J. Sargeant Reynolds Community College

MS-4 Permit: VAR040107
July 1 2018 - June 30 2019
Annual Report

Prepared for

J. Sargeant Reynolds Community College
Parham Road Campus
Facilities Management & Planning
1651 E. Parham Road
Richmond, VA 23228

October 1, 2019

Prepared by: Timmons Group
1001 Boulders Parkway, Suite 300
Richmond, VA 23225
(804) 200-6500

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1.0 Background Information

(1) Name and permit number of the program submitting the annual report; (2) The annual report permit year; (3) Modifications to any operator's department's roles and responsibilities; (4) Number of new MS4 outfalls and associated acreage by HUC added during the permit year; (5) Signed certification in accordance with 9VAC25-870-370

- Name and permit number of the program submitting the annual report

  J. Sargeant Reynolds Community College, Permit # VAR040107

- The annual report permit year.

  This serves as the annual report for permit year one of the 2018-2023 General Permit term. This annual report covers a time period from July 2018 – June 2019.

- Modifications to any operator's department's roles and responsibilities

  The operator's roles and responsibilities have been provided in the Program Plan and are not considered to be modified for the purposes of this report.

- Number of new MS4 outfalls and associated acreage by HUC added during the permit year

  Two new outfalls were added during the permit year:

Name	*Location*	*Acreage*	*VAHUC6*
OF10	*West side of Success Drive between Parking Lots K and L*	*0.34*	*JL18*
OF11	*Eest side of Success Drive between Parking Lots K and L*	*0.14*	*JL18*

- Signed certification in accordance with 9VAC25-870-370

  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.

Amelia Bradshaw — 9.25.2019

Amelia Bradshaw — Date

Vice President of Finance and Administration

For questions about the annual report submittal or JSRCC's MS4 Program Plan, please contact:
Michael S. Verdú (Director of Facilities Management & Planning)
1651 E. Parham Road, PO Box 85622, Richmond VA 23285-5622
Tel: (804) 523-5790, mverdu@reynolds.edu

2.0 Status of Permit Condition Compliance

The status of compliance with permit conditions, an assessment of the appropriateness of the identified best management practices and progress towards achieving the identified measurable goals for each of the minimum control measures

2.1. Assessment of BMP Appropriateness/Self Audit

The Program Plan elements and BMPs are considered appropriate based on the 2018-2023 General Permit requirements.

2.2. Measurable Goals Progress

MCM 1: Public Education and Outreach

Annual Reporting Requirement 1: Provide a list of the high-priority stormwater issues the permittee addressed in the public education and outreach program.

Reynolds identified three high-priority water quality issues in the 2018-2023 Program Plan:

1. *Pet Waste Contamination*
2. *Dumpster and Litter Management on Campus*
3. *Faculty and Staff Stormwater Education and Outreach*

Annual Reporting Requirement 2: A list of the strategies used to communicate each high-priority stormwater issue.

The strategies used to communicate each high-priority stormwater issue are outlined in the table below:

High-Priority Water Quality Issue	Strategy Used to Communicate Issue
Pet Waste Contamination	Traditional written & alternative materials
Dumpster and Litter Management on Campus	Traditional written & speaking engagement materials
Faculty and Staff Stormwater Education and Outreach	Media & traditional written materials

MCM 2: Public Involvement and Participation

Annual Reporting Requirement 1: A summary of any public input on the MS4 program plan received (including stormwater complaints) and how the permittee responded.

No public input or response was recorded for this reporting year.

Annual Reporting Requirement 2: A webpage address to the permittee's MS4 program and stormwater website.

The MS4 Program Plan and Annual Report are available for public review at the following website:
http://www.reynolds.edu/who_we_are/about/environmental_sustainability/ms4.aspx.

Annual Reporting Requirement 3: A description of the public involvement activities implemented by the permittee.

JSRCC identified and participated in the following four local events/activities provided in the 2018-2023 Program Plan to address public involvement with stormwater and environmental activities:

1. *Community Creek Clean-up: Reynolds hosts an annual creek clean-up event that focuses on bringing the community together to remove waste from a local creek. The event was held on June 21, 2019. Refer to Appendix MCM 2 for information documenting this event.*

2. *Storm Drain Stenciling: The College continued to participate in its storm drain marking program and performed a review of all stormwater structures to assess the condition of the markers, determine if additional markers were needed, etc. as part of the illicit discharge inspections.*

3. *Reynold's Environmental Sustainability Committee Participation: The Environmental Sustainability Committee met for a few times during the beginning of this reporting period but was ultimately dissolved in fall of 2018. In lieu of the committee, faculty and staff participated in the VCCS Spring Conference regarding MS4 compliance strategies. Refer to Appendix MCM 2 for information documenting this participation.*

4. *General Stormwater Awareness: Facilities Management & Planning staff presented on Stormwater Awareness to facilities staff in March 2019. Refer to Appendix MCM 2 for information documenting this participation.*

Annual Reporting Requirement 4: A report of the metric as defined for each activity and an evaluation as to whether or not the activity is beneficial to improving water quality.

1. *Community Creek Clean-up: Approximately 15 faculty and staff participated in the cleanup and collected an estimated 10 trash bags.*

2. *Storm Drain Stenciling: No additional markers are required as a result of the assessment during the outfall inspections.*

3. *Reynold's Environmental Sustainability Committee Participation: Reynold's was represented at the VCCS Spring Conference*

4. *General Stormwater Awareness: Approximately 25 faculty and staff attended the presentation.*

Annual Reporting Requirement 5: The name of other MS4 permittees with whom the permittee collaborated in the public involvement opportunities.

Reynold's did not collaborate with other MS4 permittees for the public involvement opportunities.

MCM3: Illicit Discharge Detection and Elimination

Annual Reporting Requirement 1: A confirmation statement that the MS4 map and information table have been updated to reflect any changes to the MS4 occurring on or before June 30 of the reporting year.

The MS4 map and information table have been updated to reflect the addition of two new outfalls. Refer to Appendix MCM3 for the updated map and information table.

Annual Reporting Requirement 2: The total number of outfalls screened during the reporting period as part of the dry weather screening program.

Ten outfalls were screened during the reporting period resulting in no required illicit discharge follow-up actions. Refer to Appendix MCM3 for outfall screening results.

Annual Reporting Requirement 3: A list of illicit discharges to the MS4 including spills reaching the MS4 with information as follows:

- The source of the illicit discharge.
- The dates that the discharge was observed, reported, or both.
- Whether the discharge was discovered by the permittee during dry weather screening, reported by the public, or other method (describe).
- How the investigation was resolved.
- A description of any follow-up activities.
- The date the investigation was closed.

No illicit discharges were reported during the reporting period.

MCM 4: Construction Site Stormwater Runoff Control

VCCS Annual Standards and Specifications for Erosion and Sediment Control and Stormwater have been approved by DEQ. These new standards are comprehensive in addressing the Regulations and Programs and were adopted by JSRCC as soon as they were approved.

Annual Reporting Requirement 1: A confirmation statement that land disturbing projects that occurred during the reporting period have been conducted in accordance with the current department approved standards and specifications for erosion and sediment control.

No regulated land disturbing activity occurred during the reporting period…

Annual Reporting Requirement 2: If one or more of the land disturbing projects were not conducted with the department approved standards and specifications, an explanation as to why the projects did not conform to the approved standards and specifications.

No land disturbing projects were not conducted with the department approved standards and specifications.

Annual Reporting Requirement 3: Total number of inspections conducted.

No regulated land disturbing activities occurred and therefore no inspections occured.

Annual Reporting Requirement 4: The total number and type of enforcement actions implemented.

No enforcement actions taken during the reporting period.

MCM5: Post Construction Stormwater Management in New Development and Development on Prior Developed Lands

VCCS Annual Standards and Specifications for Erosion and Sediment Control and Stormwater have been approved by DEQ. These new standards are comprehensive in addressing the Regulations and Programs and were adopted by JSRCC as soon as they were approved.

Annual Reporting Requirement 1: Total number of inspections conducted on stormwater management facilities owned or operated by the permittee.

Six inspections were conducted on stormwater management facilities for the reporting year.

Annual Reporting Requirement 2: A description of the significant maintenance, repair, or retrofit activities performed on the stormwater management facilities owned or operated by the permittee to ensure it continues to perform as designed. This does not include routine activities such as grass mowing or trash collection.

No significant maintenance, repair, or retrofit activities were performed on the stormwater management facilities owned or operated by the permittee.

Annual Reporting Requirement 3: A confirmation statement that the permittee submitted stormwater management facility information through the Virginia Construction Stormwater General Permit database for those land disturbing activities for which the permittee was required to obtain coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities in accordance with Part I.E.5.f or a statement that the permittee did not complete any projects requiring coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities.

The permittee did not complete any projects requiring coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities.

Annual Reporting Requirement 4: A confirmation statement that the permittee electronically reported BMPs using the DEQ BMP Warehouse in accordance with Part I.E.5.g and the date on which the information was submitted.

No new BMPs were installed during the reporting period.

MCM 6: Pollution Prevention/Good Housekeeping for Municipal Operations

Annual Reporting Requirement 1: A summary of any operational procedures developed or modified in accordance with Part I.E.6.a during the reporting period.

No new procedures were developed or modified during the reporting period.

Annual Reporting Requirement 2: A summary of any new SWPPPs developed in accordance with Part I.E.6.c during the reporting period.

The permittee did not develop any new SWPPPs during the reporting period.

Annual Reporting Requirement 3: A summary of any SWPPPs modified in accordance with Part I.E.6.f of the rationale of any high-priority facilities desilted in accordance with Part I.E.6.h during the reporting period.

The permittee did not modify any SWPPPs during the reporting period.

Annual Reporting Requirement 4: A summary of any new turf and landscape nutrient management plans developed that includes:

1. Location and the total acreage of each land area
2. The date of the approved nutrient management plan

JSRCC is required by the Virginia Department of Conservation and Recreation (DCR) to prepare and implement a Nutrient Management Plan for lands on which fertilizer, manure, etc. are applied, regardless of acreage.

NMPs have been implemented on 5.61 acres of the Parham Road campus;

Location	***Address***	***Size***
Athletic Fields	*1701 East Parham Rd, Richmond VA 23228*	*2.23 AC*
Parham Campus	*1701 East Parham Rd, Richmond VA 23228*	*3.38 AC*

A copy of the approval letters and approved plans have been incorporated into the Program Plan. The current version of the nutrient management plan is approved through 12/14/2020.

Annual Reporting Requirement 4: A list of the training events conducted in accordance with Part I.E.6.m, including the following information:

1. The date of the training event.
2. The number of employees who attended the training event.
3. The objective of the training event.

Training was provided on the Standard Operating Procedures on June 28, 2018 as documented in the MCM 2. Approximately 22 faculty and staff attended the training event. The objective of the training event was to familiarize the faculty and staff with the Standard

Operating Procedures and explain their importance. Training is planned for the next reporting period in accordance with permit requirements.

3.0 Results of Collected Data

Results of information collected and analyzed, including monitoring data, if any, during the reporting period.

J. Sargeant Reynolds was not required to collect and analyze any formal monitoring data during this reporting period.

4.0 Future Stormwater Activities

A summary of the stormwater activities the operator plans to undertake during the next reporting cycle.

- *Continue to implement Chesapeake Bay TMDL Action Plan*
- *Continue to implement Standard Operating Procedures*
- *Continue to implement Training Program as developed in the 2018-2023 Program Plan*
- *Continue to implement Public Education and Outreach Program as proposed in the 2018-2023 Program Plan*
- *Continue to implement Public Involvement and Participation Program as identified in the 2018-2023 Program Plan*
- *Continue to implement IDDE Program as identified in the 2018-2023 Program Plan*
- *Continue to implement Construction Site Stormwater Runoff Control Program as identified in the 2018-2023 Program Plan*
- *Continue to implement the Post-Construction Stormwater Management Program as identified in the 2018-2023 Program Plan*
- *Continue to implement the Pollution Prevention/Good Housekeeping for Municipal Operations Program as identified in the 2018-2023 Program Plan*
- *Continue to update outfall mapping*
- *Continue to implement "High-Priority Facility" SWPPP*

5.0 Changes in BMPs and Minimum Control Measures

A change in any identified best management practices or measurable goals for any of the minimum control measures including steps taken to address deficiencies.

5.1. Changes in BMPs

No changes to any best management practices were made during this reporting period.

5.2. Changes in Program Elements

There were no changes to the Program Plan, with the exception of submittal of the required draft Phase II Chesapeake Bay TMDL Action Plan, as presented below.

SC: Special Conditions for the Chesapeake Bay TMDL

A Draft Phase II Chesapeake Bay TMDL Action Plan was prepared and submitted with the Registration Statement for continued permit coverage.

MCM 1: Public Education and Outreach

No changes made to this program element other than minor edits to align the program with the new permit requirements.

MCM 2: Public Involvement and Participation

No changes made to this program element.

MCM 3: Illicit Discharge Detection and Elimination

No changes made to this program element.

MCM 4: Construction Site Stormwater Runoff Control

No changes made to this program element.

MCM 5: Post Construction Stormwater Management in New Development and Development on Prior Developed Lands

No changes made to this program element.

MCM 6: Pollution Prevention/Good Housekeeping for Municipal Operations

No changes made to this program element.

5.3. Changes in Measurable Goals

No changes were made to measurable goals.

6.0 Government Reliance for Permit Obligations

Notice that the operator is relying on another government entity to satisfy some of the permit obligations (if applicable).

- *JSRCC relies on the Virginia Community College System (VCCS) as its Erosion and Sediment Control Authority as part of Minimum Control Measure 4 (Construction Site Stormwater Runoff Control) as documented in the 2018-2023 Program Plan*
- *JSRCC relies on the Virginia Community College System (VCCS) as its Virginia Stormwater Management Program Authority as part of Minimum Control Measure 5 (Post-Construction Stormwater Management) as documented in the 2018-2023 Program Plan.*
- *JSRCC relies on Henrico County for the operation and maintenance of an athletic complex on JSRCC property as described in the Program Plan as part of Minimum Control Measure 6 (Pollution Prevention Good Housekeeping for Municipal Operations) as documented in the 2018-2023 Program Plan and in Appendix MCM6.*

7.0 Section II C Program Status

The approval status of any programs pursuant to Section II C (if appropriate), or the progress towards achieving full approval of these programs

Not applicable at this time.

8.0 TMDL Special Conditions Contained in Section I

Information required for any applicable TMDL special condition contained in Section I

- *JSRCC has not been assigned any TMDL WLAs as of the preparation of this report.*
- *A Chesapeake Bay TMDL Action Plan has been prepared to meet the special condition requirements for the Chesapeake Bay TMDL.*
- *Control measures implemented during the reporting period:*
  - *No control measures were implemented during this reporting period.*
- *Control measures expected to be implemented during the next reporting period:*
  - *JSRCC has prepared construction plans to implement one filtering manufactured treatment device to treat runoff from parking lots L and M. JSRCC has secured funding for construction of this project but is waiting on the results of a feasibility study for a stream restoration project on campus before starting construction.*
  - *JSRCC has been in contact with Henrico County regarding a stream restoration project on campus and is in the process of preparing a feasibility study to determine if this would be a viable project.*
- *Progress toward meeting compliance targets:*

Progress Toward Meeting Compliance Targets (lbs)			
	N	***P***	***TSS***
Current Permit Cycle (1st 5yr):			
Reductions implemented during previous reporting periods	*0*	*0*	*0*
Reductions implemented during this reporting period	*0*	*0*	*0*
Total current reductions Implemented	*0*	*0*	*0*
5% Total Reduction Required	*1.11*	*0.23*	*142.10*
Current progress towards 5% total reduction required	*0%*	*0%*	*0%*

Appendix MCM 1

Matthew Webb

From: Matthew E. Thompson Sr <MThompson@reynolds.edu>
Sent: Wednesday, June 12, 2019 8:31 AM
To: 'Jonathan Leach'; 'allamericancafe1@gmail.com'; Larry D. Long
Cc: Michael S. Verdú; Matthew Webb
Subject: Reynolds - Food Service and MS4 Best Trash Management and Dumpster Use
Attachments: Dumpster Fact Sheet - Minimizing Stormwater Pollution.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Good Morning!!!

Reynolds Community College is required annual to review our Storm Water Management Program with our Students, faculty, staff, and vendors who operate a service that may have an impact on the Storm water that discharged in the surrounding storm water inlet around our Parham Road Campus. I am reaching out to you again this year to keep in compliance to our requirements and obligation according to our ***Municipal Separate Storm Sewer Systems*** (MS4) Program.

It is very important that we work as a team and ensure our staff are trained and aware of the requirements that need to be followed when disposing of trash into the dumpsters. I had attached a Dumpster Fact Sheet for your review and awareness and will also drop off a hard copy at the Campus Café of the best practice in keeping our dumpster from polluting or contributing to storm water pollution. Please feel free to reproduce and post these facts sheets on your bulletin board to help promote this awareness to your staff for training. If I can be of any further assistance to you in the knowledge of your part in Storm Water Management here at the College, just let me know.

Thank you for your support!
Matthew

Matthew E. Thompson, Sr.
Buildings and Grounds Manager
Facilities Management and Planning
J. Sargeant Reynolds Community College
1651 E. Parham Road, Richmond, VA 23285
Office #: 804-523-5795
Fax #: 804-371-3049
Email: mthompson@reynolds.edu

Reynolds
COMMUNITY COLLEGE

Madeline Manning

From: Matthew E. Thompson Sr <MThompson@reynolds.edu>
Sent: Wednesday, June 12, 2019 9:27 AM
To: DLIST REYNOLDS ALLSTAFF
Cc: Matthew Webb
Subject: Storm Water Awareness Program At Reynolds (June 12 2019)

Follow Up Flag: Follow up
Flag Status: Flagged

"ATTENTION REYNOLDS FACULTY AND STAFF!"

Did you know that J. Sargeant Reynolds Community College participates in a Stormwater Pollution Prevention Program that is designed to protect the North Run Creek that flows around our Parham Road Campus? Well, we do along with the County of Henrico and others municipal, industrial and commercial facilities in the Commonwealth of Virginia. This is to ensure that we protect the waterways which flow throughout the Commonwealth and is mandated by the Department of Environmental Quality (DEQ) in conjunction with the Environmental Protection Agency (EPA) **Clean Water Act.**

Reynolds continues to participate in this on-going **"GREEN"** program to help protect the storm waters that flow into the Chesapeake Bay from our Campus! We are involved with the Environmental Protection Agency (EPA Department of Environmental Quality (DEQ) program which is called **"Municipal Separate Storm Sewer System" better known as MS4!"** The MS4 Program is designed to help prevent contaminate pollutants from coming in contact with storm water run-off that flows from our parking lots, sidewalks and our landscape areas. Eventually, this storm water ends up in the major water way in our region which is the Chesapeake Bay. Pollutants that dump into our water ways not only contaminate our drinking water supply, but they also kill the fish and other living creatures that inhabit those water ways. One of the mean we have in place to discourage illegal dumping into the storm water inlets around the Parham Road Campus are medallions installed on top of the inlet with the wording, "**No Dumping, Drains To Bay**" imprinted on the medallions. **(A sample is attached below)**

We at Reynolds, along with other Local and State Agencies participate in the MS4 Program to help reduce and more important stop contaminants from getting into the Bay. One of the tools that helps make this program effective is ***"Community Awareness".*** Which bring me to the purpose of this e-mail? It requires your participation too! You say, "How Can You Help?" By being aware of the program, you can help by remembering the following **six (6) points:**

1. ***What we do on the land affects the quality of the water we drink!***

2. ***Many small sources of pollution add up and eventually cause big water quality problems!***

3. ***Natural things such as soil, leaves, grass clippings and pet waste can cause water pollution!***

4. ***Waste dumped into storm sewers flows into lakes, streams and coastal waters sending untreated contaminates into the environment and waterways!***

5. ***Oil and anti-freeze spillage from Automobiles and other vehicles cause serious water pollution that can kill animal and aquatic life as well as poison our drinking water!***

6. ***Everyone can make a difference!***

If you would like to know more information about Storm Water Awareness, please click any of the attached links below.

Thank you for your participation by reading this information!

Sincerely,
Matthew

http://www.youtube.com/watch?v=4zxfsQSVVRs&feature=player_embedded

https://www.youtube.com/watch?v=jNs28UcjNbk

Matthew E. Thompson, Sr.
Buildings and Grounds Manager
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Facilities Management and Planning
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Richmond, VA 23285
Office #: 804-523-5795
Fax #: 804-371-3049

Appendix MCM 2

Matthew Webb

From: Matthew E. Thompson Sr <MThompson@reynolds.edu>
Sent: Thursday, June 20, 2019 10:38 AM
To: Matthew Webb
Cc: Aislinn Creel
Subject: RE: Volunteers Needed For Storm Water Creek Clean-up Scheduled for Friday June 21, 2019

Hi Matt,

I just did a head count and so far, there will be 18 people including my Grounds crew that will be volunteering tomorrow.

