USGS National Center
Reston, Virginia

Municipal Separate Storm Sewer System (MS4)

General Permit VAR 040126

Reporting Year
July 1, 2019 through June 30, 2020

Annual Report Number 2

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BACKGROUND INFORMATION

Facility Name/Address

U.S. Geological Survey (USGS)
12201 Sunrise Valley Drive
Reston, Virginia 20192

Facility Permit Number: VAR040126

Annual Report Permit Year 2

- July 1, 2019 through June 30, 2020

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

- The certification has been signed by the person that is currently the Chief, Office of Management Services.

Number of new MS4 outfalls and associated acreage by HUC (Hydrologic Unit Code) added during this permit year

- There have been no new MS4 outfalls during this reporting period

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Brian Wachter
Chief, Office of Management Services
U.S. Geological Survey, National Center, Reston, Virginia

Date

VAR040126
Permit Number

U.S. Geological Survey
MS4 Name

STATUS OF COMPLIANCE

1. Status of compliance with permit conditions
    a) The facility's storm drain inlets have been labeled to read "No Dumping" (BMP 1a).
2. Assessment of the appropriateness of the identified Best Management Practices (BMPs) and progress toward achieving the identified measurable goal for each of the minimum control measures.
    a) The identified BMPs in Appendix A (except BMP 2b) have been determined to be appropriate. However, to enhance the effectiveness of the BMPs, the goals and status columns have been re-evaluated and re-stated.
    b) BMP 2b has been re-evaluated based on the results of previous year's effectiveness to disseminate relevant information about our MS4 program. The updated BMP 2b provides a more focused approach toward getting MS4 information to our target audience.
    c) The progress toward achieving the goals in each of the Minimum Control Measures (MCMs) is provided in Appendix A.

INFORMATION COLLECTED AND ANALYZED

1. Results of information collected and analyzed, including monitoring data, if any
    a) Outfalls are visually monitored quarterly (four times per year).
    b) Copies of the quarterly inspection tables for the outfalls are provided in Appendix B.

SUMMARY OF STORMWATER ACTIVITIES

1. Summary of the stormwater activities to be undertaken during the next reporting period
    a) Outfalls will continue to be monitored and any discrepancies noted.

BMP CHANGES

1. Changes to any identified BMPs or measurable goals for any of the Minimum Control Measures (MCMs) including steps to be taken to address any deficiencies

    BMP 1a: Goals have been better defined by providing a completion date and this has been achieved.

    BMP 1c: Target audience more clearly defined by providing a number. Means to provide information on the listed issues is more clearly directed to the target audience.

    BMP 2a: More clearly defines using Earth Day activities as means to provide information to the target audience. Includes Watershed Experience field trip student

number as a measurable goal as well as a pollution prevention section of USGS Summer Camp.

BMP 2b: Provides a web address to find MS4 documentation.

BMP 3a: Clearly states storm drain plans have been updated in AutoCAD enabling drawings to be updated as necessary in the future.

BMP 3d: Standard Operating Procedure has been finalized for outfall inspections.

BMP 5c: Provides documentation to include any changes made to the Stormwater Management System.

BMP 6a: More clearly defines how to implement training to employees on the SWPP Plan.

BMP 6b: More clearly defines how the facility will determine pollutant sources.

BMP 6c: Clarifies how the SWPP Plan is to be implemented at the Physics Building.

The progress toward achieving the goals in each of the Minimum Control Measures (MCMs) is provided in Appendix A.

OTHER GOVERNMENT AGENCY RELIANCE

1. Notice that the operator is relying on another government entity to satisfy some of the state permit obligations (if applicable)
    a) Not applicable

APPROVAL STATUS

1. Approval status of any programs pursuant to Section II C (if appropriate), or the progress toward achieving full approval of these programs
    a) No appropriate programs

SECTION II.B.3

(1) Outfalls Screened and (2) Illicit Discharge Detection and Elimination)

1. Outfalls Screened
    a) Seven outfalls are screened (inspected) quarterly (4 times per year). See inspection documents provided in Appendix B
    b) No follow-up activities required
2. The number of illicit discharges identified and the narrative on how they were controlled or eliminated
    a) There were no illicit discharges detected during this reporting period.

SECTION II.B.4

(Construction Site Stormwater Runoff Control)

1. Regulated land disturbing activities are discussed in MCM4
    a) There were no land disturbing activities during this reporting period.

SECTION II.B.5

(Post-Construction Stormwater Management In New Development and Development on Prior Developed Lands)

1. Permanent stormwater facilities
    a) There were no post-construction activities for this reporting period since all construction had been completed prior to the last reporting period.

Additional Notes to for this annual Report

- Notification Letters of Interconnecting Stormwater Systems and Acknowledging Receipt Responses for Fairfax County, Virginia and the Virginia Department of Transportation was provided in Annual Report Number 1-July 1, 2018 through June 30, 2019.
- Stormwater Pollution Prevention Plan (SWPP Plan) for Physics Building was provided in Annual Report Number 1-July 1, 2018 through June 30, 2019.
- Chesapeake Bay TMDL Action Plan was provided in Annual Report Number 1-July 1, 2018 through June 30, 2019.

APPENDIXES

Appendix A MS4 Program Plan (Minimum Control Measures (MCM) Status Updates)

Appendix B Outfall Location Figure

Appendix C Outfall Inspections for Reporting Period July 1, 2019 thru June 30, 2020

Appendix D MS4 Action Plan

APPENDIX A
MS4 Program Plan

Minimum Control Measures (MCM) Status Updates

Effective Dates of Reporting
July 1, 2019 through June 30, 2020

MCM1. Public Education and Outreach on Stormwater Impacts:

U.S. Geological Survey (USGS) will continue its annual Earth Day activities that are open to the public and USGS employees. The handouts and activities focus on environmental-related topics. There will be more information available related to storm drain awareness and the impacts illicit discharges have on downstream areas and water bodies. The labels on the storm drain inlets will be an ongoing reminder of the areas that would be impacted. The responsible parties for these BMPs are the Section Chief, Operations and Maintenance and the Environmental Specialist for the National Center.

Proposed BMP (column 1)	**Elements of BMP** (column 2)	**Objective and Expected Result(s)** (column 3)	**Implementation Schedule** (column 4)	**Measurable Goals** (column 5)	**Current Status (as of June 30, 2020)** (column 6)	**Future Status (as of June 30, 2021)** (column 7)
1a. Labeling storm drain inlets	• Label or stencil onsite storm drain inlets to read “No Dumping”, “Drains to Waterways”, etc.	• General awareness to visitors and employees	• This task has been completed as of November 2017.	• This task has been completed	• All storm drains inlets or catch basins are labeled “No Dumping” or equal.	• Annual inspection to ensure labels are properly placed. Replace as necessary.
1b. Annual Earth Day activities	• Different environmental-related activities including pollution prevention, recycling • General watershed information • Drainage and impacts to watershed • Handouts available to all participants	• Awareness and information • Public and employees • Provide information relative to USGS National Center and environmental issues • Will focus on educating public on the issues associated with illicit dumping	• Our annual Earth Day activities occur in April of each year.	• Earth day activities were not held this year due to COVID-19 pandemic.	• All activities were cancelled for this year due to Covid-19 pandemic. Building access is currently restricted.	• We will be expanding the game scorecard to get feedback from the attendees and find out what other information would be useful in future events.

Proposed BMP (column 1)	**Elements of BMP** (column 2)	**Objective and Expected Result(s)** (column 3)	**Implementation Schedule** (column 4)	**Measurable Goals** (column 5)	**Current Status (as of June 30, 2020)** (column 6)	**Future Status (as of June 30, 2021)** (column 7)
1c. High priority water quality issue awareness	• Identification of three (minimum) issues and rationale for selection • Determine if coordination with local MS4s is appropriate • Identification of target audience and size • Identification of the message to be conveyed and method of conveyance	• To improve awareness and provide relevant information to the target audience. • The target audience is approximately 1800 people. The goal is to reach a minimum of 20% of the target audience, approximately 380 personnel.	• Our annual Earth Day activities occur in April of each year.	• Monitor % of target audience reached by selected means of conveyance	• Issue 1: Pollution Prevention a. Content of the electronic boards was evaluated to ensure the environmental messages are clear. We decided the content was effective and need to be updated regularly to keep interest. b. Positioning of the electronic boards has been evaluated to ensure visibility to the maximum number of people and have been placed where most personnel enter the buildings. c. Discussions between security force, landscaper, and facilities personnel has been held to determine how effective current procedures for picking up trash debris has been. • Issue 2: Illicit discharge a. Discussions between security force, landscaper, and facilities personnel has been held to determine if there is a need for additional monitoring to ensure no illicit discharges occur. • Issue 3: BMPs a. Assess all BMPs for effectiveness and modify as necessary.	• Issue 1: Pollution Prevention a. Create one new poster to keep content current. b. Discussions between security force, landscaper, and facilities personnel will be held to determine how effective current procedures for picking up trash debris has been. • Issue 2: Illicit discharge a. Discussions between security force, landscaper, and facilities personnel will be held to determine if there is a need for additional monitoring to ensure no illicit discharges occur. • Issue 3: BMPs a. Assess all BMPs for effectiveness and modify as necessary.

MCM2. Public Involvement/Participation

USGS will continue involving the public and surrounding merchants during the annual Earth Day activities. The responsible parties for these BMPs are the Section Chief, Operations and Maintenance and the Environmental Specialist for the National Center.

Proposed BMP (column 1)	**Elements of BMP** (column 2)	**Objective and Expected Result(s)** (column 3)	**Implementation Schedule** (column 4)	**Measurable Goals** (column 5)	**Current Status (as of June 30, 2020)** (column 6)	**Future Status (as of June 30, 2021)** (column 7)
2a. Annual Earth Day activities, Summer Camp, and Watershed Experience field trip	• Provide fliers and posters (electronic and non-electronic) at visitor entrances notifying target audience of activities • Activities open to public and employees • Activities that include local merchants • Local 7th graders undertaking field trip with USGS staff to experience a watershed • Summer Camp at USGS is an annual event	• Broaden awareness of the activities • Make public and employees more aware of impacts of illicit discharge to storm drains • Teach students value of watershed components	• Watershed field trips have been occurring since 1992 • Summer Camp Activities annually • Earth Day Activities annually	• Continue annual Earth Day events where local vendors and other groups provide information to our target audience. • Continue providing Watershed Experience field trip and record number of student participants.	• Continue to provide Earth Day info to target audience. • Watershed Experience since 1992 • Summer Camp is held annually with the Reston Association. • All activities were cancelled for this year due to Covid-19 pandemic. Building access is currently restricted.	• Earth Day activities will continue • Based on feedback from attendees, informational handouts will be modified • Earth Day info provided to target audience • Information sharing with target audience during Earth Day activities • Continue Watershed Experience with 7th graders. • Pollution prevention will be discussed with Summer Camp children (about 160 children during camp).
2b. MS4 Documents Availability	• Provide info at Earth Day activities that include information about the USGS MS4 program • Provide information annually at visitor's entrances with fliers and posters (electronic and non-electronic) • Post MS4 annual reports on USGS Internet website	• To make employees and the public more aware of steps taken to reduce or eliminate illicit discharges to storm drains • Provide a contact name and telephone number for comments or issues related to pollution	• Ongoing	• Solicit feedback from target audience during Earth Day activities to determine effectiveness of the activities.	• MS4 weblink: https://www.usgs.gov/about/documents • Modify Earth Day activities as appropriate based on target audience feedback (i.e., more hands-on activities, more local merchants) • Ongoing changes to activities as feedback is obtained.	• Organize and review all documents on internet site, ensure all documents are relevant

MCM3. Illicit Discharge Detection and Elimination (IDDE)

USGS will monitor the existing outfalls and the storm drain inlets routinely to detect and eliminate illicit discharges. Through an ongoing inspection program and utilizing baseline photographic records, elimination of illicit discharges will be achievable. The responsible parties for these BMPs are the Section Chief, Operations and Maintenance and the Environmental Specialist for the National Center.

Proposed BMP (column 1)	**Elements of BMP** (column 2)	**Objective and Expected Result(s)** (column 3)	**Implementation Schedule** (column 4)	**Measurable Goals** (column 5)	**Current Status (as of June 30, 2020)** (column 6)	**Future Status (as of June 30, 2021)** (column 7)
3a. Update and maintain storm drain drawing and table	• Drawing showing known outfall locations • Drawing showing the approximate distance to receiving water body (if appropriate), drainage area to each outfall, name of receiving water body • If development modifies the drainage system, the drawing will be updated accordingly • Drawing to be electronic	• To maintain a current and accurate storm drain drawing	• Completed December 2018	• Developed a fully electronic, up-to-date drawing in AutoCAD.	• Storm drain plans have been imported into AutoCad.	• Maintain electronic version of storm drain plan to include any updates or new information that needs to be provided in the storm drain plan.
3b. Illicit discharges / illegal dumping prohibitions	• Write a statement about how USGS conducts their IDDE (Illicit Discharge Detection and Elimination) program.	• To eliminate IDDE	• Completed November 2017	• Ongoing	• Facility is monitored (camera and physical presence) 24/7 by onsite security force. • Storm drain inlets have been labeled stating “No Dumping.” • No illicit discharges were discovered during this reporting period	• Security force will continue monitoring the facility by both vehicle and by walking. • Camera monitoring will continue 24/7 surveillance of the facility. • Labels at storm drains will be periodically checked to ensure they are still intact. If necessary, they will be replaced. • Post up to date IDDE procedures to internet site.
3c. Notifications	• Required responses to actions required by Virginia DEQ	• Written responses to Virginia DEQ outline future goals to comply with current MS4 requirements	• January 2020	• Ongoing-Spill prevention and Illicit Discharge training for contractors and employees was held to educate on how to respond to such events. BMP’s (one time) and SMF’s(four times) were inspected and recorded.	• The USGS National Centers BMP’s were submitted via e-mail to William.keeling@deq.virginia.gov on 1/8/2020 for upload to the DEQ BMP Warehouse due to a software migration issue.	• Training will be held on an annual basis, curriculum will be pertinent to MS4, illicit discharge, spill prevention, pesticide/fertilizer and salt use on campus.

Proposed BMP (column 1)	**Elements of BMP** (column 2)	**Objective and Expected Result(s)** (column 3)	**Implementation Schedule** (column 4)	**Measurable Goals** (column 5)	**Current Status (as of June 30, 2020)** (column 6)	**Future Status (as of June 30, 2021)** (column 7)
3d. Outfall condition screening and photographs	• Develop SOP for field screening outfalls • Semi-Annual outfall and storm drain inlet inspection and documentation • Photographs during no flow or low flow	• To provide baseline photographs and information of each outfall • Inspections to determine if illicit discharge has occurred • Document outfalls screened and results of screening	• Completed December 2017	• Finalized SOP has been completed. • Photograph outfalls to use as baseline	• SOP has been developed outlining steps to take during the screening process included on the inspection document. • Screening results for the seven outfalls is provided in appendix B.	• Update and modify the SOP if necessary, to ensure its effectiveness.
3e. Post Illicit Discharge Detection	• SOP outlining method of detection, identification, and addressing illicit discharges/illegal dumping	• Track observations, investigations, and resolutions • Make the documented information available to the public	• Ongoing	• Ongoing: Report observations, investigations, and resolutions. • Description and dates of any illicit discharges.	• No illicit discharges were discovered this reporting period.	• Facility will continue to be monitored (camera and physical presence) 24/7 by onsite security force • Quarterly screening will be conducted and documented. • Instructions for the quarterly screening are provided on each page of the inspection document. Instructions will be changed to include steps to take if IDDE is discovered and how the info is disseminated.

MCM4. Construction Site Stormwater Runoff Control

USGS will comply with Commonwealth regulations to install appropriate BMPs during all applicable construction activities and to inspect the BMPs until disturbed areas become fully stabilized. The responsible parties for these BMPs are the Section Chief, Operations and Maintenance and the Environmental Specialist for the National Center.

Proposed BMP (column 1)	**Elements of BMP** (column 2)	**Objective and Expected Result(s)** (column 3)	**Implementation Schedule** (column 4)	**Measurable Goals** (column 5)	**Current Status (as of June 30, 2020)** (column 6)	**Future Status (as of June 30, 2021)** (column 7)
4a. Erosion and Sediment Control and Inspections During Construction	• Contract documents list the requirements that contractors must meet to conduct land disturbance activities • All Erosion and Sediment Control Plans (E&SCP) are required to have E&SC Notes which specify Fairfax County telephone and contact info before starting any construction • E&SC Notes indicates all erosion control devices must be in place and inspected by the County prior to any ground disturbance • E&SC Notes indicate that all E&SC Practices will be constructed and maintained in accordance with current edition of the VA Erosion and Sediment Control Handbook • Plan will be compliant with standards provided in 4VAC-50-30-40 of the E&SC Regulations • E&SC Notes provide authorization for County personnel to inspect/monitor to ensure compliance • E&SC Notes specify that a copy of the E&SCP and permit be onsite at all times	• Compliance with appropriate Commonwealth regulations pertaining to erosion and sediment control during construction activities	• Ongoing	• Currently no land disturbing activities occurring on the property.	• No land disturbing activities greater than or equal to 2500 square feet were conducted this reporting period. • 2020 included a new multi-year project to mill and pave existing parking lots and sidewalks. Required permits, inspections were obtained. Areas disturbed did not extend beyond the existing pavement.	• Reporting year 2021 will continue a multi-year project to mill and pave existing parking lots and sidewalks. Required permits, inspections will be obtained. Areas disturbed will not extend beyond the existing pavement. • Any construction site that could impact silt introduction into stormwater runoff will be in accordance with Part I.E.4.a(1),(2),(3) or (4) of the MS4 General Permit.

