



Fredericksburg Campus

Municipal Separate Storm Sewer System Annual Report

For

General Permit No. VAR040125

Permit Year

July 1, 2021 through June 30, 2022

This annual report is submitted in accordance with 9VAC25-890-40 as part of the requirement for permit coverage to discharge stormwater to surface waters of the Commonwealth of Virginia consistent with the VAR04 General Permit effective date November 1, 2018.

Submitted: September 16, 2022

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ACRONYMS

BMP	Best Management Practice
DEQ	Virginia Department of Environmental Quality
MCM	Minimum Control Measure
MS4	Municipal Separate Storm Sewer System
NMP	Nutrient Management Plan
POC	Pollutant of Concern
SWM	Stormwater Management
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
VPDES	Virginia Pollution Discharge Elimination System
WLA	Wasteload Allocation

1.0 GENERAL ANNUAL REPORTING REQUIREMENTS

1.1. General Information (Part I.D.2.a)

Permittee Name: Germanna Community College

System Name: Virginia Community College System

Permit Number: VAR040125

1.2. Reporting Period (Part I.D.2.b)

The reporting period for which the annual report is being submitted:

July 1, 2021 through June 30, 2022

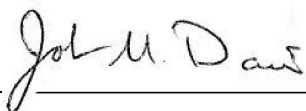
1.3. Signed Certification (Part I.D.2.c)

A signed certification as per Part III K:

"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 ensure 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."

Printed Name: John M. Davis

Title: Vice President of Administrative Services

Signature:  _____ Date: 09/16/22 _____

1.4. Reporting for MCMs 1-6 (Part I.D.2.d)

Include information for each annual reporting item specified in Part I.E:

Reporting information for each Minimum Control Measure is provided in Section 2.0.

1.5. Evaluation of the MS4 Program Implementation (Part I.D.2.e)

An evaluation of the MS4 program implementation, including a review of each MCM to determine the MS4 program’s effectiveness and whether changes to the MS4 Program Plan are necessary:

An evaluation for each Minimum Control Measure is provided in Section 2.0. Changes that are necessary to be made to the MS4 Program Plan are summarized in Table 1.

Table 1: Summary of MS4 Program Plan Changes

Not Applicable

2.0 MINIMUM CONTROL MEASURES

2.1. MCM #1: Public Education and Outreach

2.1.1. High Priority Stormwater Issues (Part I.E.1.g(1))

A list of high-priority stormwater issues addressed in the public education and outreach program:

A list of high-priority stormwater issues addressed in public education and outreach program is provided in Table 2.

2.1.2. High Priority Stormwater Issue Communication Strategies (Part I.E. 1.g(2))

A list of strategies used to communicate each high-priority stormwater issue:

A list of strategies used to communicate each high-priority stormwater issue is provided in Table 2 and documentation of the communication efforts are included in Appendix A.

Table 2: High Priority Stormwater Issues					
#	Stormwater Issue	Strategy	Communication	Metric	Beneficial
1	Public education of stormwater runoff	Traditional Written Materials	Powerpoint distributed via email to all students, faculty and staff	Approx. 10,000 students, faculty & staff	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2	TMDLs and local impaired waters	Media materials	Graphic media placed on TV monitors in public frequented areas	Approx. 500 students, faculty & staff	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3	Motor oil from vehicles in parking lots	Traditional Written Materials	Posters hung in frequented areas in multiple buildings around campus	Approx. 500 students, faculty & staff	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

2.1.3. MCM #1 Evaluation (Part I.D.2.e)

Review the MCM to determine the MS4 Program's effectiveness and whether or not changes to the MS4 Program Plan are necessary:

Were all MCM #1 measurable goals completed in accordance with the MS4 Program Plan?

Yes No ()

Are the MS4 Program measurable goals effective?

Yes (Effective) No (Ineffective, necessary changes to the MS4 Program are included in Section 1.5.)

2.2. MCM #2: Public Involvement and Participation

2.2.1. Public Input Summary (Part I.E.2.f(1))

A summary of any public input on the MS4 program received (including stormwater complaints) and responses:

Were any MS4 Program inputs or stormwater complaints received from the public?

Yes No

If yes, were responses provided? Yes No Not Applicable

2.2.2. MS4 Program Webpage (Part I.E.2.f(2))

A webpage address to the MS4 program and stormwater website:

The webpage address is <https://www.germannacommunitycollege.edu/facilities/environmental-sustainability/>

2.2.3. Public Involvement Activities Implemented (Part I.E.2.f(3))

A description of the public involvement activities implemented:

A description of the implemented public involvement activities is provided in Table 3.

2.2.4. Public Involvement Activity Metric and Evaluation (Part I.E.2.f(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:

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 is provided in Table 3. Appendix B includes documentation of the public involvement activities.

Table 3: Public Involvement Activities Implemented

#	Activity Description/Date	Category	Metric	Collaboration	Beneficial
1	Classroom MS4 Presentation & Discussion - 02/24/2022	Educational	19 participants	NA	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2	Stormdrain Marker Installation & Pollution Prevention Presentation & Discussion -04/21/2022	Pollution Prevention	7 participants, 13 stormdrain markers installed	NA	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3	Science & Engineering Day Fair - 04/02/2022	Educational	13 participants	NA	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4	CBLP Level 1 Training Class - 03/02/2022	Educational	9 participants	Chesapeake Bay Landscape Professional Trainers	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

2.2.5. MS4 Collaboration (Part I.E.2.f(5))

The name of other MS4 permittees collaborated with in the public involvement opportunities:

If applicable, the name of other MS4 permittees collaborated with for any of the public involvement opportunities are provided in Table 3.

2.2.6. MS4 Program Plan BMP Measurable Goals

The MS4 Program Plan BMPs measurable goals are provided in Table 4.

Table 4: MS4 Program Plan BMP Measurable Goals for MCM #2

BMP	Measurable Goal	Completeness Status
2.1	Was documentation of the public input or complaints on the MS4 program and MS4 Program Plan maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable (None received)
2.1	Is the effective MS4 permit and coverage letter on the webpage?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2.1	Is the most current MS4 Program Plan on the webpage?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

2.1	Is the annual report for each year of the term covered by this permit no later than 30 days after submittal to the department on the webpage?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable ()
2.1	Is there a mechanism for the public to report potential illicit discharges, improper disposal or spills to the MS4, complaints regarding land disturbing activities or other potential stormwater pollution concerns on the webpage?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2.1	Is there a method for how the public can provide input of the MS4 Program Plan on the webpage?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2.1	Is the latest Virginia Community College System Annual Standards and Specifications on the webpage?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

2.2.7. MCM #2 Evaluation (Part I.D.2.e)

Review the MCM to determine the MS4 Program’s effectiveness and whether or not changes to the MS4 Program Plan are necessary:

Were all MCM #2 measurable goals completed in accordance with the MS4 Program Plan?

Yes (Documentation is provided in Appendix B.) No

Are the MS4 Program measurable goals effective?

Yes (Effective) No (Ineffective, necessary changes to the MS4 Program are included in Section 1.5.)

2.3. MCM #3: Illicit Discharge Detection and Elimination

2.3.1. MS4 Map and Information Table (Part I.E.3.e(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:

Were the MS4 storm sewer map and outfall information table updated to reflect any changes to the MS4 occurring on or before June 30 of the reporting year?

Yes No () Not Applicable (No changes required)

2.3.2. Dry Weather Screening (Part I.E.3.e(2))

The total number of outfalls screened during the reporting period as part of the dry weather screening program:

Were outfalls screened during the reporting period? Yes No

The number of outfalls screened during the reporting yard as part of the dry weather screening program is 2. This represents 100% of the total outfalls.

2.3.3. Illicit Discharges (Part I.E.3.e(3))

A list of illicit discharges to the MS4 including spills reaching the MS4:

Were there any illicit discharges to the MS4 including spills reaching the MS4?

Yes (Refer to Table 5) No

Table 5: Illicit Discharges

Illicit Discharge Not Applicable

Part I.E.3.e(3)(a) Source:

Part I.E.3.e(3)(b) Date Observed & Date Reported:

Part I.E.3.e(3)(c) Detected during Screening, Reported by Public or Other (Describe):

Part I.E.3.e(3)(d) Investigation Resolution:

Part I.E.3.e(3)(e) Description of Follow-up Activities:

Part I.E.3.e(3)(f) Date Investigation Closed:

2.3.4. MS4 Program Plan BMP Measurable Goals

The MS4 Program Plan BMPs measurable goals are provided in Table 6.

Table 6: MS4 Program Plan BMP Measurable Goals for MCM #3		
BMP	Measurable Goal	Completeness Status
3.1	Was a GIS compatible shapefile submitted to DEQ?	Completed
3.1	Was written notification provided to any downstream adjacent MS4 of any known interconnection established or discovered during the permit reporting year?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not Applicable (No new or discovered) <input type="checkbox"/> No
3.2	Did all students, faculty and staff have access to the Standards of Conduct for Employees and the Student Handbook for Students?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3.3	Were illicit discharge detection and elimination procedures implemented, enforced and documentation maintained?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

2.3.5. MCM #3 Evaluation (Part I.D.2.e)

Review the MCM to determine the MS4 Program’s effectiveness and whether or not changes to the MS4 Program Plan are necessary:

Were all MCM #3 measurable goals completed in accordance with the MS4 Program Plan?

Yes No ()

Are the MS4 Program measurable goals effective?

Yes (Effective) No (Ineffective, necessary changes to the MS4 Program are included in Section 1.5.)

2.4. MCM #4: Construction Site Stormwater Runoff Control

2.4.1. Implementation of Standards and Specifications (Part I.E.4.a(3))

The MS4 implements a construction site stormwater runoff program in accordance with the most recent DEQ approved Standards and Specifications in compliance with the Virginia Erosion and Sediment Control Law and Virginia Erosion and Sediment Control Regulations.

2.4.1.1. Conforming Land Disturbance Projects (Part I.E.4.d(1)(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:

Were all land disturbing projects that occurred during the reporting period conducted in accordance with the current department approved standards and specifications for erosion and sediment control?

Yes No (Refer to Table 7) Not Applicable (No land disturbing projects)

2.4.1.2. Non-Conforming Land Disturbance Projects (Part I.E.4.d(1)(b))

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

If no is checked above, an explanation as to why a project did not conform to the approved standards and specifications is provided in Table 7.

Table 7: Project(s) Not in Conformance with Approved Standards and Specifications

Project Name: Not Applicable

Explanation:

2.4.2. Site Stormwater Runoff Inspections (Part I.E.4.d(2))

Total number of inspections conducted:

The total number of site stormwater runoff inspections conducted for regulated land disturbance activities in accordance with the most recent DEQ approved Standards and Specifications is Not Applicable.

2.4.3. Enforcement Actions (Part I.E.4.d(3))

The total number and type of enforcement actions implemented:

The total number of enforcement actions implemented is Not Applicable.

The total number of Notices of Violation (Red flag) issued is Not Applicable.

The total number of Stop Work Orders (Black flag) issued is Not Applicable.

2.4.4. MCM #4 Evaluation (Part I.D.2.e)

Review the MCM to determine the MS Program's effectiveness and whether or not changes to the MS4 Program Plan are necessary:

Were all MCM #4 measurable goals completed in accordance with the MS4 Program Plan?

Yes No ()

Are the MS4 Program measurable goals effective?

Yes (Effective) No (Ineffective, necessary changes to the MS4 Program are included in Section 1.5.)

2.5. MCM #5: Post-Construction Stormwater Management

2.5.1. Implementation of Standards and Specifications (Part I.E.5.a(3))

The MS4 implements the most recent DEQ approved standards and specifications and a stormwater management facility inspection and maintenance program in accordance with Part I.E.5.b.

2.5.2. Stormwater Management Facility Inspections (Part I.E.5.i(2))

Total number of inspections conducted on stormwater management facilities owned or operated by the permittee:

Were inspections conducted on stormwater management facilities during the reporting year? Yes No

The total number of inspections conducted on stormwater management facilities is 6.

2.5.3. Stormwater Management Facility Maintenance (Part I.E.5.i(3))

A description of 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:

Were significant maintenance, repair, or retrofit activities performed on any stormwater management (SWM) facilities during the reporting year?

Yes No () Not Applicable (No significant maintenance required.)

If yes, a description of significant maintenance, repair, or retrofit activities performed on the stormwater management facilities owned or operated by the MS4 to ensure it continues to perform as designed is provided in Table 8.

Table 8: Maintenance Activities Performed on Stormwater Management Facilities	
Stormwater Management Facility	Significant Maintenance Activity
SWM Facility #6 : Bioretention	Remove and replace rock trench and filter fabric; install energy stone dissipater around perimeter; regrade areas of erosion; and install mulch throughout facility.
SWM Facility #4 : Detention Basin	Remove overgrown woody vegetation on embankments and within 10 feet of outlet pipe.

2.5.4. Virginia Construction Stormwater General Permit Database (Part I.E.5.i(4))

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 form Construction Activities:

Stormwater management facility information for stormwater facilities installed after July 1, 2014 was submitted through the Virginia Construction Stormwater General Permit database for land disturbing activities requiring a General VPDES Permit for Discharges of Stormwater from Construction Activities?

Not Applicable (Not a VSMP authority.)

2.5.5. DEQ BMP Warehouse (Part I.E.5.i(5))

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 later than October 1 of each year, stormwater management facilities and BMPs implemented to meet a TMDL load reduction between July 1 and June 30 of each year were electronically reported using the DEQ BMP Warehouse for any practices not reported in accordance with Part I.E.5.f (requirement 2.5.4) including stormwater management facilities from land disturbing activities less than one acre in accordance with the Chesapeake Bay Preservation Act regulations and for which a General VPDES Permit for Discharges of Stormwater from Construction Activities was not required?

Yes, Date Submitted: No Not Applicable (No qualifying SWM facilities constructed or structural BMPs implemented.)

2.5.6. MS4 Program Plan BMP Measurable Goals

The MS4 Program Plan BMPs measurable goals are provided in Table 9.

Table 9: MS4 Program Plan BMP Measurable Goals for MCM #5		
BMP	Measurable Goal	Completeness Status
5.1	Was the post-construction stormwater management inspection and maintenance program implemented in accordance with approved standards and specifications?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5.2	Was the stormwater management facility tracking database updated?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

2.5.7. MCM #5 Evaluation (Part I.D.2.e)

Review the MCM to determine the MS4 program’s effectiveness and whether or not changes to the MS4 Program Plan are necessary:

Were all MCM #5 measurable goals completed in accordance with the MS4 Program Plan?

Yes No ()

Are the MS4 Program measurable goals effective?

Yes (Effective) No (Ineffective, necessary changes to the MS4 Program are included in Section 1.5.)

2.6. MCM #6: Pollution Prevention and Good Housekeeping

2.6.1. Operational Procedures (Part I.E.6.q(1))

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

Were any operational procedures developed or modified in accordance with Part I E 6 a during the reporting period?

Yes (Refer to Table 10) No Not Applicable (Not necessary)

Table 10: Good Housekeeping Operational Procedures Developed or Modified

Not Applicable

2.6.2. Newly Developed SWPPPs (Part I.E.6.q(2))

A summary of any new SWPPPs developed in accordance Part I E 6 c during the reporting period:

Were any new SWPPPs developed in accordance Part I E 6 c during the reporting period?

Yes (Refer to Table 11) No () Not Applicable (No new high priority facilities.)

Table 11: New SWPPPs Developed

SWPPP Name	SWPPP Address
Not Applicable	

2.6.3. Modified or Delisted SWPPPs (Part I.E.6.q(3))

A summary of any new SWPPPs modified in accordance with Part I E 6 f or the rationale of any high priority facilities delisted in accordance with Part I E 6 h during the reporting period:

Were any new SWPPPs modified after an unauthorized discharge, release or spill reported?

Yes (Refer to Table 12) No () Not Applicable (Modification not required)

Were any high priority facilities delisted in accordance with Part I E 6 h during the reporting period? Yes (Refer to Table 12) No

If yes, rationale is provided for any high priority facilities delisted in accordance with Part I E 6 h during the reporting period in Table 12.

Table 12: SWPPPs Modified or Delisted

SWPPPs Modified/Delisted	Rationale for Delisting
Not Applicable	

2.6.4. Newly Developed Nutrient Management Plans (Part I.E.6.q(4))

A summary of new turf and landscape nutrient management plans (NMPs) developed:

Were any new turf and landscape nutrient management plans developed?

Yes (Refer to Table 13) No () Not Applicable ()

2.6.4.1. Nutrient Management Plan Acreage (Part I.E.6.q(4)(a))

The location and the total acreage of each land area:

If yes is checked above, the location and total acreage of the land area for any newly developed nutrient management plan is provided in Table 13.

2.6.4.2. Nutrient Management Plan Approval Date (Part I.E.6.q(4)(b))

The date of the approved nutrient management plan:

If yes is checked above, the approval date of any newly developed nutrient management plan is provided in Table 13.

Table 13: New Turf and Landscape Nutrient Management Plans

Location	Total Acreages	Date Approved
1000 Germanna Point Drive, Fredericksburg, VA 22408	2.10	07/21/2022
2130 Germanna Highway, Locust Grove, VA 22508	8.83	07/21/2022
18121 Technology Drive, Culpeper, VA22701	7.35	07/21/2022

2.6.5. Training Events (Part I.E.6.q(5))

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

Was training conducted?

Yes No () Not Applicable (Not required this reporting year.)

If yes is checked above, a list of training events conducted in accordance with Part I.E.6.m is provided in Table 15.

2.6.5.1. Training Dates (Part I.E.6.q(5)(a))

The date of the training event:

If yes is checked above, the date of the training event is provided in Table 14.

2.6.5.2. Quantity Trained (Part I.E.6.q(5)(b))

The number of employees who attended the training event:

If yes is checked above, the number of employees who attended the training event is provided in Table 14.

2.6.5.3. Training Objective (Part I.E.6.q(5)(c))

The objective of the training event:

If yes is checked above, the objective of the training event is provided in Table 14.

Table 14: Training Events		
Date	# of Attendees	Training Objective
4/7/2022	5	Good Housekeeping Pollution Prevention and Illicit Discharge Detection
2/3/2022	1	Pesticide Application

2.6.6. MS4 Program Plan BMP Measurable Goals

The MS4 Program Plan BMPs measurable goals are provided in Table 15.

Table 15: MS4 Program Plan BMP Measurable Goals for MCM #6		
BMP	Measurable Goal	Completeness Status
6.1	Was good housekeeping and pollution prevention biennial training conducted this reporting year?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Not Applicable (Not required this reporting year) <input type="checkbox"/> No
6.2	Was the annual comprehensive compliance evaluation conducted?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

6.2	Was the SWPPP reviewed within 30 days after an unauthorized discharge, release or spill reported?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not Applicable (Not required) <input type="checkbox"/> No
6.2	Was the SWPPP updated within 90 days after an unauthorized discharge?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not Applicable (Not required) <input type="checkbox"/> No
6.2	Were the MS4's properties reviewed this reporting year to determine if the properties meet the criteria of a high priority facility?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not Applicable (The MS4 campus is a high priority facility.) <input type="checkbox"/> No
6.3	Was the nutrient management plan implemented through completion of application records?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not Applicable (No nutrients applied) <input type="checkbox"/> No
6.4	Were all signed contracts executed with contract good housekeeping and pollution prevention language?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6.5	Did all signed contracts executed for pesticide and herbicide application maintain proof of certifications on file?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not Applicable (No contracts executed) <input type="checkbox"/> No
6.6	Did training occur and were proof of certifications maintained on file for employees performing pesticide and herbicide applications?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Not Applicable (No employees applied pesticides/herbicides) <input type="checkbox"/> No

2.6.7. MCM #6 Evaluation (Part I.D.2.e)

Review the MCM to determine the MS4 Program's effectiveness and whether or not changes to the MS4 Program Plan are necessary:

Were all MCM #6 measurable goals completed in accordance with the MS4 Program Plan?