Matthew

From: Matthew E. Thompson Sr <MThompson@reynolds.edu>
Sent: Wednesday, June 12, 2019 8:57 AM
To: DLIST REYNOLDS ALLSTAFF <DLIST_REYNOLDS_ALLSTAFF@reynolds.edu>
Cc: Michael S. Verdú <MVerdu@reynolds.edu>; Matthew Webb <Matthew.Webb@timmons.com>
Subject: Volunteers Needed For Storm Water Creek Clean-up Scheduled for Friday June 21, 2019

We can do it…. Yes we can. We just need a few volunteers, to give us a hand….Again! Are you available?

The Storm Water Creek Cleanup is once again being scheduled to take place on Friday, June 21st. The Time: 10 a.m. to 12:00 p.m.

As a part of our MS4 storm water management responsibility, we promote this project and reach out for faculty and staff participation. We do this in order to care for the environment and eliminate pollutants from around the North Run tributary that surrounds our Campus which eventually flows into the Chesapeake Bay.

Reynolds Community College as well as other Local, Municipal and State Agencies continues to work toward ensuring our streams and rivers are clean by reducing the pollutants and other contaminates from reaching our waterways. We are looking for volunteers to work along with us on Friday, June 21, 2019 to fulfill that goal. If you are interested in being a volunteer, please let me know by responding to this e-mail. Come on and be a part of the team!

For More Information Or To Report
Any Illegal Dumping Please Call
HOTLINE: (804) 523-5224

Thank You!
Matthew

Matthew E. Thompson, Sr.
Buildings and Grounds Manager/Facilities Management and Planning
1651 E. Parham Road, Richmond, VA 23285
Office #: 804-523-5795 /Fax #: 804-371-3049

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Friday	June 21, 2019	Creek - Clean-up.
Dept	Print Name	Signatures
FMP	Matthew E. Thompson	Matthew E. Thompson
SB	Alex Crowell	
MaSci Eng	Ann Rice	
Nursing-SRAH	Nancy Husson	Nancy A Husson
Sch. Bus	Mazhar Anik	M. Anik
Timmons Group	Matthew Webb	Matthew Webb
Timmons Group	Jesse McWilliams	
OIE	Pamela Carroll	Pamela Carroll
FM	Randy Kiah	
	Tim Morrell	
Grounds	Joseph Mason	
Grounds	Hale Hiback	
Ground	Doug Jones	
11	Donald Pollard	Donald Pollard
Maintenance	Troy Gaskell	Troy Gaskell

Matthew Webb

From: Matthew E. Thompson Sr <MThompson@reynolds.edu>
Sent: Friday, June 28, 2019 5:36 PM
To: Pamela Carroll; Alan Crouch; Ann C. Rice; Randy V. Kiah; Timothy W. Merrill; Mazhar K. Anik; Douglas A. Jones
Cc: Aislinn Creel; Matthew Webb; Michael S. Verdú; Joseph J. Schilling; Matthew E. Thompson Sr
Subject: The Creek Clean Up Crew and Photos

Follow Up Flag: Follow up
Flag Status: Flagged

Friday, June 21, 2019 – Creek Clean-up Crew.

Stormwater Meeting
June 4, 10:15 AM

Sign-in Sheet

Name	Title
BERT THOMPSON	DIR. OF FACILITIES, TCC
Steve Patterson	" " " NOVA
Martha Cardoza	Assoc. Director Planning & PM NVCC
DAVID TRIMBLE	ENVIRONMENTAL COMPLIANCE OFFICER
MARY OCCOLICH	AD, CAPITAL PROJECT
JOHN PIVIK	CAPITAL OUTLAY PROJ. MGR
Sidney Buford	Project Manor
Tom Cartone	The Law
Greg Dunaway	Dir. of Facilities/Safety, JTCC
Michael Verdi	Reynolds
Jason Brock	Band G Superintendent / PDCCC
PHILLIP BRADSHAW	OPERATIONS MANAGER/CFO, PDCCC
Dan Jewett	Program Mngr VCCS
David Woodus	FMS, VCCS
James Bagley	FMS, VCCS
Rick Farthing	VCCS - FMS
Christine Fields	VA Highlands C.C. - VP of Finance
Rebecca Parkhill	PVCC
Timothy Woodson	PVCC Facilities
GARLAND FENWICK	GCC FACILITIES
MARK KRAMER	TNCC, Director of Facilities
Chris Lewis	SWCC, VP of Finance + Admin
Ron Parker	CVCC Facilities Management
Ter. Brothers	CVCC Facilities Mgmt
Lewis Bryant	CVCC VP of Finance

1

Lisa Ridpath VWCC VP Finance & Admin

Matthew Thompson SR ISRCC Battle & Ground Mgr.

William Turner NVCC

Charles Tuckman DCC VP Finance

Virginia Community College System

Stormwater Regulatory Compliance

What's new in stormwater for the VCCS?

June 4, 2019
Richmond, VA

Lee F. Hixon, Ph.D., P.E.
President
H2R Engineering, Inc.
H2R Engineering
LeeHixon@H2R-Inc.com

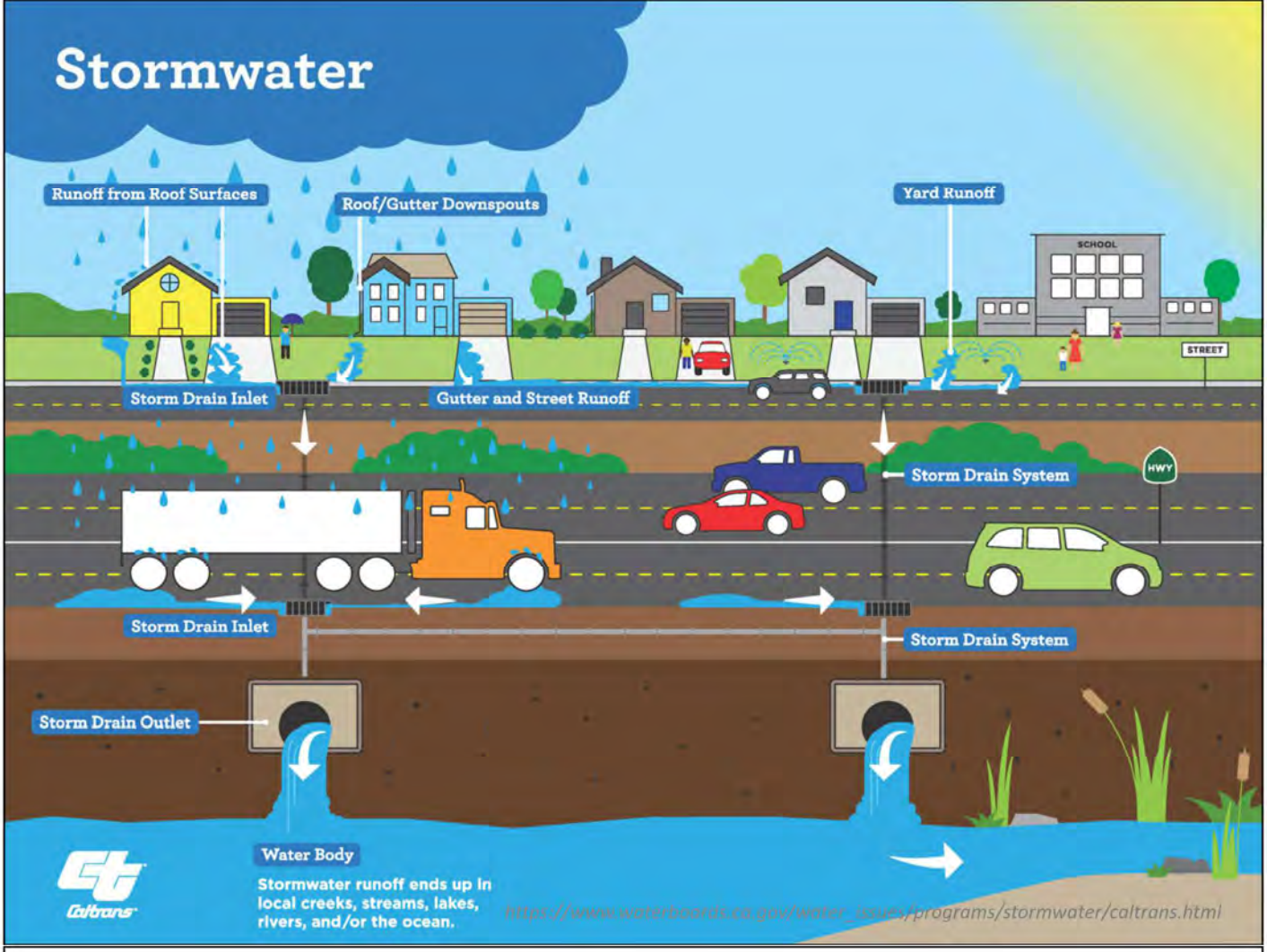
50th Anniversary Virginia's Community Colleges

NO DUMPING DRAINS TO CREEK

Discussion Items

- Impact of Stormwater
- MS4 Programs (What's New?)
  - ✓ Minimum Control Measures
  - ✓ TMDLs
- Forward Progress
  - ✓ BMP Maintenance
  - ✓ Continued GH/PP Upkeep
  - ✓ Master Planning

Stormwater


Runoff from Roof Surfaces
Roof/Gutter Downspouts
Yard Runoff
SCHOOL
STREET
Storm Drain Inlet
Gutter and Street Runoff
Storm Drain System
HWY
Storm Drain Inlet
Storm Drain System
Storm Drain Outlet
Water Body
Stormwater runoff ends up in local creeks, streams, lakes, rivers, and/or the ocean.
https://www.waterboards.ca.gov/water_issues/programs/stormwater/caltrans.html

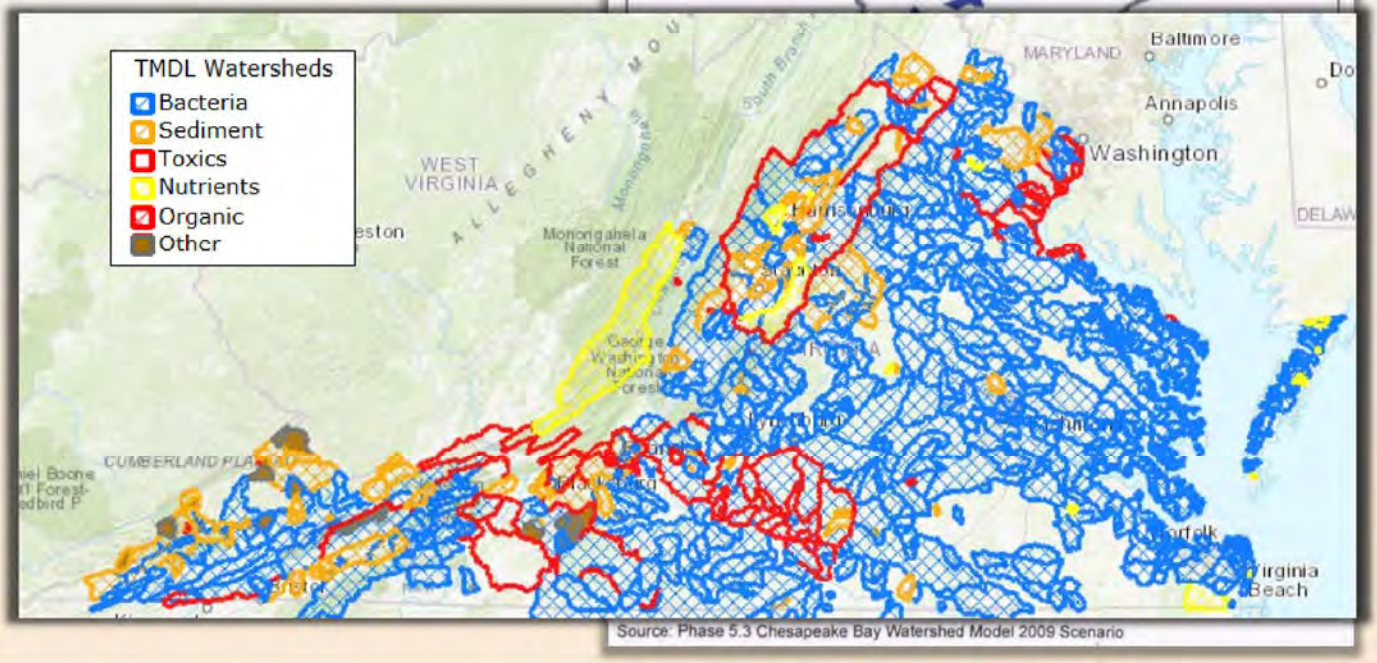
Chesapeake Bay TMDL

Estimated Cost for Virginia MS4s

$9.4 – 11.5 billion

- Virginia Senate Finance Committee

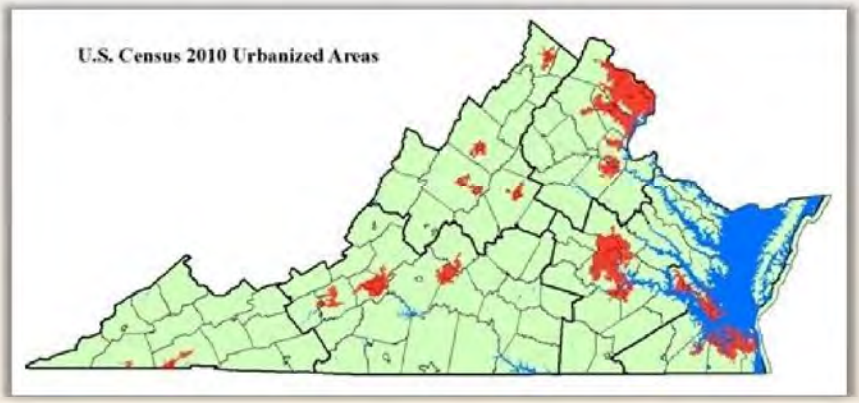
- 23 Phase I
- 400 Phase II



Source: Phase 5.3 Chesapeake Bay Watershed Model 2009 Scenario

MS4 Regulated Campuses

General | MCM1 | MCM 2 | MCM 3 | MCM 4 | MCM 5 | MCM 6 | TMDLs | Progress



VCC

DCC Danville Community College

Reynolds Community College

John Tyler Community College

NOVA Northern Virginia Community College

PVCC Piedmont Virginia Community College

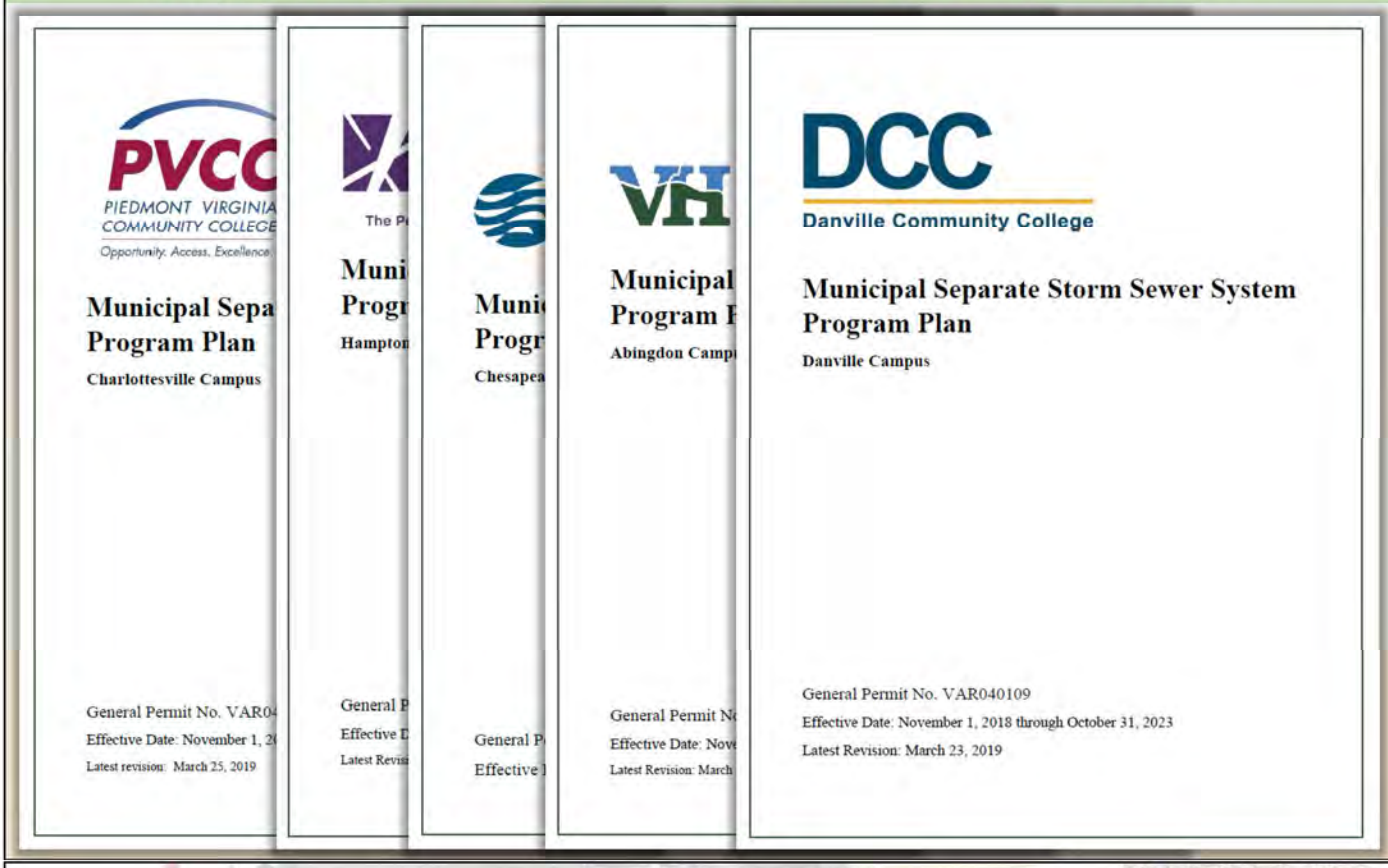
Thomas Nelson The Peninsula's Community College

Tidewater Community College From here, go anywhere.™

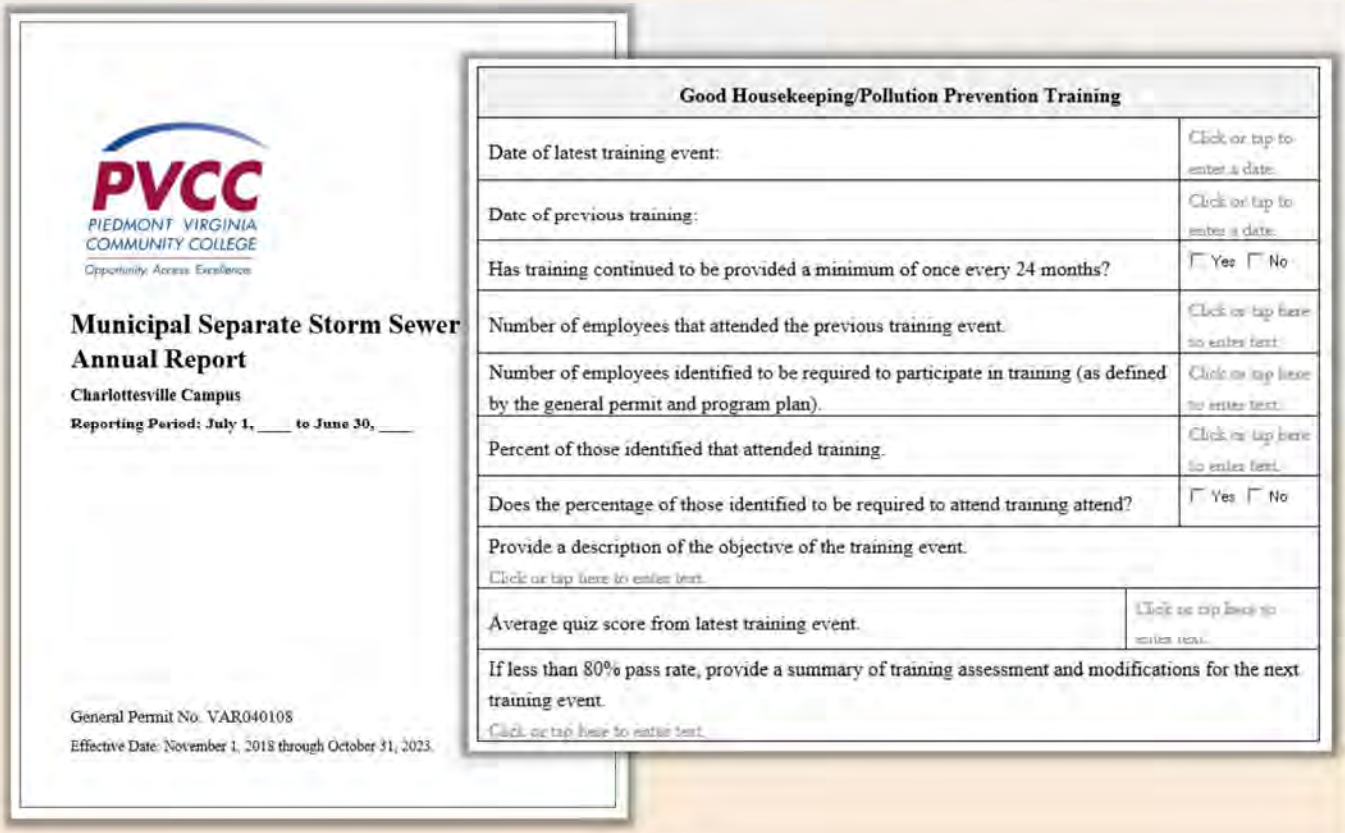
Virginia Highlands Community College

Virginia Western We'll Take You There

MS4 Program Plans



Annual Reporting Forms



Public Education & Outreach

Table BMP-1A-1. Strategies for Public Education and Outreach per the General Permit.