Proposed BMP (column 1)	**Elements of BMP** (column 2)	**Objective and Expected Result(s)** (column 3)	**Implementation Schedule** (column 4)	**Measurable Goals** (column 5)	**Current Status (as of June 30, 2020)** (column 6)	**Future Status (as of June 30, 2021)** (column 7)
4a continued	• E&SC Notes provide criteria to permanently stabilize disturbed area in accordance with the VA E&SC Regs • with the VA Erosion and Sediment Control Handbook • All construction resulting in disturbed area ≥ 2,500 sf is required to obtain a Land Disturbance Permit from Fairfax County • Construction with disturbed areas will adhere to VDEQ regulations and VDEQ-accepted BMPs					
4b. Construction Activity Tracking System	• Continue to provide the information on ground disturbing activities in our annual reports	• As outlined in MCM 4a.	• Current and ongoing	• Multi-year contract to mill and pave existing parking lots and sidewalks.	• No land disturbing activities greater than or equal to 2500 square feet were conducted during this reporting period	• Reporting year 2021 will continue a multi-year project to mill and pave existing parking lots and sidewalks. Required permits, inspections will be obtained. Areas disturbed will not extend beyond the existing pavement.

MCM5. Post-Construction SWM (Storm Water Management) in New Development and Development on Prior Developed Lands

USGS has implemented programs outlined in construction permits addressing minimizing or eliminating impacts to stormwater runoff from new development or modifications to existing development (redevelopment). The responsible parties for these BMPs are the Section Chief, Operations and Maintenance and the Environmental Specialist for the National Center.

Proposed BMP (column 1)	**Elements of BMP** (column 2)	**Objective and Expected Result(s)** (column 3)	**Implementation Schedule** (column 4)	**Measurable Goals** (column 5)	**Current Status (as of June 30, 2020)** (column 6)	**Future Status (as of June 30, 2021)** (column 7)
5a. Permits	• Develop plans, drawings, and submissions in accordance with the VA Stormwater Management Act (VSMA) • Design and installation will be in accordance w/ 4VAC50-60 • Construction resulting in disturbed area ≥ 2,500 sf is required to obtain a Virginia Stormwater Management Program permit from Fairfax County and may be required to develop a Stormwater Pollution Prevention Plan (SWPP Plan)	• Compliance with appropriate Commonwealth regulations pertaining to stormwater runoff during construction activities	• Ongoing	• Report total land disturbed acreage and total number of projects • Report total number of inspections performed, and any enforcement actions taken	• No additional land-disturbing activities greater than 2,500 square feet have taken place during this reporting period.	• Reporting year 2021 will continue a multi-year project to mill and pave existing parking lots and sidewalks. Required permits, inspections will be obtained. Areas disturbed will not extend beyond the existing pavement.
5b. Site Inspection and Maintenance	• Develop an inspection and maintenance schedule and means of documenting info for the existing retention pond and other structural BMPs (as appropriate) • List of BMPs with appropriate tracking information, including updating list with new BMPs brought online	• Outline when and how inspections are conducted • To ensure long-term operation of the BMP as designed	• March 2018	• Establish inspection and maintenance program/schedule	• GSA develops design construction drawings for large scale projects at USGS. During the preparation of the design plans, SOPs, inspection and maintenance schedules are developed in accordance with Virginia and Fairfax County requirements. • Standard Operating Procedures for inspections and maintenance of onsite BMP's has been developed and put into use.	• Continue to evaluate Standard Operating Procedures for inspections and maintenance of onsite BMPs.
5c. Permanent Stormwater Management Tracking	• Develop a tracking system for permanent stormwater management facilities.	• To provide documentation of the inspection/ maintenance conducted on the BMPs	• March 2018	• Update documentation to include any changes to the Stormwater Management System.	• No additional stormwater management facilities were brought online during this reporting period. • BMP's including 20 infiltration trenches and 1 bioretention cell were inspected on 6/15/2020 and passed inspection.	• No new stormwater management facilities are expected. • Continue to implement inspections of BMP's. • The calculated efficiency of BMP's has exceeded the 40% required cumulative reduction for total nitrogen, total phosphorus, and total suspended solids by the year 2023 as reported in the USGS-National Center Chesapeake Bay TMDL action plan(See Annual report 1 Appendix G).

MCM6. Pollution Prevention/Good Housekeeping

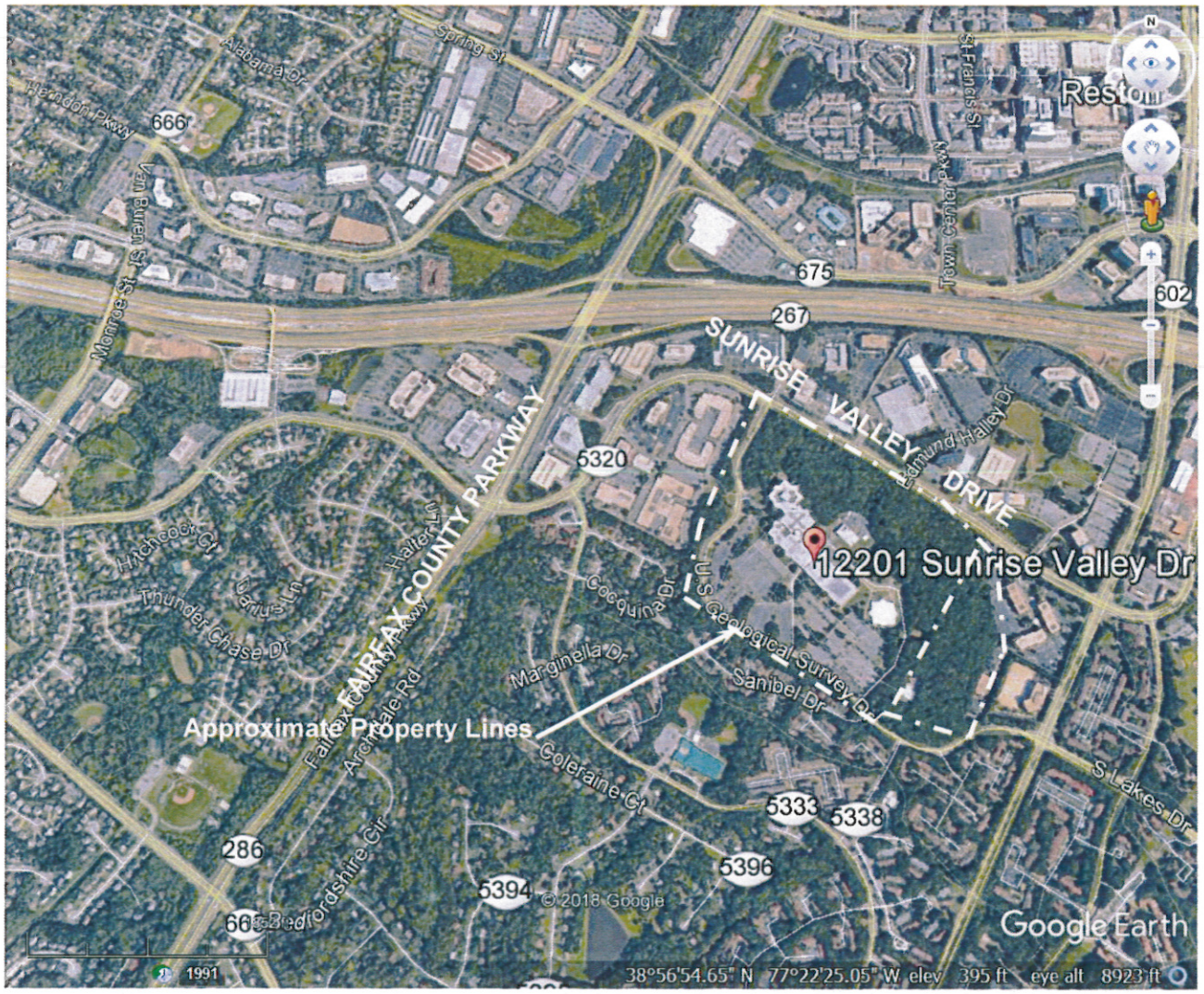
USGS will implement an operation and maintenance program to minimize or eliminate stormwater pollutant runoff from the site. The responsible parties for these BMPs are the Section Chief, Operations and Maintenance and the Environmental Specialist for the National Center.

Proposed BMP (column 1)	**Elements of BMP** (column 2)	**Objective and Expected Result(s)** (column 3)	**Implementation Schedule** (column 4)	**Measurable Goals** (column 5)	**Current Status (as of June 30, 2020)** (column 6)	**Future Status (as of June 30, 2021)** (column 7)
6a. Training and General Awareness	• Preventing Illicit Discharge on USGS National Center site • Ensure proper waste disposal (including landscape wastes) • Minimize pollutants in stormwater runoff (bulk storage areas) • Proper fertilizer/pesticide application	• To further develop awareness for impacts associated with pollution and its effects on surface waters and steps to minimize or eliminate impacts	• March 2018	• Implement and track training attendance	• Implemented training for Stormwater pollution prevention as well as Illicit Discharge Detection and Elimination which included 14 federal employees and 6 contract employees on 6/9/2020 and 6/17/2020.	• SWPP Plan (Storm Water Pollution Prevention Plan) to be reviewed as necessary to remain effective. • Continue to develop and implement training
6b. Potential Pollutant Assessment	• Assessment of the facility to identify areas that are a potential source of pollution • Assess existing SOPs for materials being stored onsite that could contribute to pollution • Modify existing SOPs or develop new SOPs to address onsite exterior storage issues as necessary	• Identify pollutant sources that will be incorporated in the SWPP Plan • Reduce or eliminate onsite pollution and eliminate illicit discharges	• March 2018	• Determine pollutant sources	• SWPP Plan was developed for the Physics Building and was monitored during this annual reporting period. No modifications are needed at this time. • SOP's were developed for crafting contract language, IDDE procedures, training, use of pesticides herbicides and fertilizers, stormwater pollution protection, and inspection and maintenance of SMF's.	• SWPP Plan will be monitored as it relates to the Physics Building area and modified as necessary to maintain effectiveness. • Annual review of SOP's to keep up to date.
6c. SWPP Plan	• Determination if a SWPP Plan is required.	• Develop procedures designed to reduce and prevent pollutant discharge • Develop an inspection and maintenance schedule.	• March 2018	• Develop SWPP Plan	• SWPP Plan for the Physics Building provides training with the objective of minimizing pollution. • Training events include: a. Good housekeeping b. Cleanup procedures c. Disposal locations d. Signs posted with good housekeeping procedures	• SWPP Plan will be monitored as it relates to the Physics Building area and modified as necessary to maintain effectiveness

APPENDIX B

Outfall Location Figure

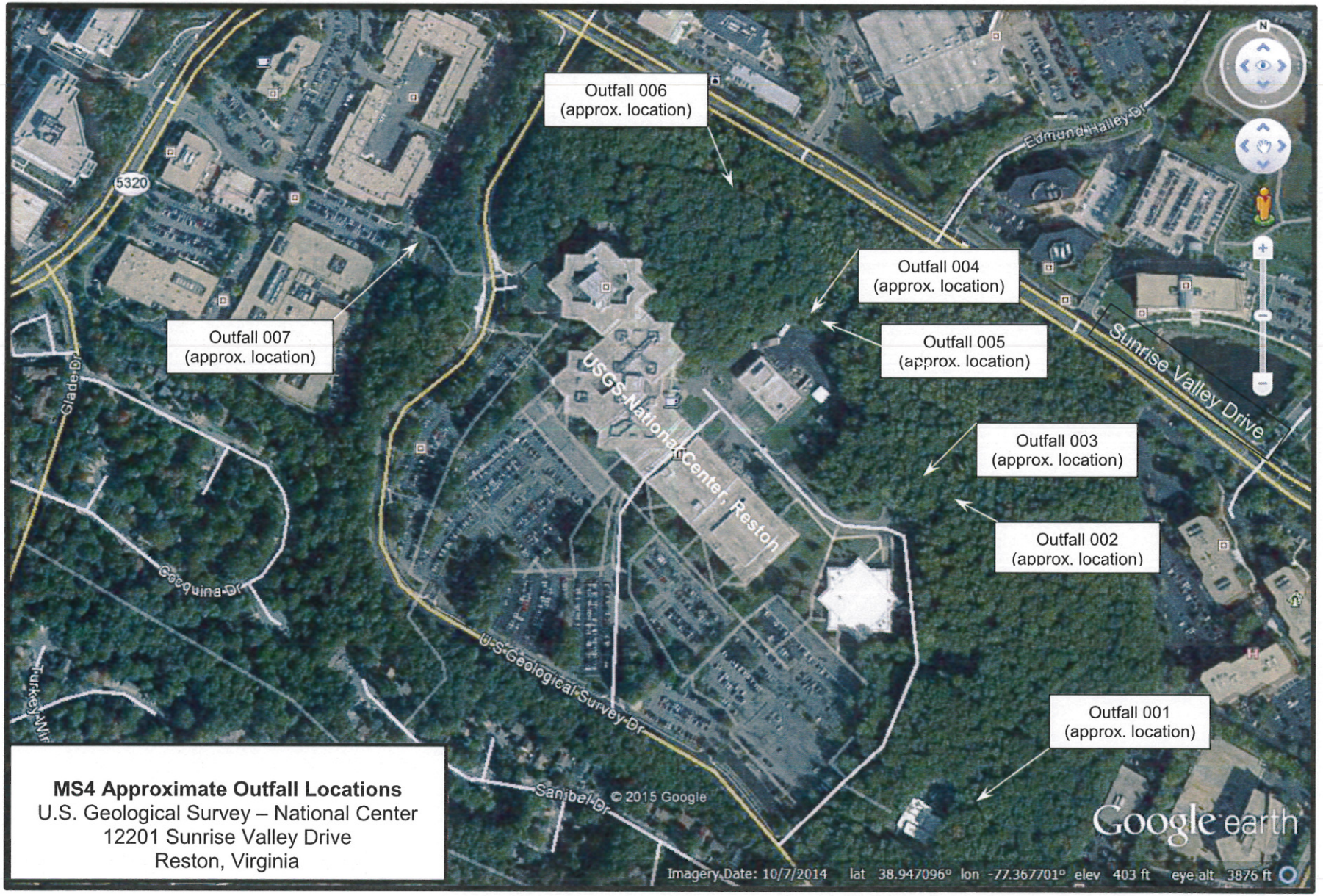
USGS MS4 Location Map



Municipal Separate Storm Sewer System (MS4)

Location Map

Approximate Outfall Locations



APPENDIX C

Outfall Inspections

Effective Dates of Reporting
July 1, 2019 through June 30, 2021

INSTRUCTIONS: For each of the parameters, respond to the question and insert only the date of inspection under the appropriate quarter if there are NO VISUAL ISSUES. If there are visual issues, describe on the lines at the bottom of this page (or on back of page if necessary) and note the outfall number. If an illicit discharge is suspected or observed, contact the Facility Manager at (703) 400-2567). Legibly print the inspector's name.

YEAR partial calendars 2019-2020	Condition Determination Question	1st Calendar Quarter (Jan-Mar)	2nd Calendar Quarter (Apr-Jun)	3rd Calendar Quarter (Jul-Sep)	4th Calendar Quarter (Oct-Dec)
		2/18/20 - 9:54AM	5/26/20 - 11:11 AM	8/2/19 8:30AM	10/7/19 9:25AM
Outfall 001 (sample at end of pipe/structure) VPDES General Permit #VAR040126 Located behind Physics Building	Is there an odor?	No	No	No	No
	Is there a color?	No	No	No	No
	Is the sample clear?	N/A	N/A	N/A	N/A
	Are there floatables?	No	No	No	No
	Are there deposits (stains)?	No	No	No	No
	What is condition of the vegetation?	Normal	Normal	Normal	Normal
	What is condition of the structure?	Good	Good	Good	Good
	Is there visible biology (fish, frogs, etc.)	No	No	No	No
Outfall 002 (sample at end of flared end section) VPDES General Permit #VAR040126 Located behind ACS Building	Is there an odor?	No	No	No	No
	Is there a color?	No	No	No	No
	Is the sample clear?	N/A	N/A	N/A	N/A
	Are there floatables?	No	No	No	No
	Are there deposits (stains)?	No	No	No	No
	What is condition of the vegetation?	Normal	Normal	Normal	Normal
	What is condition of the structure?	Good	Good	Good	Good
	Is there visible biology (fish, frogs, etc.)		No	No	No

ADDITIONAL COMMENTS:

INSPECTOR: Paul Peach

INSTRUCTIONS: For each of the parameters, respond to the question and insert only the date of inspection under the appropriate quarter if there are NO VISUAL ISSUES. If there are visual issues, describe on the lines at the bottom of this page (or on back of page if necessary) and note the outfall number. If an illicit discharge is suspected or observed, contact the Facility Manager at (703) 400-2567). Legibly print the inspector's name.

