Number of Inspections and Number and Type of Enforcement Actions, Description of Significant Maintenance, Repair, or Retrofit Activity*					

FY21 - The City's SMF inspection and maintenance program remains active. The program typically follows the calendar year with the first round of inspections starting in late winter or early spring. For the second half of calendar year 2020, post inspection letters were sent to property owners, HOA representatives, and property managers. Re-inspections were completed for "failed" facilities and follow-up letters were sent to the responsible party. For the 2021 calendar year, the initial notices to property owners were mailed on May 25, 2021. The first round of inspections occurred and follow up and final inspections will take place in the next fiscal year as needed. 20 privately-owned SMFs were inspected with 13 facilities failing initial inspections and one requiring further inspections before determining the status. Notification letters will be sent in the near future with a 60 day requirement to remedy the deficiencies noted. 19 City owned SMFs were inspected with 16 facilities failing initial inspections. Notices for City owned facilities are planned to be sent in the near future. The remaining facilities to be inspected are primarily underground detention and other BMPs not incorporated into the City's TMDL action plans.

Vegetative maintenance work to control invasive plant species was performed at several City owned SMFs, including the CHS vegetated filter strip, Azalea Park constructed wetlands, Old Lynchburg Road bioretention basin, and Fontaine Fire Station bioretention basins.

FY20 - The City's SMF inspection and maintenance program remains active. The program typically follows the calendar year with the first round of inspections starting in late winter or early spring. For the second half of calendar year 2019, post inspection letters were sent to property owners, HOA representatives, and property managers. Re-inspections were completed for "failed" facilities and follow-up letters were sent to the responsible party. For the 2020 calendar year, the initial notice to property owners was mailed on June 15, 2020. The first round of inspections has occurred; follow up and final inspections will be taking place in FY21. Eight privately-owned SMFs were inspected with three facilities failing initial inspections and one requiring further inspections before determining the status. Notification letters will be sent in the near future with a 60-day requirement to remedy the deficiencies noted. 12 City-owned SMFs were inspected with six facilities failing initial inspections. Notices for City-owned facilities are planned to be sent in the near future.

Maintenance was performed on the City's vegetated filter strip located at Charlottesville High School. Maintenance included removal of sediment and accumulated debris from gravel diaphragms, level spreaders, and the overflow spillway; cleaning and replacing of stone within gravel diaphragms, level spreaders, and overflow spillway; removal of fiber rolls previously placed in the facility; and repair of eroded areas with topsoil, seed, and straw.

5.5 - Urban Forest Management **Local TMDL Action Plan BMP*	*Track Urban Forest Management Efforts, Number of Trees Planted*					

FY21 - Implementation of urban forest management efforts continued during the permit year. Tree planting and invasive plant management in City parks and public areas continued to be focus areas of urban forest management efforts. DPR planted (via contractors and DPR staff) 23 trees this permit year, which are typically two-inch caliper ball and burlap trees. Species are chosen as most appropriate for the location to be planted and to complement other species in the area.

DPR continued their partnership with the Charlottesville Area Tree Stewards (CATS) to support invasive plant management efforts in City parks and school campuses, including: continued maintenance of an area planted with native ferns and removal of English Ivy in a riparian buffer in Greenleaf Park; continued efforts to restore the natural landscape at Charlottesville's Jackson-Via Elementary School by removing invasive vines and shrubs from around native trees and shrubs CATS had previously planted; and removing English Ivy from trees in Northeast Park. CATS also continued to tend "The Grove" in McIntire Park, where they have planted new trees and worked to clean up existing stands. In addition to pruning and weeding, this ongoing effort includes liberating trees overtaken by vines and removing unwanted invaders, such as Callery Pear trees.

DPR continued to work with the Tree Commission in a remote fashion due to the COVID 19 pandemic. DPR also created a new tree planting rubric that prioritizes tree planting locations based on different criteria, and is in the process of having a new urban tree canopy study completed.

The City maintained its Tree City USA status, having now held that status for 15 years. The City's Urban Forester was joined by CATS leaders and state officials at Charlottesville's Walker Upper Elementary School for an Arbor Day celebration. In addition to the reading of a City proclamation, the event included presentations by students on the beautiful and diverse array of trees on the school's grounds.

The Charlottesville City Council, working with the Charlottesville Tree Commission and CATS, designated six new trees to be protected by the City's Tree Conservation Ordinance. All six trees are on public property and include an American Elm outside Clark Elementary School, a Post Oak in Maplewood Cemetery, a Sycamore along the banks of the Rivanna River in Riverview Park, a Southern Red Oak in Oakwood Cemetery, a White Ash behind the Charlottesville-Albemarle Historical Society, and a Shumard Oak off the 250 Bypass. The trees are now protected from removal unless specifically authorized by City Council.