Strategies[1]	Examples (provided as examples and are not meant to be all inclusive or limiting)
Traditional written materials	Informational brochures, newsletters, fact sheets, utility bill inserts, or recreational guides for targeted groups of citizens
Alternative materials	Bumper stickers, refrigerator magnets, t-shirts, or drink koozies
Signage	Temporary or permanent signage in public places or facilities, vehicle signage, bill boards, or storm drain stenciling
Media Materials	Information disseminated through electronic media, radio, televisions, movie theater, or newspaper
Speaking engagements	Presentations to school, church, industry, trade, special interest, or community groups
Curriculum materials	Materials developed for school-aged children, students at local colleges or universities, or extension classes offered to local citizens
Training materials	Materials developed to disseminate during workshops offered to local citizens, trade organization, or industrial officials

[1]Two or more of the strategies must be used each year (i.e. all strategies cannot be signage).

What is stormwater?

Stormwater is rainfall or snowmelt that runs off surfaces such as roads, buildings, sidewalks or compacted ground. It can drain directly into streams, rivers and lakes by traveling over these surfaces and through storm drains. These drains, commonly called storm sewers, should not be confused with sanitary sewers that transport wastewater to a treatment plant before discharging to surface waters. Storm water entering storm sewers does not receive any treatment before it flows to surface waters such as lakes and streams.

What is the problem?

As communities grow, they often experience more storm water problems due to their increasing impervious areas. Impervious areas reduce the amount of rainwater that can naturally infiltrate into the soil. This causes an increase in the volume and rate of stormwater. It can lead to more frequent and severe flooding, stream bank erosion, and potential damages to public and private property and water quality.

As stormwater drains to surface waters, pollutants are collected, including trash, oil, fertilizers, pesticides, pet waste (viruses and bacteria) and other chemicals. These contaminants can cause public health risks with negative impacts to drinking water sources, recreational waters and aquatic life.

TIDEWATER COMMUNITY COLLEGE
From here, go anywhere.™

Save our waterways!

For more information visit us online at: www.tcc.edu/about-tcc/college-leadership/departments/stormwater

To **report** a suspected or potential non-stormwater discharge to the storm drain, visit the website to complete a report form or use the number below:

TCC Pollution Hotline
757-822-1715

TIDEWATER COMMUNITY COLLEGE
From here, go anywhere.™
Stormwater

What are Water Quality Standards?

The State Water Control Law mandates the protection of existing high-quality state waters and provides for the restoration of all other state waters. The State has adopted water quality standards that consist of statements and numeric limits that describe water quality necessary to meet and maintain certain designated uses. These standards serve as a tool for accomplishing the purposes of the State Water Control Law. Generally, the standards are intended to protect state waters for swimming and other water-based recreation, public water supply, wildlife, propagation and growth of aquatic life, and the production of edible and marketable fish and shellfish.

Which local waters are impaired?

Stormwater from the TNCC campuses ultimately drains to the following impaired surface waters:

- **Chesapeake Bay**: Impaired due to excessive **sediment and nutrients**. Both the Hampton and Historic Triangle campuses are within the bay's watershed.
- **Back River** (Hampton campus) and **Powhatan Creek** (Historic Triangle Campus): Impaired due to exceedance of water quality standards for **bacteria** to support recreational use.

THOMAS NELSON

Save our waterways!

For more information visit TNCC's stormwater management webpage at: tncc.edu/about/environment/stormwater

To **report** a suspected or potential non-stormwater discharge to the storm drain, visit the website or use the contact information below:

Buildings and Grounds Supervisor

Phone: 757-825-3694
Email: masonj@tncc.edu

Notice:
Local Waters Do Not Meet Water Quality Standards!

THOMAS NELSON™

The Peninsula's Community College

Local Water Quality Issues

Public Involvement Opportunities

Table BMP-2C-1. Public involvement opport

Opportunity Types [1]	Description of Activity [2]
1. Educational event ✓	Participation in VCCS Conf Stormwater Meeting - Roan
2. Educational event ✓	Participation in VCCS Conf Stormwater Meeting - Roan
3. Educational event	Booth at community fair
4. Pollution prevention	Implement a storm drain ma program.

Table 2
Public Involvement Opportunities

Public involvement opportunities	Examples (provided as example and are not meant to be all inclusive or limiting)
Monitoring	Establish or support citizen monitoring group
Restoration	Stream or watershed clean-up day, adopt-a-water way program,
Educational events	Booth at community fair, demonstration of stormwater control projects, presentation of stormwater materials to schools to meet applicable education Standards of Learning or curriculum requirements, watershed walks, participation on environmental advisory committees
Disposal or collection events ✓	Household hazardous chemicals collection, vehicle fluids collection
Pollution prevention ✓	Adopt-a-storm drain program, implement a storm drain marking program, promote use of residential stormwater BMPs, implement pet waste stations in public areas, adopt-a-street program.

Dedicated Webpage

Thomas Nelson Community College Stormwater (MS4) Annual Webpage Assessment Form Date completed: _____

Purpose and Instruction: The intent of this form is to facilitate review of the college's stormwater program webpage to ensure each item required for website posting by the 2018 – 2023 MS4 General permit is provided and maintained. The stormwater webpage should be cross-referenced for each item below. If 'no' is selected for any of the items, the item should be provided on the website as soon as possible to ensure permit compliance. This form is intended for internal use only.

Program Documents

Item No.	Item	Available on Webpage?	Notes
1	Current MS4 General Permit	☐Yes ☐No	The permit can be printed as a pdf from here.
2	MS4 Permit Coverage Letter from DEQ	☐Yes ☐No	Coverage letter, as provided to the college by DEQ at the beginning of the permit cycle.
3	Current MS4 Program Plan	☐Yes ☐No	With any modification, the Program Plan must be provided on the website within 30 days of the modification.
4	2018-2019 Annual Report	☐Yes ☐No ☐N/A	Post on website no later than November 1, 2019.
5	2019-2020 Annual Report	☐Yes ☐No ☐N/A	Post on website no later than November 1, 2020.
6	2020-2021 Annual Report	☐Yes ☐No ☐N/A	Post on website no later than November 1, 2021.
7	2021-2022 Annual Report	☐Yes ☐No ☐N/A	Post on website no later than November 1, 2022.
8	2022-2023 Annual Report	☐Yes ☐No ☐N/A	Post on website no later than November 1, 2023.
9	VCCS Annual Standards and Specifications for ESC and SWM	☐Yes ☐No	Annually verify with Shelley Bains (sbains@vccs.edu) the latest DEQ-approved version (date on cover).
10	TNCC Illicit Discharge Detection and Elimination (IDDE) Program Manual	☐Yes ☐No	Ensure posting reflects the latest revision.
11	TNCC Good Housekeeping/Pollution Prevention Program Manual	☐Yes ☐No	Ensure posting reflects the latest revision.
12	TNCC Post-construction SWM Inspection and Maintenance Program Manual	☐Yes ☐No	Ensure posting reflects the latest revision.
13	TNCC Nutrient Management Plans	☐Yes ☐No ☐N/A	Ensure posting is the current version and each campus (expires on 3-year intervals).
14	TNCC Chesapeake Bay TMDL Action Plan	☐Yes ☐No	Ensure posting reflects the latest revision.

Reporting/Input Mechanisms

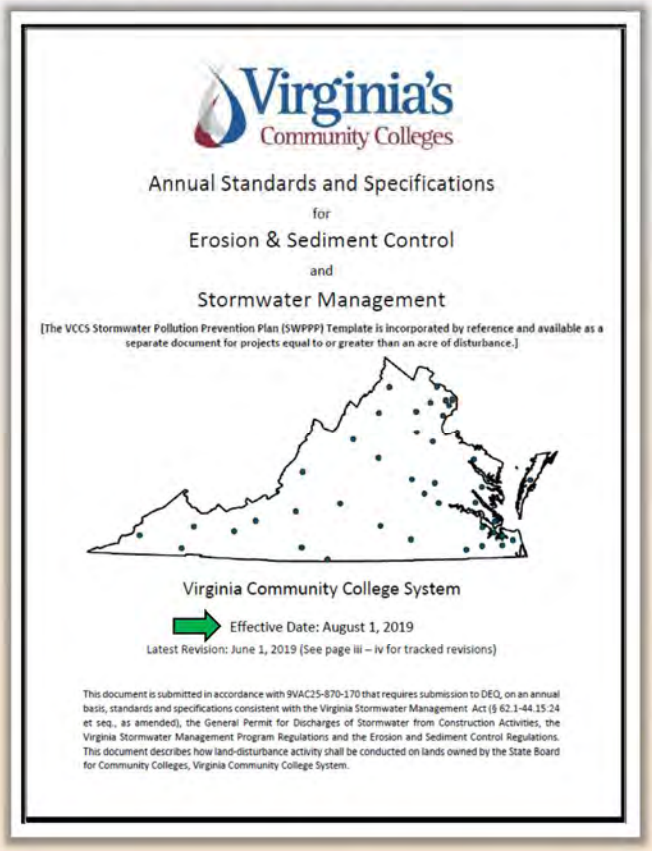
Item No.	Item	Available on Webpage?	Notes
15	Informational discussion regarding illicit discharges, improper disposal, and spills	☐Yes ☐No	Webpage should describe illicit discharge in general, including impacts from improper disposal and spills.
16	Informational discussion regarding pollution from land disturbance activities	☐Yes ☐No	Webpage should describe pollution prevention and erosion & sediment control for construction activities.
17	Phone number (hotline) for reporting associated with items 15 and 16	☐Yes ☐No	Clearly identify a hotline number for reporting on illicit discharge concerns. (Also see item 19).
18	Overview discussion of the MS4 Program Plan and solicitation for input	☐Yes ☐No	Webpage should describe the purpose of the Program Plan (i.e. BMPs to address permit requirements).
19	Online reporting associated with items 15, 16, and 18	☐Yes ☐No	Form should allow for: (1) Selection of the type of report or input (illicit discharge, improper disposal, spill, land disturbance concern, program plan input). Form should also request the date the issue was observed, the location where it was observed, and the source of the concern (i.e. spilled paint).

IDDE Program

- New for Outfall Information Table
  - ✓ Latitude and longitude;
  - ✓ Discharge to impaired water per the Virginia 2016 305(b)/303(d) Water Quality Assessment Integrated Report;
  - ✓ Predominant land use for each outfall discharging to an impaired water; and
  - ✓ Any EPA approved TMDLs for which the college is assigned a wasteload allocation (review and update annually by October 1st).
- Prohibition of illicit discharge
  - ✓ Language for inclusion in future Student Handbooks and Standards of Conduct for Employees

ESC/SWM Standards & Specifications

- ESC and SWM for Construction
  - ✓ Provide latest version of webpage
  - ✓ Minor revisions as noted in revision table



Virginia's Community Colleges

Annual Standards and Specifications

for

Erosion & Sediment Control

and

Stormwater Management

[The VCCS Stormwater Pollution Prevention Plan (SWPPP) Template is incorporated by reference and available as a separate document for projects equal to or greater than an acre of disturbance.]

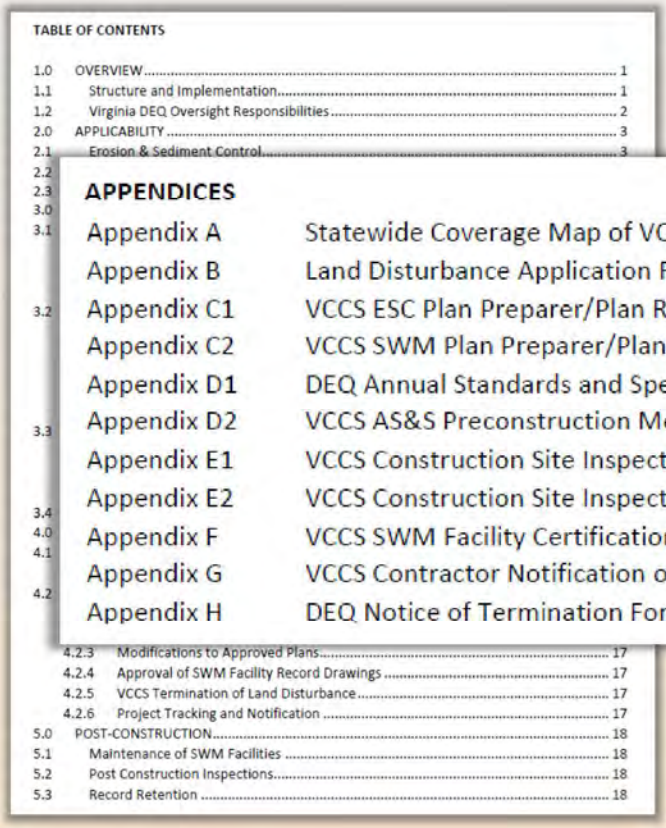
Virginia Community College System

Effective Date: August 1, 2019

Latest Revision: June 1, 2019 (See page iii – iv for tracked revisions)

This document is submitted in accordance with 9VAC25-870-170 that requires submission to DEQ, on an annual basis, standards and specifications consistent with the Virginia Stormwater Management Act (§ 62.1-44.15:24 et seq., as amended), the General Permit for Discharges of Stormwater from Construction Activities, the Virginia Stormwater Management Program Regulations and the Erosion and Sediment Control Regulations. This document describes how land-disturbance activity shall be conducted on lands owned by the State Board for Community Colleges, Virginia Community College System.

ESC/SWM Standards & Specifications



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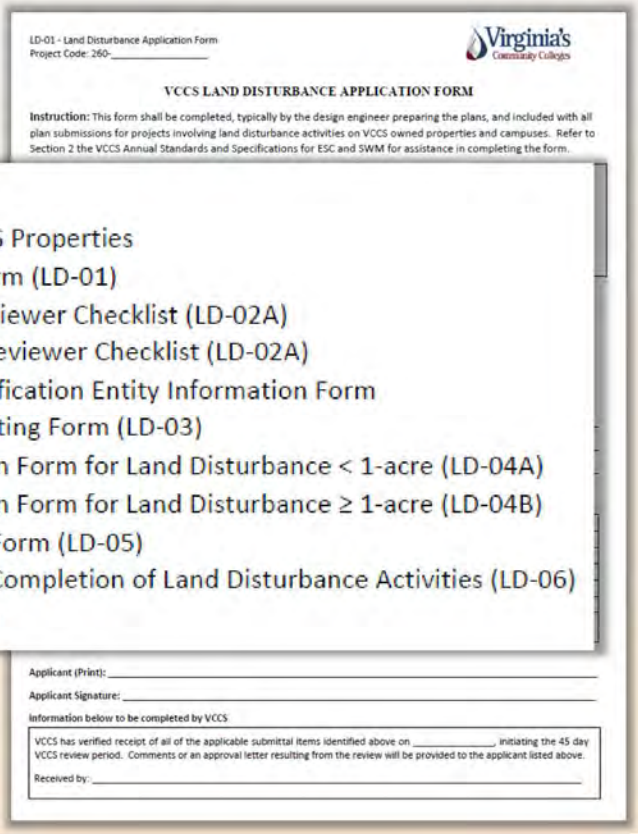
Appendix A	Statewide Coverage Map of VCCS Properties
Appendix B	Land Disturbance Application Form (LD-01)
Appendix C1	VCCS ESC Plan Preparer/Plan Reviewer Checklist (LD-02A)
Appendix C2	VCCS SWM Plan Preparer/Plan Reviewer Checklist (LD-02A)
Appendix D1	DEQ Annual Standards and Specification Entity Information Form
Appendix D2	VCCS AS&S Preconstruction Meeting Form (LD-03)
Appendix E1	VCCS Construction Site Inspection Form for Land Disturbance < 1-acre (LD-04A)
Appendix E2	VCCS Construction Site Inspection Form for Land Disturbance ≥ 1-acre (LD-04B)
Appendix F	VCCS SWM Facility Certification Form (LD-05)
Appendix G	VCCS Contractor Notification of Completion of Land Disturbance Activities (LD-06)
Appendix H	DEQ Notice of Termination Form



LD-01 - Land Disturbance Application Form
Project Code: 260-_____

Virginia's Community Colleges

VCCS LAND DISTURBANCE APPLICATION FORM

Instruction: This form shall be completed, typically by the design engineer preparing the plans, and included with all plan submissions for projects involving land disturbance activities on VCCS owned properties and campuses. Refer to Section 2 the VCCS Annual Standards and Specifications for ESC and SWM for assistance in completing the form.

Applicant (Print): _____

Applicant Signature: _____

Information below to be completed by VCCS

VCCS has verified receipt of all of the applicable submittal items identified above on _____, initiating the 45 day VCCS review period. Comments or an approval letter resulting from the review will be provided to the applicant listed above.

Received by: _____

Electronic BMP Reporting

BMPs associated with land disturbance ≥ 1-acre

↓

Stormwater Construction General Permit System
https://apps.deq.virginia.gov/swcgp

BMPs associated with land disturbance < 1-acre

↓

Virginia BMP Warehouse
https://apps.deq.virginia.gov/BMP

SWPPP Reassessment

- Stormwater Pollution Prevention Plan (SWPPP)
  - SWPPPs require
    - ✓ Minimum annual inspection & maintenance requirements for source controls (with documentation in SWPPP)
  - Requirement can be removed if no longer qualifying
    - ✓ Remove from program documents
    - ✓ Removes some permit requirements
    - ✓ Annually reassess



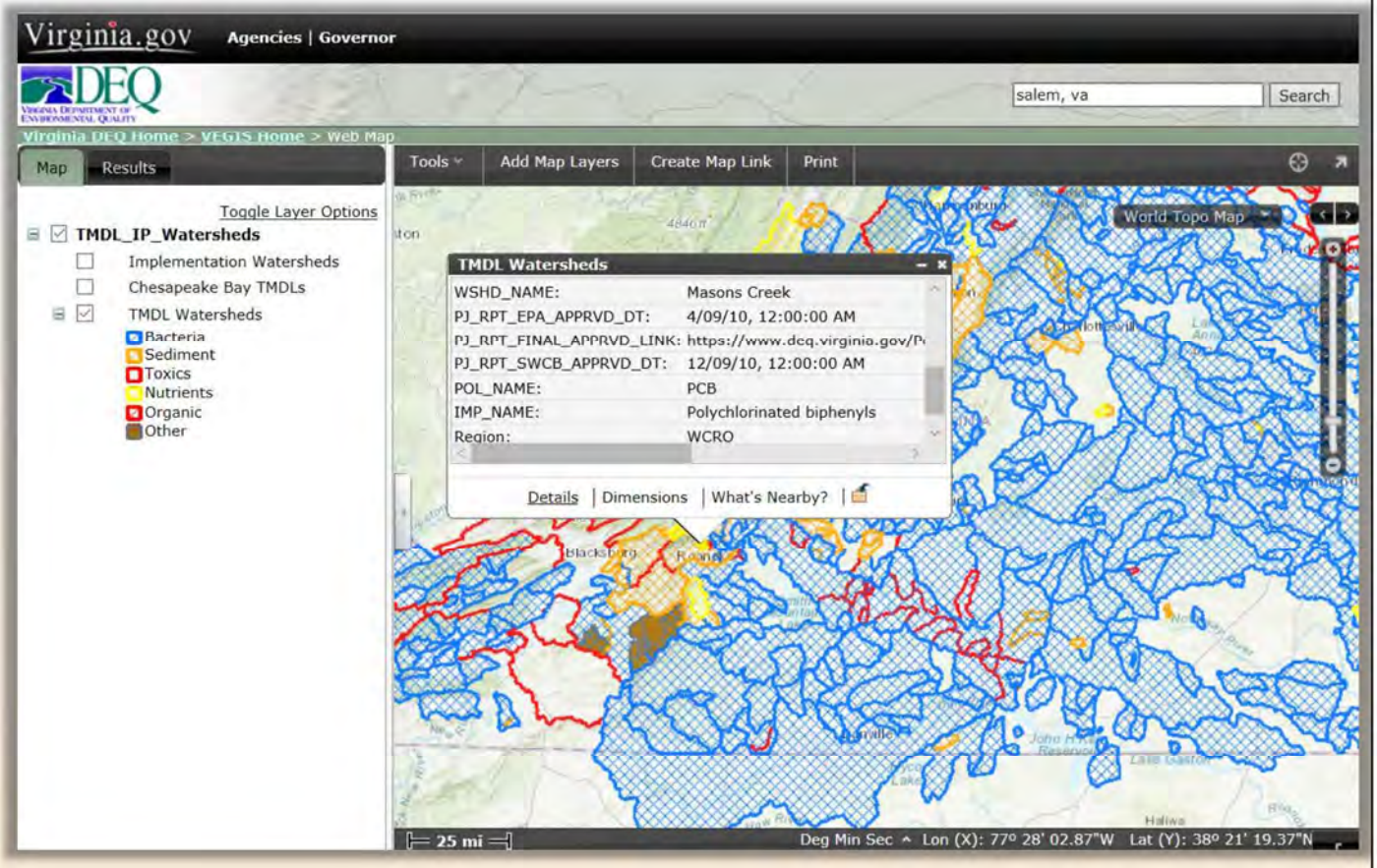
SWPPP Reassessment

General | MCM1 | MCM 2 | MCM 3 | MCM 4 | MCM 5 | **MCM 6** | TMDLs | Progress

- Any of the following occur and are expected to have exposure to stormwater
  - ✓ Areas where residuals remain from using, storing or cleaning machinery or equipment;
  - ✓ Materials or residuals on the ground from spills or leaks;
  - ✓ Material handling equipment;
  - ✓ Materials or products that would be expected to be mobilized in stormwater runoff during loading or unloading or transporting activities;
  - ✓ Materials or products stored outdoors (except final products for outside use where exposure to stormwater does not result in the discharge of pollutants);
  - ✓ Materials or products that would be expected to be mobilized in stormwater runoff contained in open, deteriorated or leaking storage drums, barrels, etc.;
  - ✓ Waste material except waste in covered, non-leaking containers;
  - ✓ Application or disposal of process wastewater; or
  - ✓ Particulate matter or visible deposits of residuals from roof stacks, vents or both not otherwise regulated (i.e., under an air quality control permit).