Yes No ()

Are the MS4 Program measurable goals effective?

Yes (Effective) No (Ineffective, necessary changes to the MS4 Program are included in Section 1.5.)

3.0 TMDL SPECIAL CONDITIONS

3.1. Chesapeake Bay TMDL Action Plan

3.1.1. BMPs Implemented and Estimated POC Reductions (Part II.A.13.a)

A list of BMPs implemented during the reporting period but not reported to the DEQ BMP Warehouse in accordance with Part I E 5 g and the estimated reduction of pollutants of concern achieved by each and reported in pounds per year:

Were any BMPs implemented during the reporting period but not reported to the DEQ BMP Warehouse in accordance with Part I.E.5.g?

Yes (Refer to Table 16) No ()

The estimated reduction of pollutants of concern achieved by each BMP reported in pounds per year is provided in Table 16.

Table 16: Chesapeake Bay TMDL Action Plan POC Reductions			
BMP #1: Street Sweeping Using the Mass Loading Approach			
Required pounds of material swept	326 lbs.		
Provided pounds of material swept	389 lbs.		
	TN (lbs./yr.)	TP (lbs./yr.)	TSS (lbs./yr.)
Required 5% Reduction (lbs.) =	.57	.12	43.48
Provided Reduction (lbs.) =	.68	.27	81.69
Future Required 40% Reduction (lbs.) =	4.56	.96	347.84
% Achieved towards 40% (%) =	14.93	28.37	23.49

3.1.2. Nutrient Credits (Part II.A.13.b)

If the permittee acquired credits during the reporting period to meet all or a portion of the required reductions in Part II A 3, A 4, or A 5, a statement that credits were acquired:

Were credits acquired during the reporting period to meet all or a portion of the required reductions in Part II A 3, A 4, or A 5? Yes No

3.1.3. POC Cumulative Reduction Progress (Part II.A.13.c)

The progress, using the final design efficiency of the BMPs, toward meeting the required cumulative reductions for total nitrogen, total phosphorus, and total suspended solids:

The progress, using the final design efficiency of the BMPs, toward meeting the required 40% reductions for total nitrogen, total phosphorus, and total suspended solids is provided in Table 17.

Table 17: 2019 – 2023 Chesapeake Bay TMDL Action Plan Implementation Schedule			
Step	General Description	Measurable Goal	Completeness Status
1	5% reduction requirement complete. Evaluate lbs. swept.	Completed tracking documentation?	<input checked="" type="checkbox"/> Yes (July 2019) <input type="checkbox"/> No
2	5% reduction requirement complete. Make adjustments to frequency based on 2019 information obtained.	Completed tracking documentation with increase sweeping frequency?	<input checked="" type="checkbox"/> Yes (July 2020) <input type="checkbox"/> No
3	5% reduction requirement complete. Determine if 40% can be achieved w/ street sweeping alone. If not, evaluate alternate means to achieve 40% reduction. Secure funding for future implementation of new BMPs. Revise Action Plan accordingly.	Completed tracking documentation. If required, revise Action Plan?	<input checked="" type="checkbox"/> Yes (July 2021) <input type="checkbox"/> No
4	Revise Action Plan based on the newly issued DEQ Guidance Memo No. GM-20-2003 (Appendix V.G).	Completed tracking documentation and support documentation from any new BMPs employed to meet 40% reduction?	<input checked="" type="checkbox"/> Yes (July 2022) <input type="checkbox"/> No
5	Complete 40% reduction requirement with selected means and methods.	Completed tracking documentation and support documentation from any new BMPs employed to meet 40% reduction?	July 2023
6	Report on Chesapeake Bay TMDL 40% reduction achievement.	Recorded results in Annual Report?	October 2023

3.1.4. Next Reporting Period Planned BMPs (Part II.A.13.d)

A list of BMPs that are planned to be implemented during the next reporting period:

BMPs that are planned to be implemented during the next reporting period is provided in Table 18.

Table 18: Chesapeake Bay TMDL Action Plan BMPs Planned for the Next Reporting Year

1. Street Sweeping

3.1.5. Chesapeake Bay TMDL Action Plan Measurable Goals

The Chesapeake Bay TMDL Action Plan measurable goals are provided in Table 19.

Table 19: Chesapeake Bay TMDL Action Plan Measurable Goals

#	Measurable Goal	Completeness Status
1	Were public comments considered during the required 15-day comment period?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Not Applicable (Not required this reporting year) <input type="checkbox"/> No
2	Were cost effective BMPs selected to support model quantification to achieve the required pollutant reductions?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Not Applicable (Not required this reporting year) <input type="checkbox"/> No
3	Was the required pollutant reduction reached for this reporting year?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

3.1.6. Chesapeake Bay TMDL Action Plan Implementation Evaluation (Part I.D.2.e)

Review the TMDL Special Condition to determine the Chesapeake Bay TMDL Action Plan’s effectiveness and whether or not changes to the Chesapeake Bay TMDL Action Plan are necessary:

Were all measurable goals completed in accordance with the Chesapeake Bay TMDL Action Plan?

Yes No ()

Are the MS4 Program measurable goals effective?

Yes (Effective) No (Ineffective, necessary changes to the MS4 Program are included in Section 1.5.)

3.2. Local TMDL Action Plan

3.2.1. No Local TMDL Implementation (Part II.B.9)

A summary of actions conducted to implement each local TMDL action plan:

The MS4 has not been assigned a wasteload allocation (WLA) for any local TMDLs.

Appendix A: Documentation of Public Education and Outreach Activities

High Priority Stormwater Issue #1

From: [Garland Fenwick](#)
To: [Garland Fenwick](#)
Subject: FW: Important Municipal Separate Storm Sewer System Program(MS-4)_Student
Date: Wednesday, March 23, 2022 1:21:35 PM
Attachments: [GCC Stormwater Slides CCTV Group 3.pptx](#)
[image001.png](#)

Thanks
Garland

From: Garland Fenwick <GFenwick@germanna.edu>
Sent: Wednesday, March 23, 2022 1:10 PM
To: ALL GCC STUDENTS - GCC <GC-Students@email.vccs.edu>
Cc: Garland Fenwick <GFenwick@germanna.edu>
Subject: Important Municipal Separate Storm Sewer System Program(MS-4)

Dear Students,

Attached is a short power point that provides important information pertaining to Municipal Separate Storm Sewer System Program(MS-4) and Stormwater Management at the Fredericksburg Area Campus and your communities . Please take a few minutes to review the power point and help GCC and your communities improve their MS-4 and Stormwater Management Program.

Thank you

Garland M. Fenwick
Director of Facilities
Germanna Community College
PO Box 1430
2130 Germanna Highway
Locust Grove, VA 22508
540-423-9046





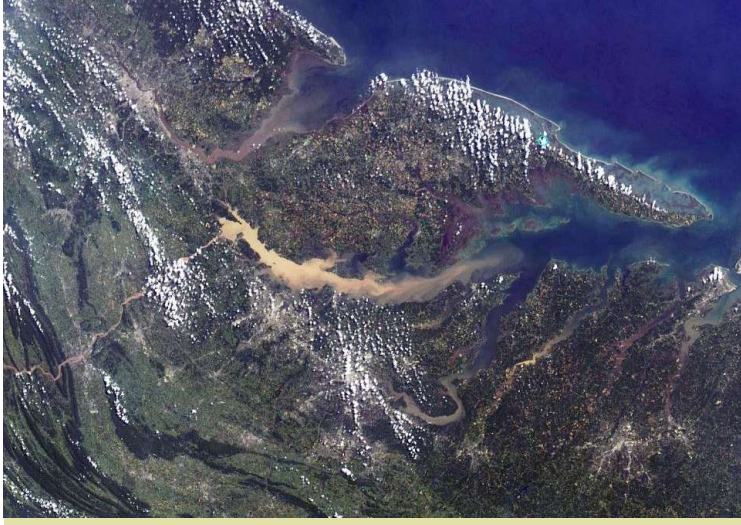
STORMWATER RUNOFF PICKS UP SEDIMENT & POLLUTANTS AFTER A RAINFALL.



SEDIMENT & POLLUTANT LADEN RUNOFF FLOWS INTO STORM SEWER SYSTEMS.



STORM SEWER INLETS DRAIN DIRECTLY INTO OUR LOCAL WATERBODIES.



OUR LOCAL WATERBODIES FLOW INTO THE CHESAPEAKE BAY & TO THE OCEAN.

Impacts of Stormwater Runoff

Sediment from **construction sites** & **streambank erosion** from urbanization adversely affect the health of our local streams & rivers & the Chesapeake Bay.





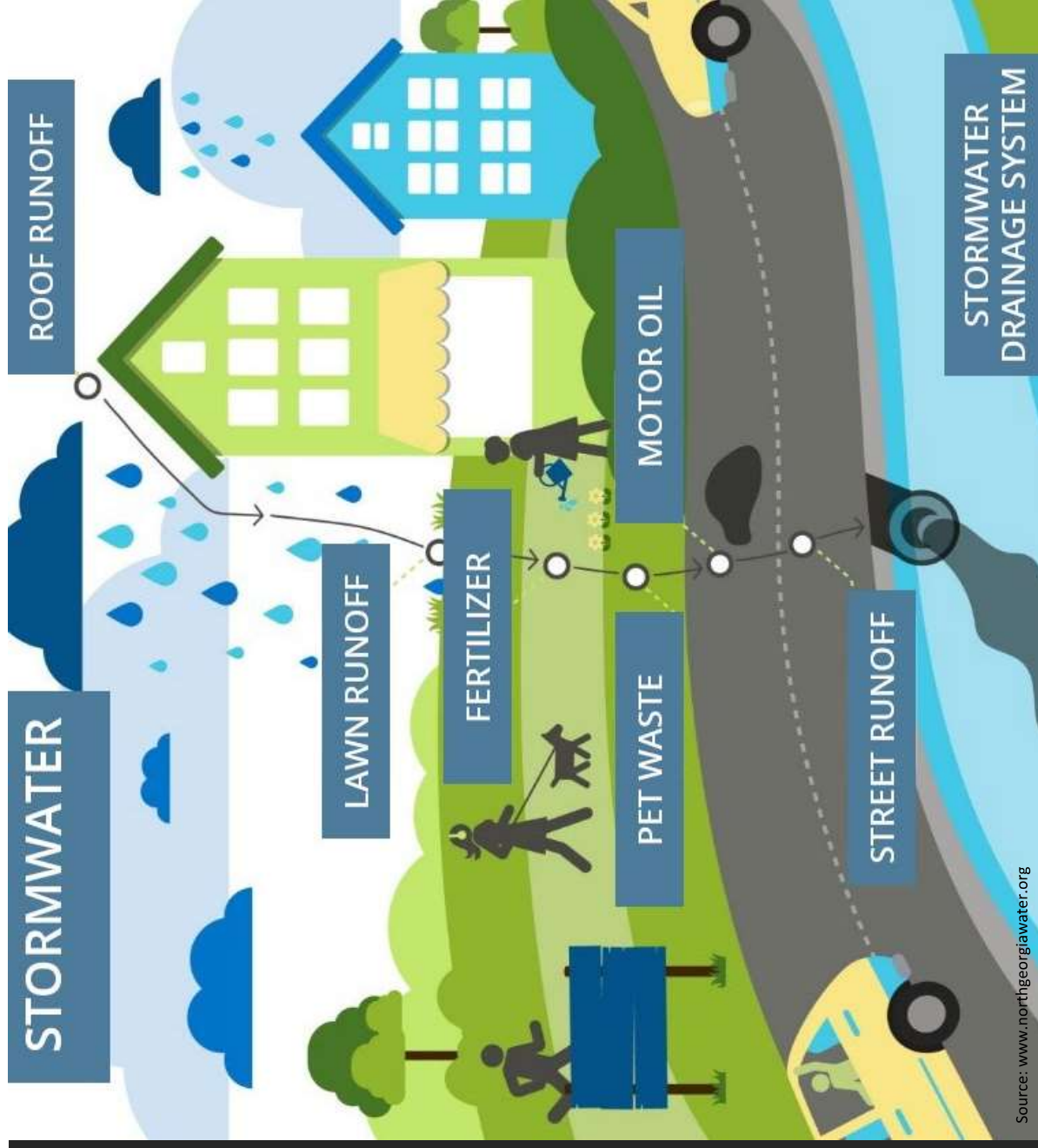
LOCAL IMPAIRED WATERWAYS

GCC directly discharges into an unnamed tributary of the Massaponax Creek.

The Massaponax Creek is designated as an impaired waterway for pH and bacteria.

Pollutant sources that affect water pH are landscape additives and chemicals.

Pollutant sources of bacteria are livestock, pet waste and sanitary sewer overflows.





ILLICIT DISCHARGE

Any discharge that enters the storm drain system or a natural drainage way on campus that is **not composed entirely of stormwater**.

To report an illicit discharge, spill or an improper disposal email gfenwick@germanna.edu or call the Facilities Department at **540-423-9185**.

For more information visit GCC's stormwater website at <http://www.germanna.edu/facilities>.



HOW YOU CAN HELP KEEP WATERBODIES CLEAN?

- Limit landscape additives such as lime & potash only in amounts needed & at appropriate times especially never before a rain event.
- Properly store & dispose of chemicals. Quickly clean-up spilled chemicals & properly dispose of the materials used to clean-up spills.
- Pick-up pet waste & properly dispose in the trash.
- Never dump anything down storm drains.
- Place litter & cigarette butts in proper receptacles.
- Utilize recycling programs.
- Promptly repair vehicle & equipment leaks.
- Wash vehicles at a commercial car wash instead of in a driveway or parking lot.
- Properly dispose of household waste items.

High Priority Stormwater Issue #2

Garland Fenwick

From: James Solomon
Sent: Wednesday, April 6, 2022 2:22 PM
To: Garland Fenwick
Subject: RE: MS-4 Slides forTV Monitors
Attachments: GCC_Stormwater Slides_CCTV_Group 3.pptx

I set them running now until May 1st. I also updated your slide deck to the new logo.

Thank you,

Jim Solomon
Marketing and Information Specialist
(540) 423-9069

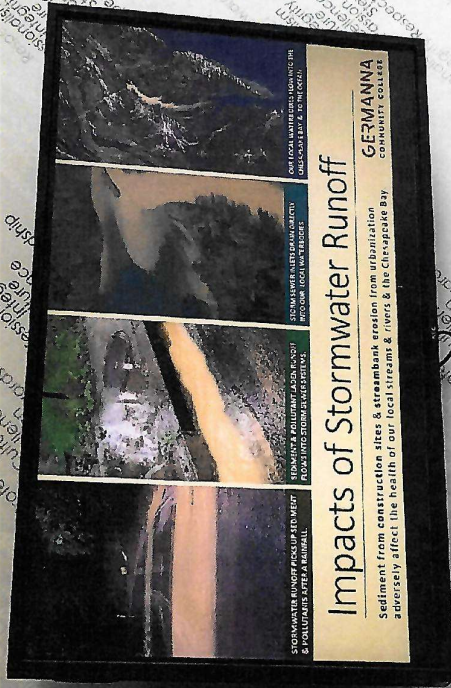
From: Garland Fenwick <GFenwick@germanna.edu>
Sent: Wednesday, April 6, 2022 1:13 PM
To: James Solomon <JSolomon@germanna.edu>
Cc: Garland Fenwick <GFenwick@germanna.edu>
Subject: MS-4 Slides forTV Monitors

Jim,

It's that time of year where I need to run the MS-4 slides for the Fredericksburg Campus on the TV monitors. Can you get them on monitors for me? If you get them on the monitors next week and they run until May 1 I should be good.

Thanks for the help.
Garland

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LOCAL IMPAIRED WATERWAYS

GCC directly discharges into an unnamed tributary of the Massaponax Creek.

The Massaponax Creek is designated as an impaired waterway for pH and bacteria.

Pollutant sources that affect water pH are landscape additives and chemicals.

Pollutant sources of bacteria are livestock, pet waste and sanitary sewer overflows.





ILLICIT DISCHARGE

ONLY RAIN
DOWN THE STORM DRAIN

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COMMUNITY COLLEGE

Any discharge that enters the storm drain system or a natural drainage way on campus that is not authorized entirely by stormwater.

To report an illicit discharge, spill or an improper disposal email afirmw@germanna.edu or call the E-C-Use Department at 404.29.3125. For more information visit www.germanna.edu/illlicit.



11



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HOW YOU CAN HELP KEEP WATERBODIES CLEAN

- Limit landscape additives such as lime & potash to 1/2 lb per 1000 sq ft & apply in small amounts frequently & at appropriate times especially never before a rain event.
- Properly store & dispose of chemicals. Quickly clean-up spilled chemicals & properly dispose of the materials used to clean-up spills.
- Pick up pet waste & properly dispose in the trash.
- Never dump anything down storm drains.
- Place litter & cigarette butts in proper receptacles.
- Utilize recycling programs.
- Promptly report vehicle & equipment leaks.
- Wash vehicles at a commercial car wash instead of a driveway or parking lot.
- Properly dispose of household waste items.



High Priority Stormwater Issue #3

Garland Fenwick

To: Garland Fenwick
Subject: Posters Placed on Bulletin Boards

Garland M. Fenwick
Director of Facilities
Germanna Community College
PO Box 1430
2130 Germanna Highway
Locust Grove, VA 22508
540-423-9046

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RAIN +
 PET WASTE MOTOR OIL
 GARBAGE CARTRIDGES
 MEDICINES FUEL OIL
 SOLVENTS PAINTS
 ELECTRONIC DEVICES TOXINS
 ART SUPPLIES TRASH

STORMDRAIN =



Knowing how our pollution affects our environment is the first step to cleaning up our act. We can't clean up what we don't know is there. So, we need to know what's in our storm drains. We need to know what's in our trash. We need to know what's in our water. We need to know what's in our air. We need to know what's in our soil. We need to know what's in our food. We need to know what's in our bodies. We need to know what's in our lives. We need to know what's in our future.

GERMANNA
 2010-2011

GUITAR CLUB




Full Care
 Anywhere.



IT'S FOR VCCS.
FOR FREE.