FY20 - Implementation of urban forest management efforts continued during the permit year. Tree planting and invasive plant management in City parks and public areas continued to be focus areas of urban forest management efforts. DPR planted (via contractors and DPR staff) 149 trees this permit year, which are typically two-inch caliper ball and burlap trees. Species are chosen as most appropriate for the location to be planted and to complement other species in the area. DPR partnered with CATS and the City Tree Commission to plant trees on private property around the Belmont neighborhood of Charlottesville, which has been identified as an area of the city with lower tree canopy coverage. With a grant from the Ballyshannon Fund, they acquired 23 trees for the project. Five teams of CATS members and Tree Steward trainees, joined by seven members of the Tree Commission, planted the trees at various locations around the neighborhood and advised homeowners on how to maintain them.

DPR worked with CATS to support invasive plant management efforts, including: removal of a heavy infestation of vines and blackberry stumps to make way for the planting of native ferns in a riparian buffer in Greenleaf Park; removal of invasive vines from trees at Meadow Creek Gardens; removal of autumn olive from newly acquired park property at the Ragged Mountain Natural Area; removal of invasive vines from the riparian buffer of Schenks Branch in the Schenks Greenway Park; clearing of invasive species and debris from an overgrown hillside near the playground and garden at Jackson-Via Elementary School; and removal of bamboo along the Rivanna River trail. CATS also continued to tend "The Grove" in McIntire Park, an area where new native trees have been planted, existing native trees are cared for, and invasive species are removed.

The City maintained its Tree City USA status, having now held that status for 14 years. Historically the City hosts an Arbor Day celebration on Arbor Day, but unfortunately this year were unable to do so responsibly due to the COVID-19 pandemic. Tree City USA waived this requirement for this year as a result of the unprecedented circumstances.

5.6 - Investigate Green Stormwater Infrastructure Retrofit Opportunities **Local TMDL Action Plan BMP*	*Implementation of Retrofits*					

FY21 - During the permit year, the City continued to investigate and pursue green stormwater infrastructure retrofit opportunities. The City was previously awarded Stormwater Local Assistance Fund (SLAF) grants, which will be matched by the City's Stormwater Capital Improvement Program fund to conduct stream restoration projects in the coming years. Proposals in response to the Request for Proposals (RFP) described below in last year's annual report for design and permitting services were received and reviewed by the City; interviews with top firms were conducted; negotiations with the selected firm were conducted; scopes of work and task orders were agreed upon; and the City entered into contract with Hazen and Sawyer. The design process was initiated, a kickoff meeting was held, and field assessment data was collected. Design and permitting will continue in the FY22 permit year.

The City and RCA wrapped up work on the stormwater planter boxes described below in last year's annual report. The planters are located at the City's Public Works/Utilities Administration Building on 4th Street NW. The project team filled the planters with rock, bioretention soil, and a variety of native plants, including little bluestem grass, asters, black-eyed susan, and purple lovegrass. The project will hold and treat nearly 50,000 gallons of stormwater each year, helping reduce erosion and pollution loads in Schenks Branch, Meadow Creek, and the Rivanna River downstream.

In conjunction with the design and construction of a new pedestrian trail along Water Street in downtown Charlottesville, a bioretention filter was installed.

FY20 - During the permit year, the City continued to investigate and pursue green stormwater infrastructure retrofit opportunities. As described below in last year's annual report, the City was awarded Stormwater Local Assistance Fund (SLAF) grants, which will be matched by the City's Stormwater Capital Improvement Program fund to conduct three stream restoration projects in the coming years. In this permit year, the City moved toward procurement of a contractor for design and permitting services through the development and release of a request for proposals. Proposal submittals were delayed by the COVID-19 pandemic until after the end of the permit year. Selection of a contractor and the start of design and permitting work is anticipated in the FY21 permit year, and construction is anticipated in future permit years.

The City continued efforts to implement additional water quality improvement projects identified in the City's Water Resources Master Plan. Continued discussions have taken place with private property owners to negotiate the acquisition of easements to permit the installation of water quality best management practices on private property. No construction on these projects took place however.

The City partnered with RCA to identify a location for, plan, and design a set of large stormwater planter boxes to treat stormwater from the roof of the City's Public Works and Utilities Administration Building in downtown Charlottesville. The two planter boxes will treat runoff from 3,470 square feet of rooftop and be planted with an aesthetically pleasing selection of native plants. Design work was completed and a planting plan was developed during the permit year. Installation and planting of the planter boxes will occur in FY21.

MINIMUM CONTROL MEASURE #6: POLLUTION PREVENTION / GOOD HOUSEKEEPING FOR FACILITIES OWNED OR OPERATED BY THE PERMITTEE WITHIN THE MS4 SERVICE AREA

Best Management Practice	Measurable Goal	FY19	FY20	FY21	FY22	FY23
6.1 - Street Sweeping Program **Local TMDL Action Plan BMP*	*Sweep at Least 2,000 Non-Residential Curb Miles Annually*					

FY21 - The City's street sweeping program continued this permit year, with 6,211 total curb miles swept.

FY20 - The City's street sweeping program continued this permit year, with 6,339 total curb miles swept.