Local TMDLs

- Applicability
  - Assigned a waste load allocation to the college and approved prior to July 1, 2013
    - ✓ Already identified and Action Plans in place
    - ✓ Update Action Plans for consistency with new permit
      - Incorporation of specific strategies (bacteria, PCBs)
      - Update by May 1, 2020
  - Assigned a waste load allocation to the college and approved between July 1, 2013 – June 30, 2018
    - ✓ Determine if WLAs assigned to college
      - Develop action plan, as applicable
      - Develop/Initiate Implementation May 1, 2020



Chesapeake Bay TMDL

- Phase II Action Plans due to DEQ no later than Nov. 1, 2019
  - ✓ Minimum 15-day pubic comment period

Option	Summary of Computational Methods
Structural BMPs	Specified % reduction in load to BMP per BMP type. For enhancements, difference in between pre- and post-load reduction.
Land Use Change	Apply specified POC reductions per unit area for various conversion scenarios.
Forest Buffers	Credit for the buffer area computed same as for land use change. Specified % reduction in loads draining to the buffer.
Urban Nutrient Management	Based on site risk level, % removal in loadings from the managed area specified for TN and TP.
Urban Stream Restoration	(1) Interim rates (mass reduction/length); or (2) Use of one of four protocols based on type of restoration effort (three require measurements).
Street Sweeping	Assigned removal efficiencies, dependent on frequency of sweeping and sweeper type based on modeling effort.

Street Sweeping Efforts

MS4 Permittee	Sweeper Type	No. of samples
City of Salem	Tymco DST-6 - Regenerative Air	24*
Germanna Community College	Parking Lot Sweeper - Vacuum	8**
John Tyler Community College	Eglin Wizard - Mechanical (Newer)	4
Northern Virginia Community College	Tymco Model 210 - Regenerative Air	15
Virginia Tech	Tennant Centurion - Mechanical (Older)	6

* 7 samples not tested for PSD and moisture content due to appearance and odor of sewage

** 2 samples not tested for PSD and moisture content due to appearance and odor of sewage

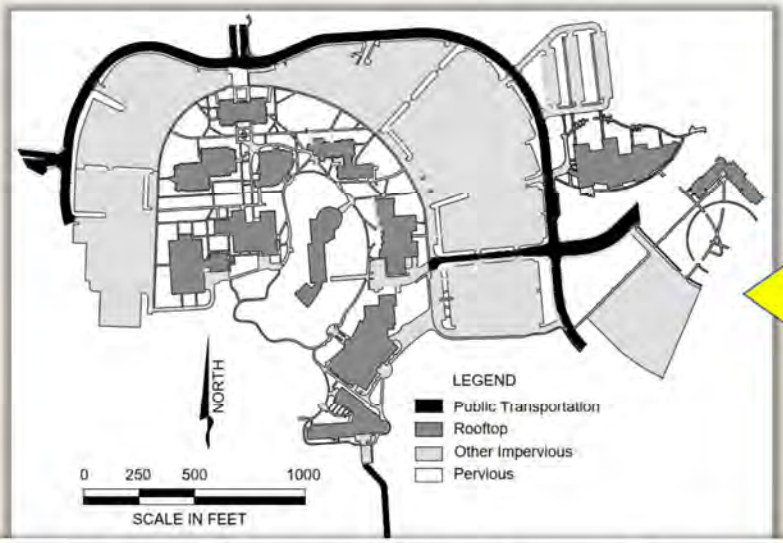
Street Sweeping Efforts

- **Summary of results thus far**

Surface Type	Days Since Runoff	Nutrient (mg/kg) TN	Nutrient (mg/kg) TP	PSD Range in µm (%) < 250	250-420	420-841	841-2,000	> 2,000
Streets	≤ 2	203	15	13.0	6.6	9.6	24.5	43.8
	> 2	408	51	22.4	10.8	17.8	26.1	14.5
	% Increase	*+101*	*+240*	*+72*	*+64*	*+85*	*+7*	*-67*
Parking Lots	≤ 2	110	10	12.3	12.3	16.0	25.9	29.7
	> 2	277	54	27.9	16.6	22.3	20.0	10.2
	% Increase	*+152*	*+440*	*+127*	*+35*	*+39*	*-23*	*-66*

Susceptible to runoff & associated with suspended sediment in receiving waters

Chesapeake Bay TMDL



~ 4 sweeping instances annually to achieve reductions for this cycle (dependent on material collected per instances)

Surface Type	Days Since Runoff	TP (< 250 µm) (mg/kg)	TP (< 250 µm) (%)	TP (< 250 µm) (lbs/ton)	TN (< 841 µm) (mg/kg)	TN (< 841 µm) (%)	TN (< 841 µm) (lbs/ton)	TSS (< 841 µm) (lbs/ton)
Streets	≤ 2	586.2	13.0	0.149	662.6	29.2	0.335	571
	> 2		22.4	0.257		51.0	0.585	998
Parking Lots	≤ 2	586.2	12.3	0.141	477.0	40.6	0.466	794
	> 2		27.9	0.320		66.8	0.766	1,307

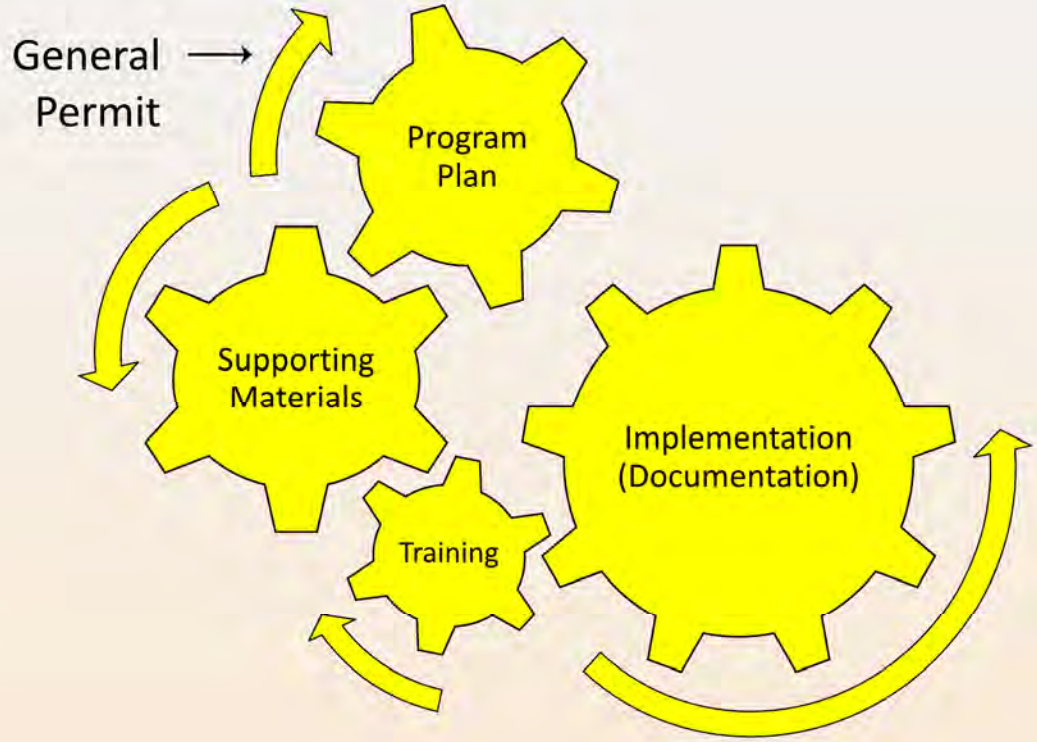
BMP Inspection/Maintenance

- DEQ Certification (required)
- Common issues
  - Vegetation maintenance
    - Inspection accessibility
    - Match to plans (i.e. bioretention)
    - Trees on embankments
  - Clogging
  - Algae
  - Invasive specifies
  - Slope stabilization (erosion)
  - Loss of design volume

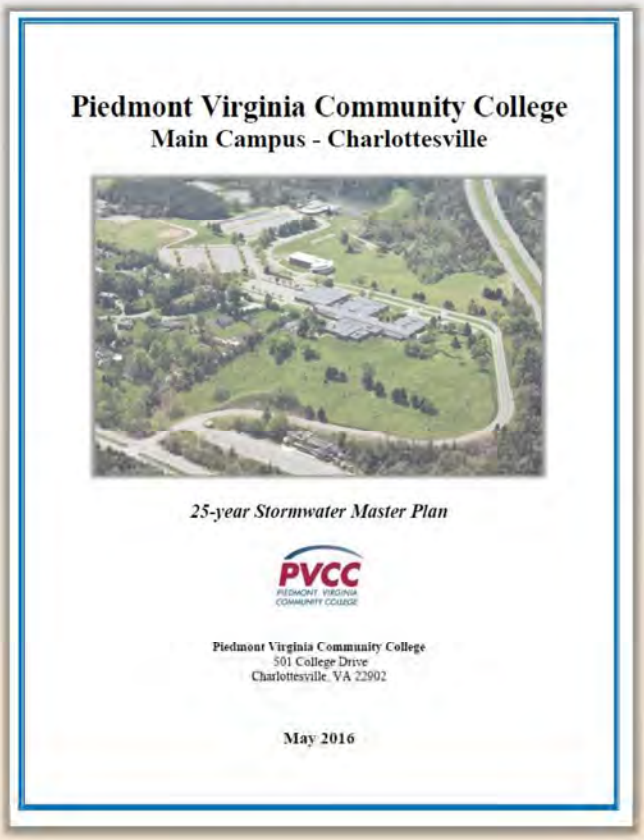
Good Housekeeping

- Common issues
  - Soluble materials exposed to rainfall
  - Leaky equipment and vehicles
  - Open dumpsters
  - Lack of perimeter controls
  - Unlabeled containers

Good Housekeeping



Master Planning



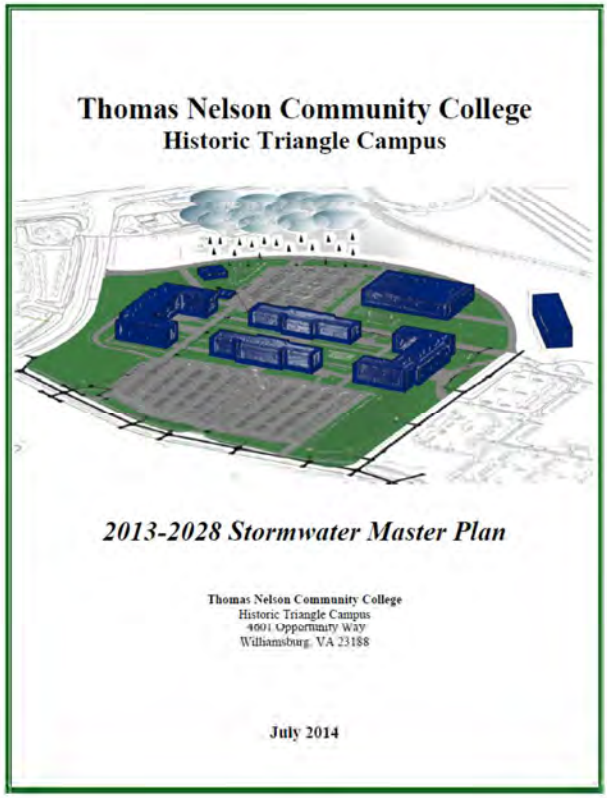
Piedmont Virginia Community College
Main Campus - Charlottesville

25-year Stormwater Master Plan

PVCC
PIEDMONT VIRGINIA COMMUNITY COLLEGE

Piedmont Virginia Community College
501 College Drive
Charlottesville, VA 22902

May 2016



Thomas Nelson Community College
Historic Triangle Campus

2013-2028 Stormwater Master Plan

Thomas Nelson Community College
Historic Triangle Campus
4601 Opportunity Way
Williamsburg, VA 23188

July 2014

Summary

- New MS4 Permit
  - Updated program documents
  - TMDL implementation
- Stnds. & Specs
  - Updated program documents
- Program Maintenance
  - Continued compliance

Thank you!

Questions?

Madeline Manning

From: Matthew E. Thompson Sr <MThompson@reynolds.edu>
Sent: Friday, June 14, 2019 4:52 PM
To: Matthew Webb
Subject: FW: Reynolds Presentation Details for Monday, March 18, 2019 - MS4 Announcement of Presentation

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Matt,

Here is an announcement of the Storm Water Management Presentation given in March 2019. I need to locate the thumb drive that I place the presentation on and check my home computer for the original. Once I locate it, I will send it to you.

Thanks
Matthew

Matthew E. Thompson, Sr.
Buildings and Grounds Manager
Facilities Management and Planning
Reynolds Community College
1651 E. Parham Road, Richmond, VA 23285
Office #: 804-523-5795
Fax #: 804-371-3049
Email: mthompson@reynolds.edu

Reynolds COMMUNITY COLLEGE

From: Maria T. Poindexter <MPoindexter@reynolds.edu>
Sent: Friday, March 15, 2019 4:39 PM
To: Matthew E. Thompson Sr <MThompson@reynolds.edu>
Subject: Reynolds Presentation Details for Monday, March 18, 2019

Matthew:

Thank you for offering a presentation to our faculty and staff during our Professional Development activities on Monday, March 18, 2019. Below you will find your session information including the number of participants registered for your session.

All activities will be held on our Parham Road Campus located at 1651 E. Parham Road, Richmond, VA 23228. Directions and a map of the Parham Road Campus can be found HERE.

Your presentation room will be equipped with a computer connected to a projector with access to the internet. If you need to use the projector for your presentation, please bring your presentation on a 'travel' drive.

Below is the information for your presentation.

Presentation Title	So, What's In Your Water
Description	Topic will cover storm water management and the impact it has on our drinking water, personal hygiene, and cooking water as well as our environment.
Instructor(s)	Matthew Thompson
Room	Room 180 Burnette Hall
Time	1:15 p.m. to 2:30 p.m.
# Registered	25 participants

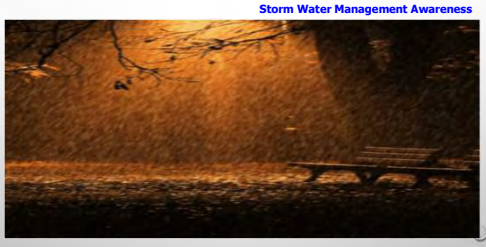
Thank you for your dedication to Professional Development at Reynolds.

Maria
Maria Poindexter, Ph.D.
Coordinator, College-Wide Professional Development
J. Sargeant Reynolds Community College
P.O. Box 85622
Richmond, VA 23285-5622
Phone: (804) 523-5832
Fax: (804) 523-5108
Email: MPoindexter@reynolds.edu

Hazard Communication Standard
"The Right to Know Law"

So, What Is In Your Water?

Storm Water Management Awareness



Reynolds Community College
Facilities Management And Planning

Matthew E. Th
Mar

1

Believe it or not, there are something we don't necessary need to survive today. Such as:

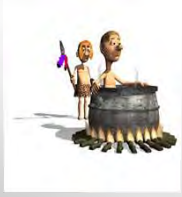
Electricity

Modern Heating Systems

Cooking Gas or microwaves

2

We also don't necessary need to have:



a Jacuzzi

Or Even Facebook to survive today.

3

However, there is an element that we will always need no matter what time period we live in.

And that is "WATER"

4

So, What Is In Your Water?

Storm Water Management Awareness

AGENDA

1. The value of Water
2. The condition of the Global water supply
3. Tap Water Vs Bottle Water
4. The EPA Regulated Protection of Our Water
5. Stormwater Management
6. Reynolds Community College MS4 Program
7. Consequenses of Non-Compliance

5

1. The Value of Water

We enjoy the beautiful sites of a waterfall

6

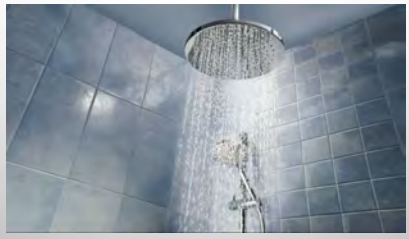
Hazard Communication Standard
"The Right to Know Law"

THE COMFORT OF DRINKING A COOL GLASS OF WATER.



7

BATHING



8

PLAYING

9

OR JUST HAVING A GOOD OLE TIME!


10

No matter the age.

11

THE VALUE OF WATER IS A VERY IMPORTANT PART OF OUR EVERYDAY SURVIVAL.

12

Hazard Communication Standard
"The Right to Know Law"

Unfortunately
Because of pollution, our quality of water is becoming unsafe.

2. The Condition Of The Global Water Supply

13

At least **3-4 million people** die every year of water related diseases.

rehydrate.org/water/

14

About 2.1 billion people – lack clean water, according to a report released by the World Health Organization and UNICEF.

Mexico
Congo
Pakistan
Bhutan
Ghana
Nepal
Cambodia

https://www.usnews.com/news/best-countries/.../10-countries-with-the-worst-water-suppl...

15

Worldwide, 780 million people do not have access to an improved water source. An estimated 2.5 billion people lack access to improved sanitation water processing plant.

(That's more than 35% of the world's population)

https://www.cdc.gov/healthywater/global/wash_statistics.html

16

The Problem With Most Water Sources Around The World?

- **Ukraine**: Water sources are ***polluted by industrial and agricultural run-off***
- **The Bahamas:** hepatitis A and typhoid found in drinking Bahamian tap water
- **Beijing China:** almost 40 percent of the water was so dirty that it couldn't be used for *any* purpose.
- **Fiji:** the fifth most sought-after honeymoon destination - tap water is actually not safe to drink. (Typhoid)
- **Mexico:** Avoid the tap water at all costs

17

Other Problem Water Sources Around The World? Con't

- **India:** is so bad that over 21 percent of the country's diseases stem from the water supply.
- **Costa Rica:** Drinking water and agricultural life polluted by toxic industrial waste.
- **Argentina:** In 2013, their Matanza River was named one of the 10 dirtiest places on the planet.
- **Panama:** Agricultural runoff led to harmful pesticides, herbicides, and even animal feces contaminating the tap water.
- **Russia:** tap water comes with warnings – "Do not use on your face because it contains something very dangerous."

18

Hazard Communication Standard
"The Right to Know Law"

3.Tap Water Vs Bottle Water

**Today, for health reasons,
More people are drinking bottle water
instead of tap water**

19

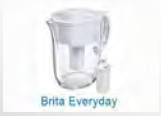
**Tap water is municipal processed water
that is sanitized for public use**

20

**Bottle water can be either Filtered
processed water or from a Natural
Water Spring (In plastic)**

21

Or You Can Filter The Tap Water Yourself



BRITA FILTERS | The Brita faucet filter can remove 99% of lead, and reduce chlorine (taste and odor) and **remove 52 other contaminants**

PUR FILTERS | By comparison, PUR's faucet filter is certified **to reduce over 80 contaminates**, which also includes 99% of lead.

