

Fredericksburg Campus

# Municipal Separate Storm Sewer System Annual Report

For

General Permit No. VAR040125

Permit Year

July 1, 2020 through June 30, 2021

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 13, 2021



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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)

Permitee 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, 2020 through June 30, 2021

#### 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

## 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.

| Ta | ble 2: High Priority | Stormwater 1 | Issues                      |                 |            |
|----|----------------------|--------------|-----------------------------|-----------------|------------|
| #  | Stormwater<br>Issue  | Strategy     | Communication               | Metric          | Beneficial |
|    | Public education     | Traditional  | Powerpoint distributed via  | Approx. 10,000  | ⊠ Yes      |
| 1  | of stormwater        | Written      | email to all students,      | students,       | □ No       |
|    | runoff               | Materials    | faculty and staff           | faculty & staff |            |
|    | TMDLs and local      | Media        | Graphic media placed on     | Approx. 500     | ⊠ Yes      |
| 2  |                      | materials    | TV monitors in public       | students,       |            |
|    | impaired waters      | materials    | frequented areas            | faculty & staff | □ No       |
|    | Motor oil from       | Traditional  | Posters hung in frequented  | Approx. 500     | ⊠ Yes      |
| 3  | vehicles in          | Written      | areas in multiple buildings | students,       |            |
|    | parking lots         | Materials    | around campus               | faculty & staff | □ 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 M | CM #1 | measurab | le goals co | mpleted in | accordance | with the | MS4 P | rogram | Plan |
|------|-------|-------|----------|-------------|------------|------------|----------|-------|--------|------|
| × Ye | es 🗆  | No (  | )        |             |            |            |          |       |        |      |





| Are         | the MS4 Program    | me  | asurable goals effective?                                 |    |
|-------------|--------------------|-----|-----------------------------------------------------------|----|
| $\boxtimes$ | Yes (Effective)    |     | No (Ineffective, necessary changes to the MS4 Program and | re |
| incl        | uded 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? $\square$ Yes $\square$ No $\boxtimes$ 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.germanna.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.





| T | able 3: Public Involvement Act                                       | ivities Impleme         | ented                        |                            |                                      |
|---|----------------------------------------------------------------------|-------------------------|------------------------------|----------------------------|--------------------------------------|
| # | Activity Description/Date                                            | Category                | Metric                       | Collaboration              | Beneficial                           |
| 1 | CBLP Level 1 Training<br>Class - 3/2/2021                            | Educational             | 12 participants              | Friends of the Rappahonock | ⊠ Yes □ No                           |
| 2 | MS4 Program Presentation 6/17/2021                                   | Educational             | 56 participants              | NA                         | <ul><li>⊠ Yes</li><li>□ No</li></ul> |
| 3 | Videos placed on website 6/2/2021                                    | Educational             | 108 views                    | NA                         | <ul><li>✓ Yes</li><li>☐ No</li></ul> |
| 4 | Janitorial Company MS4 Presentation & poster installation - 6/3/2021 | Pollution<br>Prevention | 3 posters,<br>8 participants | NA                         | ⊠ Yes □ 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 | 4: MS4 Program Plan BMP Measurable Goals for MCM #2            |                            |
|---------|----------------------------------------------------------------|----------------------------|
| BMP     | Measurable Goal                                                | <b>Completeness Status</b> |
|         |                                                                | □ Yes                      |
| 2.1     | Was documentation of the public input or complaints on the     | □ No                       |
| 2.1     | MS4 program and MS4 Program Plan maintained?                   |                            |
|         |                                                                | (None received)            |
| 2.1     | Is the effective MS4 permit and coverage letter on the         | ⊠ Yes                      |
| 2.1     | webpage?                                                       | □ No                       |
| 2.1     | Is the most surrent MSA Dragram Dlan on the webness?           | ⊠ Yes                      |
| 2.1     | Is the most current MS4 Program Plan on the webpage?           | □ No                       |
|         | Is the annual report for each year of the term covered by this | ⊠ Yes                      |
| 2.1     | permit no later than 30 days after submittal to the department | □ No                       |
|         | on the webpage?                                                | 110                        |





|     | Is there a mechanism for the public to report potential illicit |       |
|-----|-----------------------------------------------------------------|-------|
| 2.1 | discharges, improper disposal or spills to the MS4, complaints  | ⊠ Yes |
|     | regarding land disturbing activities or other potential         | □ No  |
|     | stormwater pollution concerns on the webpage?                   |       |
| 2.1 | Is there a method for how the public can provide input of the   | ⊠ Yes |
| 2.1 | MS4 Program Plan on the webpage?                                | □ No  |
| 2.1 | Is the latest Virginia Community College System Annual          | ⊠ Yes |
| 2.1 | Standards and Specifications on the webpage?                    | □ 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 Plans  ✓ 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?      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                 |
| 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. WISH Hogiam Ham Divir Weasurable Goals for Wiching                   |                            |  |  |  |  |
|-------|-------------------------------------------------------------------------|----------------------------|--|--|--|--|
| BMP   | Measurable Goal                                                         | <b>Completeness Status</b> |  |  |  |  |
| 3.1   | Was a GIS compatible shapefile submitted to DEQ?                        | Completed                  |  |  |  |  |
|       |                                                                         | □ Yes                      |  |  |  |  |
|       | Was written notification provided to any downstream                     |                            |  |  |  |  |
| 3.1   | adjacent MS4 of any known interconnection established or                | (No new or                 |  |  |  |  |
|       | discovered during the permit reporting year?                            | discovered)                |  |  |  |  |
|       |                                                                         | □ No                       |  |  |  |  |
|       | Did all students, faculty and staff have access to the                  | ⊠ Yes                      |  |  |  |  |
| 3.2   | Standards of Conduct for Employees and the Student                      | □ No                       |  |  |  |  |
|       | Handbook for Students?                                                  |                            |  |  |  |  |
| 3.3   | Were illicit discharge detection and elimination procedures             | ⊠ Yes                      |  |  |  |  |
|       | implemented, enforced and documentation maintained?                     | □ No                       |  |  |  |  |
|       |                                                                         |                            |  |  |  |  |
| ,     | 2.3.5. MCM #3 Evaluation (Part I.D.2.e)                                 |                            |  |  |  |  |
|       | Review the MCM to determine the MS4 Program's effective                 | ness and whether or not    |  |  |  |  |
|       | changes to the MS4 Program Plan are necessary:                          |                            |  |  |  |  |
|       | <del></del>                                                             |                            |  |  |  |  |
| ,     | Were all MCM #3 measurable goals completed in accordance wit            | th the MS4 Program Plan?   |  |  |  |  |
|       | $\boxtimes$ Yes $\square$ No ( )                                        |                            |  |  |  |  |
|       |                                                                         |                            |  |  |  |  |
|       | Are the MS4 Program measurable goals effective?                         |                            |  |  |  |  |
|       | oxtimes Yes (Effective) $oxtimes$ No (Ineffective, necessary changes to | to the MS4 Program are     |  |  |  |  |
| j     | 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 conducte |
|--------------------------------------------------------------------------------------|
| 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:

| e all MCM #4 me<br>Yes □ No ( | able goals completed in accordance with the MS4 Program Plan                       | n? |
|-------------------------------|------------------------------------------------------------------------------------|----|
| Č                             | asurable goals effective?  No (Ineffective, necessary changes to the MS4 Program a | re |
| aded in Section 1             | The (methodive, necessary changes to the 1915+ 1 logium a                          | 10 |





#### 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))

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

| 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 main | tenance, repair, or re   | trofit activities | performed   | on any   | stormwate |
|-----------------------|--------------------------|-------------------|-------------|----------|-----------|
| management (SWM) f    | acilities during the rep | porting year?     |             |          |           |
|                       | )   Not Applicabl        | e (No significa   | nt maintena | ince req | uired.)   |

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<br>Management Facility                                             | Significant Maintenance Activity                                                                      |  |  |
| SWM-2: Filterra                                                               | Removed sediment, debris, trash, mulch and stones and reinstalled mulch and energy dissipater stones. |  |  |





#### 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, <u>Date Submitted</u> : | ☐ No ☒ Not Applicable (No qualifying SWM facilities |
|--------------------------------|-----------------------------------------------------|
| constructed or structural BMPs | implemented.)                                       |





included in Section 1.5.)