6.2 - Stormwater Infrastructure Flushing and Cleaning **Local TMDL Action Plan BMP*	*Clean 10% of City Owned Structures and Flush 10% of City Owned Pipes Annually*					

FY21 - The City continued its stormwater infrastructure cleaning and flushing program. This permit year 2,285 (52%) City stormwater structures were cleaned, and 52,789 (18%) linear feet of City stormwater pipe was flushed. In an effort to prevent gross solids from entering and overwhelming the stormwater system, the City again collected leaves from residential properties in the fall and winter months of the permit year. 1,305 tons of leaves were collected for composting, preventing the associated nutrient loading to local waterways.

In addition to the stormwater system flushing and cleaning noted above, the City continued to make progress on implementation of drainage projects from the Water Resources Master Plan. The Edgewood Road to Wayside Place Storm Upgrade replaced approximately 550 linear feet of existing storm sewers with new 15", 18", and 24" storm sewers, and replaced 10 storm structures. The work required extensive work on private property that involved extensive coordination with property owners throughout the duration of construction. The Kenwood Lane Storm Upgrade replaced an existing storm sewer with approximately 380 linear feet of new 15" storm sewer, and required the installation of five new storm structures. The Cedar Hill Road Upgrade replaced an existing 36" corrugated metal pipe (CMP). The pipe was replaced with 56 linear feet of 36" class III reinforced concrete pipe (RCP). The project also included the installation of an outfall and grass channel downstream of the pipe.

Finally, work completed to rehabilitate the City's aging stormwater drainage system included completion of three point repairs, 250 feet of pipe replaced, 4,949 feet of cured in place pipe (CIPP) installed, nine structure repairs, 11 structures replaced, and 40,141 feet of closed circuit television (CCTV) footage reviewed.

FY20 - The City continued its stormwater infrastructure cleaning and flushing program. This permit year, 815 (18.5%) City stormwater structures were cleaned, and 21,885 (7.5%) linear feet of City stormwater pipe was flushed. In an effort to prevent gross solids from entering and overwhelming the stormwater system, the City again collected leaves from residential properties in the fall and winter months of the permit year. 1,555 tons of leaves were collected for composting, preventing the associated nutrient loading to local waterways.

6.3 - Training for Appropriate Personnel **Local TMDL Action Plan BMP*	*Document Description of Training Offered and Number of Attendees*					

FY21 - The City continued to implement the training schedule and program for appropriate City staff this permit year; see Attachment B of the Annual Report for a summary report of the required training, a list of training events, training dates, number of employees attending, and objective of the trainings. Hazmat Technician continuing education was pursued by 31 Charlottesville Fire Department (CFD) staff and Hazmat Operations continuing education was pursued by 47 CFD staff. Seven firefighters from CFD completed nearly three months of intensive training to handle hazardous materials spills, releases, and exposures. In partnership with the Virginia Office of Emergency Management, this course was the first in-house HazMat Tech training offered in the region. Specially trained CFD Instructors led the students through various chemistry lectures and hands-on exercises at the Fontaine Training Center. CFD and the Virginia Department of Emergency Management (VDEM) started preparing for this class as far back as October 2019. To ensure success, CFD committed thirteen firefighters and captains to become HazMat-trained instructors. CFD instructors significantly reduce the department's cost and staffing burdens and allow in-house training at the highest level.
10 City staff members from Charlottesville Area Transit received the City's Water Resources Protection Program training, which covers general awareness of local streams and watersheds; an overview of stormwater and typical stormwater pollutants; the City's MS4; illicit discharge detection and elimination recognition and reporting; green stormwater infrastructure; regulations specific to the sites where staff work (including information on site specific stormwater pollution prevention (SWPPP) and spill prevention, control and countermeasures (SPCC) plans); stormwater pollution prevention BMPs; spill prevention and response; and underground storage tank operator training.
City staff members from DPW-Engineering maintain the following DEQ certifications: Erosion and Sediment Control Plan Reviewer, Inspector, and Program Administrator; Stormwater Management Program Administrator, Inspector, Plan Reviewer, and Combined Administrator; and Dual Erosion and Sediment Control and Stormwater Management Inspector. DPW-Engineering staff members also completed the following DEQ trainings during the permit year: Plan Reviewer for SWM Curriculum, DEQ Limits of Analysis, Regulatory SWPPP Inspections for Localities, DEQ Regulatory SWPPP Inspections for Localities (v 2.0), DEQ Inspecting Non-Standard Practices, Applied Soil Concepts for ESC and SWM Professionals, Where the Water Goes, Armoring Inspection Reports - When Checking Yes or No is Not Enough, DEQ Construction General Permit - 2 Part Series, DEQ Refresher for ESC Inspectors - 2 Part Series, Five Easy Rules for Erosion and Sediment Control, Forest Open Space: Part 1 - Soil Restoration, and Forest Open Space: Part 2 - Vegetation Restoration. A DPW-Engineering staff member also completed the following EPA training during the permit year: Community-enabled Lifecycle Analysis of Stormwater Infrastructure Costs (CLASIC): Tool Functionality and Case Studies.