YEAR partial calendars 2019-2020	Condition Determination Question	1st Calendar Quarter (Jan-Mar)	2nd Calendar Quarter (Apr-Jun)	3rd Calendar Quarter (Jul-Sep)	4th Calendar Quarter (Oct-Dec)
		2/18/20 10:18AM	5/26/20 11:20AM	8/2/19 8:30AM	9:40AM
Outfall 003 (sample at end of pipe/structure) VPDES General Permit #VAR040126 Located behind Physics Building	Is there an odor?	No	No	No	No
	Is there a color?	No	No	No	No
	Is the sample clear?	N/A	N/A	N/A	N/A
	Are there floatables?	No	No	No	No
	Are there deposits (stains)?	No	No	No	No
	What is condition of the vegetation?	Normal	Normal	Normal	Normal
	What is condition of the structure?	Good	Good	Good	Good
	Is there visible biology (fish, frogs, etc.)	No	No	No	No
Outfall 004 (sample at end of flared end section) VPDES General Permit #VAR040126 Located behind ACS Building	Is there an odor?	No	No	No	No
	Is there a color?	No	No	No	No
	Is the sample clear?	N/A	N/A	N/A	N/A
	Are there floatables?	No	No	No	No
	Are there deposits (stains)?	No	No	No	No
	What is condition of the vegetation?	Normal	Normal	Normal	Normal
	What is condition of the structure?	Good	Good	Good	Good
	Is there visible biology (fish, frogs, etc.)	No	No	No	No

ADDITIONAL COMMENTS:

INSPECTOR: Paul Peach

INSTRUCTIONS: For each of the parameters, respond to the question and insert only the date of inspection under the appropriate quarter if there are NO VISUAL ISSUES. If there are visual issues, describe on the lines at the bottom of this page (or on back of page if necessary) and note the outfall number. If an illicit discharge is suspected or observed, contact the Facility Manager at (703) 400-2567). Legibly print the inspector's name.

YEAR partial calendars 2019-2020	Condition Determination Question	1st Calendar Quarter (Jan-Mar)	2nd Calendar Quarter (Apr-Jun)	3rd Calendar Quarter (Jul-Sep)	4th Calendar Quarter (Oct-Dec)
		2/15/20 10:27AM	5/26/20 11:28AM	8/2/19 8:30 AM	9:50
Outfall 005 (sample at end of pipe/structure) VPDES General Permit #VAR040126 Located behind Physics Building	Is there an odor?	No	No	No	No
	Is there a color?	No	No	No	No
	Is the sample clear?	N/A	N/A	N/A	N/A
	Are there floatables?	No	No	No	No
	Are there deposits (stains)?	No	No	No	No
	What is condition of the vegetation?	Normal	Normal	Normal	Normal
	What is condition of the structure?	Good	Good	Good	Good
	Is there visible biology (fish, frogs, etc.)	No	No	No	No
Outfall 006 (sample at end of flared end section) VPDES General Permit #VAR040126 Located behind ACS Building	Is there an odor?	No	No	No	No
	Is there a color?	No	No	No	No
	Is the sample clear?	N/A	N/A	N/A	N/A
	Are there floatables?	No	No	No	No
	Are there deposits (stains)?	No	No	No	No
	What is condition of the vegetation?	Normal	Normal	Normal	Normal
	What is condition of the structure?	Good	Good	Good	Good
	Is there visible biology (fish, frogs, etc.)	No	No	No	No

ADDITIONAL COMMENTS:

INSPECTOR: Paul Peach

INSTRUCTIONS: For each of the parameters, respond to the question and insert only the date of inspection under the appropriate quarter if there are NO VISUAL ISSUES. If there are visual issues, describe on the lines at the bottom of this page (or on back of page if necessary) and note the outfall number. If an illicit discharge is suspected or observed, contact the Facility Manager at (703) 400-2567). Legibly print the inspector's name.

YEAR partial calendars 2019-2020	Condition Determination Question	1st Calendar Quarter (Jan-Mar)	2nd Calendar Quarter (Apr-Jun)	3rd Calendar Quarter (Jul-Sep)	4th Calendar Quarter (Oct-Dec)
					10:12 AM
Outfall 007 (sample at end of pipe/structure) VPDES General Permit #VAR040126 Located behind Physics Building	Is there an odor?	No	No	No	do
	Is there a color?	No	No	No	do
	Is the sample clear?	N/A	N/A	N/A	N/A
	Are there floatables?	No	No	No	No
	Are there deposits (stains)?	No	No	No	No
	What is condition of the vegetation?	Normal	Normal	Normal	Normal
	What is condition of the structure?	Good	Good	Good	Good
	Is there visible biology (fish, frogs, etc.)	No	No	No	No

ADDITIONAL COMMENTS:

INSPECTOR: Pal Peach

APPENDIX D

MS4 Action Plan

Program Plan

Municipal Separate Storm Sewer System (MS4)

General Permit VAR 040126

Effective Date: November 1, 2018

Expiration Date: October 31, 2023

USGS National Center

Reston, Virginia

MS4 PROGRAM PLAN

This document represents United States Geological Survey's (USGS) Municipal Separate Storm Sewer System (MS4) Program Plan to comply with the requirements of the Virginia Pollution Elimination Discharge System (VPDES) General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4 General Permit). The requirements for the MS4 Program Plan development and update requirements are contained in Part I, Section C of the General Permit VAR040126 dated November 1, 2018.

The USGS headquarters is located south of Sunrise Valley Drive and to the west of Reston Parkway (VA Route 602) in Reston, Fairfax County, VA. A Site Location Map is included in Figure 1. The facility is an office building complex consisting of two parcels, a western and an eastern parcel, and several buildings, numerous parking lots, and a private road (USGS Drive) which runs through the facility near the southern and western boundaries of the site. General Services Administration (GSA) owns both the western and eastern parcels as well most of the buildings and roads within them, but delegates the operations and maintenance of the properties to USGS. In the western parcel, GSA owns the larger J.W. Powell Federal Building, the utilities plant located behind the J.W. Powell Federal Building, and the smaller octagonal star shaped Advanced Systems Center (ASC).

The eastern parcel consists of the Solid State Physics Laboratory (SSPL), located near the southern portion of the eastern parcel, and the building is owned by USGS. The northern and eastern portions of the site are forested. Site A site overview and notable features are included in Figure 2. The locations of Outfalls are shown in Figure 3.

A General Stormwater Permit VAR040126 was initially issued on July 1, 2013 and expired on June 30, 2018. Subsequently the stromwater permit was reissued on November 1, 2018 and isdue to expire in five years on October 31, 2023. The permit requires general stormwatermanagement at the site, including a public education and outreach; public involvement andparticipation; illicit discharge detection and elimination; construction site stormwater runoff control; post-construction stormwater management for new development and development on prior developed lands; pollution prevention and good housekeeping (including a nutrient management plan); and outfall mapping. The permit also requires development of Total Maximum Daily Limit (TMDL) Action Plans for all approved TMDLs impacting the site. These requirements are phased in over the life of the permit.

The majority of the site's impervious area, including the parking lots, the western portion of the J.W. Powell Federal Building and the front portion of the SSPL - drains to a wet pond located near the western boundary of the site. Runoff is conveyed to the pond via the site's storm sewer system. The pond was originally constructed in 1975 and was later repaired and upgraded in 1995. According to these drawings, the pond was designed and upgraded to provide sufficient flood protection for the 10-year storm event.

A bioretention cell is located near the entrance to a parking lot near the southeastern portion of the site. The bioretention cell receives runoff from the parking lot to the northeast of the cell.

There are 14 infiltration trenches that line the length of USGS Drive. The trenches were constructed as part of the road improvement project on USGS Drive, which began in 2013. Runoff from the roadway either enters the trenches by sheet-flow or enters through curb cut inlets. Once the infiltration trenches are filled up, excess runoff is piped to the wet pond via the storm drain system.

The runoff from ASC, rear portion of the SSPL, eastern portion of the J.W. Powell Federal Building, and service road and utility plant located behind the Powell Building is collected via a storm drain system separate from the collection system for the pond and discharged to outfalls located in the forest along the northern and eastern portion of the site. The drainage pattern for the site is shown in Figure 4.

The facility is located within the Sugarland Run Watershed. Runoff from the site enters Sugarland Run through two tributaries. The area draining to the pond and the bioretention cell, along with the area managed by the infiltration trenches along the southern portion of USGS Drive, outfall into Stave Run via the pond. The untreated area behind the J.W. Powell Building, the ASC, and infiltration trenches along the northern western portion of USGS Drive outfall to the northeast of the site into Smilax Branch. Both tributaries connect into Sugarland Run just north of the Dulles Toll Rd (VA State Route 267). Sugarland Run flows through the north western portion of Fairfax County into Loudoun County. Receiving waters in the vicinity of the site are shown in Figure 5. Sugarland Run is also a tributary to the non-tidal portion of the Potomac River Basin which is subject to Chesapeake Bay's nutrient TDMLs. Chesapeake Bay Watershed and Sub-watersheds for the major rivers within the Chesapeake Bay Watershed, including that for Potomac River are shown in Figures 6 and 7, respectively.

MS4 PROGRAM PLAN

Roles and Responsibilities

Derek Briggs (Operation and maintenance, oversees development and implementation of stormwater pollution prevention plan, coordinates spill response and training activities, stormwater management)
National Center Operations Branch (NCOB)
12201 Sunrise Valley Drive, Reston, VA 20192
Telephone Number: (O) 703-648-7510
Telephone Number: (M) 703-400-2567
Email address: dsBriggs@usgs.gov

John E. Brown (Supervision)
Chief, Facilities Project Management and Support Branch
12201 Sunrise Valley Drive, Reston, VA 20192
Telephone Number: (O) 703-648-4458
Email address: jebrown@usgs.gov

Larry Herrington (Technical support)

Environmental Management Branch
12201 Sunrise Valley Drive, Reston, VA 20192
Telephone number) (O) 703-648-4634
Telephone Number: (M) 703-488-8879
Email address: LHerrington@usgs.gov

Brian Wachter (MS4 Plan Certification)
Chief, Office of Management Services
12201 Sunrise Valley Drive, Reston, VA 20192
Telephone number) (O) 703-648-7925
Email address: bwachter@usgs.gov

Written Agreements

Notification and response correspondence for MS4 interconnection with Fairfax County and Virginia DOT is provided in Appendix A.

Minimum Control Measures

1. Public education and outreach.

1.b. Description of BMP

Identification of high priority stormwater issues

Standard Operating Procedures or Policies

Three high-priority stormwater issues that have been identified are:

- Chesapeake Bay TMDL
- Impairment of Sugarland Run, a tributary of Potomac River
- Illicit Discharge

These issues have been selected because any mismanagement of stormwater program is likely to contribute to the impairment of the Chesapeake Bay. Illicit discharge of non-stormwater is the most likely cause of mismanagement of the program.

Schedule

Completed

Measurable Goals

Identification of issues

Responsible Party

NCOB

1.d. Description of BMP

Implementation of a public education and outreach program to increase public's knowledge and awareness with respect to stormwater issues with focus on issues identified in I.E.1.b

Standard Operating Procedures or Policies

- Signage: labeling and storm drain stenciling
- Media Materials: Information provided on USGS web site
- Media Materials: Annual memo to all employees reminding that Privately Owned Vehicles must have up-to-date state inspections and not be leaking fluids and are subject to towing at owner's expense
- Training materials: Materials developed to disseminate during Annual Earth Day activities

Schedule

Signage completed, Annual Earth Day Participation, Update of the USGS web site: ongoing

Measurable Goals

- Conduct quiz and award successful respondents to gauge public's understanding of issues discussed during Earth Day.
- Response provided to public enquiry on stormwater issues
- Number of illicit discharges identified

Responsible Party

NCOB

2. Public involvement and participation.

2.b. Description of BMP

Webpage dedicated to MS4 program and stormwater pollution prevention

Standard Operating Procedures or Policies

USGS has developed a web page (https://cms.usgs.gov/about/documents/). The web page will have the following information/features,

- The effective MS4 permit and coverage letter
- A copy of the most current MS4 program plan
- The annual report for each year of the term covered by this permit
- A mechanism for the public to report potential illicit discharges, improper disposal, or spills to the MS4, complaints regarding land disturbing activities, or other potential stormwater pollution concerns
- Ability for the public to provide input on the USGS MS4 program

Schedule

Web page has been created and is being updated to provide information, as discussed above. It will have full functionality by October 31, 2019.

Measurable Goals

Assess extent of public participation by keeping track of number of visitors to the site.

Responsible Party

NCOB

2.c. Description of BMP

Increase public awareness of key stormwater issues.

Standard Operating Procedures or Policies

- Educational events: Annual Earth Day presentation
- Educational events: Participation in CDEPC Forum to discuss environmental issues, including the ones related to stormwater management
- Pollution prevention: storm drain marking

Schedule

Storm drain marking completed. Earth Day participation is an annual event. CDEPC Forum is conducted on a monthly basis.

Measurable Goals

- Extent of participation in these activities
- % of storm drains marked

Responsible Party

NCOB

3. Illicit discharge detection and elimination.

3.a.1. Description of BMP

Outfall location details

Standard Operating Procedures or Policies

Develop MS4 Map and Information Table. Completed Figure 8 through 21.

Schedule

Completed

Measurable Goals

Development of the map.

Responsible Party

NCOB

3.a.2. Description of BMP

Outfall location details

Standard Operating Procedures or Policies

An information table will be prepared to include,

- A unique identifier for outfall
- Location of the outfall
- The estimated regulated acreage draining to the outfall
- The name of the receiving water;
- The 6th Order Hydrologic Unit Code of the receiving water;
- An indication as to whether the receiving water is listed as impaired in the Virginia 2016 305(b)/303(d) Water Quality Assessment Integrated Report;
- The predominant land use for each outfall discharging to an impaired water; and
- The name of any EPA approved TMDLs for which the permittee is assigned a wasteload allocation.

The information is available in this Plan (Figure 8 through 21)

Schedule

Completed

Measurable Goals

Development of the information table.

Responsible Party

NCOB

3.a.3. Description of BMP

Outfall location details

Standard Operating Procedures or Policies

Develop MS4 Map in pdf format. Completed Figure 8 through 21.

Schedule

Completed

Measurable Goals

Development of the map.

Responsible Party

NCOB

3.a.4. Description of BMP

Outfall location details

Standard Operating Procedures or Policies

Figure 8 through 21 will be updated to include any new outfalls constructed or TMDLs approved or both during the preceding reporting period.

Schedule

October 1 of each year.

Measurable Goals

Development of the map.

Responsible Party

NCOB

3.c. Description of BMP

Process to identify illicit discharge and take corrective action, if found.

Standard Operating Procedures or Policies

Development of procedure for IDDE designed to detect, identify, and address unauthorized non-stormwater discharges, including illegal dumping, to the small MS4 to effectively eliminate the unauthorized discharge. The procedure will include dry weather field screening protocols to detect, identify, and eliminate illicit discharges to the MS4. It will also include methodologies for conducting a follow-up investigation for any illicit discharge identified.

Schedule

October 31, 2019

Measurable Goals

Number of illicit discharge and successful implementation of corrective action, if needed.

Responsible Party

NCOB

4. Construction site stormwater runoff control.

4.a. Description of BMP

Control construction site stormwater runoff.

Standard Operating Procedures or Policies

Review and if needed, update the contract language to address discharges entering the MS4 from regulated construction site stormwater runoff. The contractors will be required to implement appropriate controls to prevent non-stormwater discharges to the MS4, such as wastewater, concrete washout, fuels and oils, and other illicit discharges identified during land disturbing activity inspections of the MS4.

Schedule

October 31, 2019.

Measurable Goals

Contract review for the adequacy of the contract language.

Responsible Party

EMB

4.b. Description of BMP

Control construction site stormwater runoff.

Standard Operating Procedures or Policies

If needed, provide construction inspection and oversight. Inspection will be conducted

- During or immediately following initial installation of erosion and sediment controls;
- At least once per every two-week period;
- Within 48 hours following any runoff producing storm event; and
- At the completion of the project prior to the release of any performance bond.

NOTE: No new construction activities of 2,500 square feet or greater are anticipated.

Schedule

October 31, 2019

Measurable Goals

Construction Report review

Responsible Party

NCOB

5. Post-construction stormwater management for new development and development on prior developed lands.

5.a. Description of BMP

Control construction site stormwater runoff.

Standard Operating Procedures or Policies

Implement a postconstruction stormwater runoff control program through compliance with 9VAC25-870 and with the implementation of a maintenance and inspection program consistent with Part I E 5 b

Schedule

October 31, 2019

Measurable Goals

Program implementation

Responsible Party

NCOB

5.b. Description of BMP

Control construction site stormwater runoff.

Standard Operating Procedures or Policies

Develop and maintain written inspection and maintenance procedures in order to ensure adequate long-term operation and maintenance of stormwater management facilities. Inspect stormwater management facilities on an annual basis. Conduct the maintenance in accordance with the written procedures developed under Part I E 5 b (1), if it is determined that maintenance is required.

Schedule

October 31, 2019

Measurable Goals

Development of the plan in a timely manner

Responsible Party

NCOB

5.d. Description of BMP

BMPs in place to improve stormwater quality (Figures 22 through 25 show Stormwater structural BMPs in place)

Standard Operating Procedures or Policies

Develop spreadsheet of all stormwater management facilities that discharge into the MS4. The spreadsheet will include all BMPs implemented by the permittee to meet the Chesapeake Bay TMDL load reduction as required in Part II A. A database shall include the following information,

- The stormwater management facility type
- The stormwater management facility location
- The acres treated by the stormwater management facility, including total acres, pervious acres, and impervious acres;
- The date the facility was brought online
- The 6th Order Hydrologic Unit Code in which the stormwater management facility is located;
- Whether or not the stormwater management facility is part of the Chesapeake Bay TMDL action plan required in Part II A
- The date of the most recent inspection of the stormwater management facility (e.g. bioretention cell, infiltration trenches)

The spreadsheet will be used to calculate TMDL for nitrogen, phosphorus, and total suspended solids and TMDL reduction attributed to BMP

Schedule

Completed (Figures 8 through 25), Chesapeake Bay TMDL Action Plan.