## 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                                                                                                                                                             | <b>Completeness Status</b>           |  |  |  |
| 5.1                                                       | Was the post-construction stormwater management inspection and maintenance program implemented in accordance with approved standards and specifications?                    | <ul><li>⋈ Yes</li><li>□ No</li></ul> |  |  |  |
| 5.2                                                       | Was the stormwater management facility tracking database updated?                                                                                                           | <ul><li>☑ Yes</li><li>☐ No</li></ul> |  |  |  |
| <u>]</u>                                                  | 2.5.7. MCM #5 Evaluation (Part I.D.2.e)  Review the MCM to determine the MS4 program's effective changes to the MS4 Program Plan are necessary:                             |                                      |  |  |  |
|                                                           | Were all MCM #5 measurable goals completed in accordance wi  ☐ Yes ☐ No ( )  Are the MS4 Program measurable goals effective?  ☐ No (Ineffective measurable goals effective) |                                      |  |  |  |
|                                                           | $\boxtimes$ Yes (Effective) $\square$ No (Ineffective, necessary changes                                                                                                    | to the MS4 Program are               |  |  |  |





## 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 develoduring the reporting period?  ☐ Yes (Refer to Table 10) ☐ No ☒ 1 | ped or modified in accordance with Part I E 6 a  Not Applicable (Not necessary)                                         |
|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Table 10: Good Housekeeping Operational Pro                                                            | ocedures Developed or Modified                                                                                          |
| Not Applicable                                                                                         |                                                                                                                         |
| 2.6.2. Newly Developed SWPPPs (Part A summary of any new SWPPPs develop period:                        | I.E.6.q(2)) sed in accordance Part I E 6 c during the reporting                                                         |
| Were any new SWPPPs developed in acc                                                                   | cordance Part I E 6 c during the reporting period?                                                                      |
| ☐ Yes (Refer to Table 11) ☐ No (facilities.)                                                           | )   Not Applicable (No new high priority                                                                                |
| Table 11: New SWPPPs Developed                                                                         |                                                                                                                         |
| SWPPP Name                                                                                             | SWPPP Address                                                                                                           |
| Not Applicable                                                                                         |                                                                                                                         |
|                                                                                                        | Part I.E.6.q(3))  ed in accordance with Part I E 6 f or the rationale accordance with Part I E 6 h during the reporting |
| Were any new SWPPPs modified after an  ☐ Yes (Refer to Table 12) ☐ No (                                | unauthorized discharge, release or spill reported?  ) ⊠ Not Applicable (Modification not required)                      |
|                                                                                                        |                                                                                                                         |



I E 6 h during the reporting period in Table 12.

If yes, rationale is provided for any high priority facilities delisted in accordance with Part



| 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 (No nutrients have been applied since the Plans expired |
| Plans will be updated this year.)   Not Applicable (Existing NMP in place. No new NMF) |
| required this reporting year.)                                                         |

#### 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                      |  |  |  |  |  |
| Not Applicable                                             |  |  |  |  |  |

#### 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:

| following information |                                                                       |
|-----------------------|-----------------------------------------------------------------------|
| Was training conducte | 1?                                                                    |
| ☐ Yes ☐ No (          | ) Mot Applicable (Not required this reporting year.)                  |
| If in all and all are | a list of two in in a second and second in accordance with Dout I E 6 |

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<br>Attendees | Training Objective |  |  |
|                           |                   |                    |  |  |

#### 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?   | <ul><li>☐ Yes</li><li>☒ Not Applicable (Not required this reporting year)</li><li>☐ No</li></ul> |  |  |
| 6.2                                                        | Was the annual comprehensive compliance evaluation conducted?                                     | <ul><li>⋈ Yes</li><li>□ No</li></ul>                                                             |  |  |
| 6.2                                                        | Was the SWPPP reviewed within 30 days after an unauthorized discharge, release or spill reported? | <ul><li>☐ Yes</li><li>☒ Not Applicable (Not required)</li><li>☐ No</li></ul>                     |  |  |





|     |                                                                                             | □ Yes                                                          |
|-----|---------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| 6.2 | Was the SWPPP updated within 90 days after an                                               |                                                                |
| 0.2 | unauthorized discharge?                                                                     | required)                                                      |
|     |                                                                                             | □ No                                                           |
|     |                                                                                             | □ Yes                                                          |
|     | Were the MS4's properties reviewed this reporting                                           |                                                                |
| 6.2 | year to determine if the properties meet the criteria                                       | campus is a high priority                                      |
|     | of a high priority facility?                                                                | facility.)                                                     |
|     |                                                                                             | □ No                                                           |
|     |                                                                                             | ☐ Yes                                                          |
| 6.3 | Was the nutrient management plan implemented                                                |                                                                |
| 0.5 | through completion of application records?                                                  | applied)                                                       |
|     |                                                                                             | □ No                                                           |
|     | Were all signed contracts executed with contract                                            | ⊠ Yes                                                          |
| 6.4 | good housekeeping and pollution prevention                                                  | □ No                                                           |
|     | language?                                                                                   | ☐ Yes                                                          |
|     | Did all signed contracts executed for pesticide and herbicide application maintain proof of | <ul><li>✓ Yes</li><li>✓ Not Applicable (No contracts</li></ul> |
| 6.5 |                                                                                             | executed)                                                      |
|     | certifications on file?                                                                     | □ No                                                           |
|     |                                                                                             | ⊠ Yes                                                          |
|     | Did training occur and were proof of certifications                                         | ☐ Not Applicable (No                                           |
| 6.6 | maintained on file for employees performing                                                 | employees applied                                              |
|     | pesticide and herbicide applications?                                                       | pesticides/herbicides)                                         |
|     |                                                                                             | □ No                                                           |
|     | 2.6.7. MCM #6 Evaluation (Part I.D.2.e)                                                     |                                                                |
|     | Review the MCM to determine the MS4 Program                                                 |                                                                |
|     | changes to the MS4 Program Plan are necessary                                               | <u>y:</u>                                                      |
|     | Were all MCM #6 measurable goals completed i                                                | n accordance with the MS4 Program                              |
|     | Plan?                                                                                       |                                                                |
|     | $\boxtimes$ Yes $\square$ No ( )                                                            |                                                                |
|     | Are the MS4 Program measurable goals effective                                              | we?                                                            |
|     | ✓ Yes (Effective) ☐ No (Ineffective, necessary)                                             |                                                                |
|     | included in Section 1.5.)                                                                   | my thanges to the month in opinin the                          |





#### 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 1 | BMPs    | implemented   | during  | the   | reporting | period | but | not | reported | to | the | DEQ |
|------|-------|---------|---------------|---------|-------|-----------|--------|-----|-----|----------|----|-----|-----|
| BMP  | Ware  | house   | in accordance | with Pa | art I | .E.5.g?   |        |     |     |          |    |     |     |
| × Y  | es (R | efer 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                        | 580 lbs.      |               |                |  |
|                                                          | TN (lbs./yr.) | TP (lbs./yr.) | TSS (lbs./yr.) |  |
| Required 5% Reduction (lbs.) =                           | .57           | .12           | 43.48          |  |
| Provided Reduction (lbs.) =                              | 1.02          | .41           | 121.8          |  |
| Future Required 40% Reduction (lbs.) =                   | 4.56          | .96           | 347.84         |  |
| % Achieved towards 40% (%) =                             | 22            | 42            | 35             |  |

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

If the permitee 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 1 | 7: 2019 – 2023 Chesapeake Bay T                                                                                                                                                                                                                | MDL Action Plan Implementa                                                                                   | tion Schedule                                    |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| Step    | General Description                                                                                                                                                                                                                            | Measurable Goal                                                                                              | Completeness<br>Status                           |
| 1       | 5% reduction requirement complete. Evaluate lbs. swept.                                                                                                                                                                                        | Completed tracking documentation?                                                                            | <ul><li>⊠ Yes (July 2019)</li><li>□ No</li></ul> |
| 2       | 5% reduction requirement complete. Make adjustments to frequency based on 2019 information obtained.                                                                                                                                           | Completed tracking documentation with increase sweeping frequency?                                           | <ul><li>✓ Yes (July 2020)</li><li>☐ No</li></ul> |
| 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?                                           |                                                  |
| 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? | July 2022                                        |
| 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<br>TMDL 40% reduction<br>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 | Table 19: Chesapeake Bay TMDL Action Plan Measurable Goals                                                      |                                                                                                  |  |  |  |  |
|-------|-----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--|--|--|--|
| #     | Measurable Goal                                                                                                 | <b>Completeness Status</b>                                                                       |  |  |  |  |
| 1     | Were public comments considered during the required 15-day comment period?                                      | <ul><li>☐ Yes</li><li>☒ Not Applicable (Not required this reporting year)</li><li>☐ No</li></ul> |  |  |  |  |
| 2     | Were cost effective BMPs selected to support model quantification to achieve the required pollutant reductions? | <ul><li>☑ Yes</li><li>☐ Not Applicable (Not required this reporting year)</li><li>☐ No</li></ul> |  |  |  |  |
| 3     | Was the required pollutant reduction reached for this reporting year?                                           | <ul><li>⋈ Yes</li><li>□ No</li></ul>                                                             |  |  |  |  |

| 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                | n Pla | an?        |       |           |    |            |      |     |            |     |      |
| $\nabla$ $\mathbf{V}$ | es [  | □ No (     | )     |           |    |            |      |     |            |     |      |





| Are         | the MS4 Progran   | n me | asurable goals effective?                                 |
|-------------|-------------------|------|-----------------------------------------------------------|
| $\boxtimes$ | Yes (Effective)   |      | No (Ineffective, necessary changes to the MS4 Program and |
| incl        | uded 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)FacultyStaff

**Date:** Friday, August 27, 2021 2:50:26 PM

Attachments: <u>image001.jpg</u>

GCC Stormwater Slides CCTV Group 3.pptx

#### Thanks Garland

From: Garland Fenwick < GFenwick@germanna.edu>

**Sent:** Monday, March 22, 2021 11:39 AM

**To:** \*All-Germanna\* <All-Germanna@germanna.edu> **Cc:** Garland Fenwick <GFenwick@germanna.edu>

**Subject:** Important Municipal Separate Storm Sewer System Program(MS-4)

Dear Faculty and Staff,

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

As a public, comprehensive community college, Germanna provides accessible, high quality educational and training opportunities that address our communities' diverse and changing learning needs.