22

Or have a Personal 23.7 oz Bottle Filter

That is equivelant to 300 plastic bottles of water.

24 bottles case of 16 oz could cost an average of $3.25 per Case

One Personal Bottle Filter is equivalent to 12.5 cases of bottle water saving you $40.63 per filter.

23

However all tap water is not bad for you.

And all bottle water is not good for you.

24

Hazard Communication Standard
"The Right to Know Law"

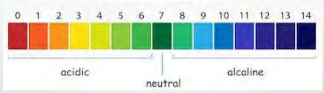
What determine the quality of drinking water?

25

The freedom of contaminates in the water

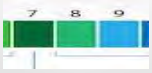
26

And the pH level of the water.



27

The best water quality for human consumption has an alkaline pH ranging from 7pH to 9 pH



28

The worse water quality for human consumption has an acidic pH ranging from 4pH to 6pH

29

Example of Tap Water Vs Bottle Water

Good Tap Water:
New York City has some of the best tap water in the world. The tap water has a pH level of 7.2

Not So Good Bottle Water:
Fiji water has a pH of 7.5 but contain 6.31 micrograms of **arsenic** per liter

Tested by a Cleveland Water Quality Manager in December 2014

30

Hazard Communication Standard
"The Right to Know Law"

So What Is The Quality Of Your Bottle Water?

31

Bottled Water – With Poor Water Quality - pH 3.4 to 5.5
Acidic Water

- Vitamin Water – 3.4 pH
- Propel Fitness Water – 3.6 pH
- Penta – 4.0 pH
- Dasani – 4.5 pH
- Function – 5.0
- Aquafina – 5.5 pH
- Perrier – 5.5 pH

Bottle water with a pH below 5.5 pH affect the enamel on your teeth and is harmful to the body.

32

Bottled Waters – With Fair Water Quality - pH 5.8 to 6.5
Acidic Water

- Poland Spring – 5.8 pH
- Voss – 6.0 pH
- Ice Mountain – 6.0 pH
- Crystal Geyser – 6.0 pH
- Nestle Pure Lite – 6.2 pH
- Deer Park – 6.3 pH
- Smart Water – 6.5 pH
- Great Value Walmart - 6.5

Bottle water with a pH above 5.5 pH may not affect your teeth enamel as poor quality water but the benefits are still acidic to the body.

33

Bottled Waters – With Good Water Quality - pH 7.0 to 9.0
Alkaline Water

- Evian – 7.0 pH
- Eternal – 7.0 pH
- Zephyrhills – 7.5 pH
- Fiji – 7.5 pH (Arsenic in water)???
- Real Water – 8.0 pH
- Essentia – 9.0 pH

Bottle water with a pH above 7.0 pH is the best water for your body.

34

With so many people drinking bottle water today we created another problem in the world.

35

And that's billions of plastic bottles in our landfills.

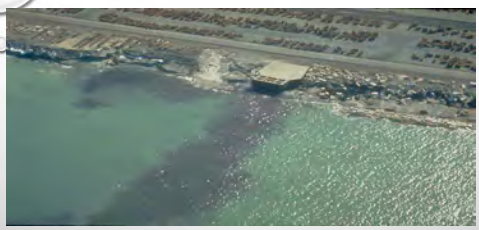
36

Hazard Communication Standard
"The Right to Know Law"

4. The EPA Regulated Protection of Our Water

Los Angeles River
Tons of trash and debris piled up after two days of a heavy rain

37



To Prevent the Pollution from Becoming Out Of Control
The EPA Clean Water Act Of 1972

38

Under the federal 1972 Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) was also established.

39

NPDES requires that certain industries and municipalities obtain permits if their discharges go directly into surface waters such as creeks, rivers, ponds and lakes.

40

Industries and municipalities are more accountable of what discharges into the waterways in their location.

41

NPDES is governed by the EPA Office in Washington D.C..

42

Hazard Communication Standard
"The Right to Know Law"

However, NPDES policies are enforced and regulated by State Environmental Agencies.

In Virginia, NPDES policies come under the Virginia Pollution Discharge Elimination System (VPDES).

43

DEQ
Virginia Department of Environmental Quality

Effective July 1, 2013, DEQ fully took over overseeing the Storm water Management Program statewide in the Commonwealth of Virginia for the EPA

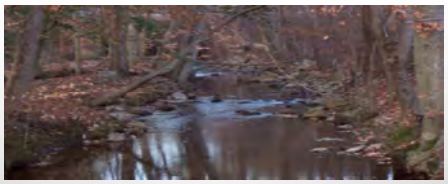
44

DEQ
Virginia Department of Environmental Quality

The Department of Environmental Quality (DEQ) administers the Virginia Pollutant Discharge Elimination System (VPDES) program and oversees all State programs that regulate the management of pollutants carried by storm water runoff.

45

5. Stormwater Management



It is our duty to promote storm water awareness and understanding to the faculty, staff, students and the community on why it is important to protect the storm water ways around our Campus which eventually flows from the North Run stream to the Chesapeake Bays.

46

Rain and snow create storm water runoff.

47

When the run-off flow across an impervious surfaces that prevent the snow and rain water from absorbing into the soil where the water is able to be filtered before it reaching the earth water table.

48

However, storm water run-off flows into the surrounding storm water inlets around the roadways and sidewalks

49

Carrying salt, chemicals, pesticides, fertilizer, animal waste and other litter discarded thoughtlessly by the public into those storm water inlets.

50

The Results: The pollutant then flow into our lakes, creeks and river, which eventually,

51

Flows into the Chesapeake Bays.

52

6. Reynolds Community College MS4 Program

Reynolds Community College has a MS4 Permit that is governed under Department of Environmental Quality (DEQ) MS4 requirements.

53

MS4 – Stands for:

Municipal Separate Storm Sewer Systems

54

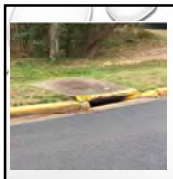
Hazard Communication Standard
"The Right to Know Law"

Reynolds Community College MS4 Program

Under the Reynolds Community College MS4 Permit, there are six awareness control programs that we are required to follow. They are:

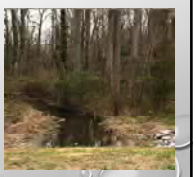
- Public Education and Outreach
- Public Participation and Involvement.
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post-Construction Runoff Control
- Pollution Prevention/Good Housekeeping

55



Public Education and Outreach

Reynolds Storm Water Management Awareness



56

Public Participation and Involvement.

57

Illicit Discharge Detection and Elimination

Such as: Vehicle pollutants, antifreeze, oil, grease and metals parts.

58

Construction Site Runoff Control

Potential pollutants from **Construction Site Pollutants**
• Sand • construction materials • stones • construction dust
• Pesticides and fertilizer•

59

Post-Construction Runoff Control

Involve cleaning up the construction site and protecting dust and other debris from getting swept into on storm inlets or roadways that will carry the construction debris into the inlets.

60

Pollution Prevention/Good Housekeeping is:

Daily cleaning of the roadways, sidewalks, and parking lots by the ground maintenance crew, keeping trash and other pollutant runoff from flowing into the area storm drain inlets.

61

7. Consequence of Non-Compliance

Failure to comply with DEQ storm water requirements could result into serious consequences

62

Consequence of Non-Compliance

Storm Water Violations Fines:

Negligent Violations: 1 year and/or $2,500 - 25,000 per day;

Subsequent convictions 2 years and/or $50,000 per day.

Knowing Violations: 3 years and/or $5,000 - 50,000 per day;

Subsequent convictions 6 years and/or $100,000 per day.

63

Consequence of Non-Compliance

Sample 1 - Storm Water Violation Fine:

Newport News

- Failed to monitor and control stormwater discharges from facilities and maintenance yards
- Failed to reduce pollutant discharges from MS4 system

Penalty
$115,000

64

Consequence of Non-Compliance

Sample 2 - Storm Water Violation Fine:

Chesterfield County

- Failed to implement and maintain BMPs
- Failed to operate in accordance with the County's Erosion and Sediment Control Ordinance

Penalty
$131,000

65

Consequence of Non-Compliance

Final Sample of Storm Water Violation Fine:

Henrico County

- Failed to manage illicit discharges
- Failed to manage stormwater discharges from all MS4 properties

Penalty

$164,300

66

Hazard Communication Standard
"The Right to Know Law"

Consequence of Non-Compliance

Knowing MS4 requirements and complying with them not only save our environment,

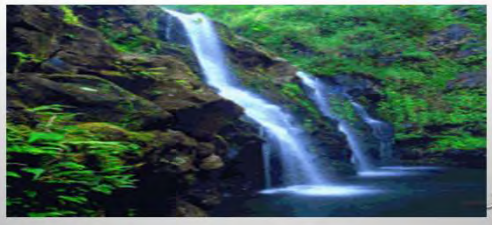
67

Consequence of Non-Compliance

It will also save us money by not paying heavy fines!

68

So, What Is In Your Water?



Storm Water Management Awareness

69

Appendix MCM 3

JSRCC Outfall Database
June 2019

Id	Location Description	Latitude	Longitude	MS4 Area Served (ac)	Receiving Water	HUC 12 of Receiving Water	Receiving Water Impaired?	Land Use	Chesapeake Bay TMDL?	Other TMDL?
01	Western corner of property, just South of Parham	37.638335	-77.476420	3.95	North Run	20802060403	Yes	Institutional	Yes	E. Coli
02	Western side of BMP adjacent to Parking Lot A	37.636863	-77.476754	12.38	North Run	20802060403	Yes	Institutional	Yes	E. Coli
03	Northern side of the Facilities Management BMP	37.635575	-77.474855	4.21	Unknown Tributary of Upham Brook	20802060403	Yes	Institutional	Yes	No
04	North of tributary, west of bridge over tributary	37.635928	-77.474579	0.62	Unknown Tributary of Upham Brook	20802060403	Yes	Institutional	Yes	No
05	West of Success Dr. @ tributary crossing on S side	37.635855	-77.473293	0.79	Unknown Tributary of Upham Brook	20802060403	Yes	Institutional	Yes	No
06	South of Parking Lot K outfalling to tributary	37.636119	-77.472824	1.08	Unknown Tributary of Upham Brook	20802060403	Yes	Institutional	Yes	No
07	Southwest of Parking Lot J outfalling to tributary	37.636237	-77.472577	9.35	Unknown Tributary of Upham Brook	20802060403	Yes	Institutional	Yes	No
09	West of football field/track, north of tennis courts	37.631652	-77.477209	8.04	North RUn	20802060403	Yes	Institutional	Yes	E. Coli
10	West of bridge	37.635915	-77.473763	0.34	Unknown Tributary of Upham Brook	20802060403	Yes	Institutional	Yes	No
11	East of bridge	37.635949	-77.473673	0.14	Unknown Tributary of Upham Brook	20802060403	Yes	Institutional	Yes	No

JSRCC Parham Campus
Illicit Discharge Detection Summary
Inspections Conducted on June 17, 2019

Outfall ID	Potential Illicit Discharge Detected?
1	No
2	No
3	No
4	No
5	No
6	No
7	No
9	No
10	No
11	No

Facilities Management and Planning
PO Box 85622, Richmond VA 23285
Phone: (804) 371-3000

Stormwater Outfall Inspection

Outfall ID: 01	Date: 06/17/2019	Time: 12:46	Inspector: MSW/MBM

LAST RAINFALL		
Depth (in): .72	End Date: 06/17/2019	End Time: 2:45pm
Weather history can be found at: https://www.wunderground.com/history/daily/us/va/glen-allen/KRIC/date/2019-7-1?cm_ven=localwx_history		

FLOW				
Present?	Yes	If yes:	Approx. discharge rate:	Trickle
			Approx. depth of flow (in):	0.05

POTENTIAL POLLUTANT INDICATORS			
Indicator	**Present?**	**Description**	**Relative Severity Index (1-3)**
Odor	No	NA	NA
Turbidity	No	See Severity Index	NA
Floatables	No	NA	NA
Deposits/Stains	No	NA	NA
Poor Pool Quality	No	NA	NA
Pipe Benthic Growth	Yes	Green	1

Notes:

CERTIFICATION:

If no suspected illicit discharge is identified, certify the following:

"I certify that the outfall inspection is complete and that no illicit discharge is evident at this time."

Signature

06/17/2019

Date

If an illicit discharge is suspected, immediately contact the Hotline at (804)-523-5224.

Facilities Management and Planning
PO Box 85622, Richmond VA 23285
Phone: (804) 371-3000

Stormwater Outfall Inspection

Outfall ID: 01	Date: 06/17/2019	Time: 12:46	Inspector: MSW/MBM

VICINITY MAP

-77.47649, 37.63838

PHOTOGRAPHS

If an illicit discharge is suspected, immediately contact the Hotline at (804)-523-5224.

Facilities Management and Planning
PO Box 85622, Richmond VA 23285
Phone: (804) 371-3000

Stormwater Outfall Inspection

Outfall ID: 02	Date: 06/17/2019	Time: 12:30	Inspector: MSW/MBM

LAST RAINFALL		
Depth (in): .72	End Date: 06/13/2019	End Time: 2:45pm
Weather history can be found at: https://www.wunderground.com/history/daily/us/va/glen-allen/KRIC/date/2019-7-1?cm_ven=localwx_history		

FLOW				
Present?	Yes	If yes:	Approx. discharge rate:	Trickle
			Approx. depth of flow (in):	0.1

POTENTIAL POLLUTANT INDICATORS			
Indicator	**Present?**	**Description**	**Relative Severity Index (1-3)**
Odor	No	NA	NA
Turbidity	No	See Severity Index	NA
Floatables	No	NA	NA
Deposits/Stains	No	NA	NA
Poor Pool Quality	No	NA	NA
Pipe Benthic Growth	No	NA	NA

Notes:

CERTIFICATION:

If no suspected illicit discharge is identified, certify the following:

"I certify that the outfall inspection is complete and that no illicit discharge is evident at this time."

_____ Signature

06/17/2019
_____ Date

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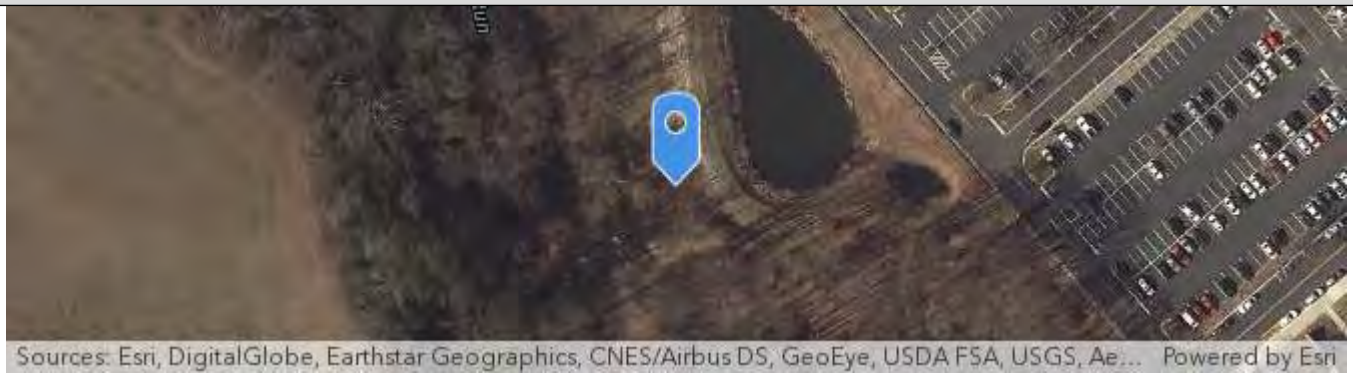
Facilities Management and Planning
PO Box 85622, Richmond VA 23285
Phone: (804) 371-3000

Stormwater Outfall Inspection

Outfall ID: 02	Date: 06/17/2019	Time: 12:30	Inspector: MSW/MBM

VICINITY MAP



-77.47678, 37.63677

PHOTOGRAPHS

If an illicit discharge is suspected, immediately contact the Hotline at (804)-523-5224.

Facilities Management and Planning
PO Box 85622, Richmond VA 23285
Phone: (804) 371-3000

Stormwater Outfall Inspection

Outfall ID: 03	Date: 06/17/2019	Time: 10:41	Inspector: MSW/MBM

LAST RAINFALL		
Depth (in): .72	End Date: 06/17/2019	End Time: 2:45pm
Weather history can be found at: https://www.wunderground.com/history/daily/us/va/glen-allen/KRIC/date/2019-7-1?cm_ven=localwx_history		

FLOW				
Present?	No	If yes:	Approx. discharge rate:	NA
			Approx. depth of flow (in):	NA

POTENTIAL POLLUTANT INDICATORS			
Indicator	**Present?**	**Description**	**Relative Severity Index (1-3)**
Odor	No	NA	NA
Turbidity	No	See Severity Index	NA
Floatables	No	NA	NA
Deposits/Stains	No	NA	NA
Poor Pool Quality	No	NA	NA
Pipe Benthic Growth	No	NA	NA

Notes:

CERTIFICATION:

If no suspected illicit discharge is identified, certify the following:

"I certify that the outfall inspection is complete and that no illicit discharge is evident at this time."

Signature

06/17/2019

Date

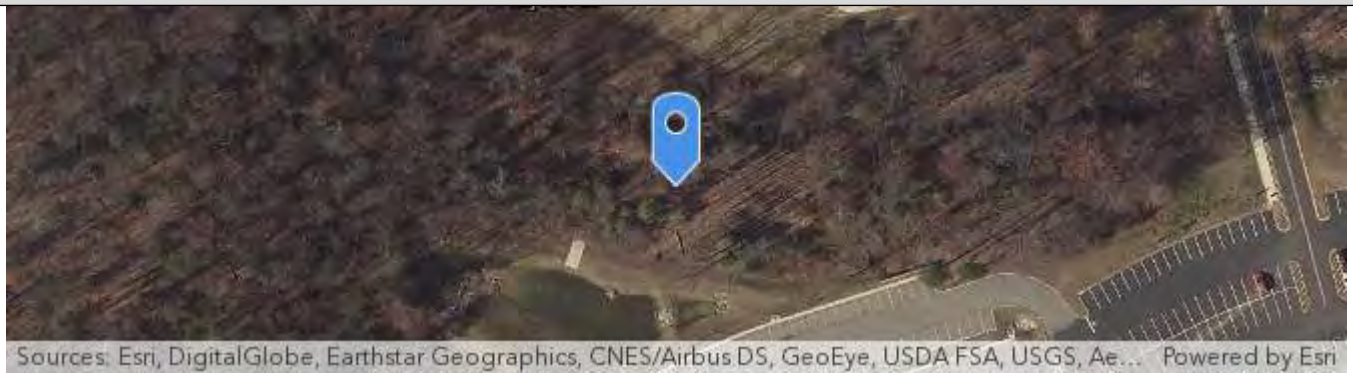
If an illicit discharge is suspected, immediately contact the Hotline at (804)-523-5224.

Facilities Management and Planning
PO Box 85622, Richmond VA 23285
Phone: (804) 371-3000

Stormwater Outfall Inspection

Outfall ID: 03	Date: 06/17/2019	Time: 10:41	Inspector: MSW/MBM

VICINITY MAP



-77.47474, 37.63571

PHOTOGRAPHS

If an illicit discharge is suspected, immediately contact the Hotline at (804)-523-5224.

Facilities Management and Planning
PO Box 85622, Richmond VA 23285
Phone: (804) 371-3000

Stormwater Outfall Inspection

Outfall ID: 04	Date: 06/17/2019	Time: 12:53	Inspector: MSW/MBM

LAST RAINFALL

Depth (in): .72	End Date: 06/13/2019	End Time: 2:45pm
Weather history can be found at: https://www.wunderground.com/history/daily/us/va/glen-allen/KRIC/date/2019-7-1?cm_ven=localwx_history		

FLOW

Present?	No	If yes:	Approx. discharge rate:	NA
			Approx. depth of flow (in):	NA

POTENTIAL POLLUTANT INDICATORS

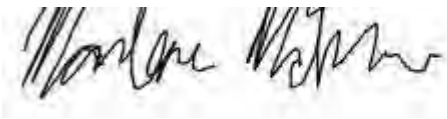
Indicator	Present?	Description	Relative Severity Index (1-3)
Odor	No	NA	NA
Turbidity	No	See Severity Index	NA
Floatables	No	NA	NA
Deposits/Stains	No	NA	NA
Poor Pool Quality	No	NA	NA
Pipe Benthic Growth	No	NA	NA

Notes:

CERTIFICATION:

If no suspected illicit discharge is identified, certify the following:

"I certify that the outfall inspection is complete and that no illicit discharge is evident at this time."



Signature

06/17/2019

Date

If an illicit discharge is suspected, immediately contact the Hotline at (804)-523-5224.