Measurable Goals

TMDL reduction

Responsible Party

NCOB

5.e. Description of BMP

Update any new BMP introduced to improve stormwater quality.

Standard Operating Procedures or Policies

Update the spreadsheet after a new stormwater management facility is brought online, a new BMP is implemented to meet a TMDL load reduction as required in Part II, or discovered if it is an existing stormwater management facility.

Calculate TMDL reduction (Completed)

Schedule

Completed

Measurable Goals

TMDL reduction

Responsible Party

NCOB

5.f. Description of BMP

BMP: Control construction site stormwater runoff.

Standard Operating Procedures or Policies

Report any stormwater management facility to address control of post-construction run-off

Schedule

October 31, 2019

Measurable Goals

Timely reporting

Responsible Party

NCOB

5.g. Description of BMP

Update any new BMP introduced to improve stormwater quality.

Standard Operating Procedures or Policies

Report any new stormwater management facility and BMPs

Schedule

October 31, 2019

Measurable Goals

Timely reporting

Responsible Party

NCOB

6. Pollution prevention and good housekeeping for facilities owned or operated by the permittee within the MS4 service area.

6.a. Description of BMP

Procedure implementation to minimize the adverse impact on stormwater runoff.

Standard Operating Procedures or Policies

Develop written procedure for road, street, and parking lot maintenance; equipment maintenance; and the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers (e.g. annual street/parking lot sweeping and SW inlet cleaning). The procedure is designed to,

- Prevent illicit discharges

- Ensure the proper disposal of waste materials, including landscape wastes
- Prevent the discharge of wastewater into the MS4 without authorization under a separate VPDES permit
- Require implementation of BMPs when discharging water pumped from utility construction and maintenance activities
- Minimize the pollutants in stormwater runoff from bulk storage areas (e.g., salt storage, topsoil stockpiles) through the use of BMPs
- Prevent pollutant discharge into the MS4 from leaking automobiles and equipment (e.g. issuing annual memo to all employees reminding that POVs must have up-to-date state inspections and not be leaking fluids and are subject to towing at owner's expense, conducting periodic visual inspection of parking lots for leaks)
- Ensure that the application of materials, including fertilizers and pesticides, is conducted in accordance with the manufacturer's recommendations.

Schedule

October 31, 2019

Measurable Goals

Procedure development in a timely manner.

Responsible Party

NCOB

6.c, d. Description of BMP

Stormwater management.

Standard Operating Procedures or Policies

Update the Stormwater Pollution Prevention Plan (SWPPP) for the facility. The Plan SWPPP will include,

- A site description that includes a site map identifying all outfalls, direction of stormwater flows, existing source controls, and receiving water bodies
- A description and checklist of the potential pollutants and pollutant sources
- A description of all potential non-stormwater discharges
- Written procedures designed to reduce and prevent pollutant discharge
- A description of the applicable training as required in Part I E 6 m
- Procedures to conduct an annual comprehensive site compliance evaluation
- Annual inspection log and associated findings and follow-up
- A log of each unauthorized discharge, release, or spill incident reported in accordance with Part III G including the following information,
  - Date of incident
  - Material discharged, released, or spilled

- Estimated quantity discharged, released or spilled.

Schedule

October 31, 2019

Measurable Goals

Prepare update in a timely manner.

Responsible Party

NCOB

6.f. Description of BMP

Minimize chance of repeat illicit discharge.

Standard Operating Procedures or Policies

Update SWPPP as needed.

Schedule

October 31, 2019

Measurable Goals

Timely update of the plan.

Responsible Party

NCOB

6.i. Description of BMP

Minimize stormwater pollution from landscape activities

Standard Operating Procedures or Policies

The landscape work is contracted out. USGS will work with landscape contractor to develop nutrient management plan and post to website.

Schedule

October 31, 2019.

Measurable Goals

Plan in place.

Responsible Party

NCOB

6.k. Description of BMP

Protect stormwater from nitrogen and phosphorus loading.

Standard Operating Procedures or Policies

Contract language to prevent application of any deicing agent containing urea or other forms of nitrogen or phosphorus to parking lots, roadways, and sidewalks, or other paved surfaces.

Schedule

October 31, 2019

Measurable Goals

Ensure proper contract language.

Responsible Party

EMB

6.l. Description of BMP

Follow process to minimize potential to discharge pollutants to stormwater.

Standard Operating Procedures or Policies

Contract language to ensure that the contractors engaged in activities with the potential to discharge pollutants use appropriate control measures to minimize the discharge of pollutants to the MS4.

Schedule

October 31, 2019

Measurable Goals

Ensure compliance by the contractors.

Responsible Party

NCOB

6.m. Description of BMP

Train applicable personnel to ensure protection of stormwater.

Standard Operating Procedures or Policies

Development and implementation of training plan. The training program ensures that,

- Field personnel receive training in the recognition and reporting of illicit discharges no less than once per 24 months
- Employees performing road, street, and parking lot maintenance receive training in pollution prevention and good housekeeping associated with those activities no less than once per 24 months

- Employees working in and around maintenance, public works, or recreational facilities receive training in good housekeeping and pollution prevention practices associated with those facilities no less than once per 24 months
- Contractors who apply pesticides and herbicides are trained or certified in accordance with the Virginia Pesticide Control Act (§ 3.2-3900 et seq. of the Code of Virginia). Certification by the Virginia Department of Agriculture and Consumer Services (VCACS) Pesticide and Herbicide Applicator program shall constitute compliance with this requirement
- Employees and contractors serving as plan reviewers, inspectors, program administrators, and construction site operators obtain the appropriate certifications as required under the Virginia Erosion and Sediment Control Law and its attendant regulations
- Employees and contractors implementing the stormwater program obtain the appropriate certifications as required under the Virginia Stormwater Management Act and its attendant regulations
- Employees whose duties include emergency response have been trained in spill response. Training of emergency responders such as firefighters and law-enforcement officers on the handling of spill releases as part of a larger emergency response training shall satisfy this training requirement and be documented in the training plan

A log will be maintained of each training event for a minimum of three years after the training event. The log will include the following information,

- The date of the training event
- The number of employees attending the training event
- The objective of the training event

Schedule

October 31, 2019

Measurable Goals

Plan development in a timely manner. Ensure participation of applicable staff.

Responsible Party

EMB

TMDL Special Conditions

Chesapeake Bay TMDL Special Condition

Sugarland Run is a tributary to the non-tidal portion of the Potomac River Basin, which is subject to Chesapeake Bay's nutrient TDMLs[1]. Required reductions in nitrogen, phosphorus, and total suspended solids (TSS) load are calculated as per Part II A 3 (Table 3b of MS4 permit). No new source is anticipated between July 1, 2009 and June 30, 2019, hence provisions of Part II A4 are not applicable. Required reduction for grandfathered projects is calculated as per Part II A 5 for the Potomac River Basin. Reductions required in Part II A 3, and A 5 shall be achieved through one or more of the following:

- BMPs approved by the Chesapeake Bay Program
- BMPs approved by the department

Reductions achieved in accordance with the General VPDES Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems effective July 1, 2013, shall be applied toward the total reduction requirements to demonstrate compliance with Part II A 3 and A 5.

A Chesapeake Bay TMDL action plan for the reductions required in Part II A 3 and A 5 has been submitted. If additional BMPs proposed to meet the reductions not previously approved by the department in the first phase Chesapeake Bay TMDL action plan, USGS will provide opportunity for public comment, prior to the submittal of the plan. The comment period will be open for 15 days. The Chesapeake Bay TMDL Action Plan includes the following,

- The load and cumulative reduction calculations calculated in accordance with Part II A 3 and A 5.
- The total reductions achieved as of July 1, 2018, for each pollutant of concern.
- A list of BMPs implemented prior to July 1, 2018, to achieve reductions associated with the Chesapeake Bay TMDL including:
- The date of implementation
- The reductions achieved
- The BMPs to be implemented by USGS prior to the expiration of this permit to meet the cumulative reductions calculated in Part II A 3 and A 5, including as applicable:
    - Type of BMP
    - Project name
    - Location
    - Percent removal efficiency for each pollutant of concern
    - Calculation of the reduction expected to be achieved by the BMP calculated

[1] https://www.deq.virginia.gov/portals/0/deq/water/guidance/152005.pdf , https://www.fairfaxcounty.gov/publicworks/sites/publicworks/files/assets/documents/chesapeake-bay-tmdl_0.pdf

- A summary of any comments received as a result of public participation required in Part II A 12, the USGS response, identification of any public meetings to address public concerns, and any revisions made to Chesapeake Bay TMDL action plan as a result of public participation.

Local TMDL Special Condition

The VDEQ has identified Sugarland Run's waters as impaired for E. coli and benthic macroinvertebrates in its 2014 Water Quality Assessment Integrated Report[2]. Table 4.2 of the report lists allocated bacteria load for the Sugarland Run watershed in Fairfax County as $2.01x10^{12}$cfu/yr. However, it does not list USGS MS4 in the report. Figures 26 and 27 show Bacteria TMDL Watershed in Fairfax County and Impaired Streams, respectively. These figures are taken from the Bacteria TMDL Action Plan developed by the Fairfax County[3]. Based on the location of USGS within the watershed, it does not appear that stormwater generated within the USGS facility is contributing to the impairment of the stream and no reduction in the bacteria load is warranted. As such, the development of a local TMDL action plan is not warranted.

[2] https://www.deq.virginia.gov/portals/0/DEQ/Water/TMDL/apptmdls/potrvr/sugarlandbact.pdf

[3] https://www.fairfaxcounty.gov/publicworks/sites/publicworks/files/assets/documents/pdf/reports/ms4/bacteria-tmdl.pdf