**SEDIMENT & POLLUTANT LADEN RUNOFF** FLOWS INTO STORM SEWER SYSTEMS.



STORM SEWER INLETS DRAIN DIRECTLY INTO OUR LOCAL WATERBODIES.



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 <a href="http://www.germanna.edu/facilities">http://www.germanna.edu/facilities</a>.





## 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 cleanup 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:

Monday, March 22, 2021 11:03 AM

To:

Garland Fenwick

Subject:

Re: On Campus Screens

#### Always glad to help

Thank you,

Jim Solomon

Marketing & Public Information Specialist: Graphic Designer 540.423.9069 | JASolomon@germanna.edu



Visit our <u>COVID-19 Resource</u> page for the most up-to-date information, teaching and learning resources and frequently asked questions. Contact us at (540) 834-1070 or <u>COVID19@germanna.edu</u>.

From: Garland Fenwick < GFenwick@germanna.edu>

Sent: Monday, March 22, 2021 10:51 AM

**To:** James Solomon < JSolomon@germanna.edu > **Cc:** Garland Fenwick < GFenwick@germanna.edu >

Subject: RE: On Campus Screens

Jim,

The slides looked good. Thanks for the help.

#### Garland

From: James Solomon < JSolomon@germanna.edu>

Sent: Friday, March 19, 2021 11:17 AM

To: Garland Fenwick < GFenwick@germanna.edu>

Subject: On Campus Screens

#### Morning Garland,

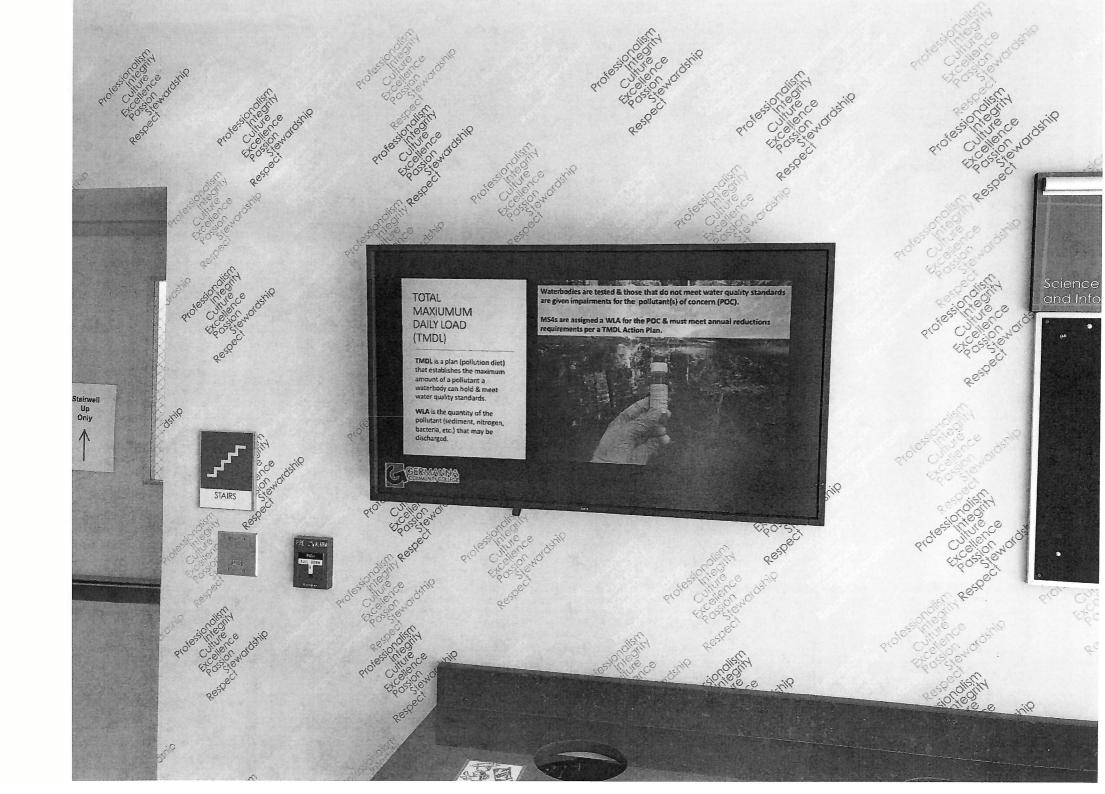
Whenever you get a chance, please take a look at the screens and make sure all 4 slides are playing. If they aren't let me know and I will need to break them out separately. But not being on campus, I will not be able to tell.

Thank you,

#### Jim Solomon

Marketing & Public Information Specialist: Graphic Designer 540.423.9069 | JASolomon@germanna.edu











High Priority Stormwater Issue #3



#### **Garland Fenwick**

From:

Garland Fenwick

Sent:

Monday, March 22, 2021 12:06 PM

To:

Garland Fenwick

Subject:

MS-4 Poster

**Attachments:** 

Close Up Poster Outside Restroom.jpg; Close Up Poster Outside Classroom.jpg; Poster

Outside Restroom.jpg; Poster Outside Classroom.jpg

MS-4 poster outside of classrooms and restrooms in Science and Engineering Building.

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

As a public, comprehensive community college, Germanna provides accessible, high quality educational and training opportunities that address our communities' diverse and changing learning needs.

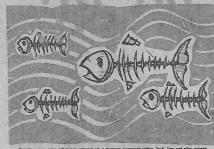


RAIN +

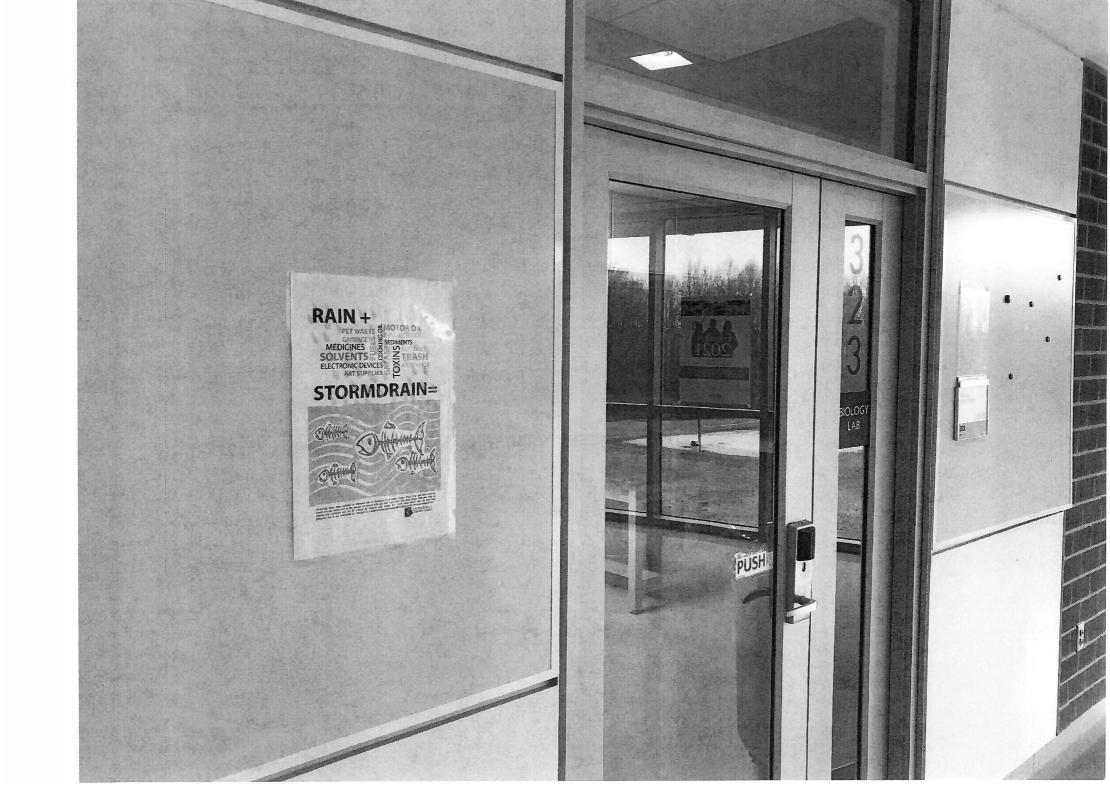
PET WASTE ON INK CARTRIDGES

GARBAGE OF SECULATION SECURATION SECULATION SECULAT

# STORMDRAIN=

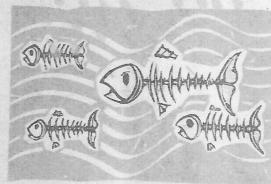






PET WASTE OMOTOR OIL GARBAGE WEST SEDIMENTS SEDIMENTS SOLVENTS OF SEDIMENTS SOLVENTS OF SEDIMENTS SOLVENTS OF SEDIMENTS OF

# STORMDRAIN=









Appendix B: Documentation of Public Involvement Activities





Public Involvement Activity #1



From: Shereen Hughes

To: Bryan Hofmann; Garland Fenwick; David Hirschman; Brent Hunsinger; Manchester, Mikel

Subject:Agenda and guidance for Mar. 2Date:Thursday, February 25, 2021 7:37:44 AM

**Attachments:** Fredericksburg BMP Tour Agenda Mar. 2021.docx

Fredericksburg Site Plan Packet 022321 (NXPowerLite Copy).pdf

#### Good Morning Everyone,

We are looking forward to the upcoming CBLP Level 1 Field Day in Fredericksburg. Attached is our agenda and BMP details that we will be using that day.