Facilities Management and Planning
PO Box 85622, Richmond VA 23285
Phone: (804) 371-3000

Stormwater Outfall Inspection

Outfall ID: 04	Date: 06/17/2019	Time: 12:53	Inspector: MSW/MBM

VICINITY MAP

-77.47445, 37.63609

PHOTOGRAPHS

If an illicit discharge is suspected, immediately contact the Hotline at (804)-523-5224.

Facilities Management and Planning
PO Box 85622, Richmond VA 23285
Phone: (804) 371-3000

Stormwater Outfall Inspection

Outfall ID: 05	Date: 06/17/2019	Time: 10:50	Inspector: MSW/MBM

LAST RAINFALL		
Depth (in): .72	End Date: 06/13/2019	End Time: 2:45pm
Weather history can be found at: https://www.wunderground.com/history/daily/us/va/glen-allen/KRIC/date/2019-7-1?cm_ven=localwx_history		

FLOW				
Present?	No	If yes:	Approx. discharge rate:	NA
			Approx. depth of flow (in):	NA

POTENTIAL POLLUTANT INDICATORS			
Indicator	**Present?**	**Description**	**Relative Severity Index (1-3)**
Odor	No	NA	NA
Turbidity	No	See Severity Index	NA
Floatables	No	NA	NA
Deposits/Stains	No	NA	NA
Poor Pool Quality	No	NA	NA
Pipe Benthic Growth	No	NA	NA

Notes:

CERTIFICATION:

If no suspected illicit discharge is identified, certify the following:

"I certify that the outfall inspection is complete and that no illicit discharge is evident at this time."

Signature

06/17/2019

Date

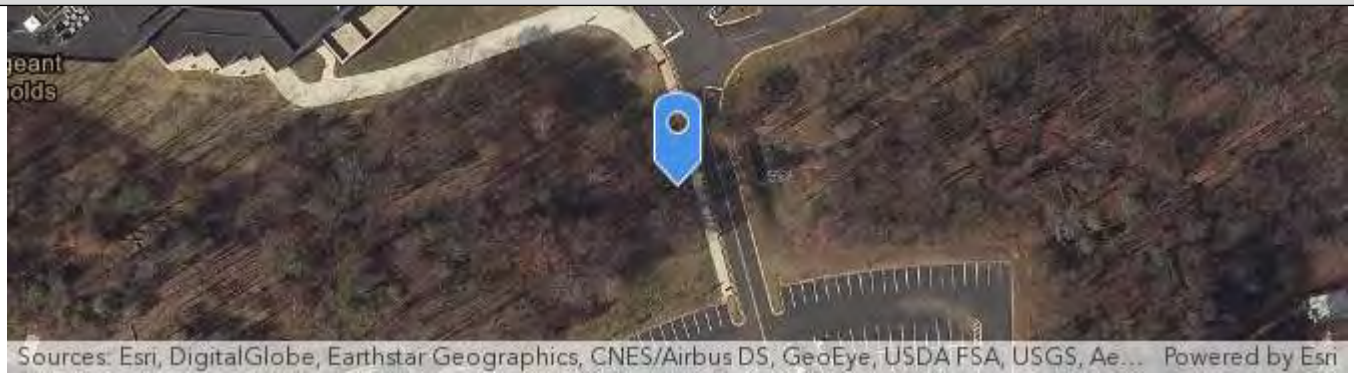
If an illicit discharge is suspected, immediately contact the Hotline at (804)-523-5224.

Facilities Management and Planning
PO Box 85622, Richmond VA 23285
Phone: (804) 371-3000

Stormwater Outfall Inspection

Outfall ID: 05	Date: 06/17/2019	Time: 10:50	Inspector: MSW/MBM

VICINITY MAP



-77.47327, 37.63591

PHOTOGRAPHS

If an illicit discharge is suspected, immediately contact the Hotline at (804)-523-5224.

Facilities Management and Planning
PO Box 85622, Richmond VA 23285
Phone: (804) 371-3000

Stormwater Outfall Inspection

Outfall ID: 06	Date: 06/17/2019	Time: 11:13	Inspector: MSW/MBW

LAST RAINFALL		
Depth (in): .72	End Date: 06/13/2019	End Time: 2:45pm
Weather history can be found at: https://www.wunderground.com/history/daily/us/va/glen-allen/KRIC/date/2019-7-1?cm_ven=localwx_history		

FLOW				
Present?	No	If yes:	Approx. discharge rate:	NA
			Approx. depth of flow (in):	NA

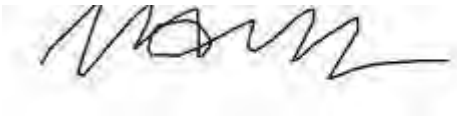
POTENTIAL POLLUTANT INDICATORS			
Indicator	**Present?**	**Description**	**Relative Severity Index (1-3)**
Odor	No	NA	NA
Turbidity	No	See Severity Index	NA
Floatables	No	NA	NA
Deposits/Stains	No	NA	NA
Poor Pool Quality	No	NA	NA
Pipe Benthic Growth	No	NA	NA

Notes:
Large tree recently fell on outfall.

CERTIFICATION:

If no suspected illicit discharge is identified, certify the following:

"I certify that the outfall inspection is complete and that no illicit discharge is evident at this time."



Signature

06/17/2019
Date

If an illicit discharge is suspected, immediately contact the Hotline at (804)-523-5224.

Facilities Management and Planning
PO Box 85622, Richmond VA 23285
Phone: (804) 371-3000

Stormwater Outfall Inspection

Outfall ID: 06	Date: 06/17/2019	Time: 11:13	Inspector: MSW/MBW

VICINITY MAP

-77.47296, 37.63606

PHOTOGRAPHS

If an illicit discharge is suspected, immediately contact the Hotline at (804)-523-5224.

Facilities Management and Planning
PO Box 85622, Richmond VA 23285
Phone: (804) 371-3000

Stormwater Outfall Inspection

Outfall ID: 07	Date: 06/17/2019	Time: 11:06	Inspector: MSW/MBM

LAST RAINFALL

Depth (in): .72	End Date: 06/13/2019	End Time: 2:45pm
Weather history can be found at: https://www.wunderground.com/history/daily/us/va/glen-allen/KRIC/date/2019-7-1?cm_ven=localwx_history		

FLOW

Present?	Yes	If yes:	Approx. discharge rate:	Trickle
			Approx. depth of flow (in):	0.1

POTENTIAL POLLUTANT INDICATORS

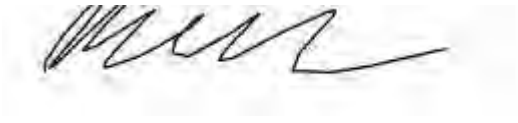
Indicator	Present?	Description	Relative Severity Index (1-3)
Odor	No	NA	NA
Turbidity	No	See Severity Index	NA
Floatables	No	NA	NA
Deposits/Stains	No	NA	NA
Poor Pool Quality	No	NA	NA
Pipe Benthic Growth	Yes	Green	1

Notes:

CERTIFICATION:

If no suspected illicit discharge is identified, certify the following:

"I certify that the outfall inspection is complete and that no illicit discharge is evident at this time."



Signature

06/17/2019

Date

If an illicit discharge is suspected, immediately contact the Hotline at (804)-523-5224.

Facilities Management and Planning
PO Box 85622, Richmond VA 23285
Phone: (804) 371-3000

Stormwater Outfall Inspection

Outfall ID: 07	Date: 06/17/2019	Time: 11:06	Inspector: MSW/MBM

VICINITY MAP

-77.47255, 37.63619

PHOTOGRAPHS

If an illicit discharge is suspected, immediately contact the Hotline at (804)-523-5224.

Facilities Management and Planning
PO Box 85622, Richmond VA 23285
Phone: (804) 371-3000

Stormwater Outfall Inspection

Outfall ID: 09	Date: 06/17/2019	Time: 10:01	Inspector: MSW/MBM

LAST RAINFALL		
Depth (in): .72	End Date: 06/17/2019	End Time: 2:45pm
Weather history can be found at: https://www.wunderground.com/history/daily/us/va/glen-allen/KRIC/date/2019-7-1?cm_ven=localwx_history		

FLOW				
Present?	Yes	If yes:	Approx. discharge rate:	Moderate
			Approx. depth of flow (in):	3.75

POTENTIAL POLLUTANT INDICATORS

Indicator	Present?	Description	Relative Severity Index (1-3)
Odor	No	NA	NA
Turbidity	No	See Severity Index	NA
Floatables	No	NA	NA
Deposits/Stains	No	NA	NA
Poor Pool Quality	No	NA	NA
Pipe Benthic Growth	No	NA	NA

Notes:
Pipe is full of sed and is back watered.

CERTIFICATION:

If no suspected illicit discharge is identified, certify the following:

"I certify that the outfall inspection is complete and that no illicit discharge is evident at this time."

Signature

06/17/2019
Date

If an illicit discharge is suspected, immediately contact the Hotline at (804)-523-5224.

Facilities Management and Planning
PO Box 85622, Richmond VA 23285
Phone: (804) 371-3000

Stormwater Outfall Inspection

Outfall ID: 09	Date: 06/17/2019	Time: 10:01	Inspector: MSW/MBM

VICINITY MAP

-77.47726, 37.63171

PHOTOGRAPHS

If an illicit discharge is suspected, immediately contact the Hotline at (804)-523-5224.

Facilities Management and Planning
PO Box 85622, Richmond VA 23285
Phone: (804) 371-3000

Stormwater Outfall Inspection

Outfall ID: 10	Date: 06/17/2019	Time: 10:59	Inspector: MSW/MBM

LAST RAINFALL		
Depth (in): .72	End Date: 06/13/2019	End Time: 2:45pm
Weather history can be found at: https://www.wunderground.com/history/daily/us/va/glen-allen/KRIC/date/2019-7-1?cm_ven=localwx_history		

FLOW				
Present?	No	If yes:	Approx. discharge rate:	NA
			Approx. depth of flow (in):	NA

POTENTIAL POLLUTANT INDICATORS			
Indicator	**Present?**	**Description**	**Relative Severity Index (1-3)**
Odor	No	NA	NA
Turbidity	No	See Severity Index	NA
Floatables	No	NA	NA
Deposits/Stains	No	NA	NA
Poor Pool Quality	No	NA	NA
Pipe Benthic Growth	No	NA	NA

Notes:

CERTIFICATION:

If no suspected illicit discharge is identified, certify the following:

"I certify that the outfall inspection is complete and that no illicit discharge is evident at this time."

Signature

06/17/2019

Date

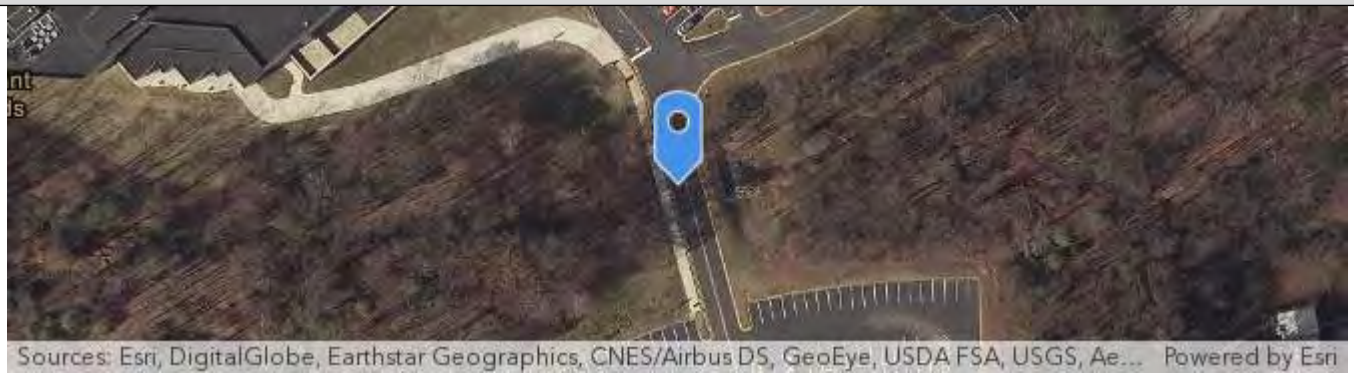
If an illicit discharge is suspected, immediately contact the Hotline at (804)-523-5224.

Facilities Management and Planning
PO Box 85622, Richmond VA 23285
Phone: (804) 371-3000

Stormwater Outfall Inspection

Outfall ID: 10	Date: 06/17/2019	Time: 10:59	Inspector: MSW/MBM

VICINITY MAP



-77.47319, 37.63595

PHOTOGRAPHS

If an illicit discharge is suspected, immediately contact the Hotline at (804)-523-5224.

Facilities Management and Planning
PO Box 85622, Richmond VA 23285
Phone: (804) 371-3000

Stormwater Outfall Inspection

Outfall ID: 11	Date: 06/17/2019	Time: 10:59	Inspector: MSW/MBM

LAST RAINFALL

Depth (in): .72	End Date: 06/13/2019	End Time: 2:45pm
Weather history can be found at: https://www.wunderground.com/history/daily/us/va/glen-allen/KRIC/date/2019-7-1?cm_ven=localwx_history		

FLOW

Present?	No	If yes:	Approx. discharge rate:	NA
			Approx. depth of flow (in):	NA

POTENTIAL POLLUTANT INDICATORS

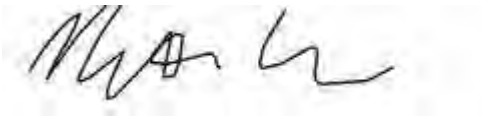
Indicator	Present?	Description	Relative Severity Index (1-3)
Odor	No	NA	NA
Turbidity	No	See Severity Index	NA
Floatables	No	NA	NA
Deposits/Stains	No	NA	NA
Poor Pool Quality	No	NA	NA
Pipe Benthic Growth	No	NA	NA

Notes:
New to database.

CERTIFICATION:

If no suspected illicit discharge is identified, certify the following:

"I certify that the outfall inspection is complete and that no illicit discharge is evident at this time."



Signature

06/17/2019

Date

If an illicit discharge is suspected, immediately contact the Hotline at (804)-523-5224.

Facilities Management and Planning
PO Box 85622, Richmond VA 23285
Phone: (804) 371-3000

Stormwater Outfall Inspection

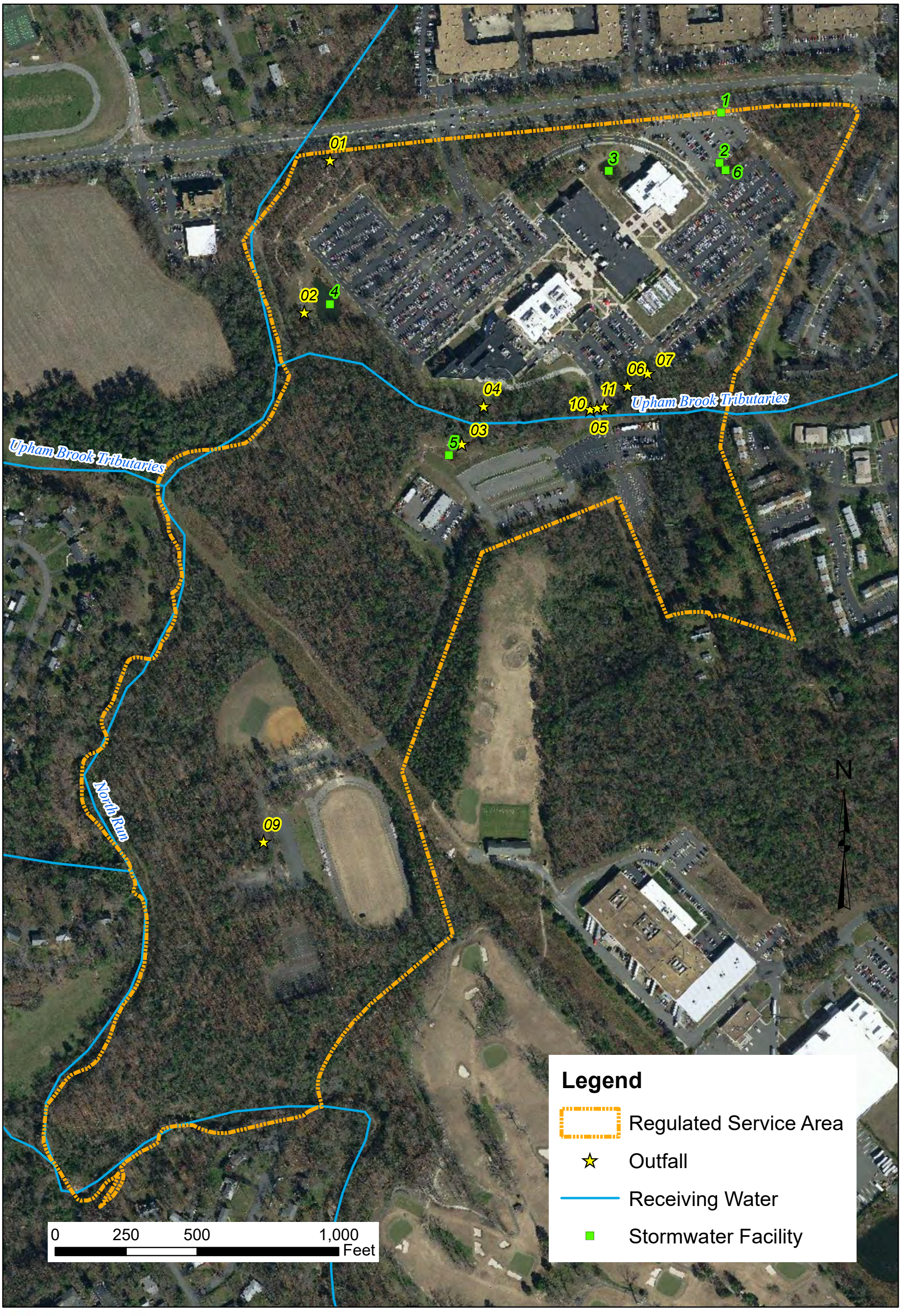
Outfall ID: 11	Date: 06/17/2019	Time: 10:59	Inspector: MSW/MBM

VICINITY MAP

-77.47313, 37.63597

PHOTOGRAPHS

If an illicit discharge is suspected, immediately contact the Hotline at (804)-523-5224.



Reynolds COMMUNITY COLLEGE

MS4 Map
June 2019

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

Appendix MCM 4

Madeline Manning

From: Michael S. Verdú <MVerdu@reynolds.edu>
Sent: Thursday, June 13, 2019 12:02 PM
To: Aislinn Creel; Matthew Webb
Subject: RE: JSRCC E&F Trailer MS4

Follow Up Flag: Follow up
Flag Status: Flagged

Demo work was less than two weeks and there are no drain inlets in the area to overflow into.

Thank you.

From: Aislinn Creel <Aislinn.Creel@timmons.com>
Sent: Thursday, June 13, 2019 11:55 AM
To: Michael S. Verdú <MVerdu@reynolds.edu>; Matthew Webb <Matthew.Webb@timmons.com>
Subject: RE: JSRCC E&F Trailer MS4

Michael,

According to the VCCS AS&S, the E&S inspections should be performed by VCCS for any land disturbance >2,500 SF:

> *4.2.1 Inspections*
> *VCCS will perform inspections on all projects subject to the VCCS AS&S. The individual performing inspections on behalf of the VCCS shall be certified as an ESC and SWM Inspector, as applicable, in accordance with the ES C and SWM Certification Regulations (9VAC25-*
> *850). Where a VAR10 is required, VCCS inspections are in addition to the VAR10 permittee's inspection require ments described in the SWPPP. The applicable inspection report provided in Appendix E shall be completed by t he inspector on each inspection and a copy provided to the appropriate individual identified on the Preconstructi on Form, provided in Appendix D-2, within 2 business days.*

For the MS4 Annual Report, JSRCC is required to provide a confirmation statement that the AS&S were followed, and report on the total number of inspections conducted and any associated enforcement actions.

> *d. The annual report shall include the following:*
> *(1) If the permittee implements a construction site stormwater runoff program in accordance with Part I E 4 a (3):*
> *(a) A confirmation statement that land disturbing projects that occurred during the reporting period have been conducted in accordance with the current department approved standards and specifications for erosion and sediment control; and*
> *(b) If one or more of the land disturbing projects were not conducted with the department approved standards and specifications, an explanation as to why the projects did not conform to the approved standards and specifications.*
> *(2) Total number of inspections conducted; and*
> *(3) The total number and type of enforcement actions implemented and the type of enforcement actions.*

If no inspections occurred, perhaps it was because the land disturbance was less than 2 weeks, or perhaps satisfied the criteria for the alternative inspection schedule provided in Section 4.2.2 of the AS&S, which allows for a reduced

frequency if the ground is frozen, or stormwater discharges were unlikely? I'm not all that familiar with the project, but Matt and I could draft wording if you think the latter is the case?