The City's Water Resources Specialist completed the following training: Stroud Water Research Center's Stream Ecology and Riparian Buffer Training, Innovative Riparian Corridor Restoration Approaches, and Stream Restoration Monitoring and Maintenance Training.
Several City staff attended the Virginia Water and Environment Association 2021 Stormwater Seminar & Vendor Showcase - New Trends in BMP Design, Maintenance and Flood Mitigation, the Rivanna River Basin Conference, and Virginia Municipal Stormwater Association Member Meetings.

FY20 - The City continued to implement the training schedule and program for appropriate City staff this permit year; see Attachment B of the Annual Report for a summary report of the required training, a list of training events, training dates, number of employees attending, and objective of the trainings. Hazmat Technician continuing education was pursued by 27 Charlottesville Fire Department (CFD) staff and Hazmat Operations continuing education was pursued by 48 CFD staff. Five City staff members from DPW-Fleet Management and two from CFD received the City's Water Resources Protection Program training, which covers general awareness of local streams and watersheds; an overview of stormwater and typical stormwater pollutants; the City's MS4; illicit discharge detection and elimination recognition and reporting; green stormwater infrastructure; regulations specific to the sites where staff work (including information on site specific stormwater pollution prevention (SWPPP) and spill prevention, control and countermeasures (SPCC) plans); stormwater pollution prevention BMPs; spill prevention and response; and underground storage tank operator training.
City staff members from DPW-Engineering maintain the following DEQ certifications: Erosion and Sediment Control Plan Reviewer, Inspector, and Program Administrator; Stormwater Management Program Administrator, Inspector, Plan Reviewer, and Combined Administrator; and Dual Erosion and Sediment Control and Stormwater Management Inspector. DPW-Engineering staff members also completed the following DEQ trainings during the permit year: Where the Water Goes and Soil Amendments for Inspectors.
The City's Stormwater Technician completed the following DEQ trainings during the permit year: Online Stormwater BMP courses for Bioretention, Soil Compost Amendments, Constructed Wetlands, Dry Swales, Extended Detention Ponds, Sheet Flow to Vegetated Filter Strip or Conserved Open Space, Grass Channels, Permeable Pavement, Rooftop Disconnection, and Wet Ponds; and the Stormwater Pollution Prevention Refresher. She also attended the Stormwater and Litter Workshop hosted by Longwood University, which addressed urban trash pollution and strategies to intercept trash before it becomes part of stormwater runoff. The City's Water Resources Specialist completed the following training during the permit year: Chesapeake Bay Landscape Professional Level 2 training; an Invasive Plant Management Workshop; and the EPA Region III/DEQ MS4 Forum.
Staff from DPW and DU attended Virginia Municipal Stormwater Association Quarterly Meetings and the Rivanna River Basin Commission's Annual Conference.

6.4 - Written Procedures for Operations and Maintenance Activities **Local TMDL Action Plan BMP*	*Maintain and Implement Written Procedures*					

FY21 - Written procedures for operations and maintenance continued to be implemented during the permit year.

FY20 - Written procedures for operations and maintenance continued to be implemented during the permit year.

6.5 Stormwater Pollution Prevention Plans for Municipal Facilities **Local TMDL Action Plan BMP*	*Completed Inspection Reports and Annual Comprehensive Site Compliance Evaluation*					

FY21 - The stormwater pollution prevention plans (SWPPP) developed for the City's municipal high priority facilities with a high potential of discharging pollutants continued to be implemented during the permit year. Annual Comprehensive Site Compliance Evaluations for the SWPPPs were completed. No new SWPPPs were developed during the permit year.

FY20 - The stormwater pollution prevention plans (SWPPP) developed for the City's municipal high priority facilities with a high potential of discharging pollutants continued to be implemented during the permit year. Annual Comprehensive Site Compliance Evaluations for the SWPPPs were completed.

6.6 Turf and Landscape Nutrient Management Plans **Local TMDL Action Plan BMP*	*Maintain Turf and Landscape Nutrient Management Plans*					

FY21 - The nutrient management plans (NMP) for all lands owned or operated by the City where nutrients are applied to a contiguous area greater than one acre, which were developed for DPR by a certified turf and landscape nutrient management planner, remained in effect for all 77.36 acres required to be covered by the plan.

FY20 - The nutrient management plans (NMP) for all lands owned or operated by the City where nutrients are applied to a contiguous area greater than one acre, which were developed for DPR by a certified turf and landscape nutrient management planner, remained in effect for all 77.36 acres required to be covered by the plan.