We have 12 people registered and the Governor has increased the outdoor gathering size to 25, so, thankfully, we won't have to manage two parallel groups in the afternoon.

Dave and I didn't feel a need to develop a facilitated agenda. So I thought I'd just explain a few roles and responsibilities in this email.

Brent and Mikel - if you still plan to be there and assist, please review the two videos provided in the agenda as refreshers. Your role will primarily be assisting small groups or pairs of trainees as they build independence in BMP inspections/evaluations. If you could be there to start by 9:00 that would be great. I have suggested that trainees park in the Trail Park parking lot and the rest of us park in the FOR parking lot. Bryan or Brent, if you think differently, let us know. We'll be there about an hour.

Brent - I believe that you said you've been in charge of some adaptive management where plants are concerned? We have some plant ID cards that people could use at the FOR rain garden and we'd like you to discuss how the plants have changed over time and why, as well as the typically maintenance/management practices for the rain garden.

Garland - we'll be arriving, give or take, around 12:40 at the GCC Campus and would be grateful to have you join us in the courtyard at the bioretention area. If you have the time, we would appreciate you accompanying us from 12:40, until the bathroom break. While accompanying us - we will have you introduce yourself and tell the group your title and roles and responsibilities with respect to the grounds and the BMPs. Ater the trainees have had a chance to evaluate the bioretention area and the fire truck lane, we'd like you to share typical maintenance of the practices and any issues that you've had to address post-construction. For instance, have you made any modifications to the practice? Is there anything that you would change regarding the plants or design of the practice? Are there portions that are hard to maintain, etc?

After the trainees have done their independent evaluation of the bioretention area behind the parking garage and the trainers have reviewed their findings, we'd like Garland to share the same types of BMP related management/functional issues that you've encountered with that practice.

From there, we'll take a restroom break (Garland will let us into a building for this) and then end the day looking at the Filterra and the pervious asphalt. Garland, you can remain with us or break off after that.

Thank you all for your support and participation in this training.

Brent and Mikel - we welcome your support and participation; however, if you need to break away at any time, no worries. This is a small group and Dave and I can handle it.

Best Wishes,

Shereen

Shereen Hughes, CBLP

Assistant Director, Wetlands Watch

### Virginia Coordinator, Chesapeake Bay Landscape Professional Program

2601 Granby Street Norfolk, VA 23517 757-880-6802 (cell)

shereen.hughes@wetlandswatch.org wetlandswatch.org



cblpro.org

### CBLP Level 1 Training Class Fredericksburg, VA March 2, 2021 9:30-3:15 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: Heritage Trail Park Parking Lot at intersection of Fall Hill Ave & Normandy Ave. (see attached map)

Overflow parking at Friends of the Rappahannock 3219 Fall Hill Ave, Fredericksburg, VA 22401

9:30 – 9:45 Introductions, Divide into Groups, and Schedule for Day – Meet at Heritage Trail bioretention area.

9:45-10:45 Heritage Trail Park bioretention area & FOR Rain Garden (50 minutes each?)

- Students will be 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. (30 min)
- FOR Collect soils samples, planting plan and adaptive management (Brent Hunsinger points out plant ID) (15)

10:45 – 11:05 Restroom Break and Drive to Fredericksburg Nationals, 42 Jackie Robinson Way, Fredericksburg, VA 22401 https://www.milb.com/fredericksburg/ballpark/directions

11:05 – 11:55 Nationals Ball Park Bioretention BMP – Small Group Inspections (40 minutes)

- Dave introduction & orientation to BMPs (10 minutes)
- Split up two groups between BMPs 1 & 2 to work in small groups assess/inspect, plant id, review design details (20 minutes)
- Groups switch to other BMP and compare to 1<sup>st</sup> BMP inspected (10 minutes)

11:55 – 12:40 Lunch Break and Reconvene at Germanna Community College Campus at 10000 Germanna Point Drive – Park in Parking Lot to the Left as you enter campus (55 minutes)

#### Afternoon 12:40 - 3:15

#### 12:40 – 1:25 Courtyard (45 minutes)

- Courtyard Bioretention Area Small groups assess/inspect, plant id (20 minutes)
- Permeable Surfaces Geogrid Grass Paving
- Sheet Flow to Conserved Open Space (Walk & Talk)
- Garland Fenwick introduced, shares role and issues with BMPs
- Q&A before moving on to independent assessment

#### 1:35 – 2:15 Parking Garage Bioretention BMP Individual Inspection (45 minutes)

- Trainees perform individual Bioretention Area Inspection w/ Maintenance and Corrective Action Punch List (30 minutes)
- Discussion (10 minutes)
- Pond

#### **2:20 – 2:30 Restroom Break**

#### 2:30 – 2:55 Pervious Asphalt & Filterra walk and talk (25 minutes)

- Filterra proprietary BMP in a box (walk and talk) (10 minutes)
- Pervious Asphalt Parking Lot Example of surface treatment, discuss contributing drainage area (2:1) (15 minutes)

#### 3:05 - 3:15 Wrap-up

9:30 meeting location



Germanna Community College - After Lunch



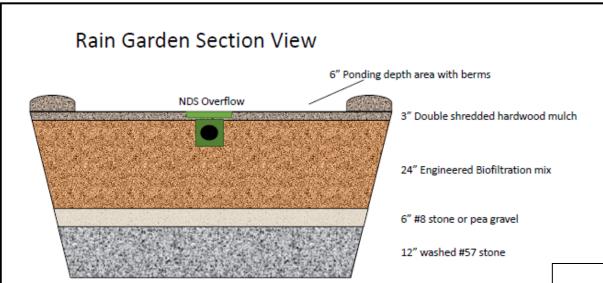
# CBLP Fredericksburg

Level 1 Field Practicum

March 2, 2021

Selected BMP Details

# Friends of the Rappahannock Rain Garden



#### Rain Garden Planting Plan

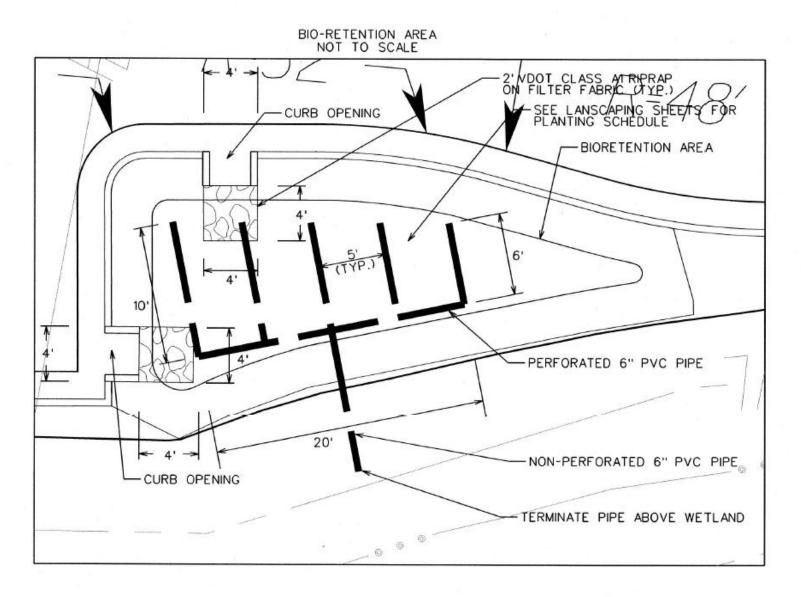
- 1 #5 Betula nigra
- 3 #3 Panicum virgatum (Shenandoah)
- 3 #3 Itea virginica Little Henry
- 3 #3 Ilex verticillata
- 3 #1 Eutrochium purpureum
- 3 #1 liatris spicata
- 3 #1 asclepias incarnate
- 3 #1 Rudbeckia hirta

Drainage area includes rooftop runoff from ½ of the rear rooftop of FOR HQ. Pipe runs under the driveway and daylights into forested area as pretreatment.

Overflow includes a 4" perforated pipe installed under the driveway which daylights into forested area.