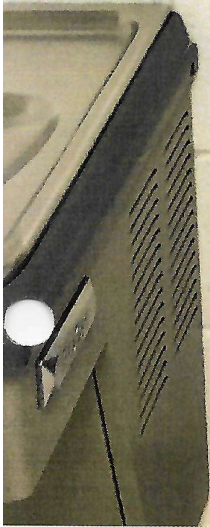
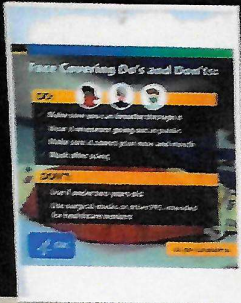
Work-Study Wednesdays



Work-Study Wednesdays
 Wednesday 11:00 AM - 12:00 PM
 Open House 11:15 AM - 12:00 PM

LEADERSHIP PROGRAM





FIRE
EXTINGUISHER

A large black bulletin board is mounted on the orange wall. It contains several posters and notices. The posters include:

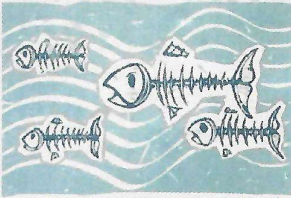
- A green poster titled "SEVERE WEATHER SHELTER" with a bird icon and the text "Located on 1st Floor".
- A white poster titled "RAIN + MEDICAL SERVICES STORMDRAIN=" with a diagram of a storm drain.
- A yellow poster titled "BOARD GAMES" with a list of games.
- A white poster titled "Gardening Club" with a picture of a garden.
- A blue poster titled "PLEASE" with a picture of a person.
- A white poster titled "Workforce and Technology Center" with a picture of a person.

The bulletin board also has the word "GERMANNA" written on it in the top right corner.

RAIN +

PET WASTE
GARBAGE
MEDICINES
SOLVENTS
ELECTRONIC DEVICES
ART SUPPLIES
COOKING OIL
CARTRIDGES
SEDIMENTS
BATTERIES
TRASH
TOXINS
ANTIBIOTICS

STORMDRAIN=



Preventing these items from polluting a community is a responsibility of all citizens. Please do not throw these items away in the trash or down the drain. They can pollute the water and harm the environment. For more information, visit www.germanna.com/stoppollution.

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Stop the Spread of Germs

Help prevent the spread of respiratory diseases like COVID-19.

<p>6 ft DISTANCE</p> <p>Stay at least 6 feet (about 2 arms length) from other people.</p>	<p>Cover your cough or sneeze with a tissue. Then throw the tissue in the trash and wash your hands.</p>
<p>Wear a public mask in public places with other people.</p>	<p>Do not touch your face, nose and mouth.</p>
<p>Clean and disinfect frequently touched objects and surfaces.</p>	<p>Wash your hands often with soap and water for at least 20 seconds.</p>



cdc.gov/coronavirus



RAIN +
MEDICINES
SOLVENTS
ELECTRONICS
TOXINS
STORMDRAIN=

Stop the Spread of...

Medicines, Solvents, Electronics, Toxins

Stop the Spread of...

Appendix B: Documentation of Public Involvement Activities

Public Involvement Activity #1

From: [Tamara A. Muldrow](#)
To: [Garland Fenwick](#)
Subject: RE: Water monitoring on Massaponax Creek
Date: Thursday, February 24, 2022 11:53:50 AM

Hi Garland,

Thanks again for coming to chat with them.

The students who were present:

Charlie Benson
Layla McGee
Isabel Bougher
Jason Argueta Garcia
Shaina Moore
Katie Woolston
Meghan Miller
Lacy Kangas
Kacy Peters
Kiya Whitaker
Alex Braswell
Benjamin Crane
Julie Ramirez
Tanya Kambou
Courtney Sanders
Crystal Roberson
Megan Shaughnessy
Chase Anderson

And me!

Tamara Muldrow
Biology Instructor
Germanna Community College
tmuldrow@germanna.edu
540 891 3021

From: Garland Fenwick <GFenwick@germanna.edu>
Sent: Wednesday, January 26, 2022 7:50 AM
To: Tamara A. Muldrow <TMuldrow@germanna.edu>
Subject: RE: Water monitoring on Massaponax Creek

Thanks
Garland

From: Tamara A. Muldrow <TMuldrow@germanna.edu>
Sent: Wednesday, January 26, 2022 7:49 AM
To: Garland Fenwick <GFenwick@germanna.edu>
Subject: RE: Water monitoring on Massaponax Creek

Excellent!
We're in room 319, in SP3.

I'll see you then--
Tamara

Tamara Muldrow
Biology Instructor
Germanna Community College
tmuldrow@germanna.edu
540 891 3021

From: Garland Fenwick <GFenwick@germanna.edu>
Sent: Wednesday, January 26, 2022 7:44 AM
To: Tamara A. Muldrow <TMuldrow@germanna.edu>
Subject: RE: Water monitoring on Massaponax Creek

How about 10:30 on the 24th?

Thanks
Garland

From: Tamara A. Muldrow <TMuldrow@germanna.edu>
Sent: Wednesday, January 26, 2022 7:37 AM
To: Garland Fenwick <GFenwick@germanna.edu>
Subject: RE: Water monitoring on Massaponax Creek

Garland,

That would be great—believe it or not, the best timing would be tomorrow morning, so that might be too short of notice? Plus, that class is still virtual...it feels like this talk would be better in person, don't you think? So people are a bit more familiar with campus and where things are (like the green roof?)

That was a lot of questions—I was thinking out loud, sorry. Assuming we're back on campus soon, would around 10:30 on Feb. 8th, 10th, 22nd or 24th be best for you?

Thank you!

Tamara

Tamara Muldrow
Biology Instructor
Germanna Community College
tmuldrow@germanna.edu
540 891 3021

From: Garland Fenwick <GFenwick@germanna.edu>
Sent: Tuesday, January 25, 2022 2:15 PM
To: Tamara A. Muldrow <TMuldrow@germanna.edu>
Subject: RE: Water monitoring on Massaponax Creek

Tamara,

I'll offer this to you and it's strictly up to you if you want to take me up on it and saying no doesn't hurt my feelings. I would be more than happy to speak to your class about GCC's MS-4 program if it's of interest.

Thanks
Garland

From: Tamara A. Muldrow <TMuldrow@germanna.edu>
Sent: Tuesday, January 25, 2022 11:56 AM
To: Garland Fenwick <GFenwick@germanna.edu>
Cc: John M. Davis <JDavis@germanna.edu>
Subject: RE: Water monitoring on Massaponax Creek

Hi Garland,

Oh, absolutely! I'll check in with the security desk whenever I'm headed down there. I need to scope out two sites, then I can give them a specific location after that so they'll know exactly where I'll be.

If this will help with the MS4, just let me know and I can get you copies of all the data. But you have enough things to worry about that I didn't want to add unnecessary information.

Thanks!
Tamara

Tamara Muldrow
Biology Instructor
Germanna Community College

tmuldrow@germanna.edu

540 891 3021

From: Garland Fenwick <GFenwick@germanna.edu>
Sent: Tuesday, January 25, 2022 8:46 AM
To: Tamara A. Muldrow <TMuldrow@germanna.edu>
Cc: John M. Davis <JDavis@germanna.edu>
Subject: RE: Water monitoring on Massaponax Creek

Tamara,

I think it is fine to do the water quality and water chemistry in Massaponax Creek. Only thing I ask is you let security know when you are going down to the creek and when you plan to return so they can keep track.

I will check with the consultant about the MS-4 plan and let you know.

Thanks
Garland

From: Tamara A. Muldrow <TMuldrow@germanna.edu>
Sent: Saturday, January 22, 2022 10:00 AM
To: Garland Fenwick <GFenwick@germanna.edu>
Cc: John M. Davis <JDavis@germanna.edu>
Subject: Water monitoring on Massaponax Creek

Good morning!

I'm thinking about creating a couple of biology labs focusing on the water quality and water chemistry in Massaponax Creek. Last semester, I was certified as a water quality monitor with the RiverTrends program in the Chesapeake Monitoring Cooperative (the training was with the Alliance for the Chesapeake Bay, but I'm working under the umbrella of Friends of the Rappahannock.) All of that to say that I have some official training and I'm not stabbing in the dark. Is this something I'm allowed to do? I know JoAnn Schrass did something similar several years ago, but I don't remember the details of what she was doing, so I don't know if it's a close parallel or not. And I realize all this would depend on us actually being on campus, but that's a different problem for now. I'm simply trying to find out if I would be working within the rules.

Assuming this is within the rules, would a series of monitoring stations help your MS4 at all? I've been trying to get in touch with TCCSWD to see if they have suggestions for locations, but Bryan Hoffman at FOR noted that I might need to just pick some reasonable spots and send FOR the specific locations. If this would help with the MS4 and you have locations in mind, please let me know.

Thanks,

Tamara

Tamara Muldrow
Biology Instructor
Germanna Community College
tmuldrow@germanna.edu
540 891 3021

STORMWATER MANAGEMENT

February 24, 2022

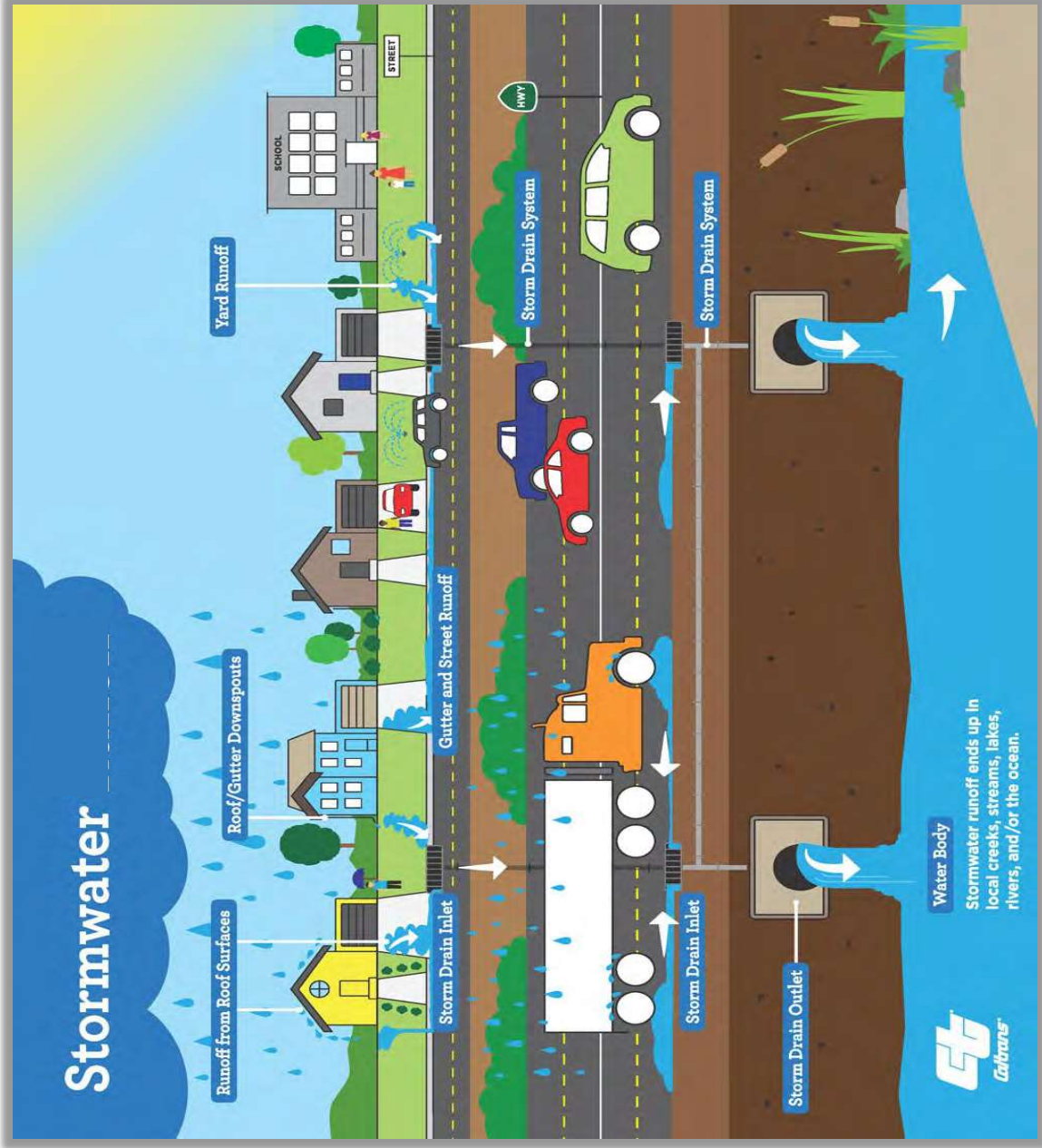


AGENDA

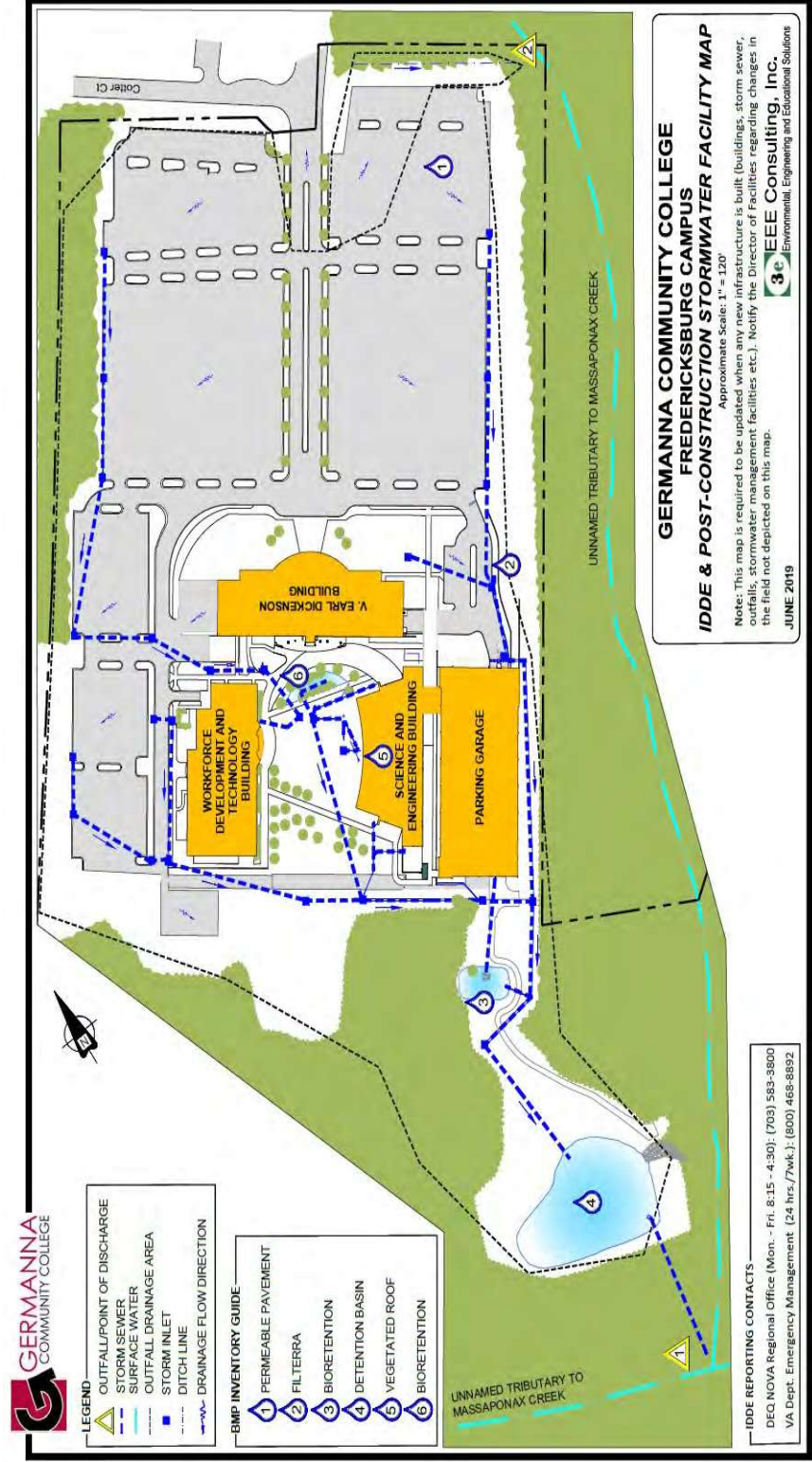
- ▶ What is Storm Water Run Off?
- ▶ Where does it go?
- ▶ Regulatory Requirements
 - ▶ MS-4 Plan (Municipal Separate Storm Sewer System)
 - ▶ TMDL (Total Maximum Daily Load)
- ▶ Questions



STORMWATER RUNOFF



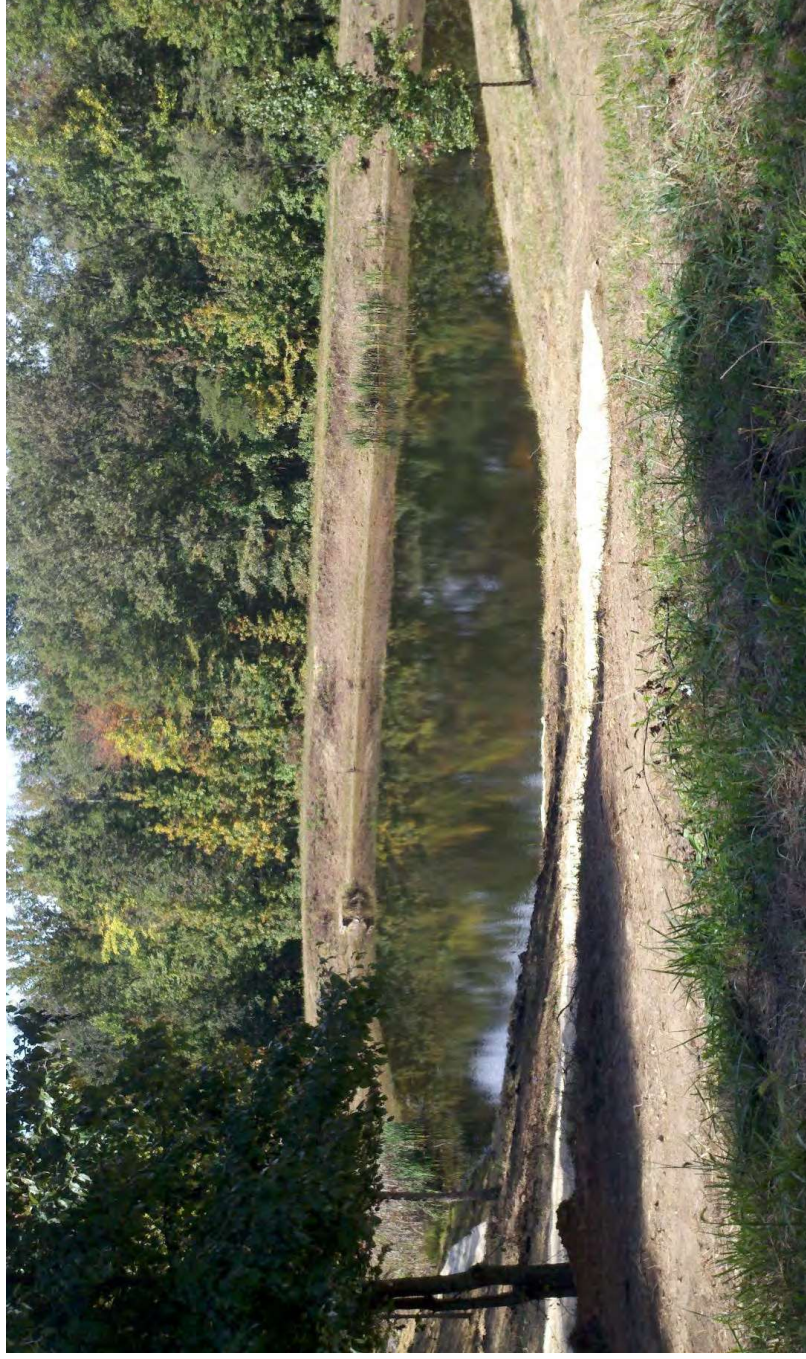
STORMWATER MAP



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IDDE REPORTING CONTACTS
 DFC NOVA Regional Office (Mon. - Fri. 8:15 - 4:30): (703) 563-3800
 VA Dept. Emergency Management (24 hrs./7wk.): (800) 468-6932