6.7 Green Public Lands Management Strategies **Local TMDL Action Plan BMP*	*Identify and Implement Strategies*					

FY21 - The City's DPR and DPW continue to employ green public lands management strategies. These strategies include operating under an integrated pest management (IPM) approach to achieve chemical use reductions on our public lands, acquiring and preserving land, using organic herbicides, augmenting riparian stream buffers, and including pet waste stations and signage in many City parks. The IPM Policy for DPR-maintained City land remained in place during the permit year. The City also celebrated the opening of 142 acres of forested land and trails adjacent to the Ragged Mountain Reservoir property. The property was obtained with funding assistance from the US Department of Agriculture Community Forest Grant program. The land consists of undeveloped forest with rock outcrops and mountainous topography. Intended uses will be for environmental education, forest preservation, and trail purposes. The City acquired an additional five acres of land adjacent to this property to further expand the new parkland.

FY20 - The City's DPR and DPW continue to employ green public lands management strategies. These strategies include operating under an integrated pest management (IPM) approach to achieve chemical use reductions on our public lands, acquiring and preserving land, using organic herbicides, augmenting riparian stream buffers, and including pet waste stations and signage in many City parks. The IPM Policy for DPR-maintained City land remained in place during the permit year. The City's DPR received a donation of a 3.9 acre parcel containing streams and riparian buffer adjacent to Meadow Creek, with the intent of protecting these natural resources.

Attachment A
Illicit Discharges to the MS4 List

As required by the MS4 General Permit, the following is a list of illicit discharges to the City's MS4 that were observed or reported during the permit year. City staff was notified of the incidents via internal reports from City staff, DEQ, as well as direct reports from citizens to the City. In all cases, the situation was evaluated, the presence of the illicit discharge was confirmed, the source of the discharge was investigated, and the responsible party established (where possible). Subsequent actions, as appropriate, explained the prohibition on such activities, educated the responsible party, and documented corrective actions.

Date Suspected Discharge Observed / Reported	Description of Investigation Including any Follow-Up	Resolution of the Investigation	Date the Investigation was Closed
6/23/20	FY20: On June 23, 2020, City's Environmental Sustainability Office received a report from a resident that the neighboring property owner was regularly draining chlorinated pool water onto their property, flooding the home's outdoor patio. Reportedly this situation had been going on for several summers. The resident responded to several follow up questions, stating that this water runoff situation occurs frequently during the entire pool season, sometimes daily, and that after crossing the patio and the front yard the runoff flows into a storm drain.	FY20: A representative of the City's Environmental Sustainability Office contacted the pool owner and informed them that the discharge of this water was in violation of the City's Water Protection Ordinance. She instructed him to immediately cease discharging contaminated water into the City's stormwater drainage system, and to not allow contaminated (chlorinated) water to enter a drain connected to the City's stormwater drainage system. She also instructed him to contact the Charlottesville Department of Utilities regarding steps for connecting to the municipal sanitary sewer system and related billing issues. The pool owner has since been unresponsive to multiple efforts by the City to move towards a solution. The City is currently exploring enforcement options with the City Attorney's Office.	Ongoing

Date Suspected Discharge Observed / Reported	Description of Investigation Including any Follow-Up	Resolution of the Investigation	Date the Investigation was Closed
		FY21 Update: City staff made repeated efforts to engage the pool owner in a solution but were unsuccessful. The City Attorney's Office issued a letter to the pool owner instructing them to respond to the Environmental Sustainability Office with confirmation that the issue had been addressed or with a plan to do so. Again, the pool owner was unresponsive. Legal action via the Attorney's Office was again considered. FY22 update: The City learned that the pool owner's property will be placed for sale in the near future. City staff was able to communicate with the pool owner's real estate agent, who relayed that a solution to the issue is being pursued in conjunction with the sale of the property.	
12/1/20	The City's Environmental Sustainability Office (ESO) received a call on the morning of 12/1/20 from DEQ relaying a report of hydraulic fluid leaking from a piece of equipment onto the street and into a City storm drain. The Charlottesville Fire Department (CFD) also received a notification from the Virginia Department of Emergency Management. CFD investigated the area that morning and confirmed a small release. There was not responsible party on site when they arrived so they could not confirm the source of the discharge.	CFD performed cleanup of residue on the road and in the curb line. Charlottesville Department of Public Works (DPW) staff conducted a follow up investigation of the site the afternoon of 12/1/20 and confirmed that a small amount of product had entered a storm drain but did not migrate. They conducted additional cleanup in the structure. There was no evidence that any product ended up in a waterway.	12/1/20
3/23/21	The City's Environmental Sustainability Office (ESO) received a report from a citizen on 3/23/21 about	City staff subsequently spoke with the responsible party on March 24, 2021. They explained that the	