Thanks,
Aislinn

Aislinn Creel, PE, LEED AP
Sr. Project Manager

TIMMONS GROUP | www.timmons.com
1001 Boulders Parkway, Suite 300 | Richmond, VA 23225
Office: 804.200.6432 | Fax: 804.560.1438
Mobile: 804.647.7388 | aislinn.creel@timmons.com
Your Vision Achieved Through Ours
To send me files greater than 20MB click here.

From: Michael S. Verdú <MVerdu@reynolds.edu>
Sent: Wednesday, June 12, 2019 11:39 AM
To: Matthew Webb <Matthew.Webb@timmons.com>; Aislinn Creel <Aislinn.Creel@timmons.com>
Subject: FW: JSRCC E&F Trailer MS4

Does this suffice for the MS4 report?

Thank you.

From: Trelane M. B. Oun <toun@brockenbrough.com>
Sent: Wednesday, June 12, 2019 11:08 AM
To: Michael S. Verdú <MVerdu@reynolds.edu>; Daniel Jewett <djewett@vccs.edu>
Cc: Matthew Webb <Matthew.Webb@timmons.com>; Aislinn Creel <Aislinn.Creel@timmons.com>; Matthew E. Thompson Sr <MThompson@reynolds.edu>
Subject: RE: JSRCC E&F Trailer MS4

Michael,

E&SC inspections by the contractor should have occurred since an E&SC plan is required because land disturbance is greater than 2,500 square feet. But, I have no knowledge of whether E&SC inspections were done by the contractor.

The VCCS Annual Standards and Specifications has a land disturbance preconstruction meeting form that says "prepared site-specific and completed SWPPP for land disturbance of an acre or greater." If a SWPPP is not required, then the SWPPP inspections are also not required.

Trelane M. B. Oun, PE
Civil Engineer

Austin Brockenbrough & Associates, LLP
1011 Boulder Springs Drive, Suite 200 | Richmond, Virginia 23225
804.592.3916 direct | 804.592.3900 main

From: Michael S. Verdú <MVerdu@reynolds.edu>
Sent: Wednesday, June 12, 2019 10:59 AM
To: Trelane M. B. Oun <toun@brockenbrough.com>; Daniel Jewett <djewett@vccs.edu>
Cc: Matthew Webb <Matthew.Webb@timmons.com>; Aislinn Creel <Aislinn.Creel@timmons.com>; Matthew E. Thompson Sr <MThompson@reynolds.edu>
Subject: RE: JSRCC E&F Trailer MS4

It was my understanding that since we are in the Chesapeake watershed any disturbance over 2,500 SF required SWPPP.

Thank you.

From: Trelane M. B. Oun <toun@brockenbrough.com>
Sent: Wednesday, June 12, 2019 9:49 AM
To: Michael S. Verdú <MVerdu@reynolds.edu>; Daniel Jewett <djewett@vccs.edu>
Cc: Matthew Webb <Matthew.Webb@timmons.com>; Aislinn Creel <Aislinn.Creel@timmons.com>; Matthew E. Thompson Sr <MThompson@reynolds.edu>
Subject: RE: JSRCC E&F Trailer MS4

Michael,

SWPPP inspections are not applicable since the land disturbance was less than 1 acre. I have no knowledge of E&SC inspections that should have occurred.

Trelane M. B. Oun, PE
Civil Engineer

Austin Brockenbrough & Associates, LLP
1011 Boulder Springs Drive, Suite 200 | Richmond, Virginia 23225
804.592.3916 direct | 804.592.3900 main

From: Michael S. Verdú <MVerdu@reynolds.edu>
Sent: Tuesday, June 11, 2019 3:37 PM
To: Daniel Jewett <djewett@vccs.edu>; Trelane M. B. Oun <toun@brockenbrough.com>
Cc: Matthew Webb <Matthew.Webb@timmons.com>; Aislinn Creel <Aislinn.Creel@timmons.com>; Matthew E. Thompson Sr <MThompson@reynolds.edu>
Subject: JSRCC E&F Trailer MS4

Can either of you send us the SWPPP and E&S inspections related to the E&F trailer demo? We need for our DEQ report.

Michael S. Verdú, MBA

Director of Facilities Management & Planning

Reynolds
COMMUNITY COLLEGE

P. O. Box 85622
Richmond, VA 23285-5622
Phone (804) 523-5790 Fax (804) 371-3049

Appendix MCM 5

Facilities Management and Planning
PO Box 85622
Richmond, VA 23285
Phone: (804)371-3000

Filterra
Inspection & Maintenance Checklist

Date: 06/17/2019			**Inspector Name:** MSW/MBM		
Type of BMP: Curb inlet Filterra			**Inspection Date:** 06/17/2019		
BMP ID #: 1			**Filterra Size:** 6' x 6'		
Component			**Comments:**		
Initial Observations					
Standing Water?	Y☐	N☑			
Damage to Box Structure?	Y☐	N☑			
Damage to Grate?	Y☐	N☑			
Is Bypass Clear?	Y☑	N☐			
Waste					
Silt/Clay	Y☑	N☐			
Cups/Bags/Trash	Y☐	N☑			
Leaves	Y☑	N☐			
Other	Y☑	N☐			
Media					
Depth from Top of Slab to Surface of Mulch (in.)	11		Note: If depth from top of slab to surface of mulch exceeds 14", mulch is added until the depth of 14" is achieved.		
Mulch					
Netting in Need of Replacement?	Y☐	N☐	Mulch Replacement or Addition Necessary?	Y☑ N☐	Amount of Mulch Addition or Replacement Needed (in.): TBD
Stones in Need of Replacement?	Y☑	N☐	Type of Mulch to Be Added or Replaced? Undyed, double shredded hardwood.		
Plantings					
Plant Information	#1	#2	Note: #1 indicates the plant to the left facing the throat of the inlet and #2 represents the plant to the right facing the throat of the inlet.	#1	#2
Height Above Grate? (ft.)	9	_____	Health of plant(s)	Alive	_____
Stem Diameter/Caliper?	3	_____	Damage to plant(s)?	No	_____
Width at Widest Point? (ft.)	12	_____	Plant(s) replaced?	No	_____

Facilities Management and Planning
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Phone: (804)371-3000

Notes:
Can't tell if energy dissipation stones are missing or hidden by sediment accumulation. Can see high water mark inside unit. Recommended to remove existing mulch and top layer of fines (including any intermixed media). A top layer of fines may eventually clog and render Filterra ineffective. Additional media may need to be added if significant amounts are intermixed with fines and need to be removed. Replenish with fresh mulch after maintenance is performed. See manufacturer's Operation and Maintenance manual for additional information.

Certification:

If no maintenance is required, certify the following:

"I certify that the inspection is complete and that no action is necessary at this time."

_____ _____

Signature of Inspector **Date**

If maintenance is required, provide a time frame for maintenance completion: Prior to next inspection.
Upon maintenance completion, re-inspect and certify the following:

"I certify that all recommended maintenance is complete and no additional action is necessary at this time."

_____ _____

Signature of Inspector **Date**

Next inspection date: Fall 2019

Facilities Management and Planning
PO Box 85622
Richmond, VA 23285
Phone: (804)371-3000

Photos:

Overall

Close-up of partially blocked curb inlet throat

Facilities Management and Planning
PO Box 85622
Richmond, VA 23285
Phone: (804)371-3000

Accumulation of leaves/organic fines and lack of mulch

Facilities Management and Planning
PO Box 85622
Richmond, VA 23285
Phone: (804)371-3000

Filterra
Inspection & Maintenance Checklist

Date: 06/17/2019			**Inspector Name:** MSW/MBM		
Type of BMP: Filterra			**Inspection Date:** 06/17/2019		
BMP ID #: 2			**Filterra Size:** 6' x 4'		
Component			**Comments:**		
Initial Observations					
Standing Water?	Y☐	N☑			
Damage to Box Structure?	Y☐	N☑			
Damage to Grate?	Y☐	N☑			
Is Bypass Clear?	Y☑	N☐			
Waste					
Silt/Clay	Y☑	N☐			
Cups/Bags/Trash	Y☐	N☑			
Leaves	Y☑	N☐			
Other	Y☑	N☐			
Media					
Depth from Top of Slab to Surface of Mulch (in.)	12.5		Note: If depth from top of slab to surface of mulch exceeds 14", mulch is added until the depth of 14" is achieved.		
Mulch					
Netting in Need of Replacement?	Y☐	N☐	Mulch Replacement or Addition Necessary?	Y☑ N☐	Amount of Mulch Addition or Replacement Needed (in.): TBD
Stones in Need of Replacement?	Y☐	N☑	Type of Mulch to Be Added or Replaced? Undyed, double shredded hardwood.		
Plantings					
Plant Information	#1	#2	Note: #1 indicates the plant to the left facing the throat of the inlet and #2 represents the plant to the right facing the throat of the inlet.	#1	#2
Height Above Grate? (ft.)	10		Health of plant(s)	Alive	
Stem Diameter/Caliper?	3.5		Damage to plant(s)?	No	
Width at Widest Point? (ft.)	12		Plant(s) replaced?	No	

Facilities Management and Planning
PO Box 85622
Richmond, VA 23285
Phone: (804)371-3000

Notes:
Can't tell if energy dissipation stones are missing or hidden by sediment accumulation. Can see high water mark inside unit. Recommended to remove existing mulch and top layer of fines (including any intermixed media). A top layer of fines may eventually clog and render Filterra ineffective. Additional media may need to be added if significant amounts are intermixed with fines and need to be removed. Replenish with fresh mulch after maintenance is performed. See manufacturer's Operation and Maintenance manual for additional information. Tree may need to be pruned so that it does not encroach on parked vehicles.

Certification:

If no maintenance is required, certify the following:

"I certify that the inspection is complete and that no action is necessary at this time."

_____ _____

Signature of Inspector **Date**

If maintenance is required, provide a time frame for maintenance completion: Prior to next inspection
Upon maintenance completion, re-inspect and certify the following:

"I certify that all recommended maintenance is complete and no additional action is necessary at this time."

_____ _____

Signature of Inspector **Date**

Next inspection date: Fall 2019

Facilities Management and Planning
PO Box 85622
Richmond, VA 23285
Phone: (804)371-3000

Photos:

Overall

Accumulation of leaves and organic fines. Lack of mulch

Facilities Management and Planning
PO Box 85622
Richmond, VA 23285
Phone: (804)371-3000

Detention, Retention, & Impoundment BMP

Inspection & Maintenance Checklist

Date: 06/17/2019			**Inspector Name:** MSW/MBM	
			Inspection Date: 06/17/2019	
BMP ID #: 3			**Type of BMP:** Extended Retention Basin	
Component:	**Yes**	**No**	**N/A**	**Comments:**
I. Embankment				
A. Top				
1. Visual settlement	☐	☐	☑	
2. Misalignment	☐	☐	☑	
3. Cracking	☐	☐	☑	
B. Upstream Slope				
1. Erosion	☐	☐	☑	
2. Adequate groundcover	☐	☐	☑	
3. Trees, shrubs, or other vegetation	☐	☐	☑	
4. Cracks, settlements, or bulges	☐	☐	☑	
5. Rodent holes	☐	☐	☑	
C. Downstream Slope				
1. Erosion	☐	☐	☑	
2. Adequate groundcover	☐	☐	☑	
3. Trees, shrubs, or other vegetation	☐	☐	☑	
4. Cracks, settlements, or bulges	☐	☐	☑	
5. Rodent holes	☐	☐	☑	
E. Drainage/seepage control				
1. Internal drains flowing	☐	☐	☑	
2. Seepage at toe	☐	☐	☑	
II. Emergency Spillway				
1. Eroding or backcutting	☐	☐	☑	
2. Obstruction	☐	☐	☑	

Facilities Management and Planning
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Phone: (804)371-3000

Component:	Yes	No	N/A	Comments:
3. Leaking	☐	☐	☑	
4. Operational	☐	☐	☑	
III. Principal Spillway Barrel				
1. Seepage into pipe	☐	☑	☐	
2. Debris present	☐	☑	☐	
3. Displaced or offset joints	☐	☑	☐	
IV. Outlet Protection/Stilling Basin				Basin discharges to storm sewer.
1. Obstruction	☐	☐	☑	
2. Adequate riprap	☐	☐	☑	
3. Undercutting at the outlet	☐	☐	☑	
4. Outlet channel scour	☐	☐	☑	
V. Internal Basin Area				Inflow pipes not visible due to high water level. Basin should normally be dry but holds water. There is excessive surface and sub-surface algae
A. Low Flow Channel*				
1. Erosion	☐	☑	☐	
2. Adequate vegetation	☑	☐	☐	
3. Obstruction	☐	☑	☐	
B. Basin Bottom & Side Slopes				
1. Erosion	☐	☑	☐	
2. Adequate stabilization	☐	☐	☑	
3. Sediment accumulation	☐	☑	☐	
4. Floating debris	☐	☑	☐	
5. High water marks	☐	☑	☐	
6. Shoreline protection	☐	☑	☐	
C. Inflow Channels/Pipes				
1. Erosion	☐	☑	☐	
2. Adequate stabilization	☑	☐	☐	

Facilities Management and Planning
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Richmond, VA 23285
Phone: (804)371-3000

Component:	Yes	No	N/A	Comments:
3. Undercutting	☐	☑	☐	Forebay is likely full of sediment.
4. Obstruction	☐	☑	☐	
D. Sediment Forebay				
1. Sediment accumulation	☐	☑	☐	
2. Stable overflow into basin	☐	☑	☐	
E. Upland Landscaping				
F. Aquatic Landscaping				
*Only applies to Extended Detention Facilities				

Notes:
Basin is designed as a dry detention basin but permanently holds water. Owner is in the process of evaluating alternatives.

Certification:

If No maintenance is required, certify the following:

"I certify that the inspection is complete and that No action is necessary at this time."

Signature of Inspector **Date**

If maintenance is required, provide a time frame for maintenance completion: As soon as possible
Upon maintenance completion, re-inspect and certify the following:

"I certify that all recommended maintenance is complete and No additional action is necessary at this time."

Signature of Inspector **Date**

Next inspection date: Spring 2020

Facilities Management and Planning
PO Box 85622
Richmond, VA 23285
Phone: (804)371-3000

Photos:

Overall

Submerged inlet

Facilities Management and Planning
PO Box 85622
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Phone: (804)371-3000

Flooded inlet, side view

Trash rack on top of riser

Facilities Management and Planning
PO Box 85622
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Inside riser

Surface algae

Facilities Management and Planning
PO Box 85622
Richmond, VA 23285
Phone: (804)371-3000

Detention, Retention, & Impoundment BMP

J. Sargeant Reynolds Community College Inspection & Maintenance Checklist

Date: 06/17/2019			**Inspector Name:** MSW	
			Inspection Date: 06/17/2019	
BMP ID #: 4			**Type of BMP:** Retention Pond	
Component:	**Yes**	**No**	**N/A**	**Comments:**
I. Embankment				None.
A. Top				
1. Visual settlement	☐	☑	☐	
2. Misalignment	☐	☑	☐	
3. Cracking	☐	☑	☐	
B. Upstream Slope				
1. Erosion	☐	☑	☐	
2. Adequate groundcover	☑	☐	☐	
3. Trees, shrubs, or other vegetation	☑	☐	☐	
4. Cracks, settlements, or bulges	☐	☑	☐	
5. Rodent holes	☐	☑	☐	
C. Downstream Slope				
1. Erosion	☐	☑	☐	
2. Adequate groundcover	☑	☐	☐	
3. Trees, shrubs, or other vegetation	☑	☐	☐	
4. Cracks, settlements, or bulges	☐	☑	☐	
5. Rodent holes	☐	☑	☐	
D. Drainage/seepage control				
1. Internal drains flowing	☐	☐	☑	
2. Seepage at toe	☐	☑	☐	
II. Emergency Spillway				None.
1. Eroding or backcutting	☐	☑	☐	
2. Obstruction	☐	☑	☐	

Facilities Management and Planning
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Richmond, VA 23285
Phone: (804)371-3000

Component:	Yes	No	N/A	Comments:
3. Leaking	☐	☑	☐	
4. Operational	☑	☐	☐	
III. Principal Spillway Barrel				None.
1. Seepage into pipe	☐	☑	☐	
2. Debris present	☐	☑	☐	
3. Displaced or offset joints	☐	☑	☐	
IV. Outlet Protection/Stilling Basin				None.
1. Obstruction	☐	☑	☐	
2. Adequate riprap	☑	☐	☐	
3. Undercutting at the outlet	☐	☑	☐	
4. Outlet channel scour	☐	☑	☐	
V. Internal Basin Area				
A. Low Flow Channel*				
1. Erosion	☐	☐	☑	
2. Adequate vegetation	☑	☐	☐	
3. Obstruction	☐	☑	☐	
B. Basin Bottom & Side Slopes				
1. Erosion	☐	☑	☐	
2. Adequate stabilization	☑	☐	☐	
3. Sediment accumulation	☐	☑	☐	
4. Floating debris	☐	☑	☐	
5. High water marks	☐	☑	☐	
6. Shoreline protection	☑	☐	☐	
C. Inflow Channels/Pipes				
1. Erosion	☐	☑	☐	
2. Adequate stabilization	☑	☐	☐	

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Component:	Yes	No	N/A	Comments:
3. Undercutting	☐	☑	☐	
4. Obstruction	☐	☑	☐	
D. Sediment Forebay				
1. Sediment accumulation	☐	☑	☐	
2. Stable overflow into basin	☑	☐	☐	
E. Upland Landscaping				
F. Aquatic Landscaping				
*Only applies to Extended Detention Facilities				

Notes:
Continue efforts to remove woody vegetation from basin side slopes and basin embankment. Clear vegetation from immediately around riser to reduce trash rack clogging risk. Clear overgrown vegetation from around north inlet.

Certification:

If No maintenance is required, certify the following:

"I certify that the inspection is complete and that No action is necessary at this time."

Signature of Inspector **Date**

_____ _____

If maintenance is required, provide a time frame for maintenance completion: Prior to next inspection.
Upon maintenance completion, re-inspect and certify the following:

"I certify that all recommended maintenance is complete and No additional action is necessary at this time."

Signature of Inspector **Date**

_____ _____

Next inspection date: Spring 2020

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Photos:

Overall

South forebay

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South inlet

Outlet

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Riser

Emergency spillway

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Emergency spillway

View of north inlet from

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North inlet

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Detention, Retention, & Impoundment BMP

Inspection & Maintenance Checklist

Date: 06/17/2019			**Inspector Name:** MSW/MBM	
			Inspection Date: 06/17/2019	
BMP ID #: 5			**Type of BMP:** Extended Detention Basin	
Component:	**Yes**	**No**	**N/A**	**Comments:**
I. Embankment				None.
A. Top				
1. Visual settlement	☐	☑	☐	
2. Misalignment	☐	☑	☐	
3. Cracking	☐	☑	☐	
B. Upstream Slope				
1. Erosion	☐	☑	☐	
2. Adequate groundcover	☑	☐	☐	
3. Trees, shrubs, or other vegetation	☐	☑	☐	
4. Cracks, settlements, or bulges	☐	☑	☐	
5. Rodent holes	☐	☑	☐	
C. Downstream Slope				
1. Erosion	☐	☑	☐	
2. Adequate groundcover	☑	☐	☐	
3. Trees, shrubs, or other vegetation	☐	☑	☐	
4. Cracks, settlements, or bulges	☐	☑	☐	
5. Rodent holes	☐	☑	☐	
E. Drainage/seepage control				
1. Internal drains flowing	☐	☐	☑	
2. Seepage at toe	☐	☑	☐	
II. Emergency Spillway				None.
1. Eroding or backcutting	☐	☑	☐	
2. Obstruction	☐	☑	☐	

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Component:	Yes	No	N/A	Comments:
3. Leaking	☐	☑	☐	
4. Operational	☑	☐	☐	
III. Principal Spillway Barrel				None.
1. Seepage into pipe	☐	☑	☐	
2. Debris present	☐	☑	☐	
3. Displaced or offset joints	☐	☑	☐	
IV. Outlet Protection/Stilling Basin				Outlet and outlet channel are overgrown.
1. Obstruction	☑	☐	☐	
2. Adequate riprap	☑	☐	☐	
3. Undercutting at the outlet	☐	☑	☐	
4. Outlet channel scour	☐	☑	☐	
V. Internal Basin Area				There is overgrown vegetation around the riser.
A. Low Flow Channel*				
1. Erosion	☐	☐	☑	
2. Adequate vegetation	☐	☐	☑	
3. Obstruction	☐	☐	☑	
B. Basin Bottom & Side Slopes				
1. Erosion	☐	☑	☐	
2. Adequate stabilization	☑	☐	☐	
3. Sediment accumulation	☐	☑	☐	
4. Floating debris	☐	☑	☐	
5. High water marks	☐	☑	☐	
6. Shoreline protection	☐	☐	☑	
C. Inflow Channels/Pipes				
1. Erosion	☐	☑	☐	
2. Adequate stabilization	☑	☐	☐	

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Component:	Yes	No	N/A	Comments:
3. Undercutting	☐	☑	☐	None.
4. Obstruction	☐	☑	☐	
D. Sediment Forebay				
1. Sediment accumulation	☐	☑	☐	
2. Stable overflow into basin	☑	☐	☐	
E. Upland Landscaping				
F. Aquatic Landscaping				
*Only applies to Extended Detention Facilities				

Notes:
Clear vegetation from around riser structure to reduce risk of clogged orifices. Cut back vegetation at outlet end wall and along outlet channel. Continue to monitor accumulated sediment in check dams which may eventually lead to ponding water in some basin components.