STORMWATER POND

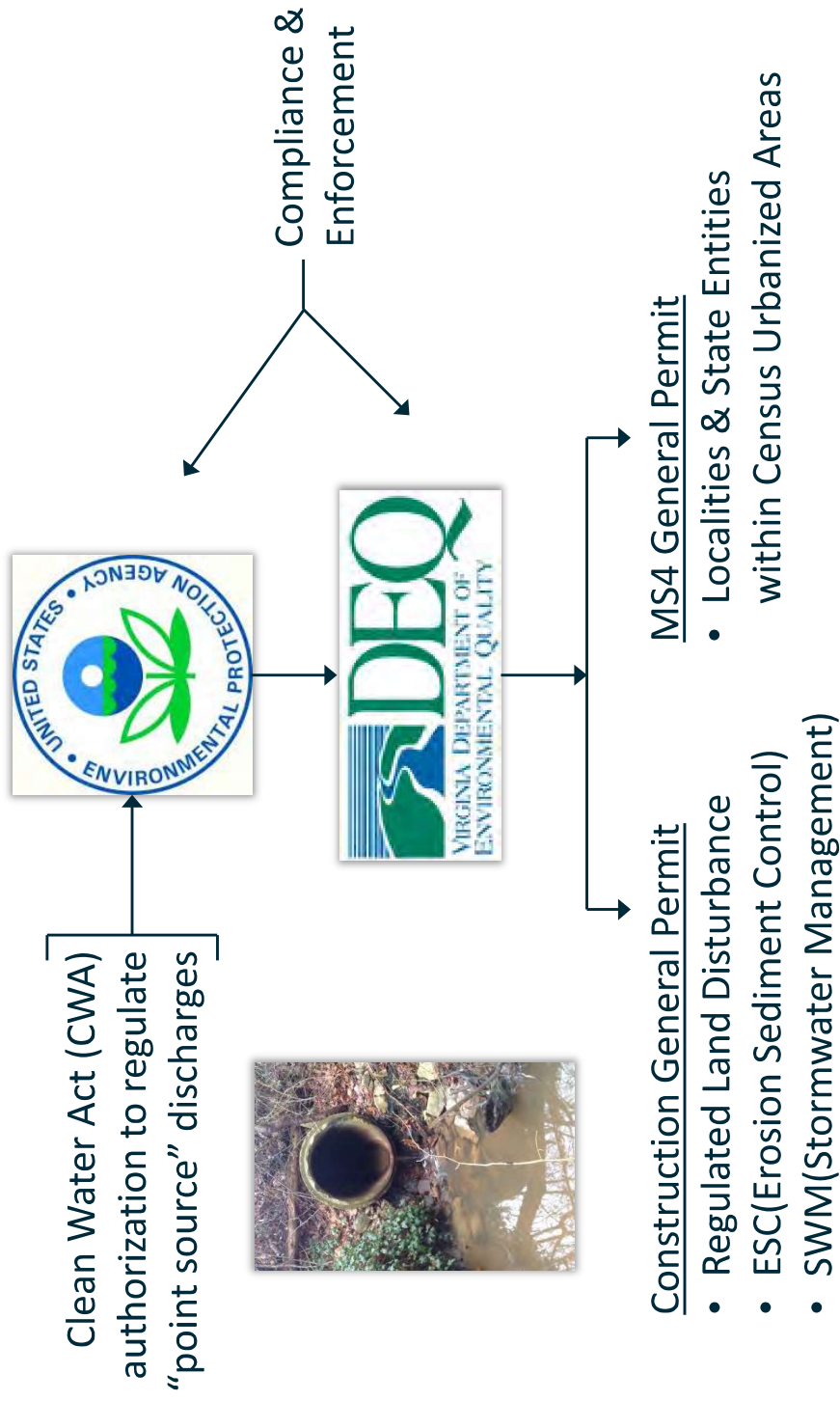


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OUTFALL LOCATION



REGULATORY STRUCTURE



MS4 GENERAL PERMIT

Special Conditions

- 1.** Chesapeake Bay TMDL (Total Maximum Daily Load)

Minimum Control Measures

- 1.** Public Education & Outreach
- 2.** Public Involvement/Participation
- 3.** Illicit Discharge Detection & Elimination
- 4.** Construction Site Runoff Controls
- 5.** Post-construction Runoff Controls
- 6.** Pollution Prevention/Good Housekeeping

TOTAL MAXIMUM DAILY LOAD (TMDL)

- TMDL is a plan (pollution diet) that establishes the maximum amount of a pollutant the waterbody can hold and meet water quality standards.
- WLA(Waste Load Allocations) is the quantity of the pollutant (sediment, nitrogen, bacteria, etc.) that may be discharged.

CHESAPEAKE BAY TMDL

- The Chesapeake Bay is impaired for Nitrogen, Phosphorous and Sediment.
- GCC implements a Chesapeake Bay TMDL Action Plan to reduce the Pollutants of Concern (POCs) based on the amount of impervious area (hard surfaces like roads, sidewalks and building footprints) on campus.
- Currently, GCC uses street sweeping as a Best Management Practice to achieve the required reductions.
 - Requires 5% or 326 lbs. load reduction per year for the 5 year permit cycle (Phosphorus, Nitrogen, Sediment)

LOCAL IMPAIRED WATERWAYS

- GCC directly discharges into an unnamed tributary of the Massaponax Creek; however, downstream of the College is Massaponax Creek is designated as an impaired waterway.
- DEQ's 2016 impaired waters list identifies Massaponax Creek as impaired for:
 - pH (measure of amount of hydrogen and hydroxide ions in water i.e. alkalinity versus acidity); and E. coli (bacteria).

LOCAL IMPAIRED WATERWAYS CONTINUED

- Pollutant sources that affect water pH: landscape additives such as lime, potash; and chemicals that are alkaline, acidic or neutral in content.
- Pollutant sources of E. coli: livestock and pet waste and sanitary sewer overflows.
- Steps taken to reduce pollution of impaired waterways:
 - Limit landscape additives only in amounts needed and at appropriate times (never before a rain event);
 - Properly store and dispose of spilled chemicals; and
 - Pick-up pet waste.

PUBLIC INVOLVEMENT/EDUCATION

- Involvement
 - Implement 4 activities per year i.e. educational events, pollution prevention, stream restoration
- Education
 - Communicate two or more strategies i.e. speaking engagements, media materials
 - Program Plan/Annual Report webpage posting specifics



ILLCIT DISCHARGE DETECTION AND ELIMINATION(IDDE)

- *What is Illicit Discharge? Any discharge to an MS4 that is not composed entirely of stormwater, except discharges specifically identified in the Va. Administrative Code*

IDDE CONTINUED

- **Written IDDE procedures to detect, identify, and address nonstormwater discharges**
 - Methods for field observations/screening
 - Schedule (outfalls screened annually)
 - Data collection (field screening)
 - Methods for investigation of source
 - Observation
 - Mechanisms for eliminations of source
 - Policies
 - Follow-up & documentation
- **Public reporting of illicit discharges**
 - Promote, publicize, & facilitate reporting
 - Who to contact: Garland Fenwick, 540-423-9046
 - Conduct inspections in response to complaints
 - Ensure corrective action where necessary

WHAT IS AN ILLICIT DISCHARGE



WHAT IS NOT AN ILLICIT DISCHARGE



- Water system flushing



- Air Conditioning condensate



- Landscape irrigation

- Basement sump pumps
- Potable water sources
- Street wash water

- Foundation/footing drains
- Fire fighting activities
- Residential car washing

- Spring water
- Dechlorinated pool discharge
- Agricultural irrigation water

WHAT IS OR IS NOT ILLICIT DISCHARGE???



ILLICIT DISCHARGE CLEAN-UP

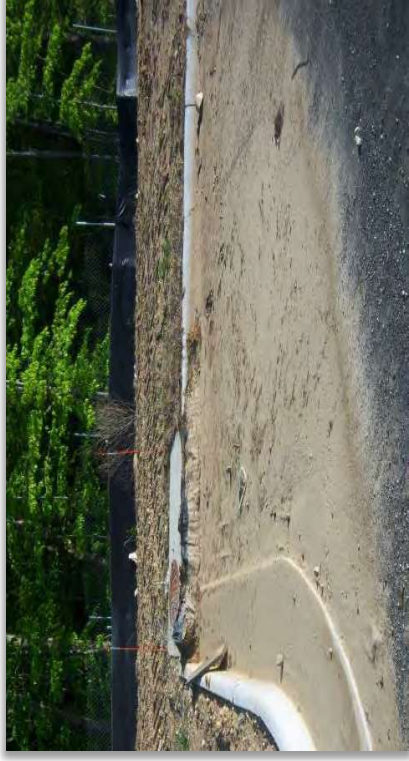


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CONSTRUCTION SITE RUNOFF CONTROLS

- **VCCS Standards & Specifications for ESC**
 - Approved plan prior to start of regulated land disturbance (Approved by VCCS)
 - Inspection oversight (Certified consultants)
 - Legal Authority to require compliance
- **Contractor responsibilities with VCCS oversight**
 - Obtain Construction General Permit (GP), when required
 - Implement the ESC Plan and meet GP requirements
 - Develop and implement Stormwater Pollution Prevention Plan (SWPPP)

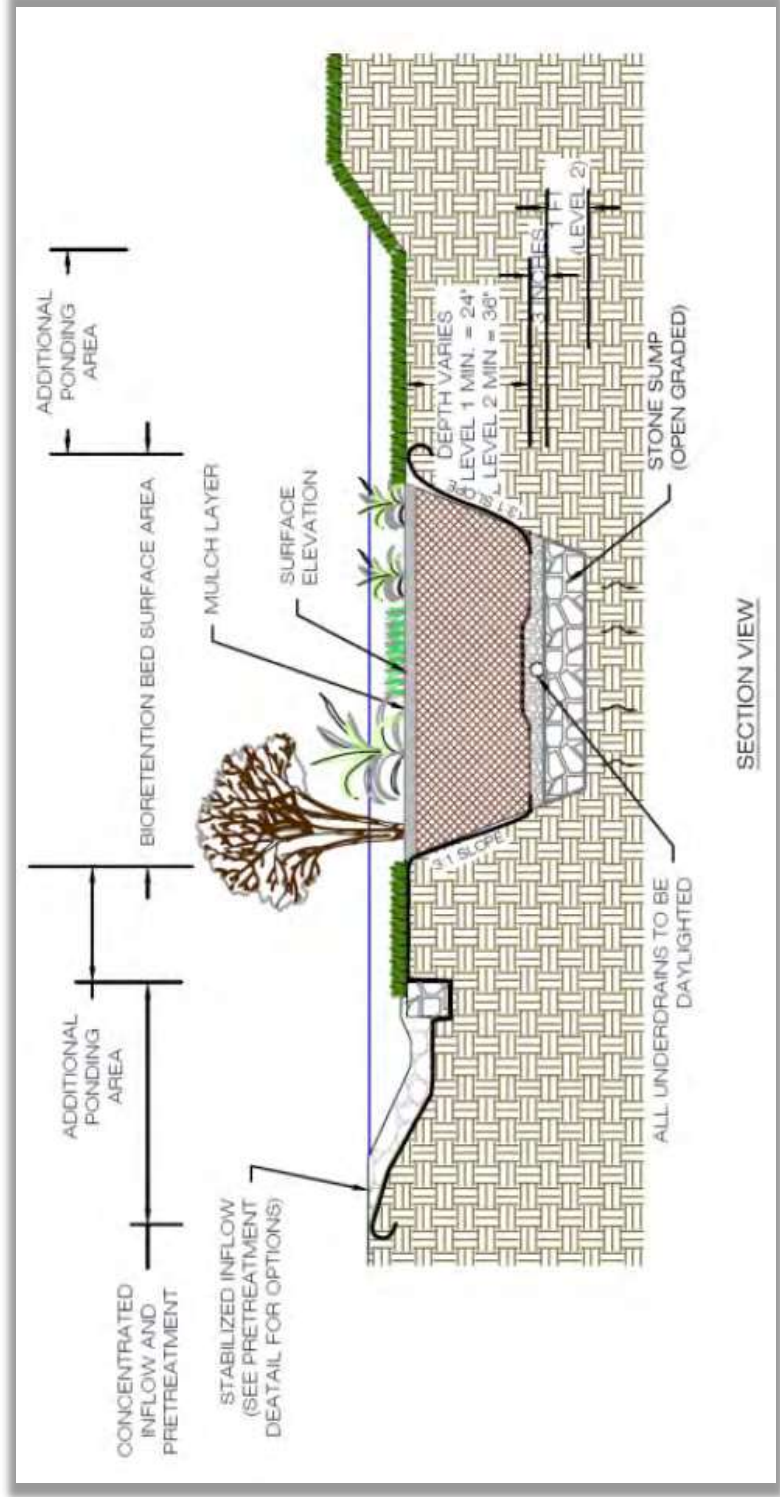
CONSTRUCTION SITE RUNOFF CONTROLS

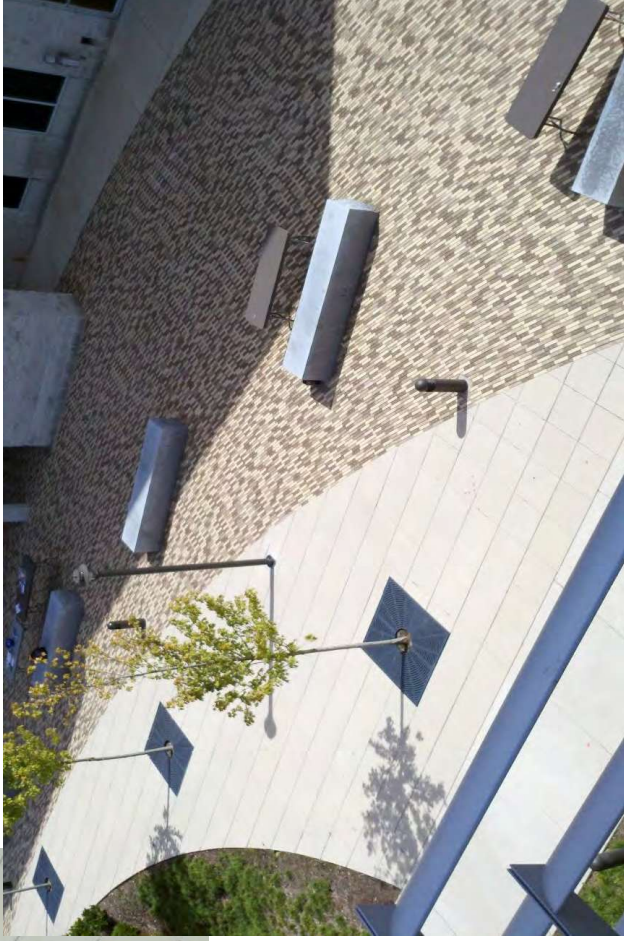
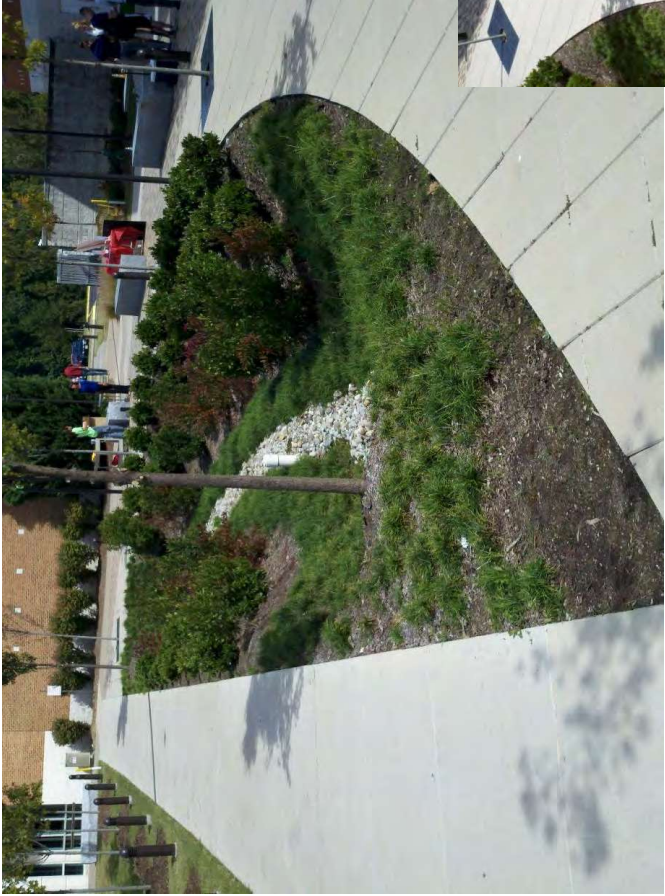


POST CONSTRUCTION CONTROLS

- Permit requires long-term Inspection, operation, & maintenance of SW BMPs
 - Written inspection & maintenance procedures
 - Conduct maintenance as necessary
 - BMP Specific Checklists
 - Annual inspections
 - Frequency of inspection may vary based on BMP type
- Additional SWM facility tracking and reporting
 - Lat./long., date brought online, date of latest inspection, total inspections