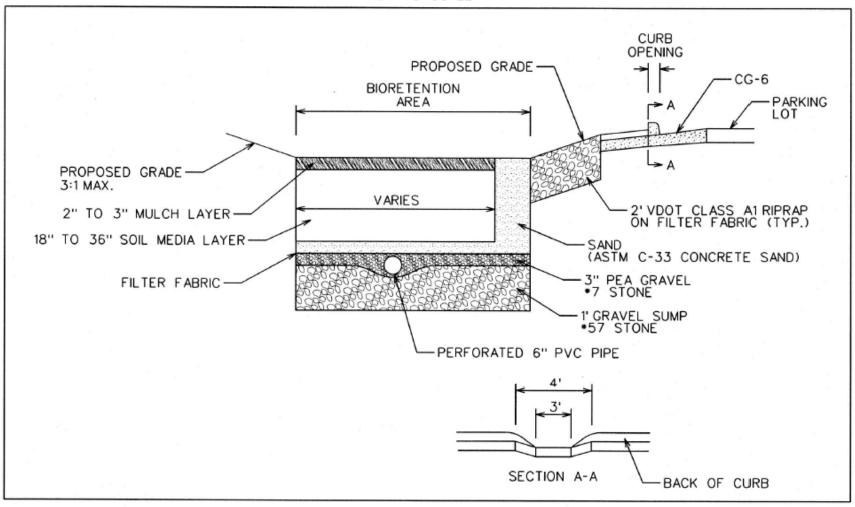


# Fall Hill Avenue – Heritage Trail Park Bioretention (2012) (1)



# Fall Hill Avenue – Heritage Trail Park Bioretention (2012) (2)

TYPICAL BIO-RETENTION AREA DETAIL NOT TO SCALE



## Fall Hill Avenue – Heritage Trail Park Bioretention (2012) (3)

#### SPECIFICATIONS:

PLANTING SOIL MEDIUM:

A HOMOGENOUS SOIL MIX OF 50-60% CONSTRUCTION SAND: 20-30% TOP SOIL WITH LESS THAN 5% MAXIMUM CLAY CONTENT, AND 20-30% ORGANIC LEAF COMPOST PROVIDES A SOIL MEDIUM WITH A HIGH INFILTRATION/FILTRATION CAPACITY.

SOIL PLACEMENT:

PLACEMENT OF THE PLANTING SOIL IN THE BIORETENTION AREA SHOULD BE IN LIFTS OF 12 TO 18 INCHES AND LIGHTLY COMPACTED, MINIMAL COMPACTION EFFORT CAN BE APPLIED TO THE SOIL BY TAMPING OR ROLLED WITH A HAND-OPERATED LANDSCAPE ROLLER.

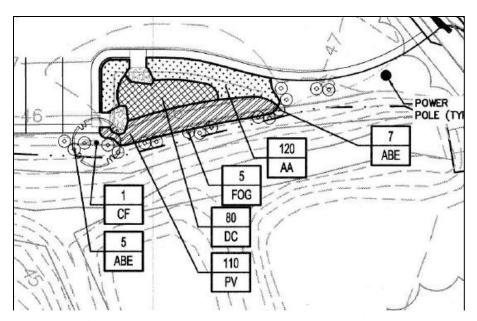
MULCH SPECIFICATIONS:

HARDWOOD ONLY. MULCH MUST BE WELL AGED, UNIFORM IN COLOR, AND FREE OF FOREIGN
MATERIAL INCLUDING PLANT MATERIAL. WELL AGED MULCH IS DEFINED AS MULCH THAT HAS BEEN
STOCKPILED OR STORED FOR AT LEAST TWELVE (12) MONTHS.

#### BIORETENTION INSPECTION AND MAINTENANCE SCHEDULE:

| DESCRIPTION                                                                                                                                                   | METHOD                 | FREQUENCY                                  | TIME OF YEAR                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------------|---------------------------------------------------------------------------|
| SOIL:<br>INSPECT AND REPAIR EROSION                                                                                                                           | VISUAL                 | MONTHLY                                    | MONTHLY                                                                   |
| ORGANIC LAYER:<br>RE-MULCH ANY VOID AREAS                                                                                                                     | BY HAND                | WHENEVER NEEDED                            | WHENEVER NEEDED                                                           |
| REMOVE PREVIOUS MULCH LAYER<br>BEFORE APPLYING NEW LAYER<br>(OPTIONAL)                                                                                        | BY HAND                | ONCE EVERY TWO<br>TO THREE YEARS           | SPRING                                                                    |
| ADD FRESH MULCH LAYER                                                                                                                                         | BY HAND                | EVERY SIX MONTHS                           | SPRING AND FALL                                                           |
| PLANTS:<br>REMOVAL AND REPLACEMENT OF ALL DEAD AND DISEASED<br>VEGETATION CONSIDERED BEYOND TREATMENT                                                         | SEE PLANTING<br>SPECS. | TWICE A YEAR                               | MARCH 15TH TO APRIL 30TH<br>AND OCT.IST TO NOV.30TH                       |
| INSPECT FOR DISEASE/PEST PROBLEMS                                                                                                                             | VISUAL                 | ONCE A MONTH (AVERAGE)                     | INSPECT MORE FREQUENTLY IN WARMER MONTHS                                  |
| DETERMINE IF TREATMENT IS WARRANTED:USE LEAST TOXIC TREATMENT APPROACH                                                                                        | BY HAND                | N/A                                        | VARIES, DEPENDS ON DISEASE OR INSECT<br>INFESTATION                       |
| WATERING OF PLANT MATERIAL SHALL TAKE PLACE FOR<br>FOURTEEN CONSECUTIVE DAYS AFTER PLANTING HAS BEEN<br>COMPLETED UNLESS THERE IS SUFFICIENT NATURAL RAINFALL | BY HAND                | IMMEDIATELY AFTER<br>COMPLETION OF PROJECT | N/A                                                                       |
| REMOVE STAKES AND WIRES AFTER 6 MONTHS                                                                                                                        | BY HAND                | AFTER TREES HAVE<br>TAKEN ROOT             | REMOVE STAKES AND WIRES WHEN POSSIBLE,<br>BUT AT LEAST BY SIX MONTHS TIME |
| REMOVE TAGS                                                                                                                                                   | BY HAND                | AT THE END OF<br>WARRANTEE PERIOD          | AT THE END OF<br>WARRANTEE PERIOD                                         |

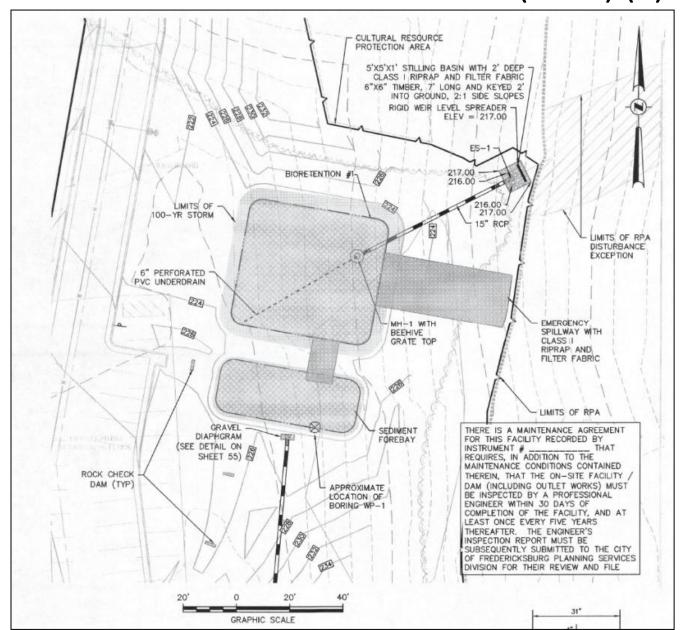
# Fall Hill Avenue – Heritage Trail Park Bioretention (2012) (4)



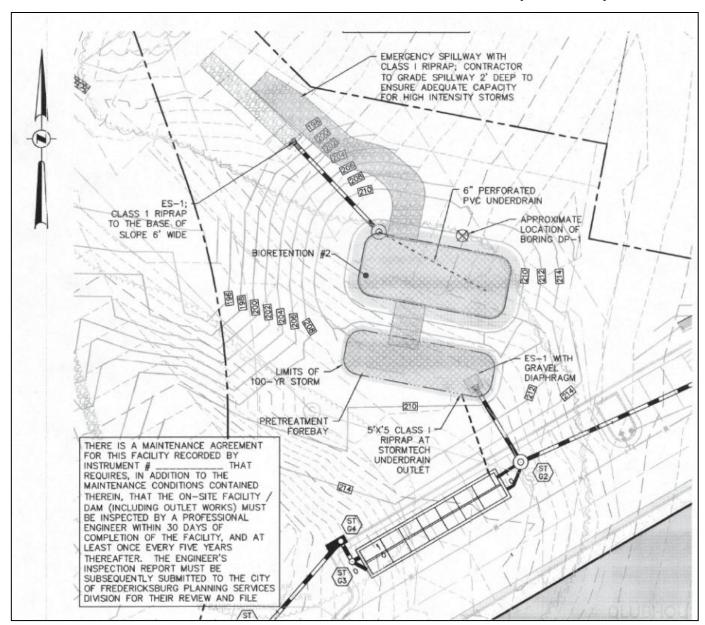
### SHRUBS

| ABE | 12  | Abelia x 'Edward Goucher'<br>Edward Goucher Abelia | 18" ht. | Cont. | Full, dense            |  |
|-----|-----|----------------------------------------------------|---------|-------|------------------------|--|
| FOG | 29  | Fothergilla gardenii Dwarf Fothergilla             | 24" ht. | Cont. | Full, dense            |  |
| PV  | 110 | Panicum virgatum<br>Switch Grass                   | 1 Qt.   | Cont. | Full, dense (18" O.C.) |  |
| AA  | 120 | Agrostis alba<br>Redtop                            | 1 Qt.   | Cont. | Full, dense (18" O.C.) |  |
| DC  | 80  | Deschampsia caespitosa Tufted Hairgrass            | 1 Qt.   | Cont. | Full, dense (18" O.C.) |  |