FIGURES

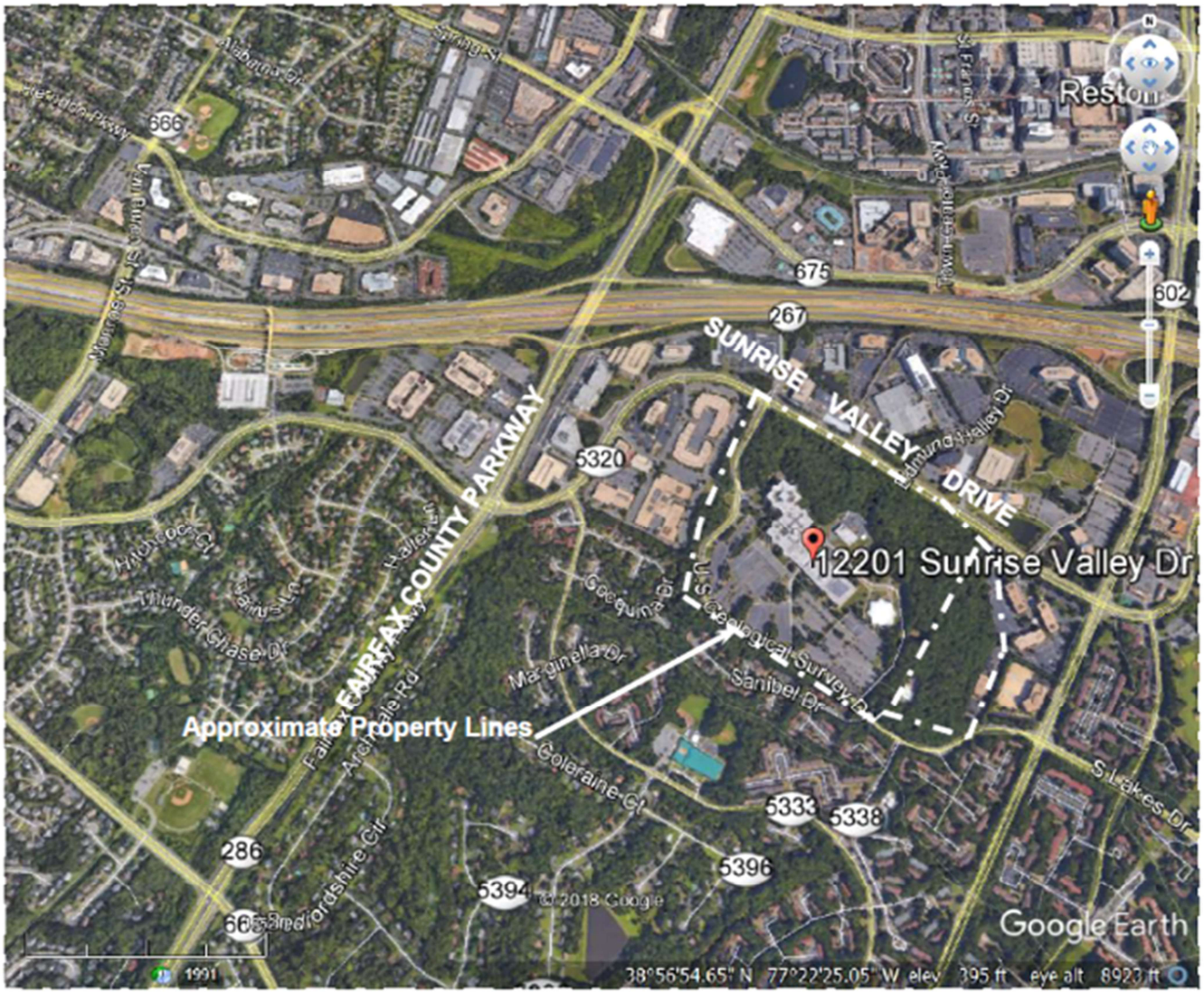


Figure 1. Location Map

Figure 2. Site Boundary and Features

CONTROLLED UNCLASSIFIED INFORMATION

USGS RESTON VA
STORM DRAIN DOCUMENTATION

CONTROLLED UNCLASSIFIED INFORMATION

Figure 3. Aerial View Showing Outfall Locations

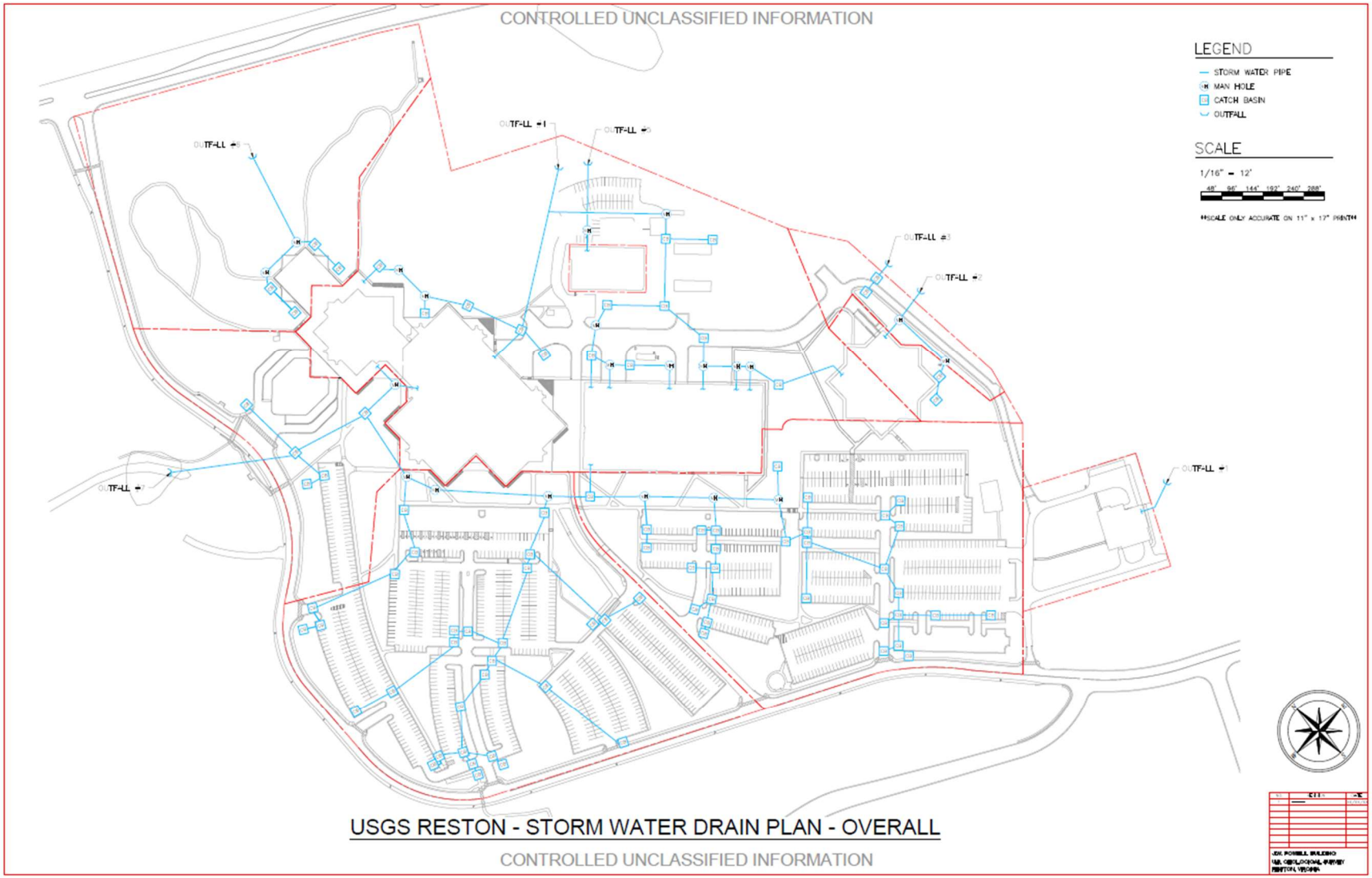


Figure 4. Stormwater Drainage Plan

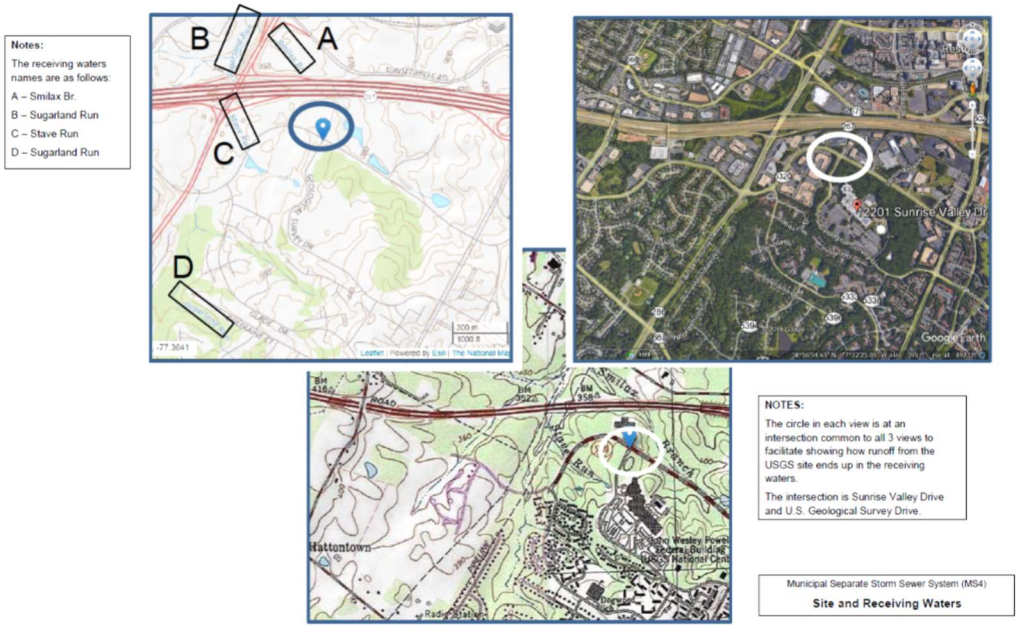


Figure 5. Receiving Waters

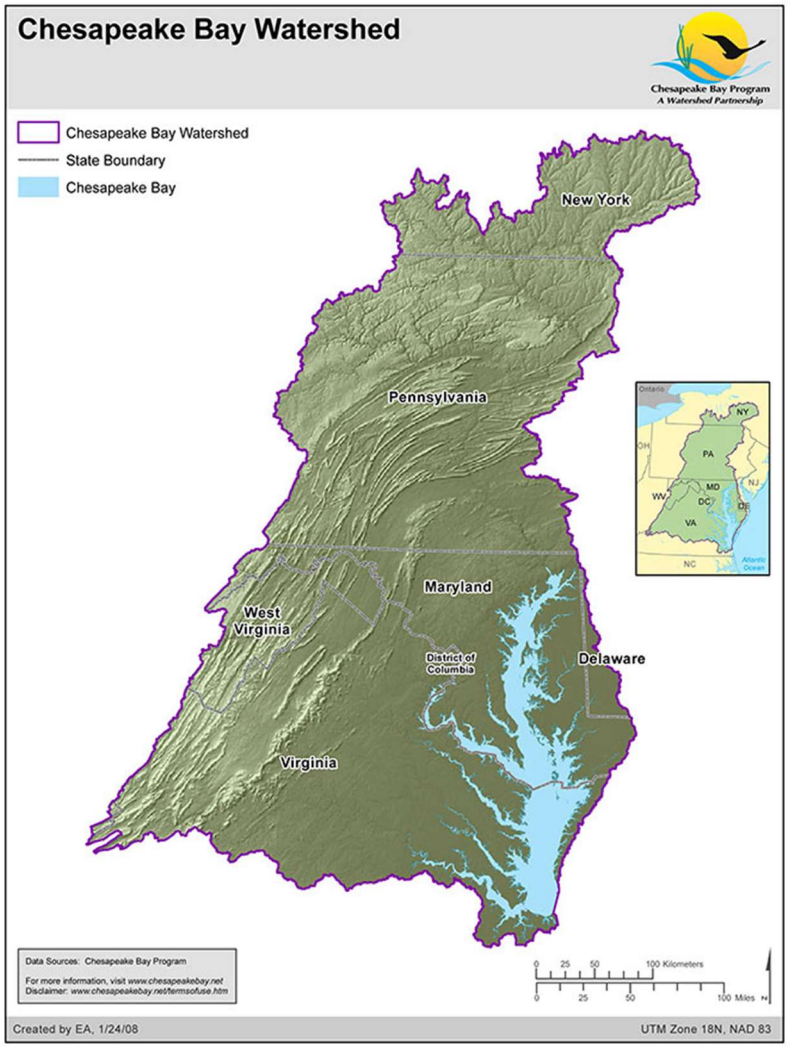


Figure 6. Chesapeake Bay Watershed

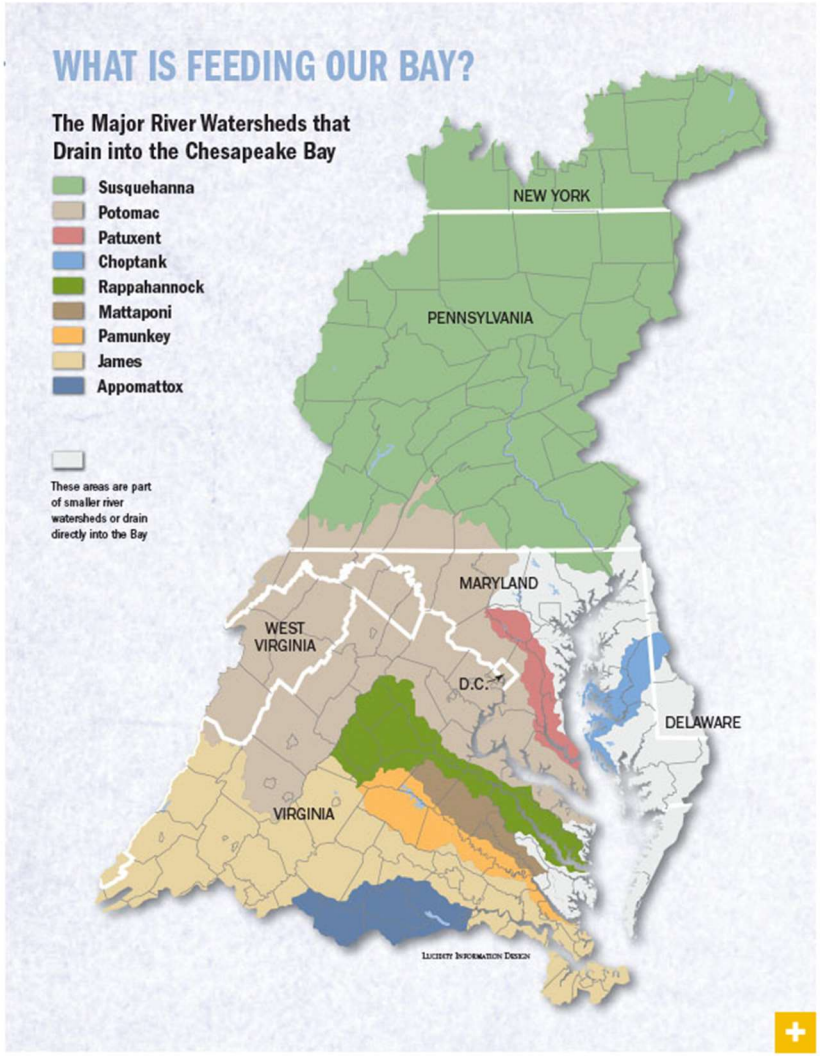


Figure 7. Major River Watershed within Chesapeake Bay Watershed

CONTROLLED UNCLASSIFIED INFORMATION

LEGEND

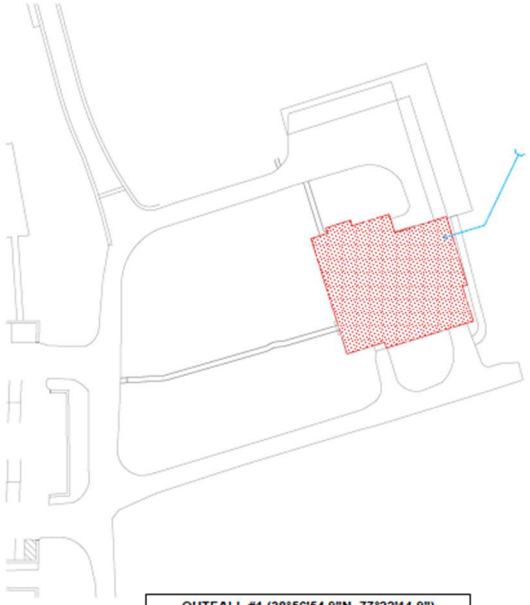
- STORM WATER PIPE
- MAN HOLE
- CATCH BASIN
- OUTFALL

SCALE

1/16" = 5'

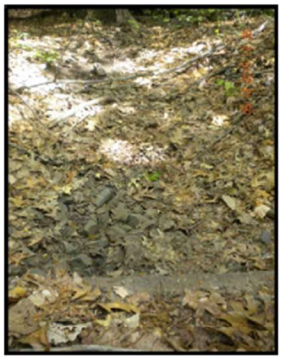
20' 40' 60' 80' 100' 120'

SCALE ONLY ACCURATE ON 11" x 17" PRINT



OUTFALL #1 - VIEW UPSTREAM

OUTFALL #1 (38°56'54.9"N, 77°22'11.9")	
WATER RECEIVING DISCHARGES FROM OUTFALL:	SUGARLAND RUN (IMPAIRED)
HYDROLIC UNIT CODE (HUC):	HUC8 = 02070008 VAHU6 = PL21
APPROXIMATE ACREAGE SERVED:	30.4 ACRES (1324555 ft²)
PREDOMINATE LAND USE:	INSTITUTIONAL
NAME OF APPROVED TMDL:	CHESAPEAKE BAY TMDL



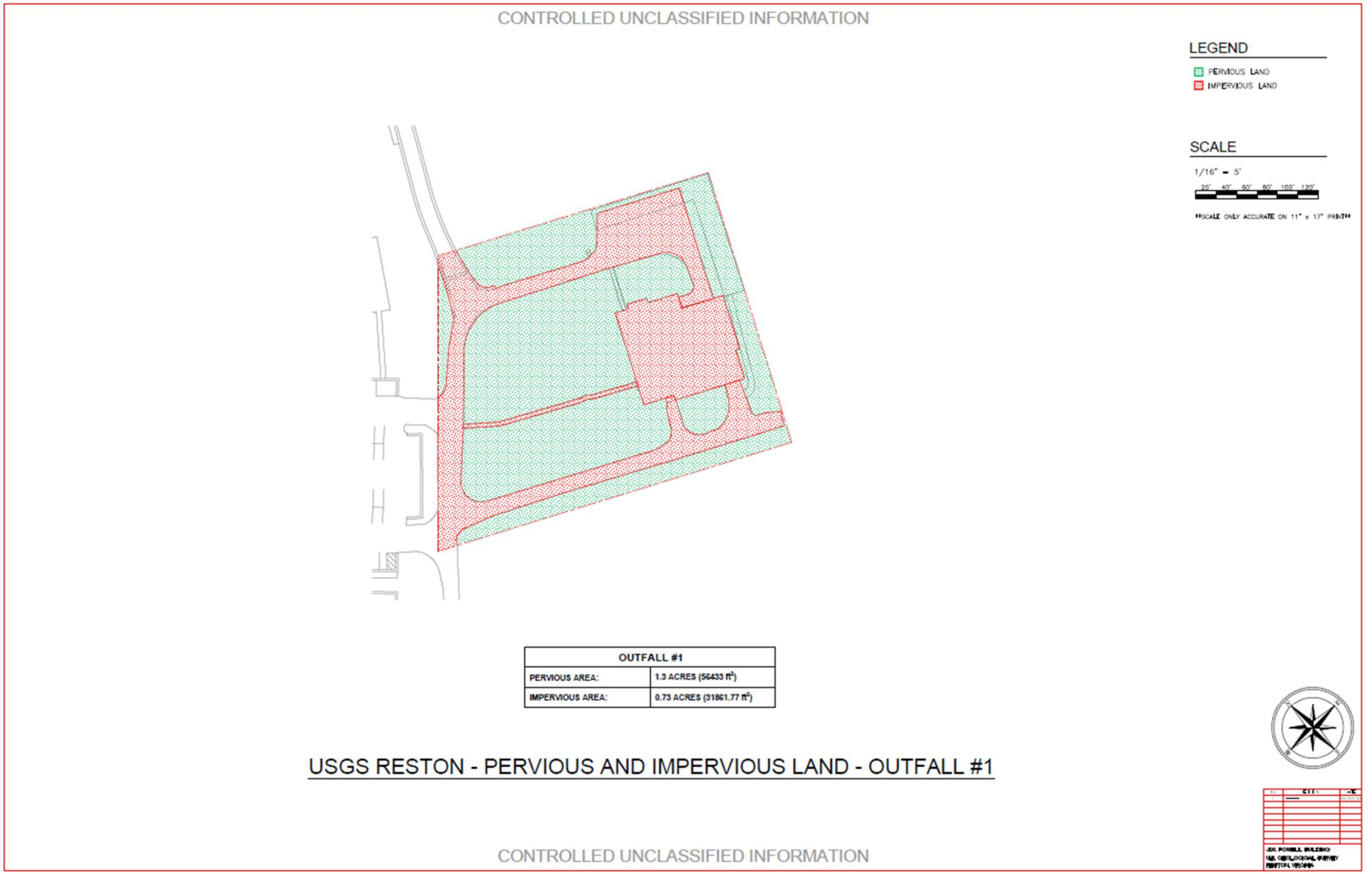
USGS RESTON - STORM WATER DRAIN PLAN - OUTFALL #1

OUTFALL #1 - VIEW DOWNSTREAM

CONTROLLED UNCLASSIFIED INFORMATION

Figure 8. Outfall #1 Details

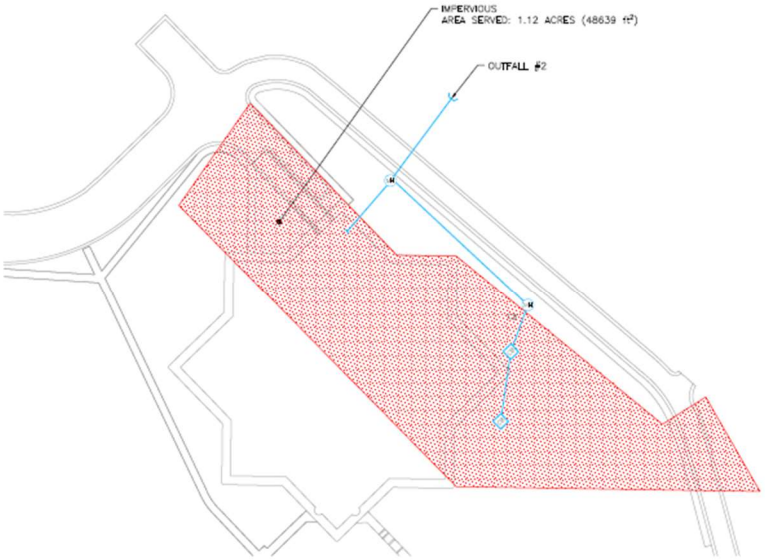
CONTROLLED UNCLASSIFIED INFORMATION



CONTROLLED UNCLASSIFIED INFORMATION

Figure 9. Drainage Area for Outfall #1

CONTROLLED UNCLASSIFIED INFORMATION



OUTFALL #2 (38°56'46.6"N, 77°21'53.9"W)	
WATER RECEIVING DISCHARGES FROM OUTFALL:	SUGARLAND RUN (IMPAIRED)
HYDROLIC UNIT CODE (HUC):	HUC8 = 02070008 VAHU6 = PL21
APPROXIMATE ACREAGE SERVED:	1.12 ACRES (48639 ft²)
PREDOMINATE LAND USE:	INSTITUTIONAL
NAME OF APPROVED TMDL:	CHESAPEAKE BAY TMDL

USGS RESTON - STORM WATER DRAIN PLAN - OUTFALL #2

OUTFALL #2 - VIEW UPSTREAM

OUTFALL #2 - VIEW DOWNSTREAM

LEGEND

- STORM WATER PIPE
- MAN HOLE
- CATCH BASIN
- OUTFALL

SCALE

1/16" = 5'

20' 40' 60' 80' 100' 120'