BMP STANDARDS & SPECIFICATIONS

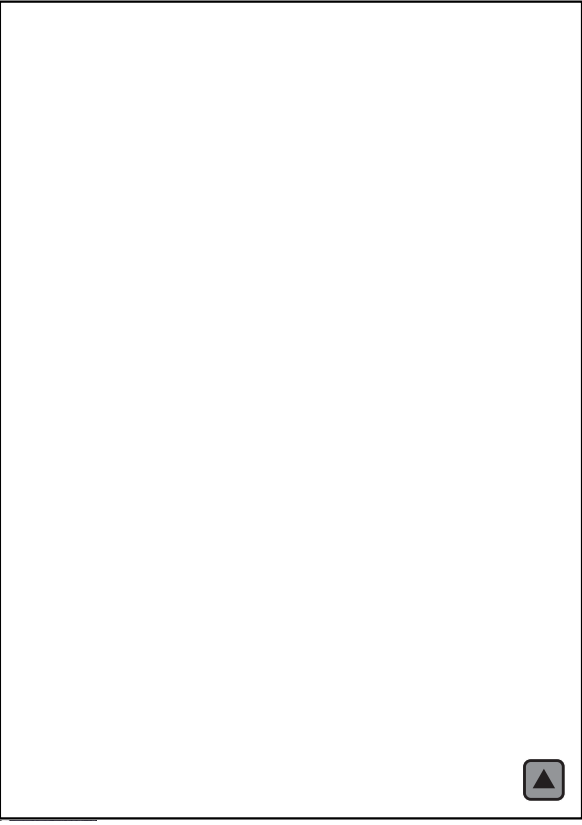
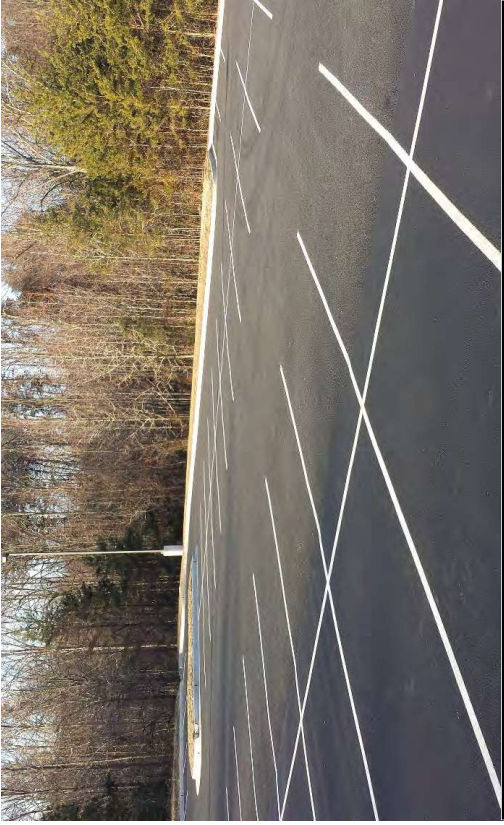




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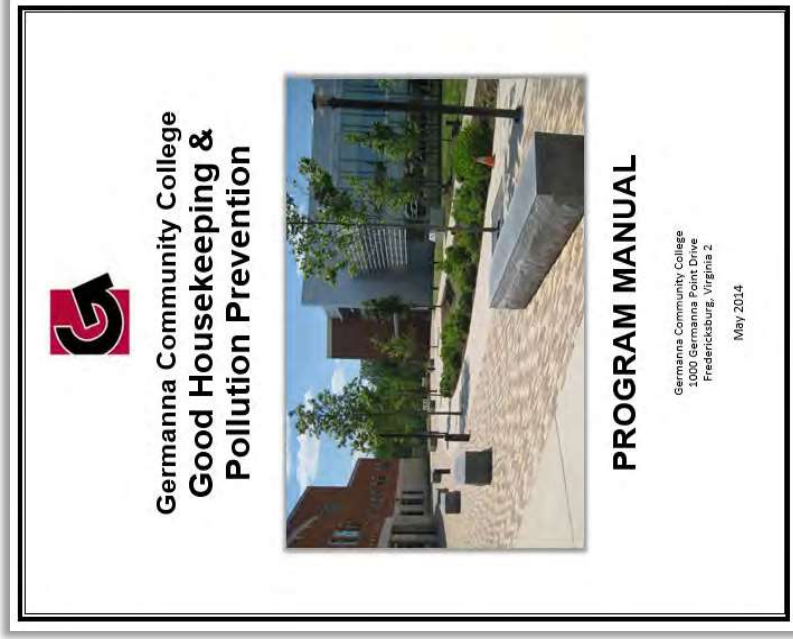


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GOOD HOUSEKEEPING/POLLUTION PREVENTION

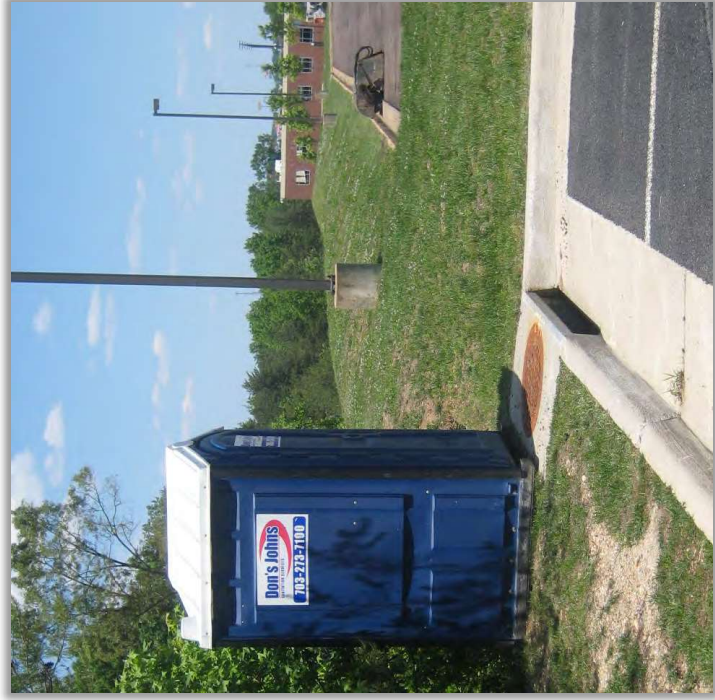


- Maintenance & operations procedure BMP
 - Vehicle washing, vehicle maintenance, dumpster operations/locations, fueling, chemical storage, other applicable practices
- Training Plan
- Inspection Guidance
 - Checklist/Mapping
 - Documentation
- Waste Management
 - Oil, gas, and diesel
 - Absorbents
 - Other applicable wastes
- Reporting
- Evaluation/modification

GOOD HOUSEKEEPING/POLLUTION PREVENTION



GOOD HOUSEKEEPING/POLLUTION PREVENTION



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GOOD HOUSEKEEPING/POLLUTION PREVENTION



QUESTIONS

Thank You!
Garland

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Public Involvement Activity #2

Note: Same PowerPoint presentation as in Public Involvement Activity 1 was used to educate participants.

SIGN-IN SHEET

School Name:	Geranna Community College	Date:	04/21/2022
Topic:	Stormwater Drain Marker Install Pollution Prevention	Location:	Fredericksburg Campus

Name	Role	Time	Flyer <input checked="" type="checkbox"/>	No.
Sean Ahmad		2pm		1
NEESHIA Sims		2PM		2
Rebecca A		2pm		3
Chase Johnson		2PM		4
Niamh Benister				5
Jordan Ridderhof		2PM		6
Charles Stocter		2pm		7
Ryan Pierce				8
				9
				10
				11
INSTALLED 13 DRAIN MARKERS				12
				13
				14
				15
				16
				17
				18
				19
				20



Public Involvement Activity #3

Science & Engineering Day



April 2 • 10 a.m. – 2 p.m.

Fredericksburg Campus, 10000 Germanna Point Drive, Fredericksburg, VA

Here are just a few examples of activities designed for grades K-8:

- Squishy circuits
- Design a catapult competition
- See how 3D printers work
- You'll Find this Humerus!: Human anatomy & physiology activities
- The science behind seeing: mirrors, lenses and lasers
- What is in pond water?
- Use a microscope
- Geology Rocks!
- Extract DNA
- Drones
- Preserved zoology specimens
- Learn about the Virginia Blue Society, Virginia State Parks, and the Friends of the Rappahannock
- Take a campus tour
- Music & Food

We will be collecting canned and boxed food and personal hygiene items for the Germanna Food Pantry at the event ([here is a list of their specific needs](#)).

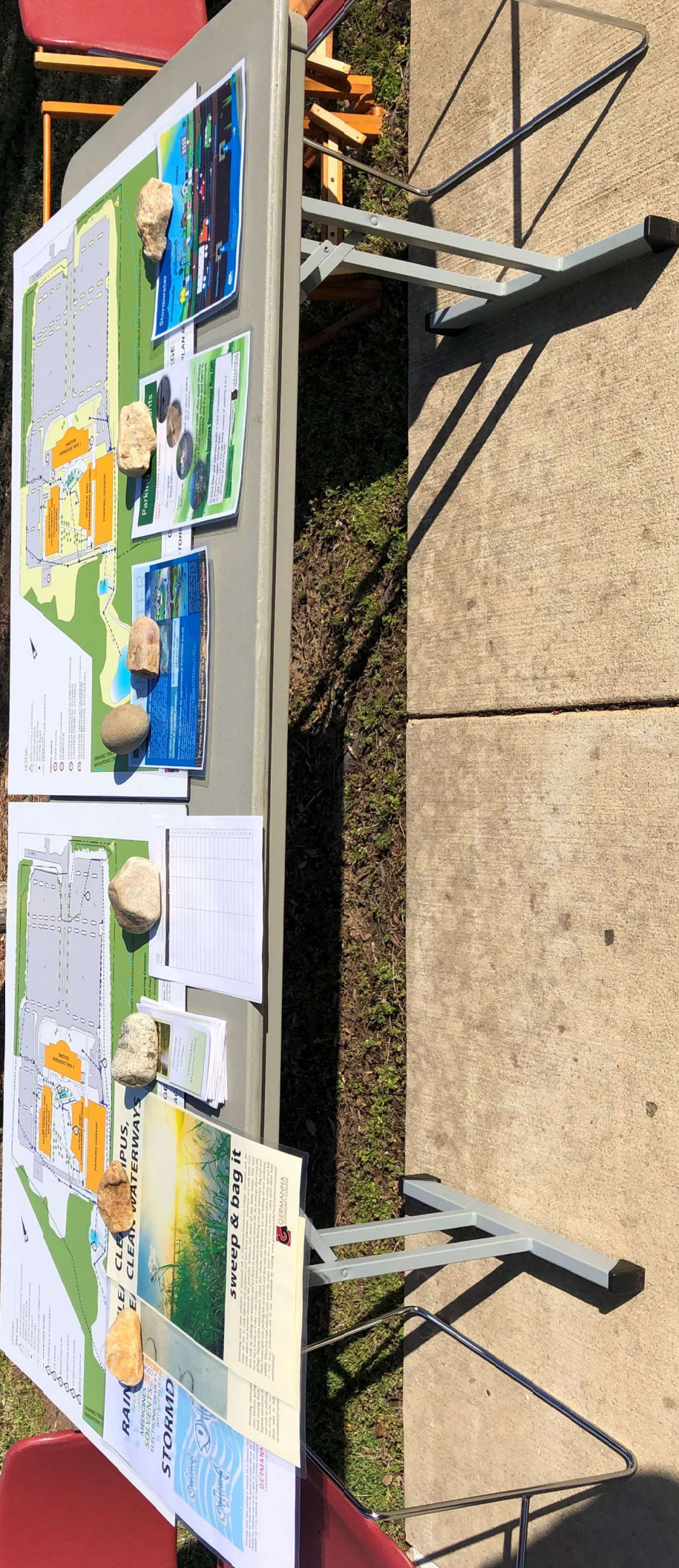
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SIGN-IN SHEET (MS-4)

School Name:	Germanna Community College	Date: 4/2/2022	
Event:	Science & Engineering Day	Location:	Fredericksburg Campus

Name	Role	Time	Flyer <input checked="" type="checkbox"/>	No.
<i>[Signature]</i>	Admin	10:00		1
Johanna Humphrey		10:00		2
Abigail Dodd				3
WILLIAM WACHTER	HALF-BAKED			4
Jim Solana		10:00		5
Sabren Harris				6
<i>[Signature]</i>	student			7
Ross Smith	Guest	10:43		8
Dannyell Yane	Student	10:58		9
Kate Woolsten	student	10:58		10
Emily Jakob	Student			11
Hilda Quansah	STUDENT			12
Brianna Colon	Student	11:51		13
				14
				15
				16
				17
				18
				19
				20



Site Plan

Map showing residential lots, streets, and utility lines. Includes a legend for symbols like 'Water Main', 'Sewer Main', and 'Electric Main'.

Permitting

Information regarding the permitting process for construction.

Site Plan

Another view of the site plan, highlighting specific areas.

Site Plan

Map showing residential lots and streets.

Permitting

Information regarding the permitting process.

Site Plan

Map showing residential lots and streets.

RAIN

How to manage rainwater runoff.

STORMID

How to manage stormwater runoff.

CLEAN TIPUS, CLEAN WATERWAYS

Information about water quality and stream health.

sweep & bag it

Information about litter cleanup and its impact on waterways.

GERMANN

Logo for GERMANN, a company involved in the project.

Public Involvement Activity #4

CBLP Level 1 Training Class

Fredericksburg, VA

March 2, 2022

9:30-3:00 pm

PRE Class Assignments:

Fill out

- Covid Form

Watch

- BMP Inspection and Verification Presentation, by Shereen Hughes
- BMP Worksheet and Tools Video, By Dave Hirschman and Beth Ginter

BMP Tour

Parking: Germanna Community College Campus at 10000 Germanna Point Drive – Park in Parking Lot to the Left as you enter campus

9:30 – 9:45 Introductions, Divide into Groups, and Schedule for Day

9:45 – 10:35 Courtyard Bioretention (50 minutes)

Objective: Trainees will be guided by trainers through the BMP assessment and inspection process, introduced to tools, compare design details with field observations of a bioretention basin, take soil samples, measure elevation change and compare BMP measurements to design details

10:40 – 11:25 Parking Garage Bioretention (30 minutes)

Objective: Trainees break into small groups to work through the inspections forms and evaluate the bioretention area. Trainers facilitate to reinforce categories and terminology. Trainees use tools, inspection forms, plant cards and planting plans. Can take time to do plant id to compare planting plan to existing plants. Students will be introduced to treatment train concepts will be discussed including sheetflow to conserved open space, bioretention outlets to stormwater pond.

11:30 – 11:45 Restroom Break

11:45 – 12:15 Pervious Asphalt & Filterra walk and talk (30 minutes)

Objective: Trainees will be introduced to a Filterra, a proprietary product, and pervious asphalt, commentary by Germanna Staff will be provided.

12:15 – 1:10 Lunch Break and Reconvene at University of Mary Washington (UMW) Campus at Marshal Hall

Parking Instructions/Directions to meeting location to be provided

1:10 – 1:30 Marshall Hall Treatment Train Walk and Talk: rain gardens + bioretention (50 minutes each?)

Objective: Review how system of rain gardens and bioretention practices work as treatment train, look at plant lists and compare to observed plants.

1:30 – 2:15 Individual BMP Checklist at Marshall Hall Bioretention (45 minutes)

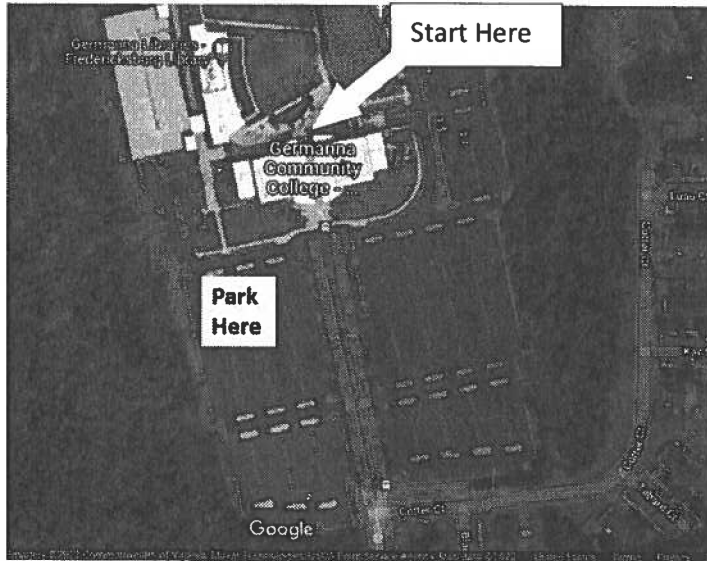
Objective: Trainees will perform independent assessment and inspection of a bioretention area using tools, inspection forms and plans. Forms will be turned in upon completion and observations discussed.

2:15 – 2:55 Walk and Talk of other UMW BMPs

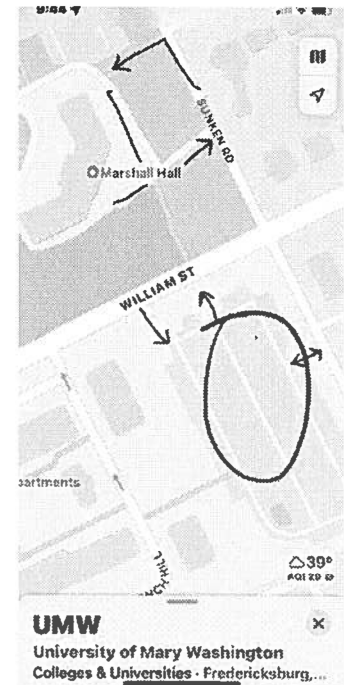
Objective: Visit and discuss other types of BMPs used on UMW Campus including an Extended Detention Basin, a Proprietary Jepson Filter, Permeable Sidewalk retrofit.