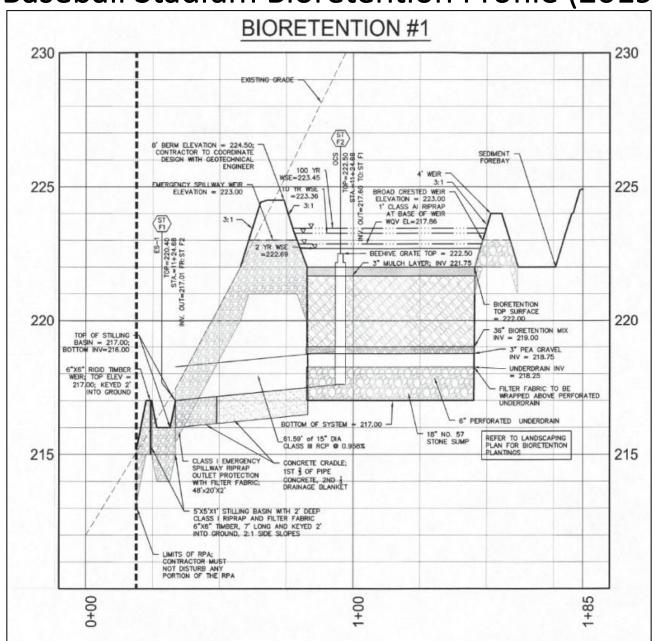
# Baseball Stadium Bioretention #1 (2019) (1)



# Baseball Stadium Bioretention #2 (2019)



# Baseball Stadium Bioretention Profile (2019)



# Baseball Stadium Bioretention Filter Media (2019)

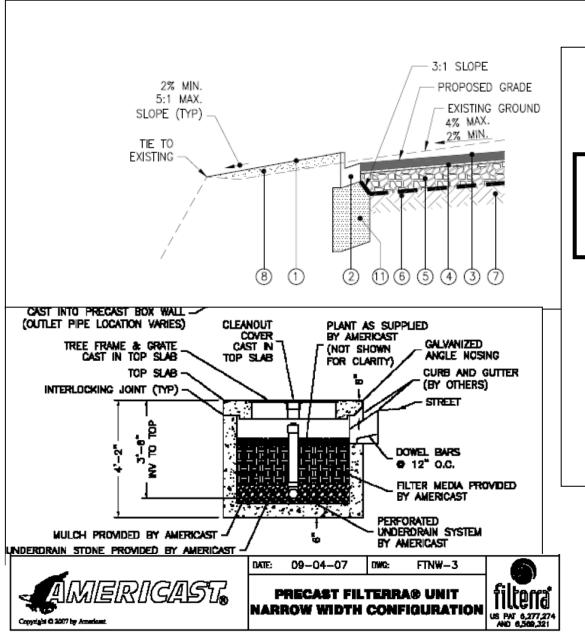
#### 6.6. Filter Media and Surface Cover

The filter media and surface cover are the two most important elements of a bioretention facility in terms of long-term performance. The following are key factors to consider in determining an acceptable soil media mixture.

- General Filter Media Composition. The recommended bioretention soil mixture is generally
  classified as a loamy sand on the USDA Texture Triangle, with the following composition:
  - 85% to 88% sand;
  - o 8% to 12% soil fines; and
  - 3% to 5% organic matter.

It may be advisable to start with an open-graded coarse sand material and proportionately mix in topsoil that will likely contain anywhere from 30% to 50% soil fines (sandy loam, loamy sand) to achieve the desired ratio of sand and fines. An additional 3% to 5% organic matter can then be added. (The exact composition of organic matter and topsoil material will vary, making particle size distribution and recipe for the total soil media mixture difficult to define in advance of evaluating the available material.)

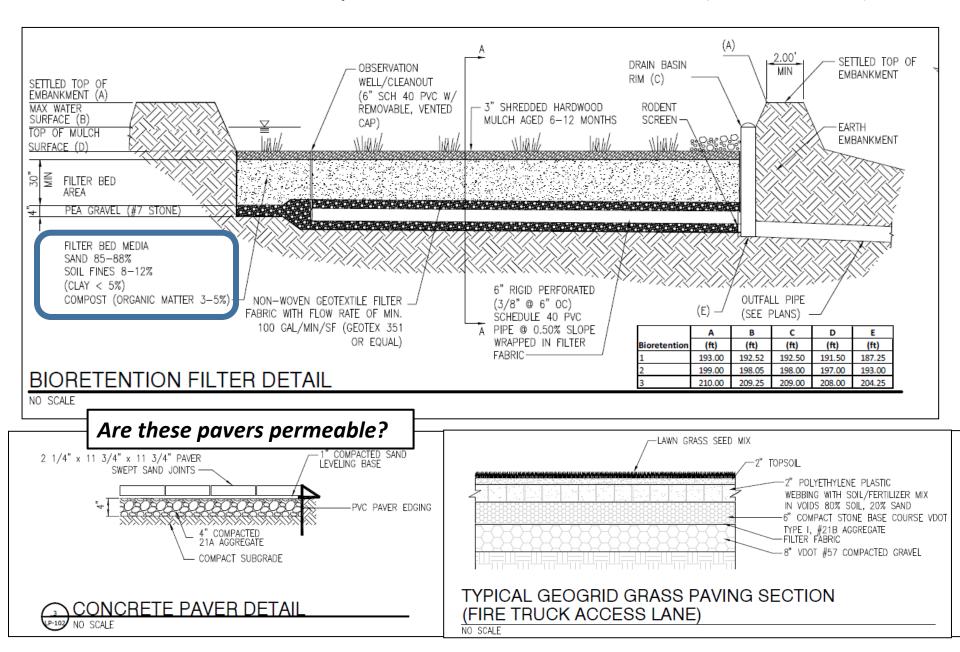
# Germanna CC – Porous Asphalt & Filterra (2010, 2012)



## 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
- SUBGRADE (SEE NOTE 2)
- (8) BACKFILL AS NEEDED
- O 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)
- (14) 2.5" VDOT STANDARD SM-9.5A ASPHALT PAVEMENT