SCALE ONLY ACCURATE ON 11" x 17" PRINT

CONTROLLED UNCLASSIFIED INFORMATION

Figure 10. Outfall #2 Details

CONTROLLED UNCLASSIFIED INFORMATION

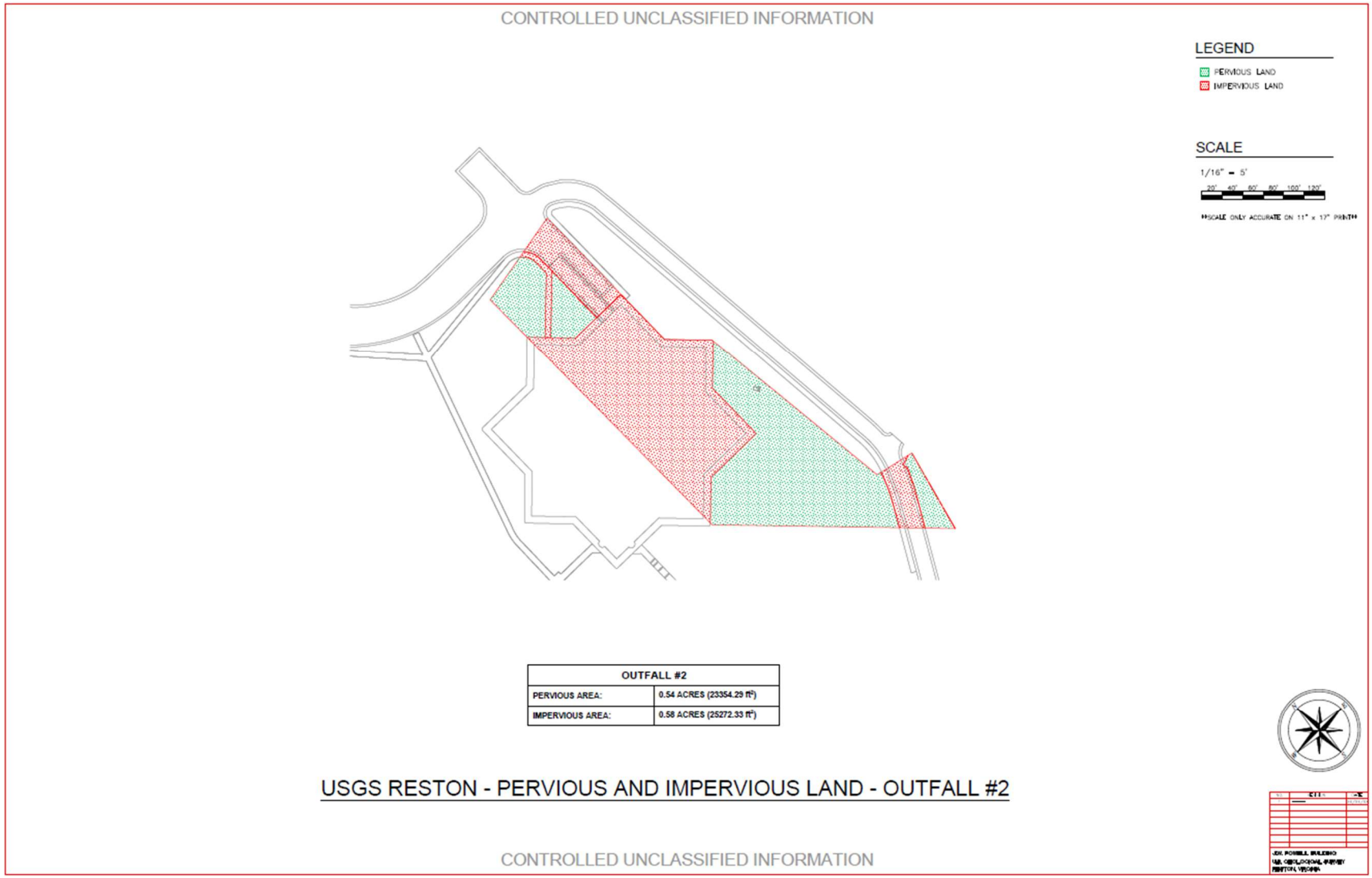
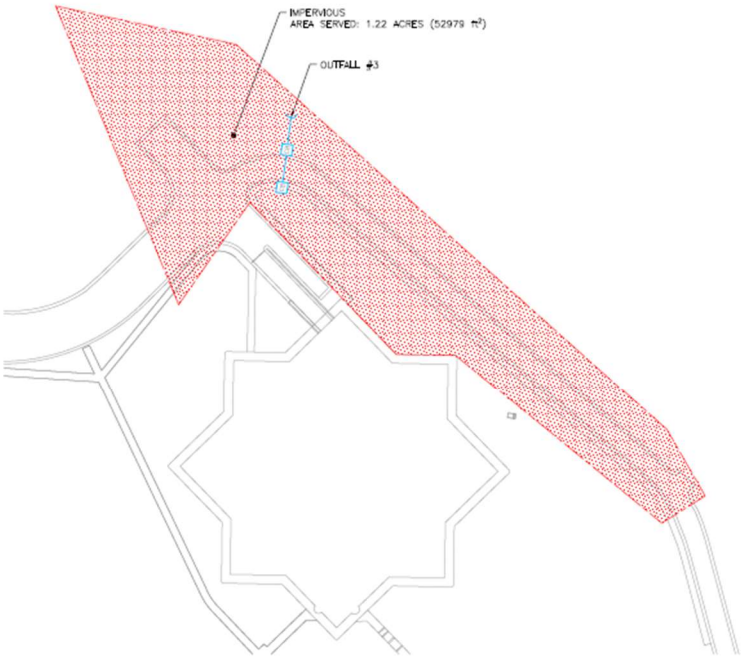


Figure 11. Drainage Area for Outfall #2

CONTROLLED UNCLASSIFIED INFORMATION



LEGEND

- STORM WATER PIPE
- MAN HOLE
- CATCH BASIN
- OUTFALL

SCALE

1/16" = 5'

20' 40' 60' 80' 100' 120'

SCALE ONLY ACCURATE ON 11" x 17" PRINT

OUTFALL #3 - VIEW UPSTREAM

OUTFALL #3 (38°56'47.3"N, 77°21'53.8"W)	
WATER RECEIVING DISCHARGES FROM OUTFALL:	SUGARLAND RUN (IMPAIRED)
HYDROLIC UNIT CODE (HUC):	HUC8 = 02070008 VAHU6 = PL21
APPROXIMATE ACREAGE SERVED:	1.22 ACRES (52979 ft²)
PREDOMINATE LAND USE:	INSTITUTIONAL
NAME OF APPROVED TMDL:	CHESAPEAKE BAY TMDL

USGS RESTON - STORM WATER DRAIN PLAN - OUTFALL #3

OUTFALL #3 - VIEW DOWNSTREAM

CONTROLLED UNCLASSIFIED INFORMATION

Figure 12. Outfall #3 Details

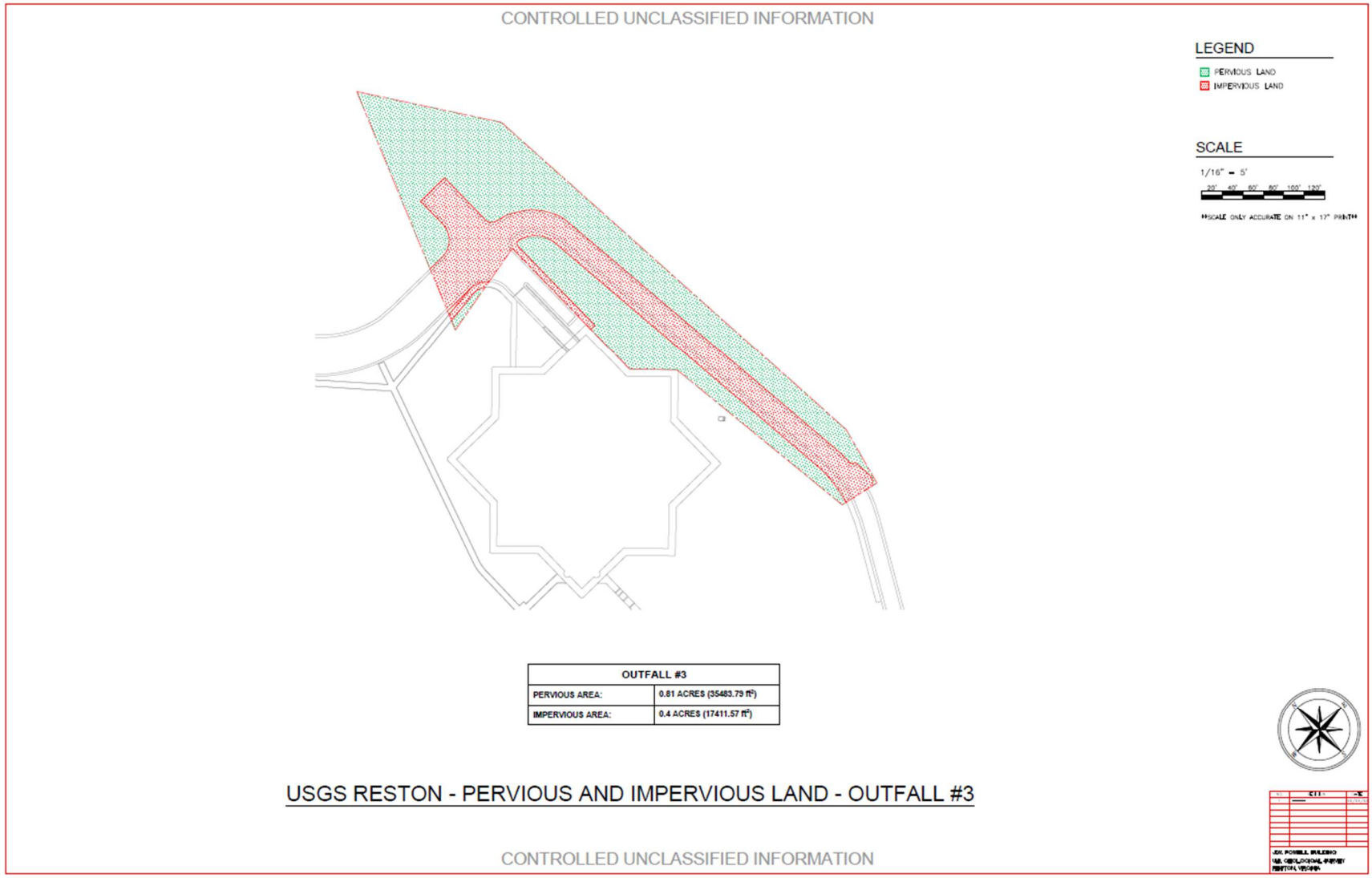
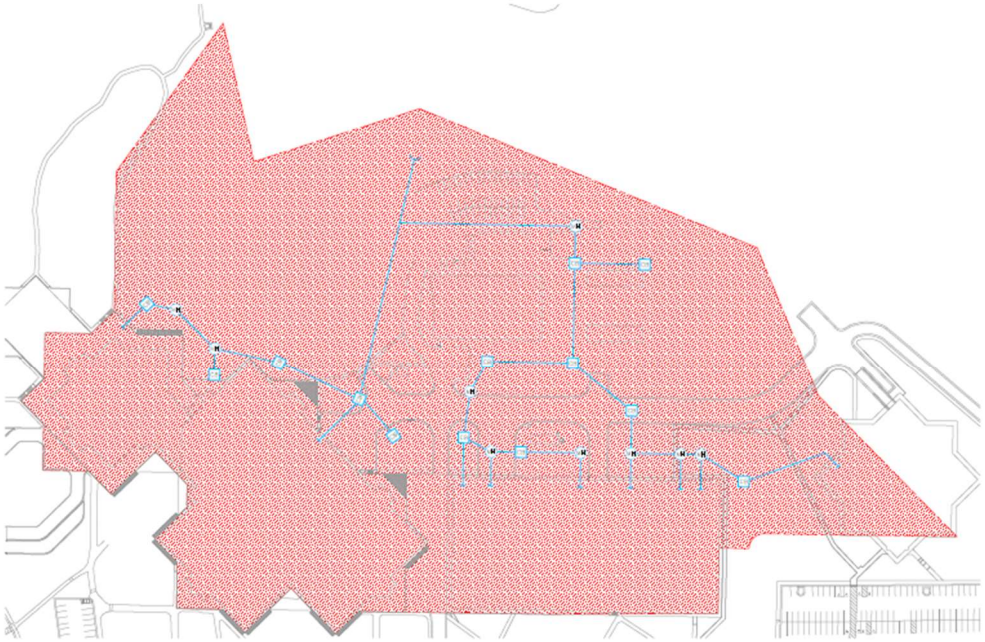


Figure 13. Drainage Area for Outfall #3

CONTROLLED UNCLASSIFIED INFORMATION



LEGEND

- STORM WATER PIPE
- MAN HOLE
- CATCH BASIN
- OUTFALL

SCALE

1/16" = 10'

40' 80' 120' 160' 200' 240'

SCALE ONLY ACCURATE ON 11" x 17" PRINT

OUTFALL #4 - VIEW UPSTREAM

OUTFALL #4 (38°56'53.6"N, 77°21'58.5"W)	
WATER RECEIVING DISCHARGES FROM OUTFALL:	SUGARLAND RUN (IMPAIRED)
HYDROLIC UNIT CODE (HUC):	HUC8 = 02070008 VAHU6 = PL21
APPROXIMATE ACREAGE SERVED:	2.5 ACRES (780762 ft^2)
PREDOMINATE LAND USE:	INSTITUTIONAL
NAME OF APPROVED TMDL:	CHESAPEAKE BAY TMDL

USGS RESTON - STORM WATER DRAIN PLAN - OUTFALL #4

OUTFALL #4 - VIEW DOWNSTREAM

CONTROLLED UNCLASSIFIED INFORMATION

Figure 14. Outfall #4 Details

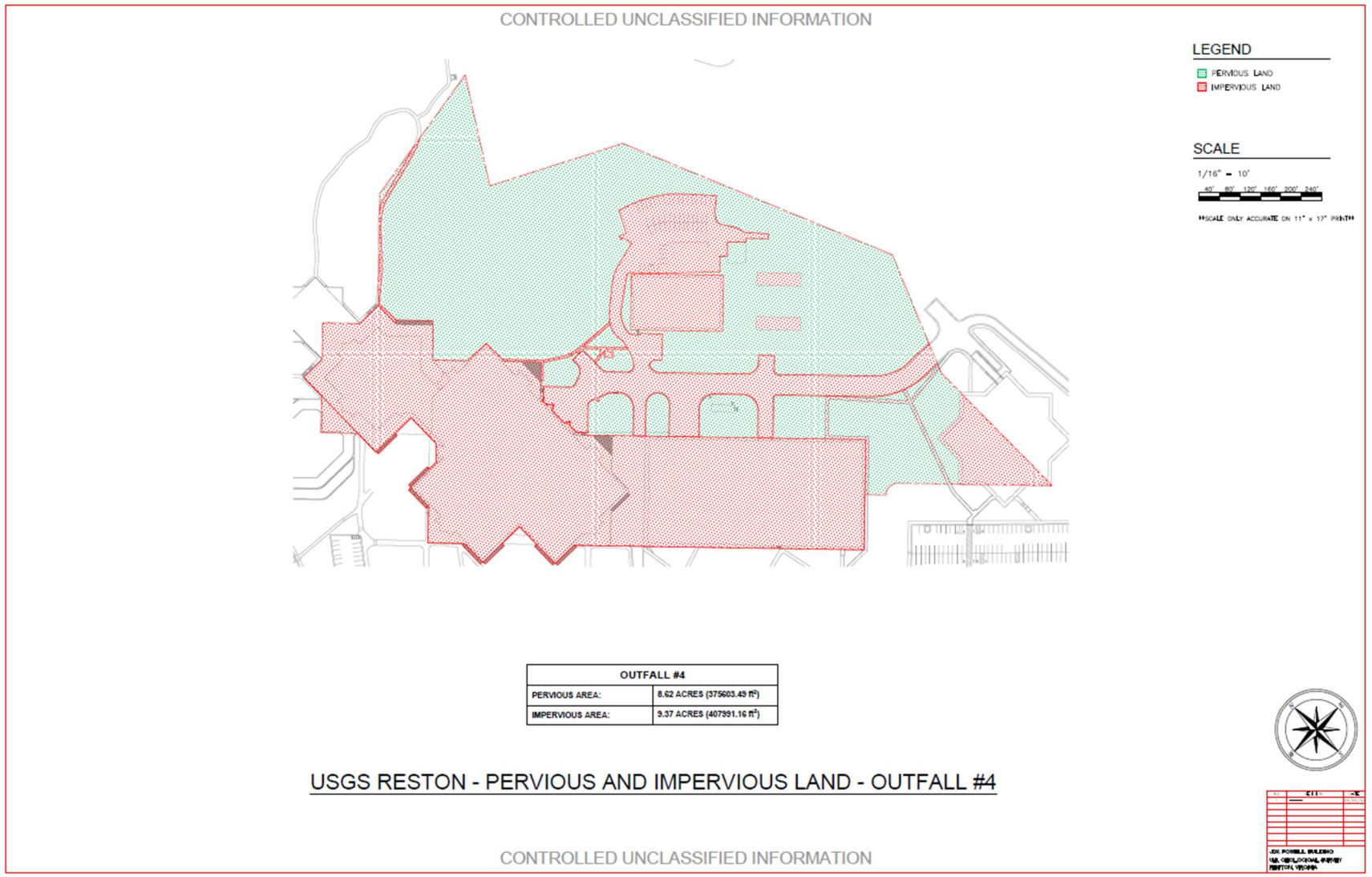


Figure 15. Drainage Area for Outfall #4

CONTROLLED UNCLASSIFIED INFORMATION

LEGEND

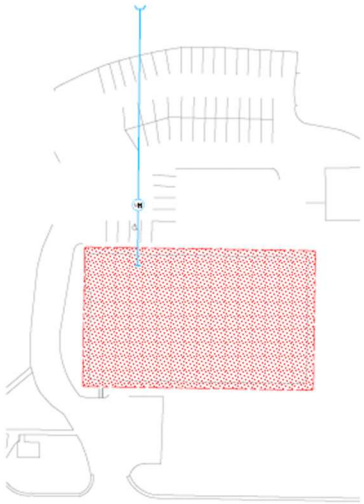
- STORM WATER PIPE
- MAN HOLE
- CATCH BASIN
- OUTFALL

SCALE

1/16" = 5'