2:55 – 3:00 Wrap-up

Morning Location: Germanna Community College



Afternoon Location: University of Mary Washington – Parking in Lot off William Street (red circle)



CBLP Level 1 Fredericksburg Attendance Mar. 2, 2022

First	Last	email	Affiliation	Attendance
Rose	Austin	brm8192@gmail.com		✓
Diane	Beyer	dbeyer@fredericksburgva.gov	City of Fredericksburg	✓
Lloyd	Blake	lbblake42@gmail.com	Garden Groomer of Virginia	✓
Holly	Chichester	hchiches@umw.edu	University of Mary Washington	✓
Aleta	Daniels	Aleta.Daniels@faquiercounty.gov		✓
Michael	Hirsch	hirschm@alumni.vcu.edu		
Ashleigh	Hughes	Ashleigh.hughes@riverfriends.org	Friends of The Rappahannock	
Gabriel	Irigaray	girigaray@rvarc.org		✓
Bryan	Mcknight	bryan.mcknight@timmons.com	Timmons Group	✓
Jessalyn	Mehrkam	earthliaison03@gmail.com	Earth Liaison	✓
Abby	Pierson	abby.pierson@mountaincastles.org	Mountain Castles SWCD	✓
Darby	Reed	darby.reed@vaswcd.org	Friends of the Rappahannock	✓
Andrew	Scott Rae	asrae@fredericksburgva.gov	City of Fredericksburg	
Nancy	Segarra	nesegarra@fredericksburgva.gov	City of Fredericksburg	
David	Hirschman		CBLP Trainer/HWE	
Shereen	Hughes		CBLP Virginia Coordinator	

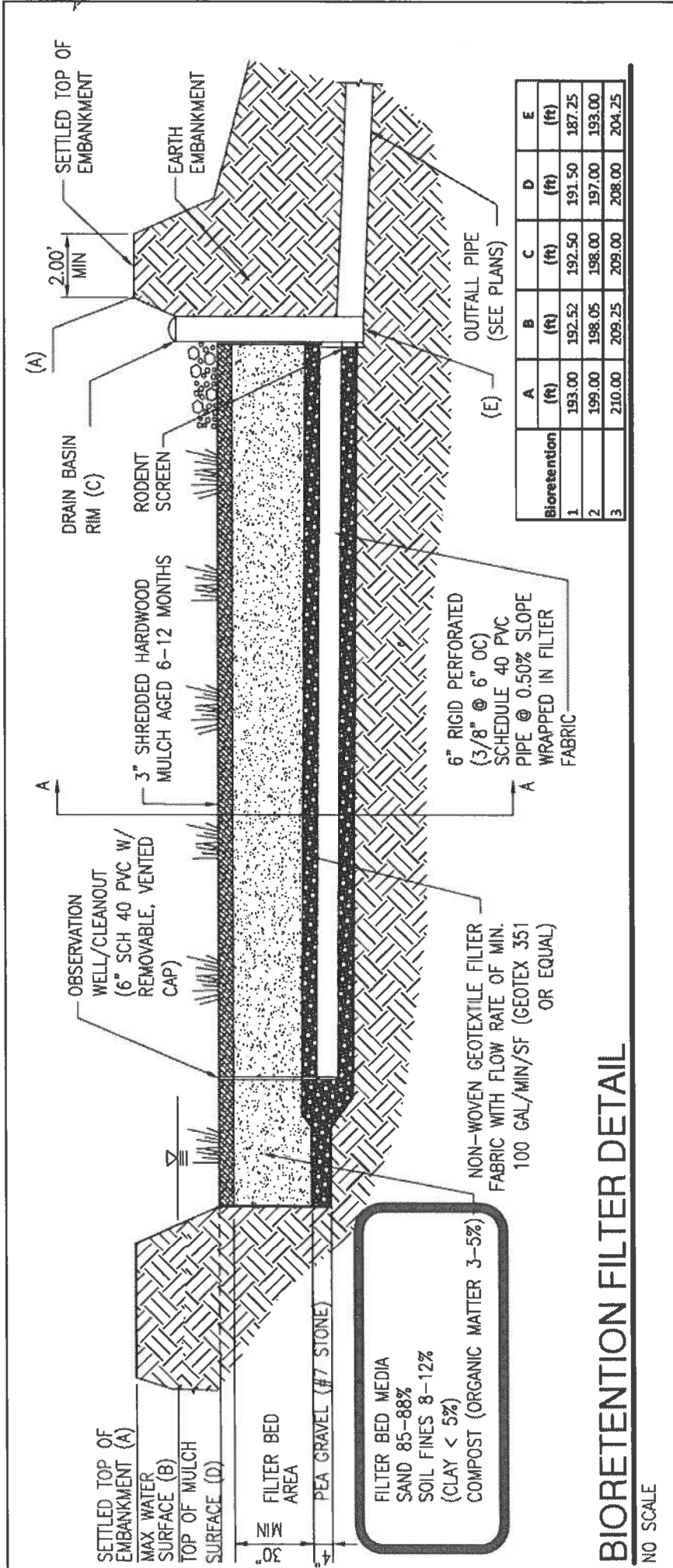
CBLP Fredericksburg

Level 1 Field Practicum

March 2, 2022

Selected BMP Details

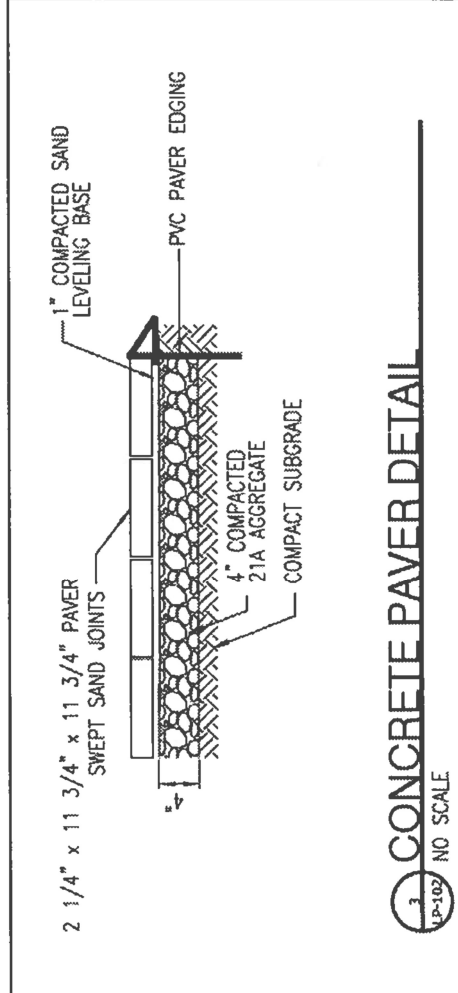
Germanna CC – Courtyard Bioretention & Pavers (2011, 2012)



Bioretention	A (ft)	B (ft)	C (ft)	D (ft)	E (ft)
1	193.00	192.52	192.50	191.50	187.25
2	199.00	198.05	198.00	197.00	193.00
3	210.00	209.25	209.00	208.00	204.25

BIORETENTION FILTER DETAIL

NO SCALE



Are these pavers permeable?

CONCRETE PAVER DETAIL

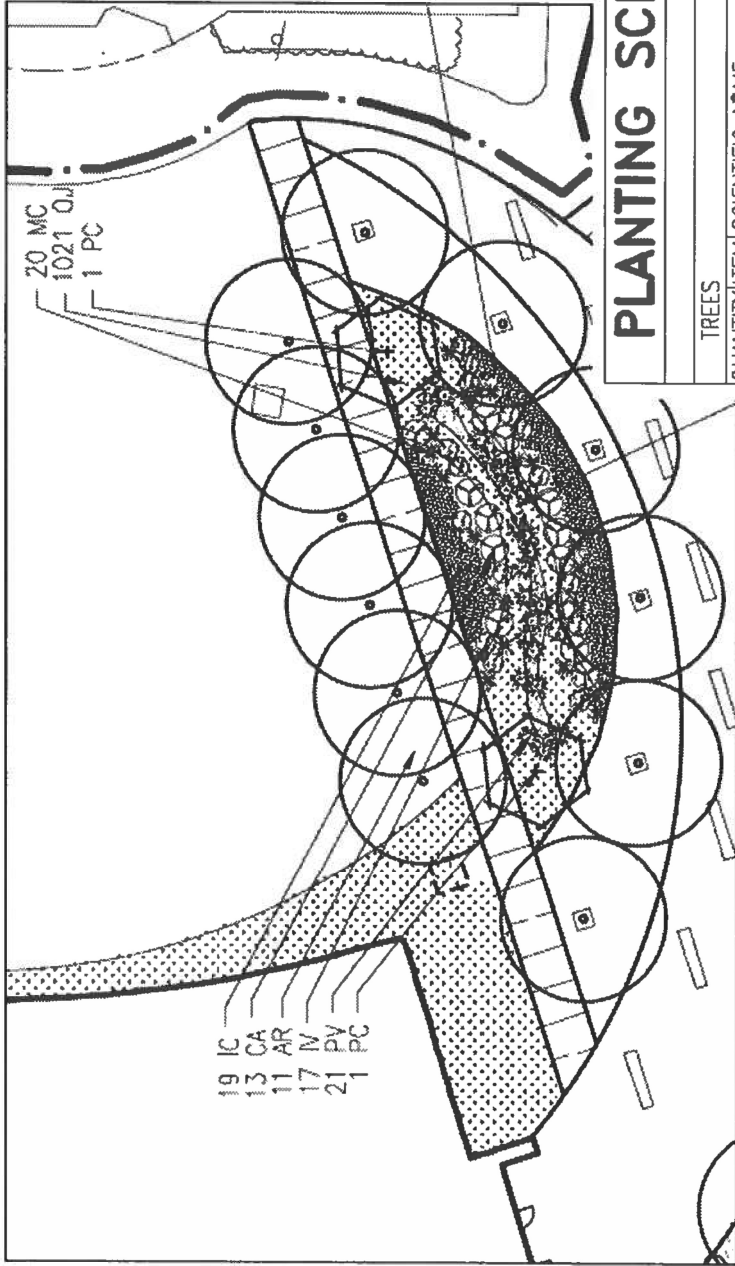
NO SCALE

Germanna CC – Courtyard Bioretention (2011)

INSPECTION AND MAINTENANCE SCHEDULE FOR BIORETENTION BASIN

DESCRIPTION	METHOD	FREQUENCY	TIME OF THE YEAR
<u>SOIL</u>			
INSPECT AND REPAIR EROSION	VISUAL	MONTHLY	MONTHLY
INSPECT AND REPAIR BIO-AREA FOR STRUCTURAL DEFICIENCIES.	MECHANICAL OR BY HAND	TWICE A YEAR	AFTER SIGNIFICANT RAINFALL EVENTS
<u>ORGANIC LAYER</u>			
REMULCH ANY VOID AREAS	BY HAND	WHENEVER NEEDED	WHENEVER NEEDED
REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER (OPTIONAL)	BY HAND	ONCE EVERY TWO TO THREE YEARS	SPRING
ANY ADDITIONAL MULCH ADDED (OPTIONAL)	BY HAND	ONCE A YEAR	SPRING
<u>PLANTS</u>			
REMOVAL AND REPLACEMENT OF ALL DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT	SEE PLANTING SPECIFICATIONS	TWICE A YEAR	3/15 TO 4/30 AND 10/1 TO 11/30
TREAT ALL DISEASED TREES AND SHRUBS	MECHANICAL OR BY HAND	N/A	VARIES, DEPENDS ON INSECT OR DISEASE INFESTATION
WATERING OF PLANT MATERIAL SHALL TAKE PLACE AT THE END OF EACH DAY FOR FOURTEEN CONSECUTIVE DAYS AFTER PLANTING HAS BEEN COMPLETED	BY HAND	IMMEDIATELY AFTER COMPLETION OF PROJECT	N/A
REPLACE STAKES AFTER ONE YEAR	BY HAND	ONCE A YEAR	ONLY REMOVE STAKES IN THE SPRING
REPLACE ANY DEFICIENT STAKES OR WIRES	BY HAND	N/A	WHENEVER NEEDED
CHECK FOR ACCUMULATED SEDIMENTS	VISUAL	MONTHLY	MONTHLY

Germanna CC – Courtyard Bioretention (2011)

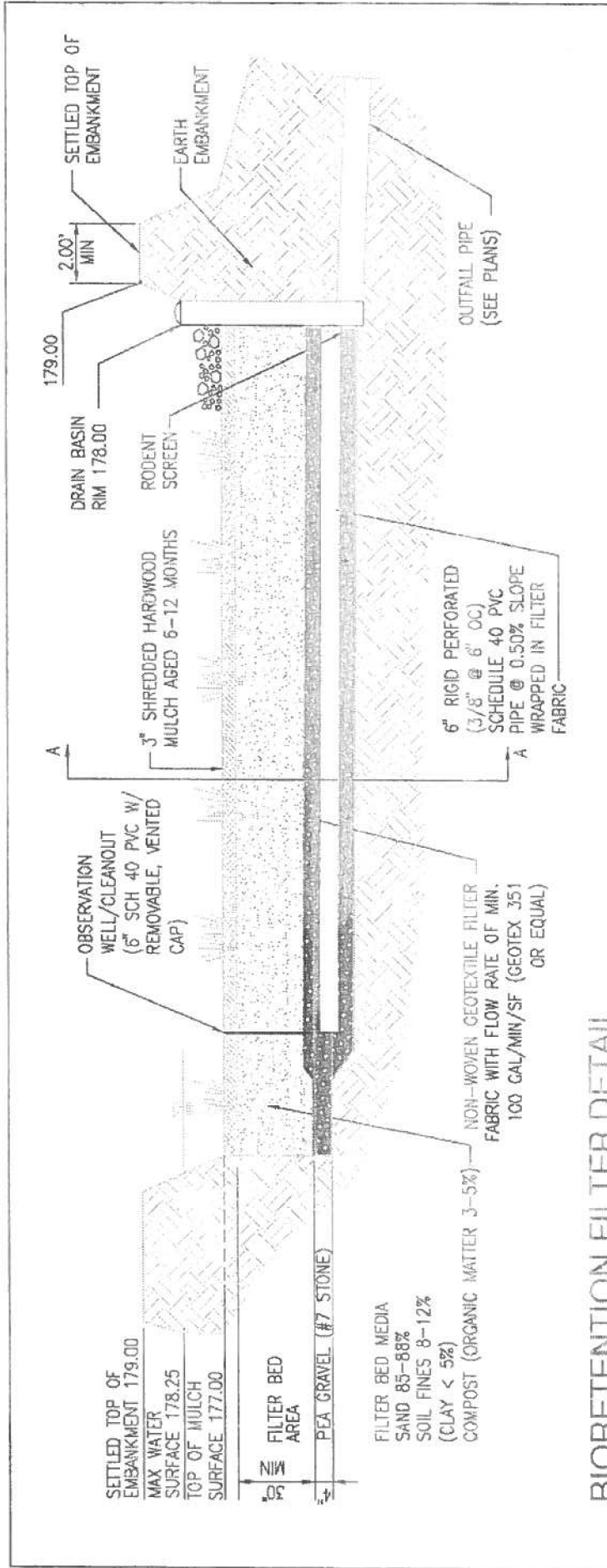


PLANTING SCHEDULE

TREES		COMMON NAME
20	AR	ACER RUBRUM "OCTOBER GLORY"
1	IA	ILEX A ATTENUATA "EAST PALATKA"
4	ML	MAGNOLIA GRANDIFLORA "LITTLE GEM"
7	PC	PYRUS CALLERYANA "CHANTICLEER"
2	QB	QUERCUS BOREALIS
SHRUBS		
16	CA	CLETHRA ALNIFOLIA
9	PL	PRUNUS LAUROCERASUS ZABELIANA
77	RI	RHAPHIOLEPSIS INDICA "SNOW PINK"
17	IV	ITEA VIRGINICA "LITTLE HENRY"
49	IC	ILEX CORNUATA "CARISSA"
GROUNDCOVER		
220	PA	PENNISETUM A. 'HAMELN'
4693	OJ	OPHIPOGON JAPONICUS
20	MC	MUHLENBERGIA CAPILLARIS
21	PV	PANICUM VIRGATUM

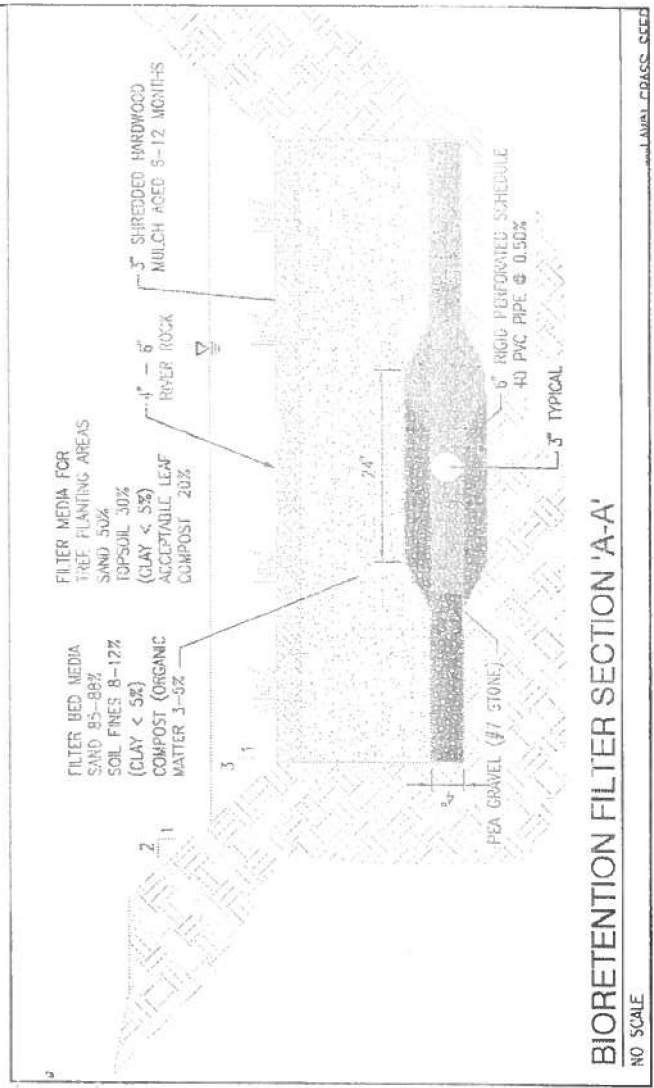
QUANTITY	ITEM	SCIENTIFIC NAME	COMMON NAME
	AR	ACER RUBRUM "OCTOBER GLORY"	OCTOBER GLORY RED MAPLE
	IA	ILEX A ATTENUATA "EAST PALATKA"	EAST PALATKA HOLLY
	ML	MAGNOLIA GRANDIFLORA "LITTLE GEM"	LITTLE GEM MAGNOLIA
	PC	PYRUS CALLERYANA "CHANTICLEER"	CHANTICLEER PEAR
	QB	QUERCUS BOREALIS	NORTHERN RED OAK
SHRUBS			
	CA	CLETHRA ALNIFOLIA	SUMMER SWEET
	PL	PRUNUS LAUROCERASUS ZABELIANA	ZABEL CHERRY LAUREL
	RI	RHAPHIOLEPSIS INDICA "SNOW PINK"	DWARF INDIAN HAWTHORN
	IV	ITEA VIRGINICA "LITTLE HENRY"	LITTLE HENRY VIRGINIA SWEETSPIRE
	IC	ILEX CORNUATA "CARISSA"	CARISSA HOLLY
GROUNDCOVER			
	PA	PENNISETUM A. 'HAMELN'	DWARF FOUNTAIN GRASS
	OJ	OPHIPOGON JAPONICUS	MONDO GRASS
	MC	MUHLENBERGIA CAPILLARIS	PURPLE MUHLY GRASS
	PV	PANICUM VIRGATUM	SWITCHGRASS

Germanna CC - Parking Garage Bioretention (2012) (1)