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

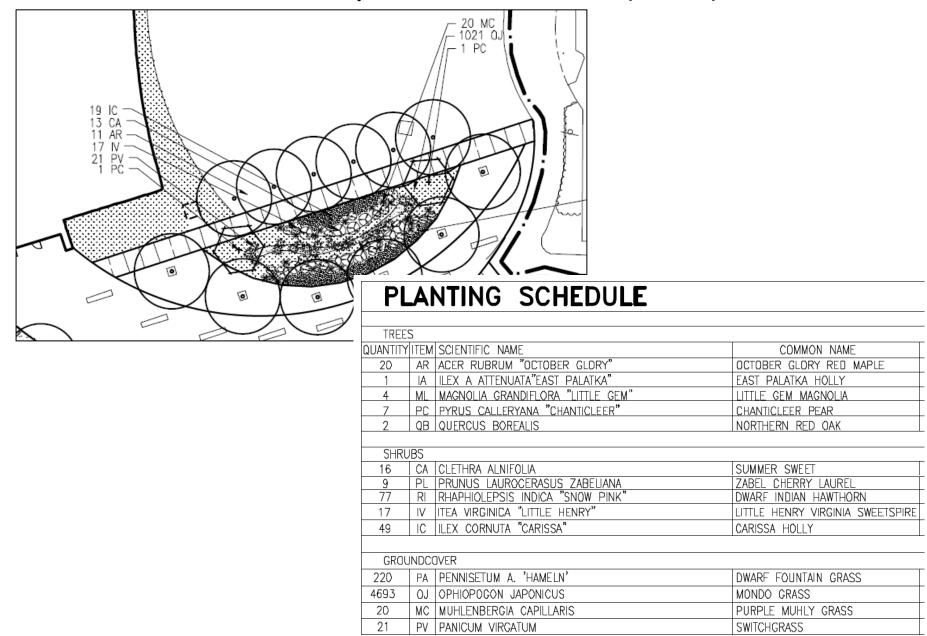


# Germanna CC – Courtyard Bioretention (2011)

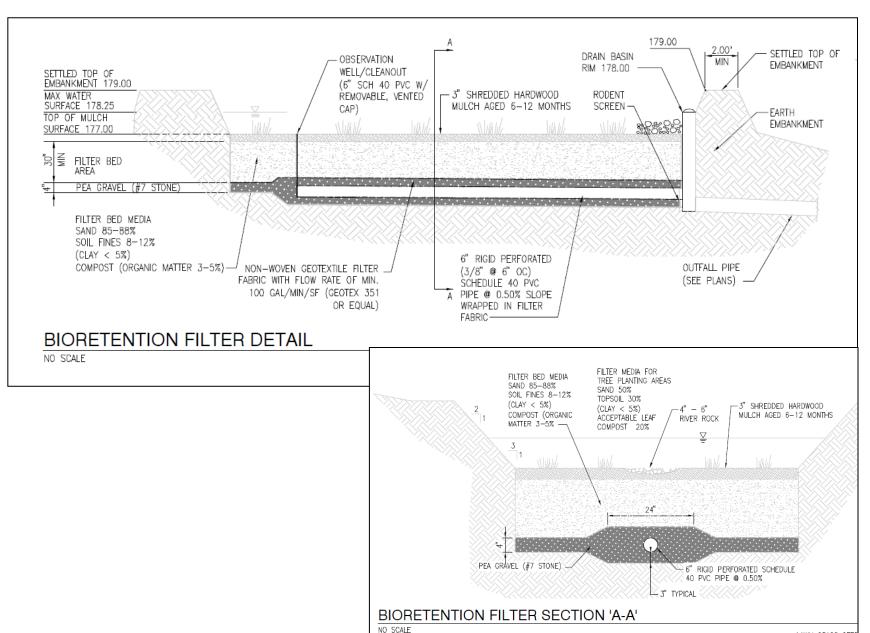
#### INSPECTION AND MAINTENANCE SCHEDULE FOR BIORETENTION BASIN

| DESCRIPTION                                                                                                                        | METHOD                         | FREQUENCY                                     | TIME OF THE YEAR                                       |  |
|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------------------------|--------------------------------------------------------|--|
| SOIL                                                                                                                               |                                |                                               |                                                        |  |
| INSPECT AND REPAIR EROSION                                                                                                         | VISUAL                         | MONTHLY                                       | MONTHLY                                                |  |
| INSPECT AND REPAIR BIO—AREA FOR STRUCTURAL<br>DEFICIENCIES.                                                                        | MECHANICAL<br>OR BY HAND       | TWICE A YEAR                                  | AFTER SIGNIFICANT<br>RAINFALL EVENTS                   |  |
| ORGANIC LAYER                                                                                                                      |                                |                                               |                                                        |  |
| REMULCH ANY VOID AREAS                                                                                                             | BY HAND                        | WHENEVER NEEDED                               | WHENEVER NEEDED                                        |  |
| REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING<br>NEW LAYER (OPTIONAL)                                                                | BY HAND                        | ONCE EVERY TWO<br>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<br>DISEASED VEGETATION CONSIDERED BEYOND TREATMENT                                         | SEE PLANTING<br>SPECIFICATIONS | TWICE A YEAR                                  | 3/15 TO 4/30 AND<br>10/1 TO 11/30                      |  |
| TREAT ALL DISEASED TREES AND SHRUBS                                                                                                | MECHANICAL OR<br>BY HAND       | N/A                                           | VARIES, DEPENDS ON<br>INSECT OR DISEASE<br>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<br>COMPLETION OF<br>PROJECT | N/A                                                    |  |
| REPLACE STAKES AFTER ONE YEAR                                                                                                      | BY HAND                        | ONCE A YEAR                                   | ONLY REMOVE STAKES<br>IN THE SPRING                    |  |
| REPLACE ANY DEFICIENT STAKES OR WIRES                                                                                              | BY HAND                        | N/A                                           | WHENEVER NEEDED                                        |  |
| CHECK FOR ACCUMULATED SEDIMENTS                                                                                                    | VISUAL                         | MONTHLY                                       | MONTHLY                                                |  |

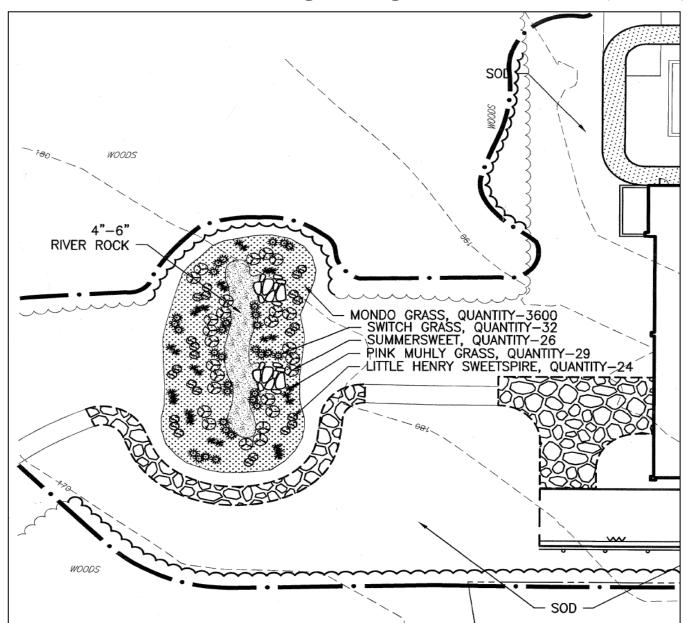
# Germanna CC - Courtyard Bioretention (2011)



# Germanna CC – Parking Garage Bioretention (2012) (1)



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





Public Involvement Activity #2



 From:
 Garland Fenwick

 To:
 \*All-Germanna\*

 Cc:
 Garland Fenwick

**Subject:** Important Municipal Separate Storm Sewer System Program(MS-4)

**Date:** Wednesday, June 2, 2021 6:59:43 AM

Attachments: <u>image001.jpg</u>

#### Dear Faculty and Staff,

Germanna's Municipal Separate Storm Sewer System Program (MS-4) requires us to provide public education pertaining to the MS-4 Program and Stormwater Management at the Fredericksburg Area Campus. Here's a link <a href="https://www.germanna.edu/facilities/">https://www.germanna.edu/facilities/</a> to the Facilities web page. On the web page, you will see two short videos called Rack Up, Sweep Up and Maine Devil Ducks please take a few minutes to review the videos. The videos are a little corny but the information is appropriate to help GCC and your communities improve their MS-4 and Stormwater Management.

#### Thank you

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

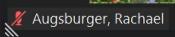
As a public, comprehensive community college, Germanna provides accessible, high quality educational and training opportunities that address our communities' diverse and changing learning needs.



# Good Housekeeping/Pollution P













Reactions

# Germanna Communi

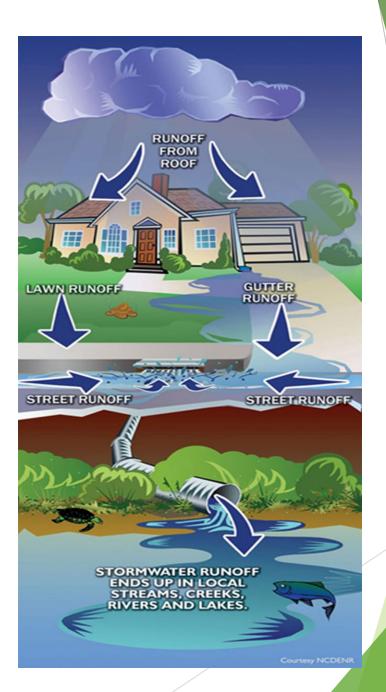
# Stormwater Management

## Agenda

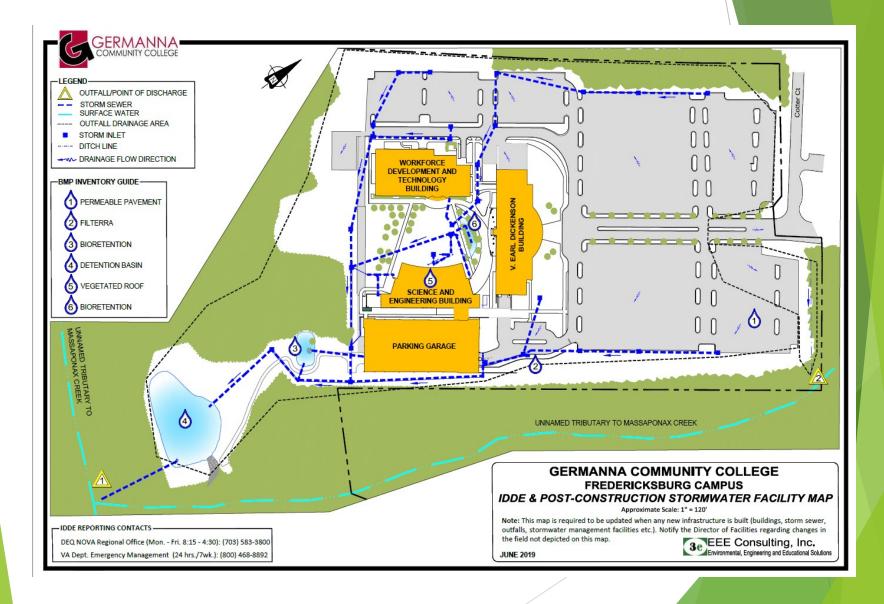
- ► What is Storm Water Run Off?
- ► Where does it go?
- Regulatory Requirements
  - ► MS-4 Plan(Municipal Separate Storm Sewer System)
  - ► TMDL(Total Maximum Daily Load)
- ▶ Questions