20' 40' 60' 80' 100' 120'

**SCALE ONLY ACCURATE ON 11" x 17" PRINTS



OUTFALL #5 - VIEW UPSTREAM

OUTFALL #5 (38°56'53.6"N, 77°21'58.2"W)	
WATER RECEIVING DISCHARGES FROM OUTFALL:	SUGARLAND RUN (IMPAIRED)
HYDROLIC UNIT CODE (HUC):	HUC8 = 02070008 VAHU6 = PL21
APPROXIMATE ACREAGE SERVED:	0.45 ACRES (19729 ft²)
PREDOMINATE LAND USE:	INSTITUTIONAL
NAME OF APPROVED TMDL:	CHESAPEAKE BAY TMDL

USGS RESTON - STORM WATER DRAIN PLAN - OUTFALL #5

OUTFALL #5 - VIEW DOWNSTREAM

CONTROLLED UNCLASSIFIED INFORMATION

Figure 16. Outfall #5 Details

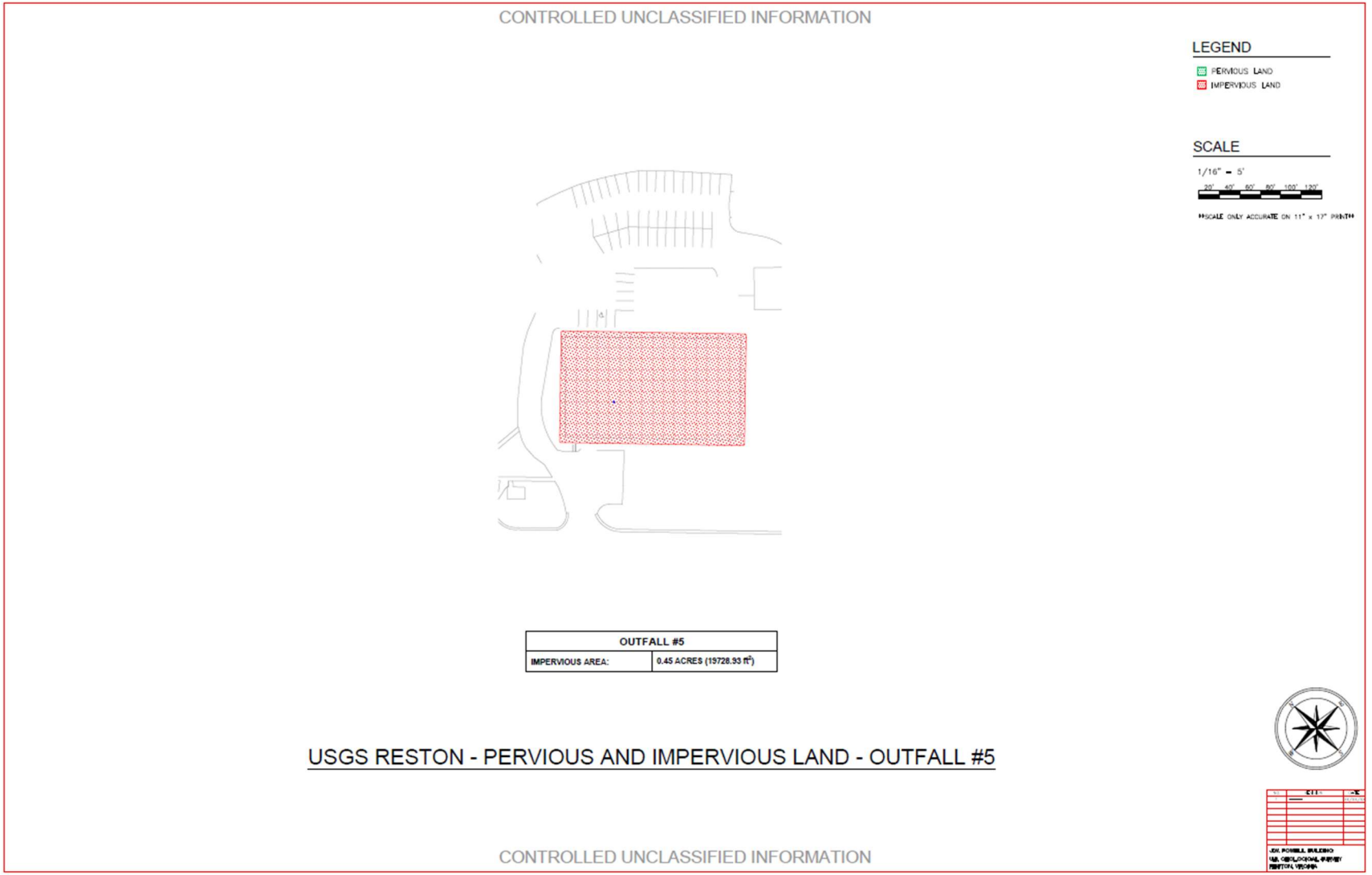
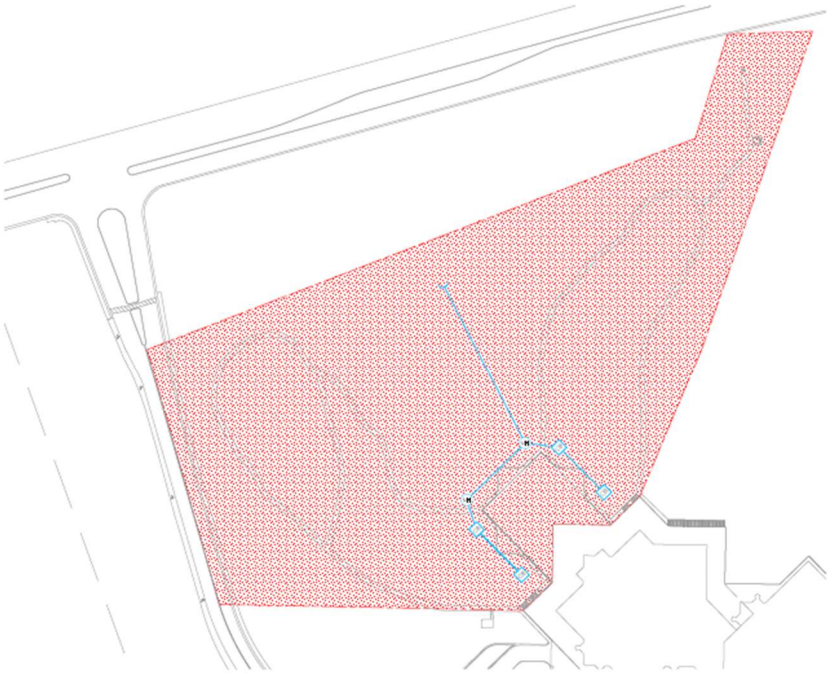


Figure 17. Drainage Area for Outfall #5

CONTROLLED UNCLASSIFIED INFORMATION



LEGEND

- STORM WATER PIPE
- MAN HOLE
- CATCH BASIN
- OUTFALL

SCALE

1/16" = 8'

32' 64' 96' 128' 160' 192'

SCALE ONLY ACCURATE ON 11" x 17" PRINT

OUTFALL #6 - VIEW UPSTREAM

OUTFALL #6 (38°56'28.9"N, 77°22'03.5"W)	
WATER RECEIVING DISCHARGES FROM OUTFALL:	SUGARLAND RUN (IMPAIRED)
HYDROLIC UNIT CODE (HUC):	HUC8 = 02070008 VAHUS = PL21
APPROXIMATE ACREAGE SERVED:	6.79 ACRES (295816 ft²)
PREDOMINATE LAND USE:	INSTITUTIONAL
NAME OF APPROVED TMDL:	CHESAPEAKE BAY TMDL