Certification:

If No maintenance is required, certify the following:

"I certify that the inspection is complete and that No action is necessary at this time."

Signature of Inspector **Date**

_____ _____

If maintenance is required, provide a time frame for maintenance completion: Prior to next inspection
Upon maintenance completion, re-inspect and certify the following:

"I certify that all recommended maintenance is complete and No additional action is necessary at this time."

Signature of Inspector **Date**

_____ _____

Next inspection date: Spring 2020

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Photos:

Inlet swale

Inlet rip-rap and swale

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Level spreader to west forebay

Embankment

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Riser with low-flow orifices

East forebay

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Accumulated sediment in riprap

Outlet

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Phone: (804)371-3000

Detention, Retention, & Impoundment BMP

Inspection & Maintenance Checklist

Date: 06/17/2019			**Inspector Name:** MSW	
			Inspection Date: 06/17/2019	
BMP ID #: 6			**Type of BMP:** Detention Basin	
Component:	**Yes**	**No**	**N/A**	**Comments:**
I. Embankment				None.
A. Top				
1. Visual settlement	☐	☐	☑	
2. Misalignment	☐	☐	☑	
3. Cracking	☐	☐	☑	
B. Upstream Slope				
1. Erosion	☐	☐	☑	
2. Adequate groundcover	☐	☐	☑	
3. Trees, shrubs, or other vegetation	☐	☐	☑	
4. Cracks, settlements, or bulges	☐	☐	☑	
5. Rodent holes	☐	☐	☑	
C. Downstream Slope				
1. Erosion	☐	☐	☑	
2. Adequate groundcover	☐	☐	☑	
3. Trees, shrubs, or other vegetation	☐	☐	☑	
4. Cracks, settlements, or bulges	☐	☐	☑	
5. Rodent holes	☐	☐	☑	
E. Drainage/seepage control				
1. Internal drains flowing	☐	☐	☑	
2. Seepage at toe	☐	☐	☑	
II. Emergency Spillway				None.
1. Eroding or backcutting	☐	☐	☑	
2. Obstruction	☐	☐	☑	

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Component:	Yes	No	N/A	Comments:
3. Leaking	☐	☐	☑	None.
4. Operational	☐	☐	☑	
III. Principal Spillway Barrel				None.
1. Seepage into pipe	☐	☑	☐	
2. Debris present	☐	☑	☐	
3. Displaced or offset joints	☐	☑	☐	
IV. Outlet Protection/Stilling Basin				None.
1. Obstruction	☐	☐	☑	
2. Adequate riprap	☐	☐	☑	
3. Undercutting at the outlet	☐	☐	☑	
4. Outlet channel scour	☐	☐	☑	
V. Internal Basin Area				Large amount of accumulated leaves. Rip-rap check-dam appears to be clogged with fine sediment and may be contributing to ponded water.
A. Low Flow Channel*				
1. Erosion	☐	☑	☐	
2. Adequate vegetation	☐	☑	☐	
3. Obstruction	☐	☑	☐	
B. Basin Bottom & Side Slopes				
1. Erosion	☑	☐	☐	
2. Adequate stabilization	☐	☑	☐	
3. Sediment accumulation	☑	☐	☐	
4. Floating debris	☑	☐	☐	
5. High water marks	☑	☐	☐	
6. Shoreline protection	☐	☐	☐	
C. Inflow Channels/Pipes				
1. Erosion	☐	☑	☐	
2. Adequate stabilization	☑	☐	☐	

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Component:	Yes	No	N/A	Comments:
3. Undercutting	☐	☑	☐	None.
4. Obstruction	☐	☑	☐	
D. Sediment Forebay				
1. Sediment accumulation	☑	☐	☐	
2. Stable overflow into basin	☑	☐	☐	
E. Upland Landscaping				
F. Aquatic Landscaping				
*Only applies to Extended Detention Facilities				

Notes:
It is recommended to frequently remove accumulated leaves from basin to reduce the risk of the riser orifice clogging or the check dam clogging. Re-building the check dams and re-establish the basin to original design grade may help relieve current ponding issues.

Certification:

If No maintenance is required, certify the following:

"I certify that the inspection is complete and that No action is necessary at this time."

Signature of Inspector **Date**

_____ _____

If maintenance is required, provide a time frame for maintenance completion: Prior to next inspection
Upon maintenance completion, re-inspect and certify the following:

"I certify that all recommended maintenance is complete and No additional action is necessary at this time."

Signature of Inspector **Date**

_____ _____

Next inspection date: Spring 2020

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Photos:

Overall

Riser with leaf and sediment accumulation

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Sediment accumulation on riprap

View of consistently wet part of basin

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Inlet with some sediment accumulation

Appendix MCM 6

See Appendix MCM 2 for SOP training documentation.

LEARN & GROW

Professional Education, Training & Development

Reynolds COMMUNITY COLLEGE

Title: Storm Water Management Standard Of Procedures

Date/Time: June 28, 2019 ~~11:00 a.m.~~ 1:00 p.m

Location: ~~DTC Room 320~~ LTC Room 218

Instructor(s): Matthew E. Thompson, Sr.

Printed Name	Signature
RODNEY FRIERSON	
Chantelle Spearman	
Joseph Mason	
Donald Pollard	
Dell Jones	
Anthony Neblett	
Matt Bryant	
Troy Gruber	
Tommy Huffman	
Samuel Washington	
Chris Neilands	
Frederick Fowler	
RANDY KIAH	

Please return this sign in sheet to M. Poindexter 237 Massey LTC, Parham Road Campus

LEARN & GROW

Professional Education, Training & Development

Reynolds COMMUNITY COLLEGE

Title: Storm Water Management Standard Of Procedures

Date/Time: June 28, 2019 11:00 a.m.

Location: DTC Room 520

Instructor(s): Matthew E. Thompson, Sr.

Printed Name	Signature
Daniel C. 20534	Daniel Cat
Barbara Newsome	Barbara Newsome
Laveliq Jackson	Laveliq Jackson
Elisha Claiborne	Elisha Claiborne
Wallace Stokes	Wallace Stokes
Sametria M Casper	Sametria M. Casper
Michal V Jackson	Michal V Jackson
Brenda Burton	Brenda Burton
Ashton Hyde	Ashton Hyde

Please return this sign in sheet to M. Poindexter 237 Massey LTC, Parham Road Campus

Hazard Communication Standard
"The Right to Know Law"

Reynolds Community College
Facilities Management & Planning

Storm Water Management
Standard Of Procedures

Matthew E. Thompson, Sr
June 28, 2019

1

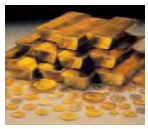
Question??

2

Which of the following items would be considered the most valuable item that exist today?

Personal Wealth

Oil



Gold

Precious Stones

3

The Answer would be:

NONE OF THEM!

Water is the most valuable item or element that exist today!

4

Why Is Water the Most Valuable Element For Us You Ask????

5

Water is of major importance to all living things.

6

Hazard Communication Standard
"The Right to Know Law"

In some organisms

Up to 90% of their body weight comes from water.

7

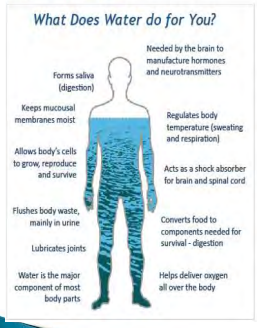
And up to 60% of the human adult body is water.

8

Water serves a number of essential functions to keep us all going:

9

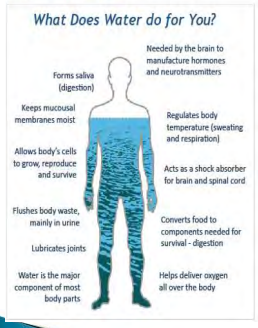
The water in you



It regulates our internal body temperature by sweating and respiration.

10

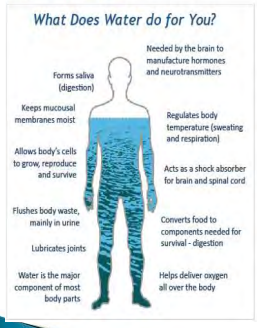
The water in you



The carbohydrates and proteins that our bodies use as food are metabolized and transported by water in the bloodstream

11

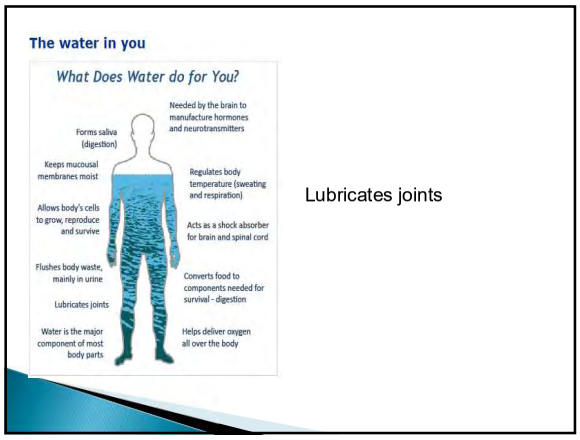
The water in you



Water acts as a shock absorber for the brain, spinal cord, and fetus

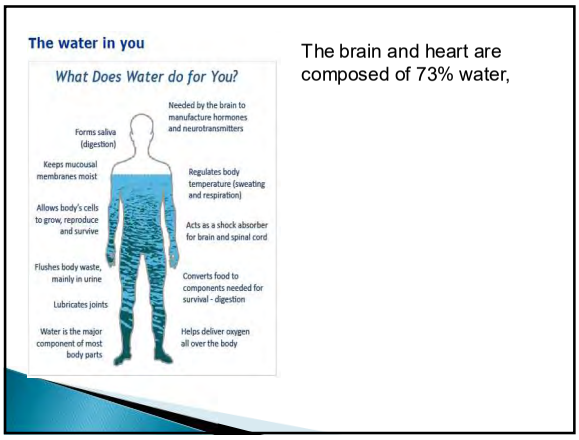
12

Hazard Communication Standard
"The Right to Know Law"



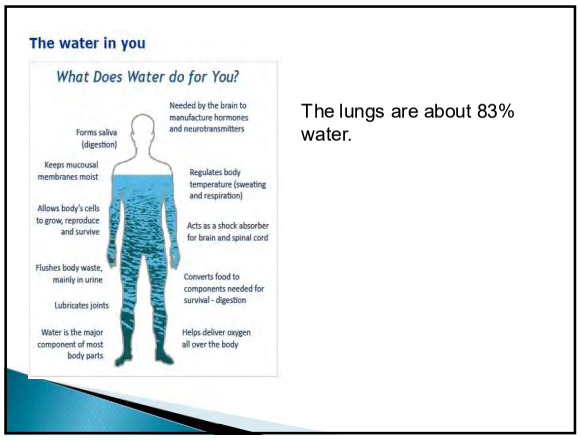
Lubricates joints

13



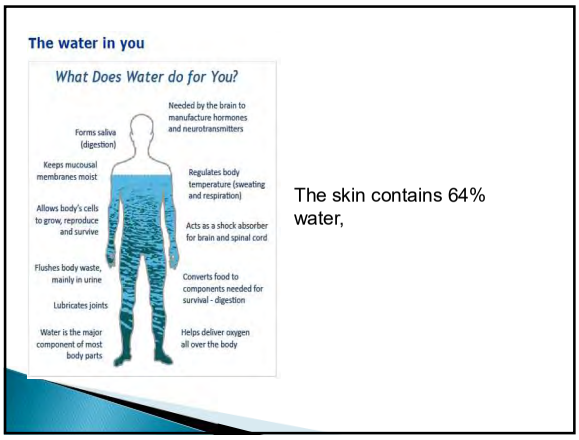
The brain and heart are composed of 73% water,

14



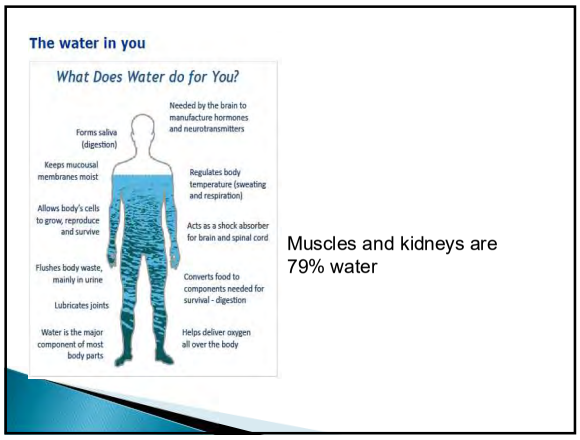
The lungs are about 83% water.

15



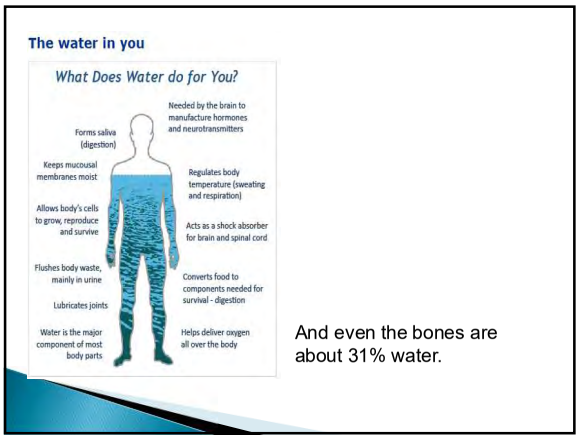
The skin contains 64% water,

16



Muscles and kidneys are 79% water

17



And even the bones are about 31% water.

18

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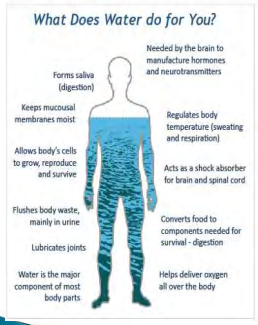
"The Right to Know Law"

The water in you



No less important is the ability of water to transport waste material out of our bodies. And,

Water helps deliver oxygen all over the body!

19

Quality and healthy water is important to us and for us!

20

Which Brings Me To The Purpose of this Presentation

Storm Water Management Awareness
And Standard Of Procedures

21

At Reynolds Community College the Facilities Management department and its personnel have a major role in protecting pollutants from flowing from our campus through storm water into the North Run Creek which eventually flows into the Chesapeake Bays.

22

Pollutants flow in storm water runoff when rains water flows across the land and over impervious surfaces such:

Sidewalks

Paved streets

Parking lots And

Building rooftops

23

Unlike the vegetated areas where the rain and snow can be absorbed through the trees, plants, and the soil.

24

Impervious surface are solid surfaces that prevent water from absorbing into the soil and reaching underground water tables.

25

So rain and snow runoff flow from impervious areas into storm water inlets

26

That eventually discharges into our creeks,

27

Which discharges into our rivers

28

Which discharges into our bays and oceans

29

That flows on to our beaches

30

Hazard Communication Standard
"The Right to Know Law"

And eventually affect our drinking water supply.

31

In 1972 The Environment Protection Agency (EPA) Established the Clean Water Act

32

Under the EPA Federal 1972 Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) was established.

33

The NPDES requires that certain industries and municipalities obtain permits if their discharges go directly into surface waters such as creeks, rivers, ponds and lakes.

34

Industries and municipalities are now more accountable of what discharges into the waterways in their location.

35

The NPDES is governed by the EPA Office in Washington D.C..

36

Hazard Communication Standard
"The Right to Know Law"

However, many NPDES policies are being enforced and regulated by State Environmental Agencies.

In Virginia, The NPDES policies come under the Virginia Pollution Discharge Elimination System (VPDES).

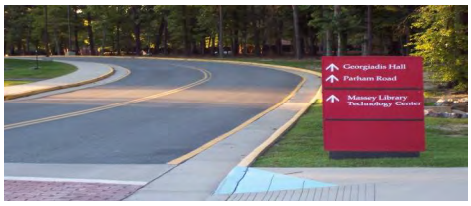
37

The Department of Environmental Quality (DEQ) administers the Virginia Pollutant Discharge Elimination System (VPDES) program for Commonwealth of Virginia.

38

DEQ regulates storm water discharges associated with "industrial activities" and now fully regulates storm water discharges from construction sites, and from municipal separate storm sewer systems (MS4) for the EPA.

39



Reynolds Community College is governed under DEQ's Municipal Separate Storm Sewer Systems (MS4) requirements.

40

One of the requirements under the Municipal Separate Storm Sewer Systems (MS4) is that Reynolds Community College Facilities Personnel understand the Standard Of Procedures (SOP) when it comes to Storm water Management Awareness.

Which is the purpose of this presentation.

41

Reynolds Community College MS4 Program

Under the Reynolds Community College MS4 Permit, there are six awareness control programs that we are required to follow. They are:

- **Public Education and Outreach**
- **Public Participation and Involvement.**
- **Illicit Discharge Detection and Elimination**
- **Construction Site Runoff Control**
- **Post-Construction Runoff Control**
- **Pollution Prevention/Good Housekeeping**

42

Hazard Communication Standard
"The Right to Know Law"

Public Education and Outreach Is

- The distribution of educational materials and conducting a community outreach to inform citizens about the impacts polluted storm water runoff can have on water quality.

43

Public Participation and Involvement



- Provides opportunities for citizens to participate in the program development and implementation.

44

Illicit Discharge Detection and Elimination involves:

- Developing and implementing a plan to detect and eliminate illicit discharges to the storm drainage system.

45

Illicit Discharge Detection and Elimination involves:


Leaks from vehicles

Discarded trash on ground

46

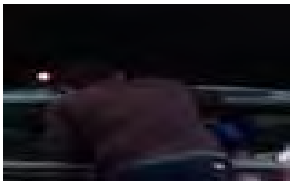
Illicit Discharge Detection and Elimination involves:

Factor that contribute to leaks from vehicles

47

Illicit Discharge Detection and Elimination involves:

Individuals pouring motor oil into their vehicles on College property



That could possibility become storm water pollution!

48

Hazard Communication Standard
"The Right to Know Law"

Illicit Discharge Detection and Elimination involves:

Pet Waste

Needs to be place in receptacles

49

Construction Site Runoff Control Is:

- Developing, implementing and enforcing an erosion and sediment control program for construction activities that disturb one or more acres so soil won't erode or wash into waterways.

50

Post-Construction Runoff Control Is:

- Developing, implementing and enforcing a program to address discharges of post-construction storm water runoff from new development.

51

Pollution Prevention/Good Housekeeping is:

- Developing and implementing a program with the goal of preventing or reducing pollutant runoff from municipal operations ie: regular street sweeping, reduction in the use of pesticides or street salt.

52

Facilities Management Storm Water Standard of Procedures

- Involves cleaning and keeping the grounds free of litter

53

Facilities Management Storm Water Standard of Procedures

Involves making others aware of what can and cannot be put into our dumpsters such as grease and liquids.

54

Hazard Communication Standard
"The Right to Know Law"

Facilities Management Storm Water Standard of Procedures

It also involves making sure the dumpster door are kept closed

55

Facilities Management Storm Water Standard of Procedures

It involves having trash receptacles available to avoid litter from being throw on the grounds.

56

Facilities Management Storm Water Standard of Procedures

And keeping the Pet Waste receptacles service with fresh trash bags.

57

Facilities Management Storm Water Standard of Procedures

And not running over or hanging out the bottom wear they can tear and dump on to the grounds adding litter and animal waste that can become pollutants.

58

Water is a very important source to our ecology and to our survival

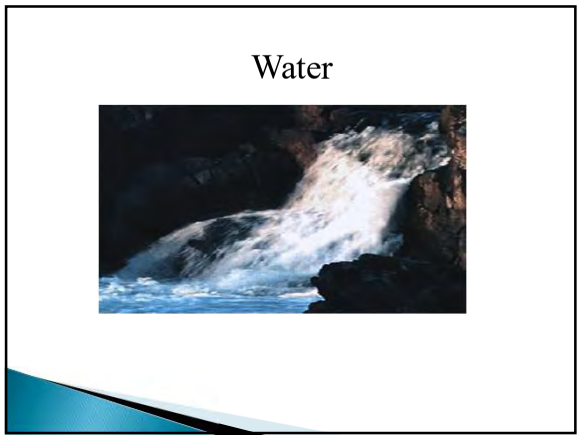
59

And Storm water management is the way we preserves it and to protect it!

60


So what is the most valuable thing we need everyday
Personal Wealth
Oil
Gold
Precious Stones

61


Water

62


Reynolds Community College
Facilities Management & Planning
Storm Water Management
Standard Of Procedures
THANK YOU FOR ATTENDING!!

63