Date Suspected Discharge Observed / Reported	Description of Investigation Including any Follow-Up	Resolution of the Investigation	Date the Investigation was Closed
	construction site dumpster management issues at a newly constructed building. The resident provided pictures and a video of construction workers dumping liquids from trash cans onto a narrow grassy area immediately upgrade of a City stormwater drain, with overflow entering the storm drain. They also depicted turbid liquid running out of the construction dumpster and into another City stormwater drain. The issue was also reported to the Department of Environmental Quality (DEQ). DEQ subsequently reached out to the City and provided the same pictures and video. City staff investigated and was able to determine who was conducting the work observed and reported by the citizen.	work involved the leveling of concrete floors in an office suite. A "self-leveling" product was employed, and the leveling process involved mixing product (Portland cement and sand aggregate) with water and applying it to the floors via a pump system. Waste products produced included a slurry and a mix of murky water and sand. The slurry was placed in trash bags and then put into the construction dumpster, which resulted in some loss/leakage from the dumpster. The murky water/sand mix was dumped into the thin grassy strip between the sidewalk and street, which resulted in overflow into the street and subsequently the stormwater drain. The responsible party confirmed that the work was completed on March 23, 2021 and no further waste products would be produced. They followed up with an email communication providing documentation of the process described, as well as photos of "gutter buddies" deployed into the stormwater drain openings. He also acknowledged that another round of this work would be occurring in the future and that they would be building wash out boxes lined with plastic inside the construction dumpster into which they will dump all murky water, sand, and slurry to keep it contained.	3/25/21 Notice of Violation Issued
5/5/21	The City's Environmental Sustainability Office (ESO) received a report on 5/4/21 from a utility provider that they had a transformer come down in a storm event late	A representative from the utility provider checked the stormwater system down to where it discharges to the nearest waterway and could not find any evidence of	5/6/21

Date Suspected Discharge Observed / Reported	Description of Investigation Including any Follow-Up	Resolution of the Investigation	Date the Investigation was Closed
	the previous night. The utility provider estimated that the transformer discharged ~35 gallons of non-PCB mineral oil, which entered the City's stormwater drainage system. The utility provider also reported the release to DEQ and the National Response Center.	oil residuals in the system or stream. They assumed that it all got washed away by the storm. They deployed some absorbent booms in the stormwater system just in case and planned to come back to collect them.	
6/1/21	The City's Environmental Sustainability Office received a report from a resident on 6/1/21 that they observed a power washing operation in front of a restaurant on the Downtown Mall. The resident observed that the resulting wash water was being directed into a nearby stormwater drain without any form of treatment. City staff called the restaurant several times on 6/1/21 but the phone was never answered. Subsequently, staff utilized an email contact form on the restaurant's website to notify the restaurant that the discharge to the City stormwater system was in violation of the City's Water Protection Ordinance. Staff noted that wash water from outdoor washing activities must be filtered (if only cold water is used with no chemical cleaners) prior to entering the stormwater drainage system or captured for disposal into the sanitary sewer system (if chemical cleaners or hot water is used). Staff requested a response in order to provide further information and gather contact information.	A representative from the restaurant responded on 6/2/21 and noted that a filter was employed in the power washing process. City staff inquired further multiple times about the filtering process employed and whether chemical cleaning agents were used in an effort to determine if the discharge was conducted in accordance with the City's exterior washing guidelines, which were provided. The information requested from the representative was not provided. As a result the City concluded that the discharge was indeed an illicit discharge.	6/18/21 Notice of Violation Issued

Attachment B
Training Summary Report

The following report summarizes training that was completed as part of the City's MS4 Training Program during the permit year, and includes a list of training events, the training date, the number of employees attending the training, and the objective of the training.

Training Event	Training Date	# of Employees Attending	Objective of the Training
Water Resources Protection Program Training	9-23-20 through 10-8-20	10	Provide staff with general awareness training on local streams and watersheds; stormwater and typical stormwater pollutants; the City's MS4; illicit discharge detection and elimination recognition / reporting; green stormwater infrastructure; regulations specific to the sites where staff work (SWPPP and SPCC plans); stormwater pollution prevention BMPs; spill prevention and response; and underground storage tank operator training.
Hazardous Materials Operations	Numerous dates over the course of the permit year	47	Train personnel to operate under the defensive tactical control principle with some mission specific skills training.
Hazardous Materials Technician	Numerous dates over the course of the permit year	31	Train personnel in advanced detection and monitoring, wearing/using chemical protective clothing, addressing/controlling atmospheric and pressurized leaks, plugging and patching, material categorization.
DEQ Stormwater Trainings	Numerous dates over the course of the permit year	6	DEQ continuing education on stormwater management
VWEA Stormwater Seminar & Exhibitor Showcase	4-21-21 and 4-22-21	4	Virginia Water Environment Association conference focusing on new trends in BMP design, maintenance and flood mitigation
Stream Restoration Monitoring and Maintenance	5-27-21	1	Learn how to identify and address minor issues in stream restoration projects; Erosion monitoring in streams; Erosion prevention through installing waddles and plants; Erosion prevention through installing plants and coir matting.