BIORETENTION FILTER DETAIL

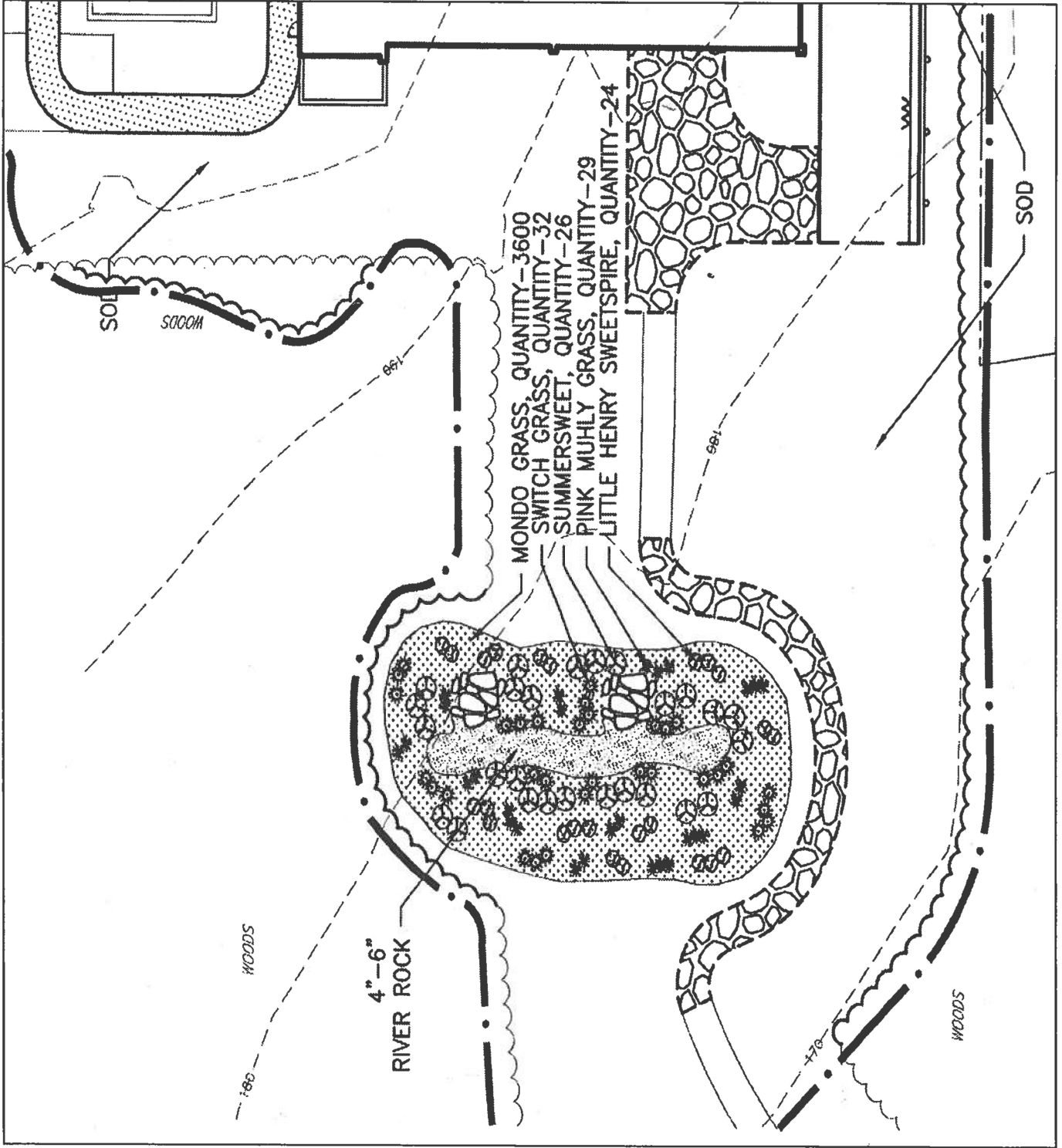
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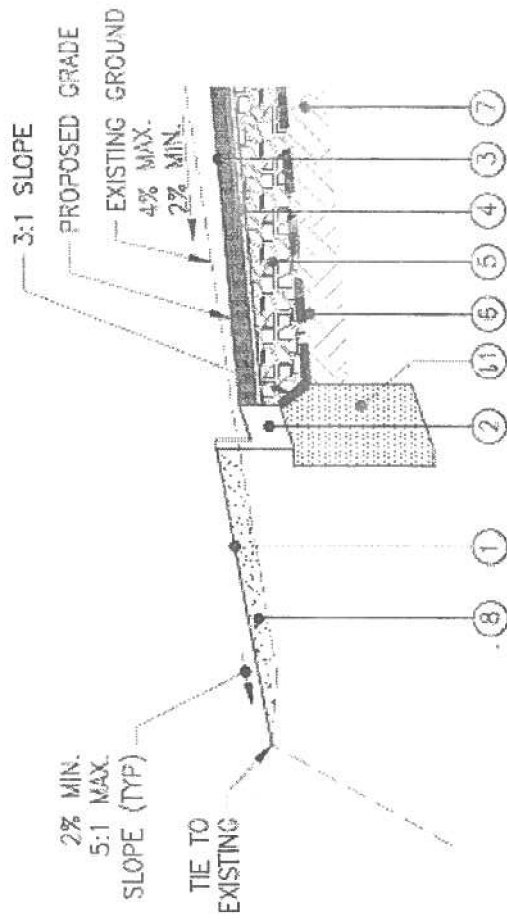
BIORETENTION FILTER SECTION 'A-A'

NO SCALE

Germanna CC – Parking Garage Bioretention (2012) (2)

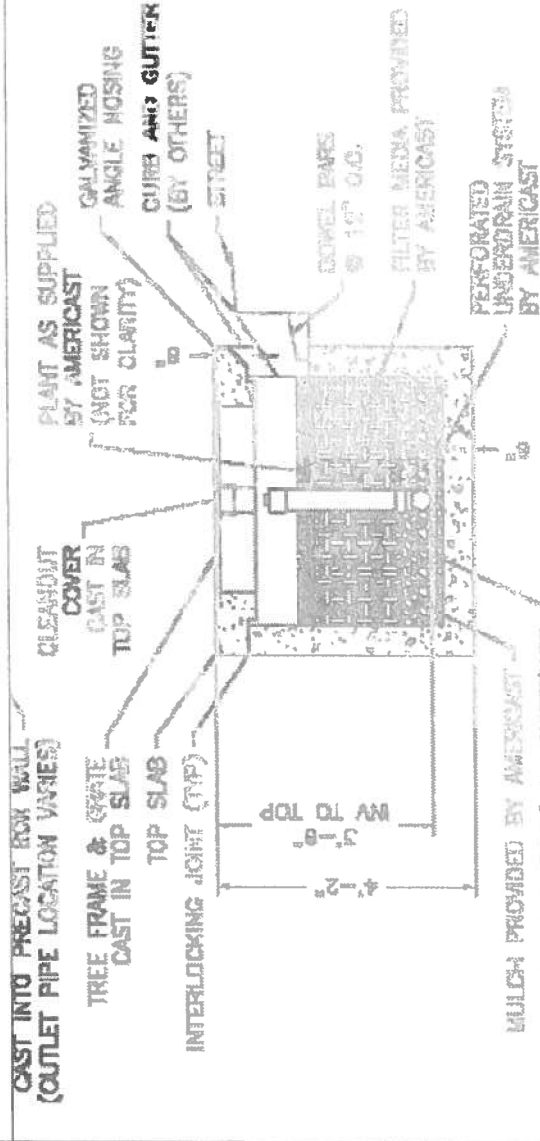


Germanna CC - Porous Asphalt & Filterra (2010, 2012)



SECTION LEGEND

- ① 4" TOPSOIL, SEED, FERTILIZE, & MULCH
- ② CURB AND GUTTER
- ③ 2.5" POROUS ASPHALT PAVEMENT
- ④ 2" #57 STONE (CLEANED AND WASHED)
- ⑤ 12" #3 STONE (CLEANED AND WASHED)
- ⑥ FILTER FABRIC
- ⑦ SUBGRADE (SEE NOTE 2)
- ⑧ BACKFILL AS NEEDED
- ⑨ CURB AND GUTTER (MOD.)
- ⑩ 6" #21B STONE
- ⑪ 24"x24" #21A STONE DAM - CONTINUOUS ALONG WEST & SOUTH SIDE GUTTERS
- ⑫ 24"x12" #21B CONTINUOUS STONE DAM
- ⑬ 8" #3 STONE (CLEANED AND WASHED)
2.5" VDOT STANDARD #M-9.5A ASPH. I



AMERICAST
Copyright © 2007 by Americast

DATE: 09-04-07 DWG: FTNW-3

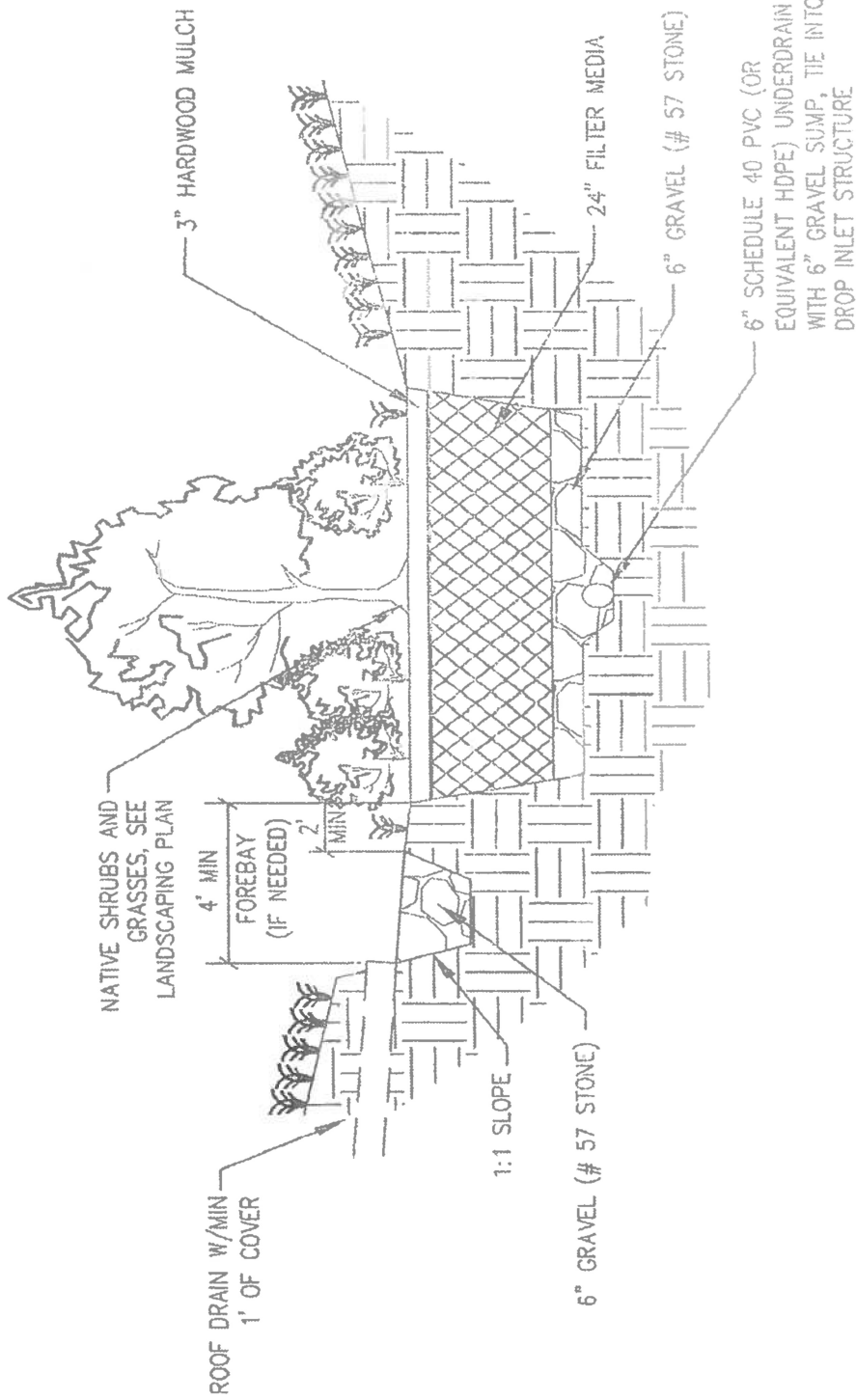
filterra
US PAT. 6,277,274 AND 6,569,321

**PRECAST FILTERRA® UNIT
NARROW WIDTH CONFIGURATION**

University of Mary Washington – Marshall Hall (2013) (1)



University of Mary Washington -- Marshall Hall (2013) (2)



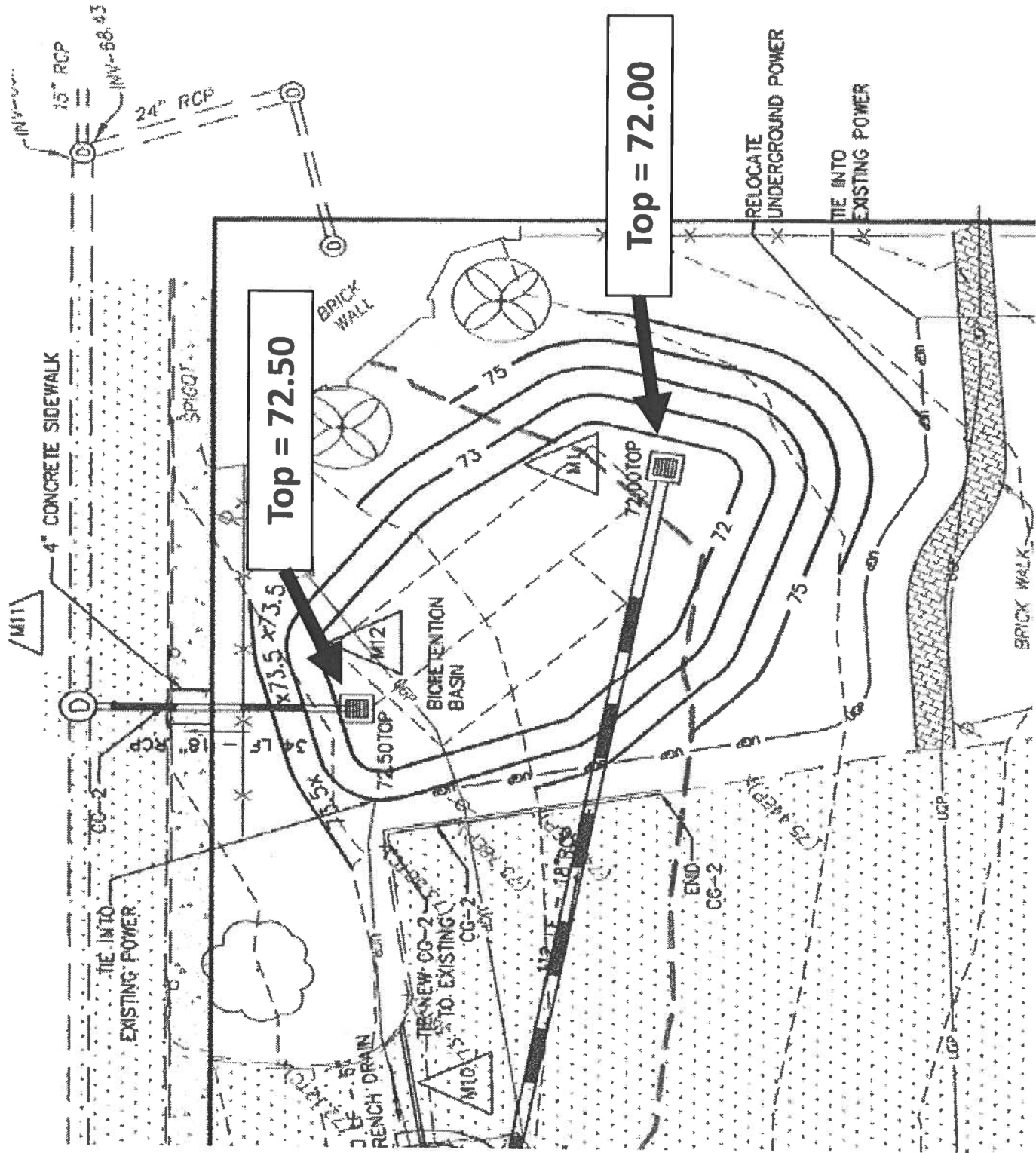
NOTES:

1. SEE CONSENSUAL LANDSCAPING PLAN FOR PLANT DETAILS.
2. UNDERDRAINS SHOULD BE ON 5 FT CENTERS. REFER TO SHEET C3.0 FOR APPROXIMATE UNDERDRAIN SYSTEM LAYOUT.

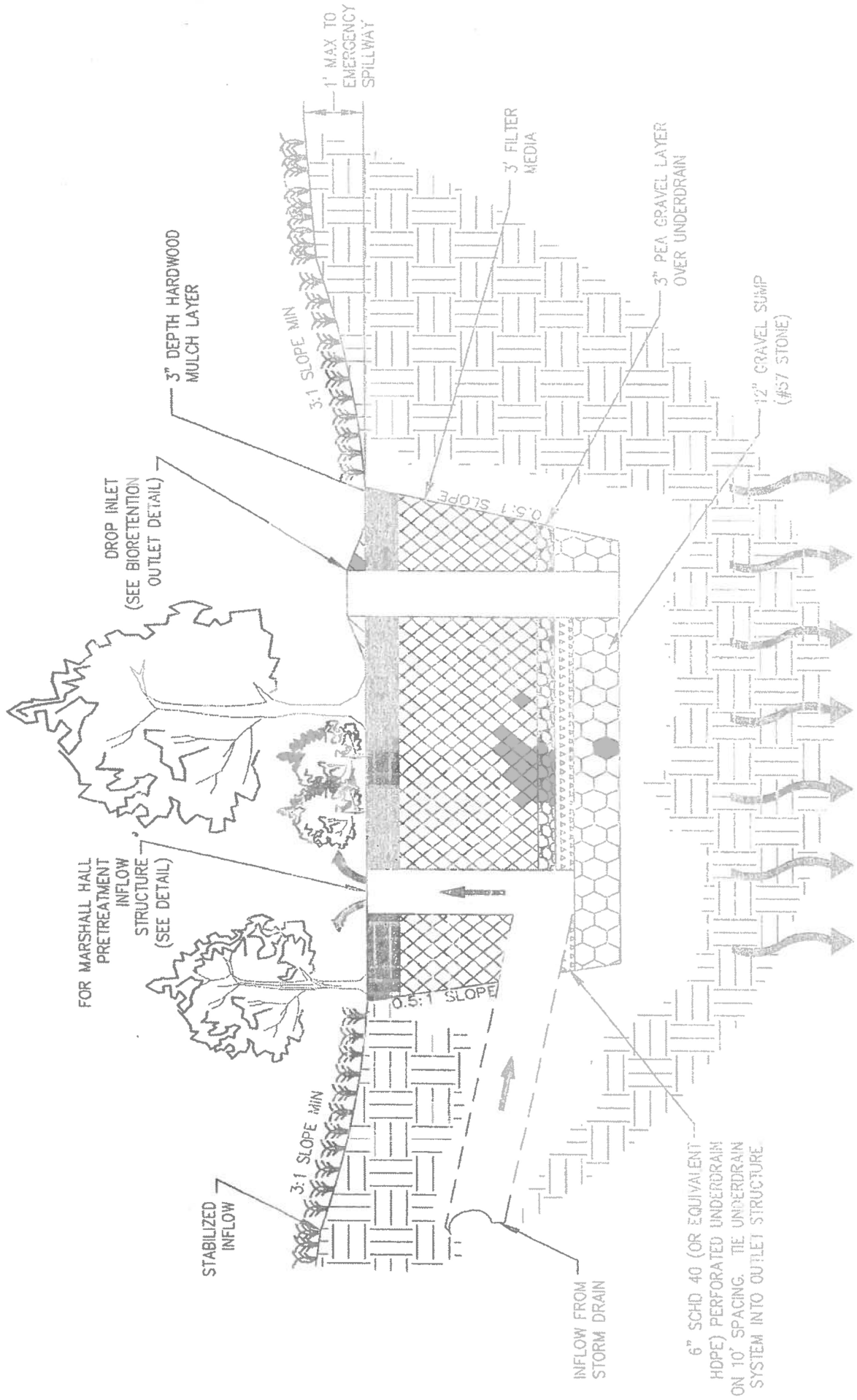
RAIN GARDEN TYPICAL SECTION

N.T.S.