## Stormwater Runoff



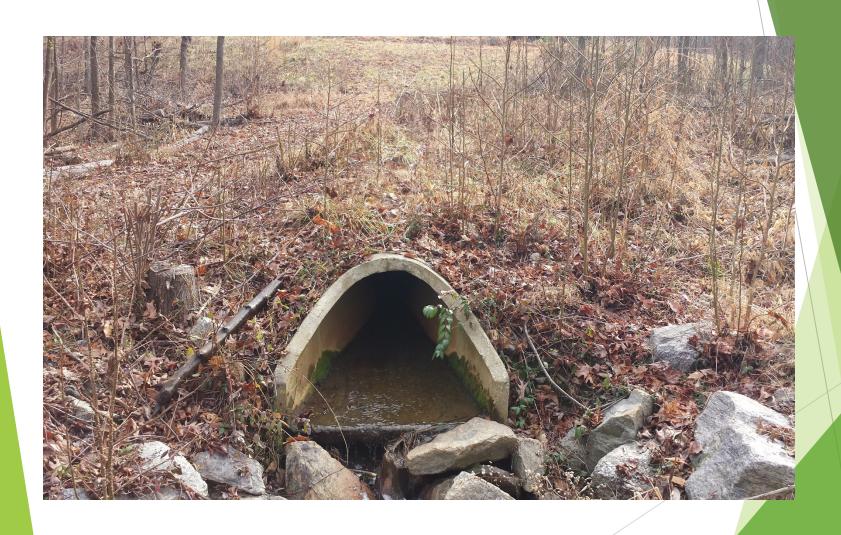
## Stormwater Map



## Stormwater Pond



## **Outfall Location**



## Regulatory Structure



ENVIRONMENTAL QUALITY

### **Construction General Permit**

- Regulated Land Disturbance
- ESC & SWM

#### **MS4** General Permit

 Localities & State Entities within Census Urbanized Areas

### MS4 General Permit

### **Special Conditions**

 Chesapeake Bay TMDL(Total Maximum Daily Load)

### Minimum Control Measures

- Public Education & Outreach
- 2. Public Involvement/Participation
- 3. Illicit Discharge Detection & Elimination
- 4. Construction Site Runoff Controls
- 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).
- 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



# Illicit 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
- 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

## **IDDE** Continued

- 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



Landscape irrigation



Air Conditioning condensate

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

- Spring water
- Dechlorinated pool discharge
- Agricultural irrigation water
- Foundation/footing drains
- Fire fighting activities
- Residential car washing

# What is or is not illicit discharge???







# Illicit Discharge Clean-up



## 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**





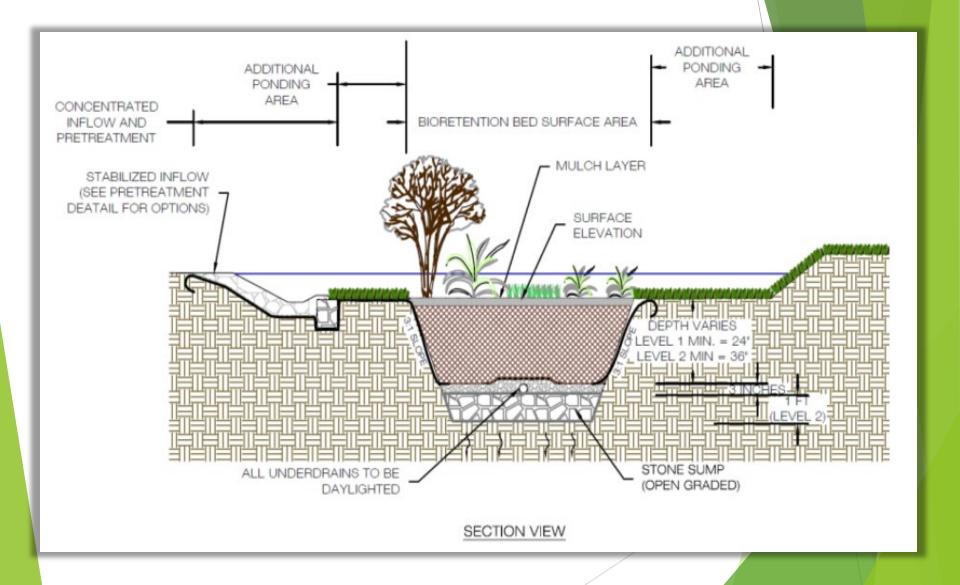




## **Post Construction Controls**

- 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











# Germanna Community College Good Housekeeping & Pollution Prevention



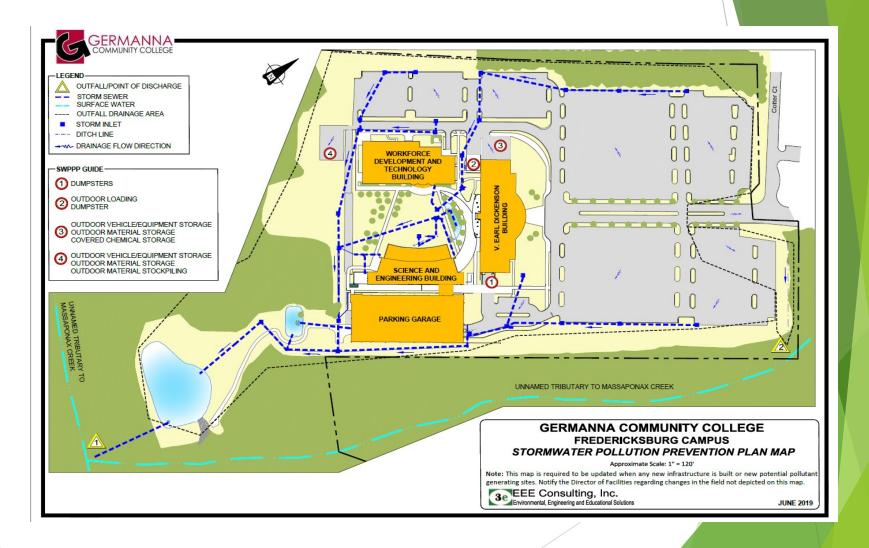
#### PROGRAM MANUAL

Germanna Community College 1000 Germanna Point Drive Fredericksburg, Virginia 2

May 2014

- 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

# Stormwater Pollution Prevention Plan Map

















# **QUESTIONS**

Thank You! Garland

EEE Consulting Inc.



Public Involvement Activity #3



#### Rilveria, Sara

**From:** Garland Fenwick

Sent: Wednesday, June 2, 2021 7:00 AM

To: \*All-Germanna\*
Cc: Garland Fenwick

**Subject:** Important Municipal Separate Storm Sewer System Program(MS-4)

#### Dear Faculty and Staff,

Germanna's Municipal Separate Storm Sewer System Program(MS-4) requires us to provide public education pertaining to the MS-4 Program and Stormwater Management at the Fredericksburg Area Campus. Here's a link <a href="https://www.germanna.edu/facilities/">https://www.germanna.edu/facilities/</a> to the Facilities web page. On the web page, you will see two short videos called Rack Up, Sweep Up and Maine Devil Ducks please take a few minutes to review the videos. The videos are a little corny but the information is appropriate to help GCC and your communities improve their MS-4 and Stormwater Management.

#### Thank you

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

As a public, comprehensive community college, Germanna provides accessible, high quality educational and training opportunities that address our communities' diverse and changing learning needs.





Maine Devil Ducks

49 views • Jun 2, 2021



Rake Up, Sweep Up



Public Involvement Activity #4



#### **SIGN-IN SHEET**

| School<br>Name: | Germanna Community College                     | Date:     | June 3, 2021 Portco Training |
|-----------------|------------------------------------------------|-----------|------------------------------|
| Topic:          | Municipal Separate Storm Sewer<br>System (MS4) | Location: | Fredericksburg Campus        |

| Name                           | Role    | Time    | Flyer <b>☑</b> | No. |
|--------------------------------|---------|---------|----------------|-----|
| LORETTA CAIN                   | PORTED  | 11:00Am |                | 1   |
| Robert Wrists                  | Porte O | 1.1.00  |                | 2   |
| incathett                      | Portco  | 11:00   |                | 3   |
| Kiana Lewis                    | Portco  | 11:00   |                | 4   |
| Kiana Lewis<br>Barbara Sievers | Portco  | 11100   |                | 5   |
|                                |         |         |                | 6   |
|                                |         |         |                | 7   |
|                                |         |         |                | 8   |
|                                |         |         |                | 9   |
|                                |         |         |                | 10  |
|                                |         |         |                | 11  |
|                                |         |         |                | 12  |
|                                |         |         |                | 13  |
|                                |         |         |                | 14  |
|                                |         |         |                | 15  |
|                                |         |         |                | 16  |
|                                |         |         |                | 17  |
|                                |         |         |                | 18  |
|                                |         |         |                | 19  |
|                                |         |         |                | 20  |

#### **SIGN-IN SHEET**

 School Name:
 Germanna Community College
 Date:
 Fortco Training

 Topic:
 Municipal Separate Storm Sewer System (MS4)
 Location:
 Fredericksburg Campus

| Name                                     | Role                       | Time    | Flyer <b></b> ✓ | No. |
|------------------------------------------|----------------------------|---------|-----------------|-----|
| Tiffani Staten  Jeremy Cook  Of Register | Supervisor                 | 4:11 pm |                 | 1   |
| Jesemy Cook                              | Supervisor<br>House Keeper | 4311pm  |                 | 2   |
| Of Register                              | florcrew                   | 4:11 8W |                 | 3   |
| U                                        | •                          |         |                 | 4   |
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