City of Charlottesville, VA MS4 Permit VAR040051 Annual Report
Attachment C
Cheaspeake Bay TMDL Progress Towards Meeting Required Cumulative POC Reductions

Summary Page Ledger:
Management Practices and Retrofit Programs to Achieve 5% and 35% Reductions Required For Existing Development

		Location (Lat/Long)	Nitrogen	Phosphorus	Total Suspended Solids
1. Total 5% Reductions Required			150.52	34.70	15,398.65
2. Total 35% Reductions Required			1,053.57	242.83	107,790.62
3. Total Cumulative (40%) Reductions Required			1,204.09	277.53	123,189.27
4. Reduction Practices Implemented / To be Implemented					
Site Name	BMP Type				
ABC Preschool	Bioretention	38.0286/-78.4726	-1.75	-0.25	-89.56
Saint Thomas Aquinas Priory	8'x4' Filterra	38.0386/-78.5163	-0.04	-0.01	-5.38
Saint Thomas Aquinas Priory	Bioretention	38.0388/-78.5157	-2.03	-0.31	-110.92
Cabell Ave Apartments	4'x6' Filterra	38.0419/-78.4966	-0.03	-0.01	-4.03
Brody Jewish Student Center	Bioretention	38.0426/-78.5021	-1.34	-0.24	-92.51
Brody Jewish Student Center	Bioretention	38.0428/-78.5019	-0.72	-0.12	-45.38
Kroger Fueling Center	4'x6' Filterra	38.0599/-78.4928	-0.03	-0.01	-4.12
Jaunt Parking Lot	Permeable Pavers	38.0151/-78.4705	-2.61	-0.51	-205.46
1600 Monticello Ave.	Raintank Infiltration	38.0164/-78.4756	-1.20	-0.24	-102.89
601 Park Street	Bioretention	38.0348/-78.4762	-3.55	-0.50	-174.10
1327 Carlton Ave	Bioretention	38.0214/-78.4666	-0.74	-0.22	-100.86
Brookwood	Bioretention	38.0168/-78.4941	-2.36	-0.40	-149.72
Rives Park	Bioretention	38.0173/-78.4707	-1.12	-0.07	-103.50
Timberlake Place	Bioretention + Rain Garden	38.0231/-78.4625	-0.06	-0.01	-5.10
Meade Park Aquatic Center	2 Bioretention Areas	38.0279/-78.4654	-4.28	-0.30	-395.98
Whole Foods	Sand Filter	38.06/-78.4884	-0.10	-0.04	-16.98
CHS Stadium Improvements	Bioretention	38.052/-78.4712	-4.44	-0.44	-451.03
Hydraulic Road Substation	Filterra & Biopave	38.058/-78.4904	0.00	-1.54	0.00
Sunrise Park	Permeable Pavement	38.0208/-78.467	-11.25	-0.52	-1,141.25
Fontaine Fire Station	2 Bioretention Areas	38.0259/-78.5198	0.00	-0.16	0.00
	Cistern	38.0254/-78.5201			
Arlington & Millmont Apartments	Dry Swale	38.0496/-78.5058	0.00	-0.65	0.00
	4'x6' Roof Drain Filterra	38.04978/-78.50564			
	4'x6' Roof Drain Filterra	38.0504/-78.50507			
Wertland Street	2 BaySavers	38.0354/-78.4959 38.0352/-78.495	0.00	-0.56	0.00
Smith Aquatic Center	Biofilter-1	38.0276/-78.4975	-3.21	-0.45	-571.56
	Biofilter-2 + Rain Garden	38.0271/-78.4972			
Boys & Girls Club	Biofilter	38.0273/-78.4983	-2.17	-0.37	-220.06
250 Bypass@McIntire Rd.	Enhanced Ext. Detention	38.04505/-78.47251	0.00	-1.77	0.00
	Bioretention #1	38.04328/-7847466			
	Bioretention #2	38.04119/-78.47637			
	11 - Filterras	38.04254/-78.4746			
CTS OPERATIONS CENTER	SWM#1 Bioretention	38.0126/-78.4878	0.00	-0.39	0.00
	SWM#2 Bioretention	38.0122/-78.488			
	SWM#3 Bioretention	38.0119/-78.4875			
	SWM#4 Underground Storage	38.0114/-78.4872			
	SWM#5 Extended Detention	38.0118/-78.4861			
	SWM#6 Bioretention	38.0123/-78.4875			
	SWM#7 Bioretention	38.0129/-78.4873			
	SWM#8 Bioretention	38.0132/-78.4873			
	SWM#9 Rainwater Harvesting	38.0122/-78.4876			
Jefferson School	Enhanced Ext. Detention	38.0322/-78.4864	-6.77	-2.04	-1,559.86
Martha Jefferson	Bioswale	38.0322/-78.4718	-37.19	-2.18	-3,387.40
Pace Center	Water Quality Swale	38.0214/-78.4652	-6.66	-1.28	-538.75
	Bioretention	38.0213/-78.4649			
Retail at Barracks Road	4'x6' Filterra	38.0497/-78.5026	-0.14	-0.03	-12.51
600 Preston Place	Permeable Pavers	38.0411/-78.4982	-1.23	-0.21	-80.62
	Raintank Drywell	38.041/-78.4983			
Blue Moon Fund	Bioretention	38.0296/-78.484	-1.57	-0.28	-105.86
	Cistern to Vegetated Swale	38.0295/-78.4841			
	Infiltration	38.0296/-78.484			
CHS MLK	Bioretention	38.053/-78.4772	-23.31	-0.74	-1,364.53
Rugby Road	Permeable Pavers	38.05472/-78.49006	-1.60	-0.22	-76.02
Azalea Park	Constructed Wetland	38.0105/-78.5132	-93.78	-12.01	-6,719.67
City Yard Smart Sponge Inserts	Catch Basin Filters	38.0332/-78.4884	0.00	0.00	-1,408.04
CHS Parking Lot	Permeable Pavement + Vegetated Filter Strip	38.0512/-78.4751	-13.28	-0.39	-952.01
909 E. Market	Permeable Asphalt	38.0298/-78.4746	-0.34	-0.08	-31.61
Old Lynchburg Road	Bioretention	38.0171/-78.5147	-5.89	-0.96	-371.83
Forest Hills Park	Bioretention	38.0231/-78.4975	-52.31	-6.41	-2,040.34
Venable Bioretention	Bioretention	38.0381/-78.4959	-2.59	-0.53	-214.86
Plaza on West Main	MTD Vortex	38.0319/-78.4934	-1.14	-0.47	-92.60
Residence Inn	Sand Filter	38.0310/-78.4855	-5.01	-0.23	-786.24
Coca Cola Building	Permeable Pavers	38.0356/-78.4873	-3.97	-0.57	-825.38
Blue Ridge Commons	Bioretention	38.0234/-78.4944	-0.05	-0.02	-9.26
City Hall Green Roof	Green Roof	38.0299/-78.4773	-1.58	-0.31	-135.05
1012 Druid Ave	Bioretention	38.0167/-78.4772	-1.03	-0.14	-46.50
Pen Park	Bioretention	38.0548/-78.4536	-15.45	-2.24	-900.80