University of Mary Washington – Marshall Hall (2013) (3)

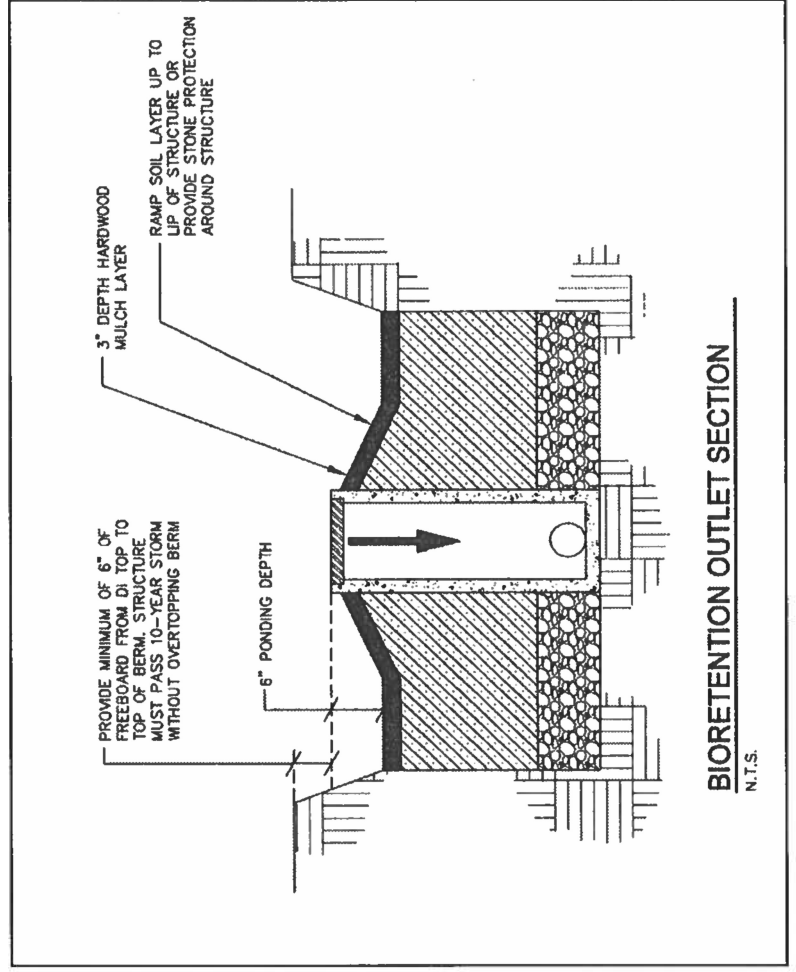
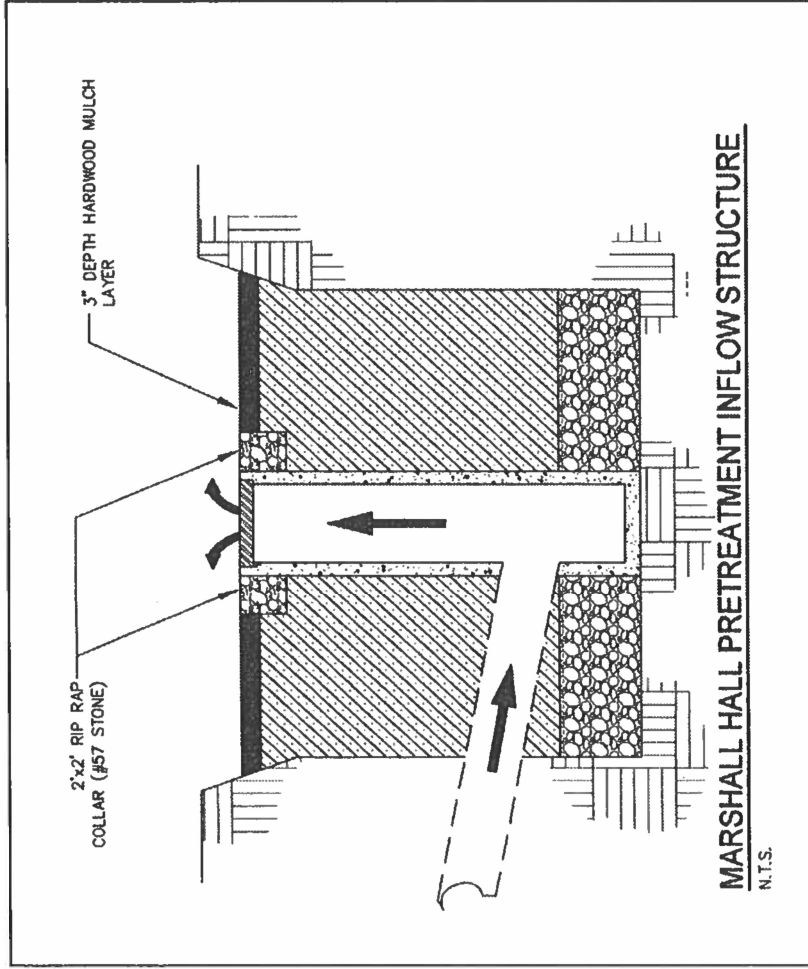


University of Mary Washington, 1 – Marshall Hall, Bioretention (2013) (4)



NOTES:
1. FILTER MEDIA COMPOSITION TO CONTAIN:

University of Mary Washington – Marshall Hall, Bioretention (2013) (5)



University of Mary Washington – Marshall Hall (2013) (6)

Rain Garden:

- Clethra hummingbird (7)
- Shamrock Inkberry (2)
- Sweet Bay Magnolia (1)

No ground cover,

Mulch to go from behind of rain garden up slope towards building (no grass)

Bioretention Basin

- Green Luster Holly (9)
- Sparkle Berry (6)
- Shamrock Inkberry (4) added afterwards
- Joe Pye Weed (1)
- New England Aster (5)
- Little Blue Stem (13)
- Swamp milkweed (4)
- No ground cover

NOTES:

1. FILTER MEDIA COMPOSITION TO CONTAIN:

- 85%-88% SAND
- 7%-12% SOIL FINES
- 3%-5% ORGANIC MATTER IN THE FORM OF LEAF COMPOST

2. PLANTING SOIL MIXTURE SHALL BE 50% SAND, 30% LEAF COMPOST (FULLY COMPOSTED) AND 20% TOPSOIL. TOPSOIL SHALL BE SANDY LOAM OR LOAMY SAND OF UNIFORM COMPOSITION, CONTAINING NO MORE THAN 5% CLAY, FREE OF STONES, STUMPS, ROOTS, OR SIMILAR OBJECTS GREATER THAN ONE INCH, OR ANY SUBSTANCE WHICH MAY BE HARMFUL TO PLANT GROWTH.

3. SOIL SHALL BE PLACED IN LIFTS LESS THAN 18 INCHES AND LIGHTLY COMPACTED (MINIMAL COMPACTIVE EFFORT) BY TAMPING OR ROLLING WITH A HAND-OPERATED LANDSCAPE ROLLER.

4. BIO-RETENTION BASIN SHALL BE INSPECTED AND MAINTAINED PER MINIMUM STANDARD 3.11 BIO-RETENTION BASIN PRACTICES OF THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK.

5. SEE SHEET L1.0 CONCEPTUAL LANDSCAPING PLAN FOR PLANT DETAILS.

Vegetated Practices: bioretention, rain gardens, bioswales, filter strips, living wall, buffers/shoreline, constructed wetlands, infiltration w/ vegetation. NOTE: Shaded cells to be used for BMP verification

Date of Inspection: _____ Project/BMP Name: _____ Plan/BMP # if applicable: _____

Type of Inspection: Verification 1st Inspection for Permit Cycle Verification Re-Inspection To Confirm Corrective Actions

BMP Type: Stormwater Retrofit New LID Practice Old Stormwater Practice Homeowner BMP

Date BMP Placed into Service: _____ Site Address: _____

Verification Inspector: _____ Inspector Credential(s): _____

Photo #s Taken at Site: _____ Is BMP Still Present? YES NO

Component:	Check For:	Observations:	VERIFICATION
Drainage Area	<input type="checkbox"/> Erosion <input type="checkbox"/> Sediment/Grit/Dirt <input type="checkbox"/> Stockpiles: <input type="checkbox"/> Bare soil <input type="checkbox"/> Chemicals, oil, etc.: <input type="checkbox"/> Other:		<input type="checkbox"/> Drainage area conforms to plan? If different from plan, note how it is different:
Inlets to Practices: <input type="checkbox"/> Pipes <input type="checkbox"/> Curb cuts <input type="checkbox"/> Sheetflow <input type="checkbox"/> Other:	<input type="checkbox"/> Obstruction <input type="checkbox"/> Erosion <input type="checkbox"/> Structural/safety issues <input type="checkbox"/> Other		



Component:	Check For:	Observations:	VERIFICATION
Pre-Treatment: <input type="checkbox"/> Forebay <input type="checkbox"/> Grass filter strip <input type="checkbox"/> Grass channel <input type="checkbox"/> Stone pad <input type="checkbox"/> Other: <input type="checkbox"/> None	<input type="checkbox"/> Full of sediment; needs clean-out <input type="checkbox"/> Erosion <input type="checkbox"/> Holding water <input type="checkbox"/> Flow by-passes pre-treatment <input type="checkbox"/> Other		
BMP Surface Area: <input type="checkbox"/> Vegetation <input type="checkbox"/> Mulch <input type="checkbox"/> Other:	<input type="checkbox"/> Appears undersized <input type="checkbox"/> Ponding depth too shallow <input type="checkbox"/> Ponding depth too deep <input type="checkbox"/> Not level; ponding not even across surface <input type="checkbox"/> Sink holes <input type="checkbox"/> Sediment caked on surface <input type="checkbox"/> Standing water <input type="checkbox"/> Trash <input type="checkbox"/> Erosion		<input type="checkbox"/> Surface area conforms to plan? If different from plan, note how it is different: <input type="checkbox"/> Ponding depth conforms to plan? If different from plan, note how it is different:
Soil Media: <input type="checkbox"/> Bioretention or Rain Garden mix <input type="checkbox"/> Sand <input type="checkbox"/> Other:	<input type="checkbox"/> Too much clay or wrong soil type; not permeable enough <input type="checkbox"/> Too shallow <input type="checkbox"/> Other:		<input type="checkbox"/> Soil media appears to conform to plan? If different from plan, note how it is different:
Side Slopes	<input type="checkbox"/> Erosion <input type="checkbox"/> Unstable <input type="checkbox"/> Other:		
Vegetation: <input type="checkbox"/> Trees <input type="checkbox"/> Shrubs <input type="checkbox"/> Herbaceous <input type="checkbox"/> Other:	<input type="checkbox"/> % surface area covered with vegetation: <input type="checkbox"/> Many bare spots <input type="checkbox"/> Dead/diseased/unhealthy plants <input type="checkbox"/> Overgrown <input type="checkbox"/> Invasives <input type="checkbox"/> Too much mulch <input type="checkbox"/> Other:		<input type="checkbox"/> Vegetation generally conforms to plan OR vegetative cover is adequate? If different from plan, note how it is different:



Component:	Check For:	Observations:	VERIFICATION
Outlets: <input type="checkbox"/> Underdrain(s) <input type="checkbox"/> Overflow structure @ ponding depth <input type="checkbox"/> Other	<input type="checkbox"/> Obstruction/clogging <input type="checkbox"/> By-passing or short-circuiting treatment <input type="checkbox"/> Erosion <input type="checkbox"/> Structural problem <input type="checkbox"/> Other:		
Other			
Issues to Refer to Higher Authority:			
VERIFICATION			<input type="checkbox"/> BMP is functioning properly and as designed for pollutant removal. <input type="checkbox"/> BMP requires corrective or preventative maintenance or rehabilitation to maintain its function for pollutant removal. Actions to be completed within one year: <input type="checkbox"/> BMP recommended to be downgraded for pollutant removal.

Permeable Pavement NOTE: Shaded cells to be used for BMP verification

Date of Inspection: _____ Project/BMP Name: _____ Plan/BMP # if applicable: _____

Type of Inspection: Verification 1st Inspection for Permit Cycle Verification Re-Inspection To Confirm Corrective Actions

BMP Type: Stormwater Retrofit New LID Practice Old Stormwater Practice Homeowner BMP

Date BMP Placed into Service: _____ Site Address: _____

Verification Inspector: _____ Inspector Credential(s): _____

Photo #s Taken at Site: _____ Is BMP Still Present? YES NO

Component:	Check For:	Observations:	VERIFICATION
Drainage Area	<input type="checkbox"/> Erosion <input type="checkbox"/> Sediment/Grit/Dirt <input type="checkbox"/> Stockpiles: <input type="checkbox"/> Bare soil <input type="checkbox"/> Chemicals, oil, etc.: <input type="checkbox"/> Other: <input type="checkbox"/> Approximate ratio of "run-on" area to permeable: <input type="checkbox"/> Asphalt <input type="checkbox"/> Turf/Landscaped areas		<input type="checkbox"/> Drainage area conforms to plan? If different from plan, note how it is different:
Pre-Treatment for run-on areas:	<input type="checkbox"/> Full of sediment; needs clean-out <input type="checkbox"/> Erosion <input type="checkbox"/> Holding water <input type="checkbox"/> Flow by-passes pre-treatment <input type="checkbox"/> Other: <input type="checkbox"/> None		



<p>Permeable Surface:</p> <ul style="list-style-type: none"> <input type="checkbox"/> PICP <input type="checkbox"/> Grid pavers <input type="checkbox"/> Permeable asphalt <input type="checkbox"/> Permeable concrete <input type="checkbox"/> Other: 	<p>Sediment accumulation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Grass/weeds growing <input type="checkbox"/> Standing water <input type="checkbox"/> Sink holes <input type="checkbox"/> Staining (oil, etc.) <input type="checkbox"/> Deterioration of surface material <input type="checkbox"/> Structural problem <input type="checkbox"/> Other: 	<p><input type="checkbox"/> Permeable surface functioning as designed? if different from plan, note how it is different:</p>
<p>Overflow/Outlet:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Underdrain(s) <input type="checkbox"/> Overflow inlet at curb <input type="checkbox"/> Other: 	<p>Obstruction/clogging</p> <ul style="list-style-type: none"> <input type="checkbox"/> Flow by-passing pavement surface <input type="checkbox"/> Not high enough to create storage on pavement surface <input type="checkbox"/> Erosion <input type="checkbox"/> Structural problem <input type="checkbox"/> Other: 	
<p>Other</p>		
<p>Issues to Refer to Higher Authority:</p>		
<p>VERIFICATION</p>	<p><input type="checkbox"/> BMP is functioning properly and as designed for pollutant removal.</p> <p><input type="checkbox"/> BMP requires corrective or preventative maintenance or rehabilitation to maintain its function for pollutant removal. Actions to be completed within one year:</p>	<p><input type="checkbox"/> BMP recommended to be downgraded for pollutant removal.</p>





Other: Rainwater Harvesting, Vegetated Roofs. NOTE: Shaded cells to be used for BMP verification

Date of Inspection: _____ Project/BMP Name: _____ Plan/BMP # if applicable: _____

Type of Inspection: Verification 1st Inspection for Permit Cycle Verification Re-Inspection To Confirm Corrective Actions

BMP Type: Stormwater Retrofit New LID Practice Old Stormwater Practice Homeowner BMP

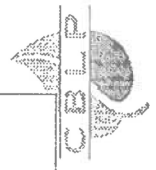
Date BMP Placed into Service: _____ Site Address: _____

Verification Inspector: _____ Inspector Credential(s): _____

Photo #s Taken at Site: _____ Is BMP Still Present? YES NO

Component:	Check For:	Observations:	VERIFICATION
Roof Area/Gutters	<input type="checkbox"/> Overhanging branches <input type="checkbox"/> Excessive debris <input type="checkbox"/> Other:	Rainwater Harvesting	<input type="checkbox"/> Contributing roof area conforms to plan? If different from plan, note how it is different:
Pre-Treatment Filter: <input type="checkbox"/> Vortex <input type="checkbox"/> Roof washer <input type="checkbox"/> Other <input type="checkbox"/> None	<input type="checkbox"/> Flow by-passes pre-treatment <input type="checkbox"/> Needs maintenance <input type="checkbox"/> Structural problem <input type="checkbox"/> Other:		<input type="checkbox"/> Pre-Treatment present and functioning? If different from plan, note how it is different:

<p>Tank/Cistern:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Above ground <input type="checkbox"/> Underground <input type="checkbox"/> Material: 	<ul style="list-style-type: none"> <input type="checkbox"/> Sediment accumulation (if possible to view) <input type="checkbox"/> Structural problem/leaning <input type="checkbox"/> Inadequate foundation <input type="checkbox"/> Excessive algae growth <input type="checkbox"/> Missing lids, screens <input type="checkbox"/> Broken components <input type="checkbox"/> Mosquito breeding <input type="checkbox"/> Other: 	<ul style="list-style-type: none"> <input type="checkbox"/> Tank/Cistern present, collecting water, and functioning properly? If different from plan, note how it is different:
<p>Plumbing components:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Pumps <input type="checkbox"/> Backflow preventer <input type="checkbox"/> Covers <input type="checkbox"/> Outlets/spigots <input type="checkbox"/> None <input type="checkbox"/> Other: 	<ul style="list-style-type: none"> <input type="checkbox"/> Missing pieces <input type="checkbox"/> Damaged or non-functional components <input type="checkbox"/> Other: 	
<p>Overflow:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Downstream practice <input type="checkbox"/> Vegetated area <input type="checkbox"/> None <input type="checkbox"/> Other: 	<ul style="list-style-type: none"> <input type="checkbox"/> Erosion <input type="checkbox"/> Obstructed or clogged <input type="checkbox"/> Other: 	<ul style="list-style-type: none"> <input type="checkbox"/> Overflow stable? If different from plan or is unstable, note the conditions:
Vegetated Roof		
<p>Type</p> <ul style="list-style-type: none"> <input type="checkbox"/> Intensive <input type="checkbox"/> Extensive <input type="checkbox"/> Not sure 		<ul style="list-style-type: none"> <input type="checkbox"/> Vegetated roof still present and functioning? If different from plan, note how it is different:
<p>Vegetation</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Many bare areas <input type="checkbox"/> Dead/diseased/poor health <input type="checkbox"/> Weeds/invasives <input type="checkbox"/> Other: 	<ul style="list-style-type: none"> <input type="checkbox"/> Vegetation generally conforms to plan OR vegetative cover is adequate? If different from plan, note how it is different:



Structural <input type="checkbox"/> Roof drains/scuppers <input type="checkbox"/> Other:	<input type="checkbox"/> Obstructed, clogged <input type="checkbox"/> Suspect leaks <input type="checkbox"/> Broken components <input type="checkbox"/> Other:		
Issues to Refer to Higher Authority:			
VERIFICATION			
<input type="checkbox"/> BMP is functioning properly and as designed for pollutant removal. <input type="checkbox"/> BMP requires corrective or preventative maintenance or rehabilitation to maintain its function for pollutant removal. Actions to be completed within one year:			
<input type="checkbox"/> BMP recommended to be downgraded for pollutant removal.			