Summary Page Ledger:

Management Practices and Retrofit Programs to Achieve 5% and 35% Reductions Required For Existing Development

		Location (Lat/Long)	Nitrogen	Phosphorus	Total Suspended Solids
1. Total 5% Reductions Required			150.52	34.70	15,398.65
2. Total 35% Reductions Required			1,053.57	242.83	107,790.62
3. Total Cumulative (40%) Reductions Required			1,204.09	277.53	123,189.27
4. Reduction Practices Implemented / To be Implemented					
Site Name	BMP Type				
Willoughby	Bioretention	38.0158/-78.4994	-17.96	-3.02	-1,139.32
Woolen Mills Self Storage	Ext. Detention Pond	38.0229/-78.4625	-46.77	-10.74	-4,818.15
One Carlton LLC	Permeable Pavement	38.0220/-78.46827	0.00	-0.23	0.00
English Construction Company	Bioretention	38.04378/-78.51526	0.00	-0.78	0.00
McIntire Plaza	Filtering Devices - StormTech Isolator Row	38.0417/-78.4792	0.00	-1.81	0.00
CHS Track	Infiltration Practice	38.0521/-78.4761	-12.72	-1.93	0.00
Hillsdale Drive	Filtering Devices - Filterra Bioretention System	38.0647/-78.4864	0.00	-4.99	0.00
Baywood Hotels	Underground Detention - Vault and Isolator Row	38.02908/-78.48483	0.00	-1.12	0.00
Longwood PUD	Permeable Asphalt	38.01235/-78.50913	0.00	-2.40	0.00
Rock Creek	Stream Restoration	38.02317/-78.50182	-19.84	-17.99	-11,870.76
Meadowcreek Golf Course	Stream Restoration	38.05582/-78.44941	-12.75	-11.56	-7,629.60
Meadow Creek	Stream Restoration	38.06384/-78.47599	-541.40	-488.54	-320,496.92
River Run	Stream Restoration	38.05571/-78.45241	-295.33	0.00	0.00
Pen Park	Urban Nutrient Management	38.05494/-78.45036	-0.39	-0.01	0.00
Washington Park	Urban Nutrient Management	38.04138/-78.49126	-0.53	-0.02	0.00
Venable School	Urban Nutrient Management	38.03732/-78.49577	-0.59	-0.02	0.00
Azalea Park	Urban Nutrient Management	38.01057/-78.51649	-0.52	-0.02	0.00
Quarry Park	Urban Nutrient Management	38.01471/-78.4771	-0.22	-0.01	0.00
Quarry Park	Urban Nutrient Management	38.015/-78.4777	-0.45	-0.02	0.00
Quarry Park	Urban Nutrient Management	38.01497/-78.47657	-0.32	-0.01	0.00
Burnley Moran School	Urban Nutrient Management	38.03497/-78.46253	-0.36	-0.01	0.00
Charlottesville High School	Urban Nutrient Management	38.05279/-78.47378	-0.30	-0.01	0.00
Street Sweeping	Street Sweeping	City Wide	-970.67	-126.06	-204,848.48
5. Total Reductions Implemented / To be Implemented			-2,239.03	-712.73	-576,453.37
6. Total Reductions In Excess of 40% Reductions Required			(1,034.95)	(435.21)	(453,264.09)