USGS RESTON - STORM WATER DRAIN PLAN - OUTFALL #6

OUTFALL #6 - VIEW DOWNSTREAM

CONTROLLED UNCLASSIFIED INFORMATION

Figure 18. Outfall #6 Details

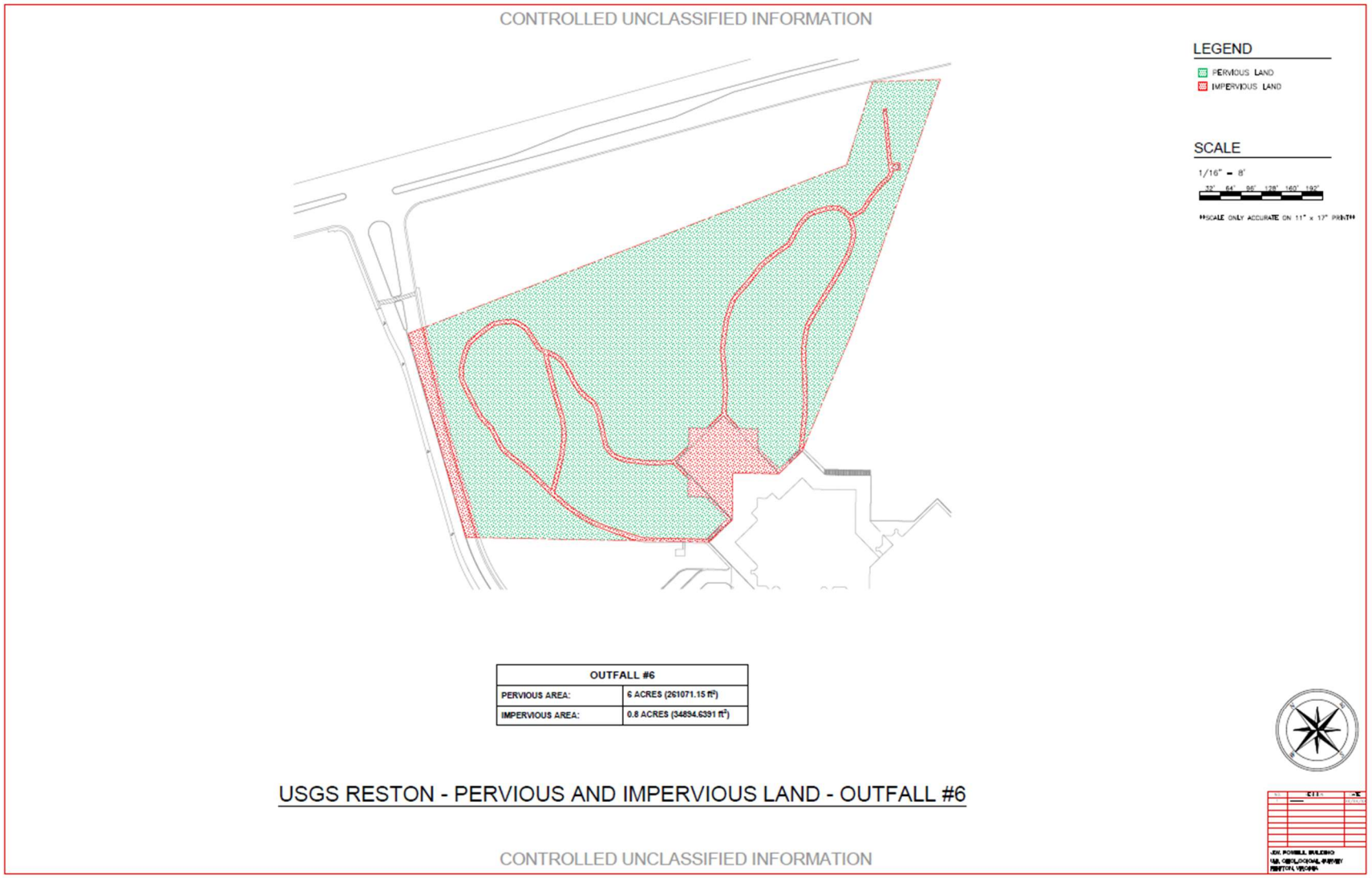


Figure 19. Drainage Area for Outfall #6

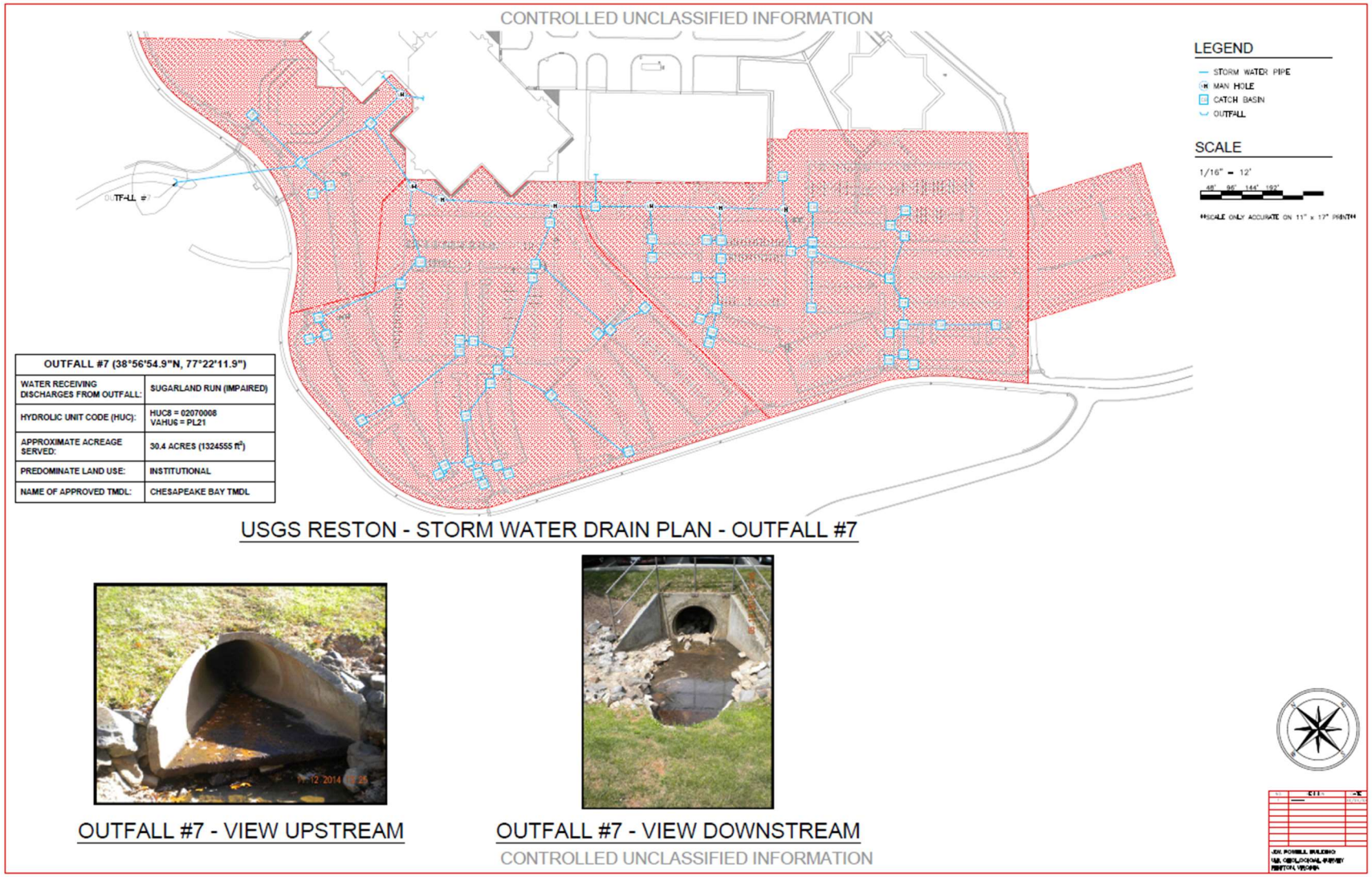


Figure 20. Outfall #7 Details

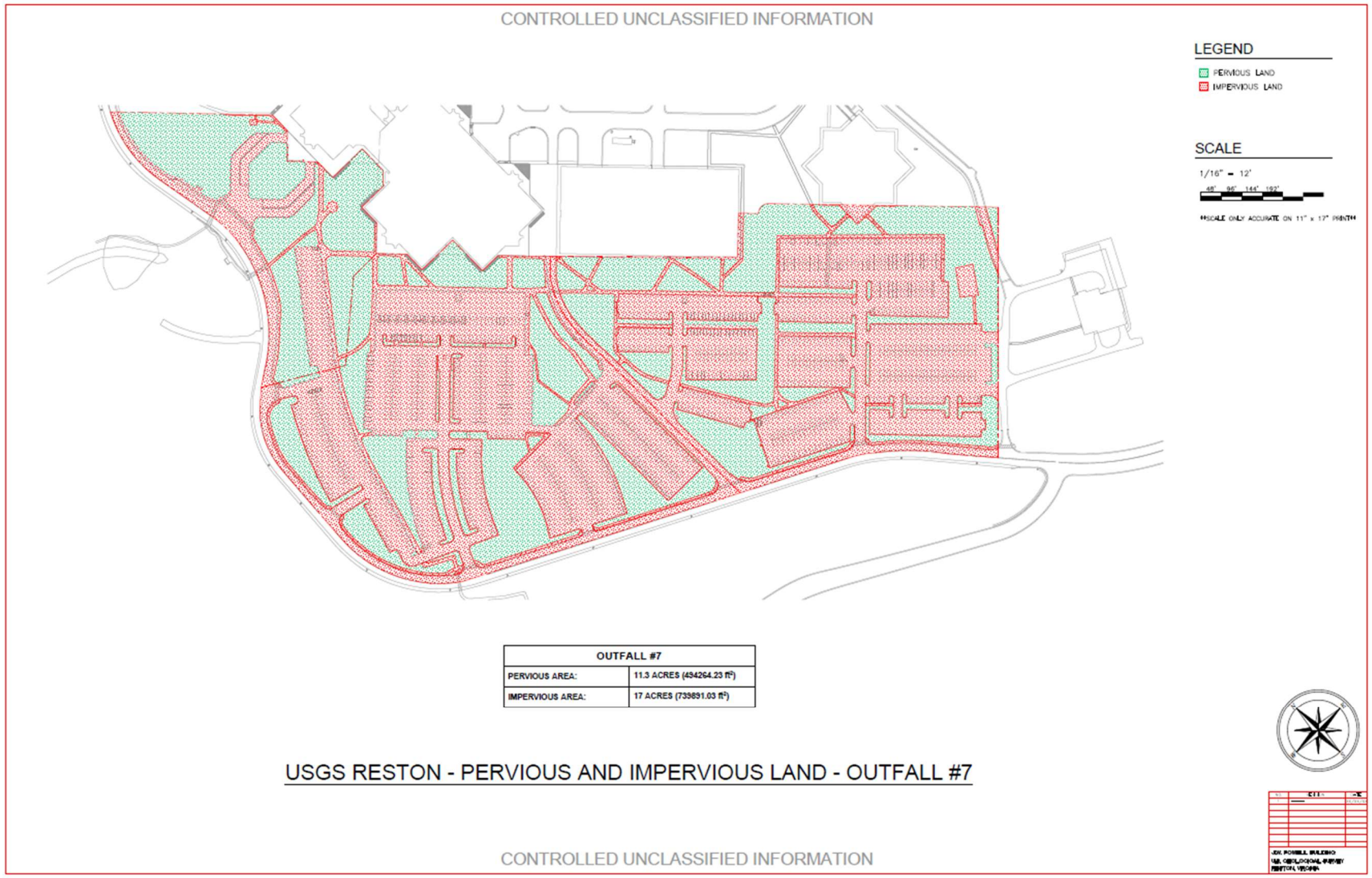


Figure 21. Drainage Area for Outfall #7

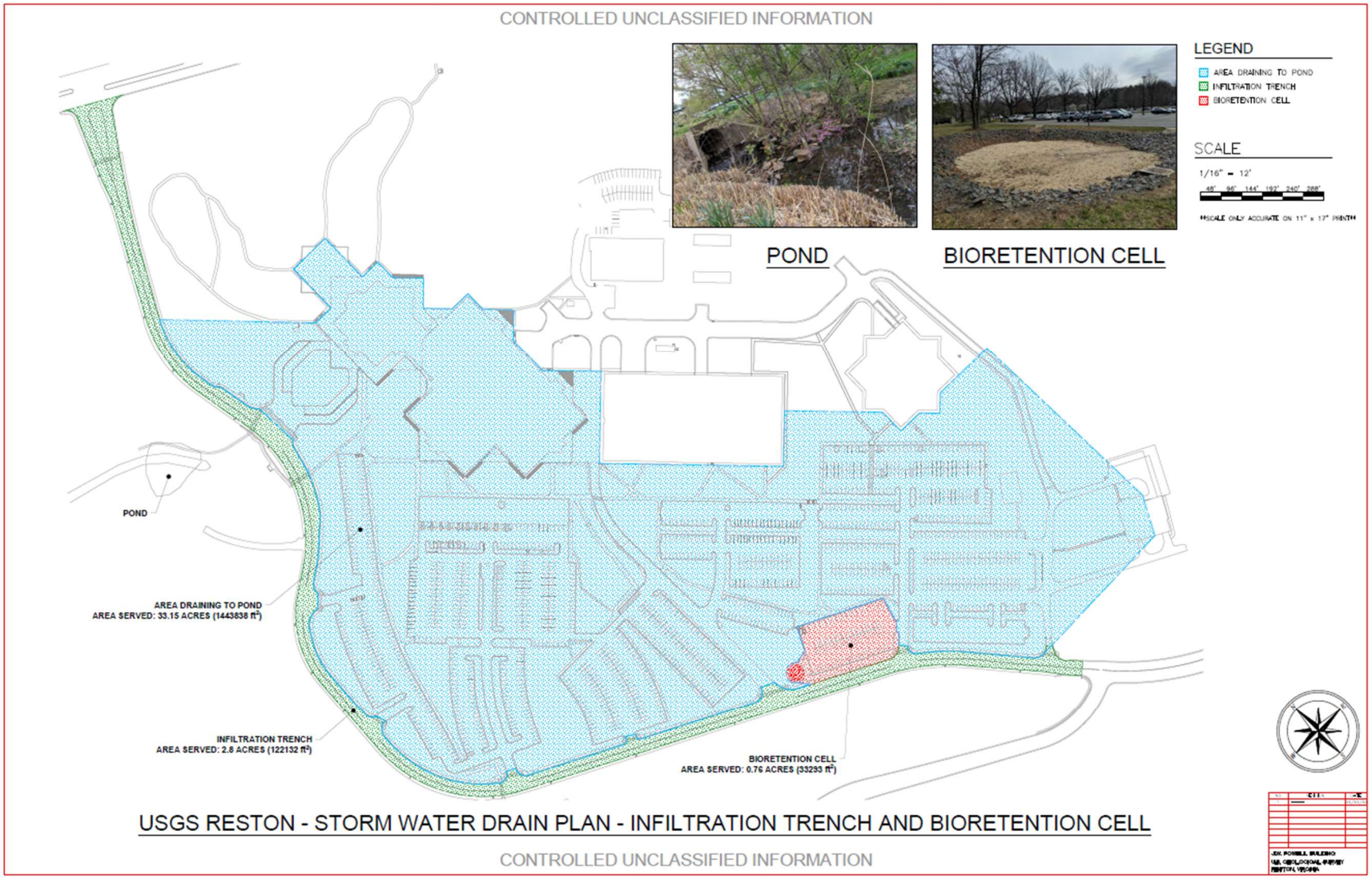


Figure 22. Stormwater BMPss

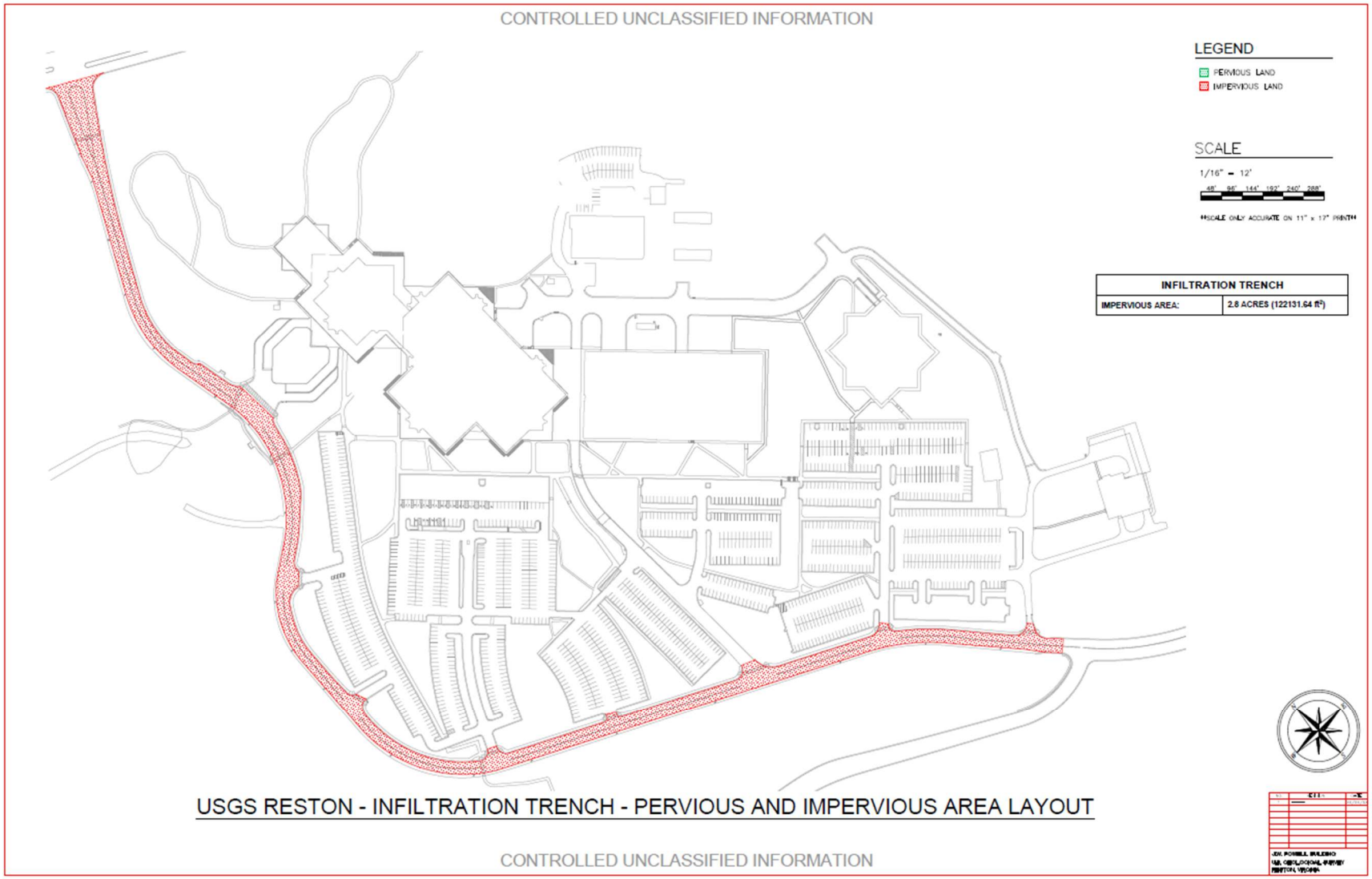


Figure 23. Area Managed by Infiltration Trench

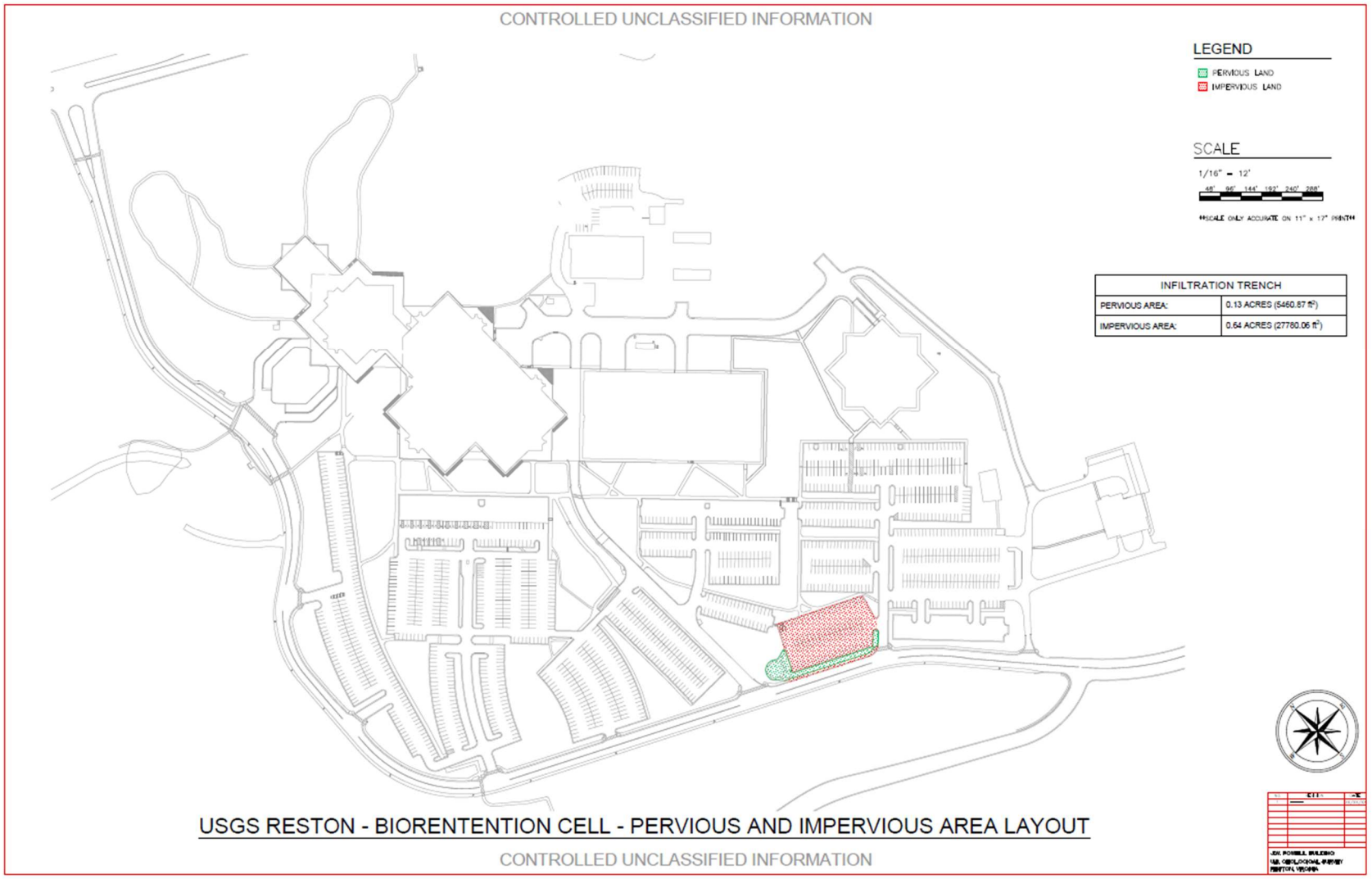


Figure 24. Area Managed by Bioretention Cell

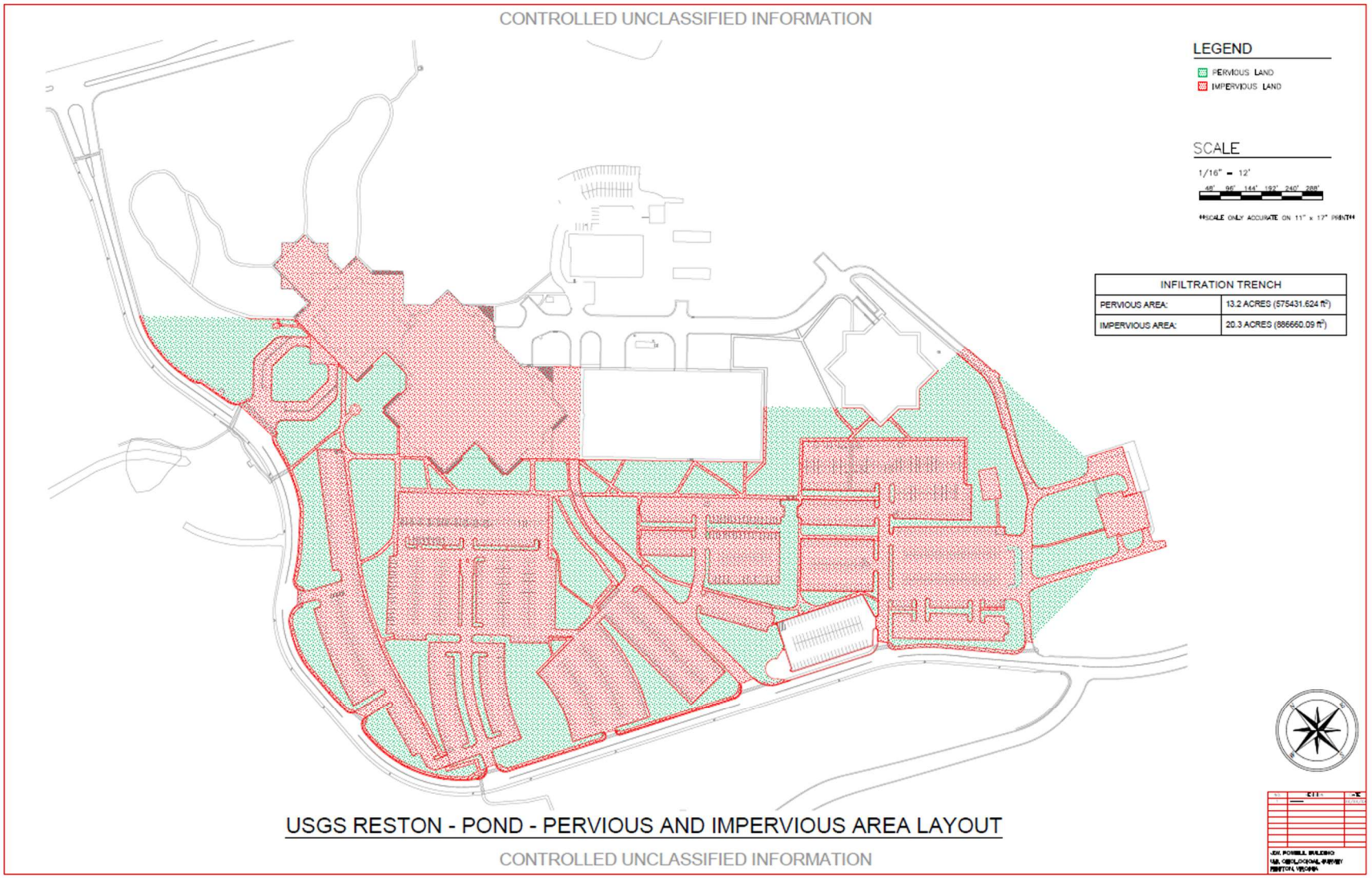


Figure 25. Area Managed by Pond

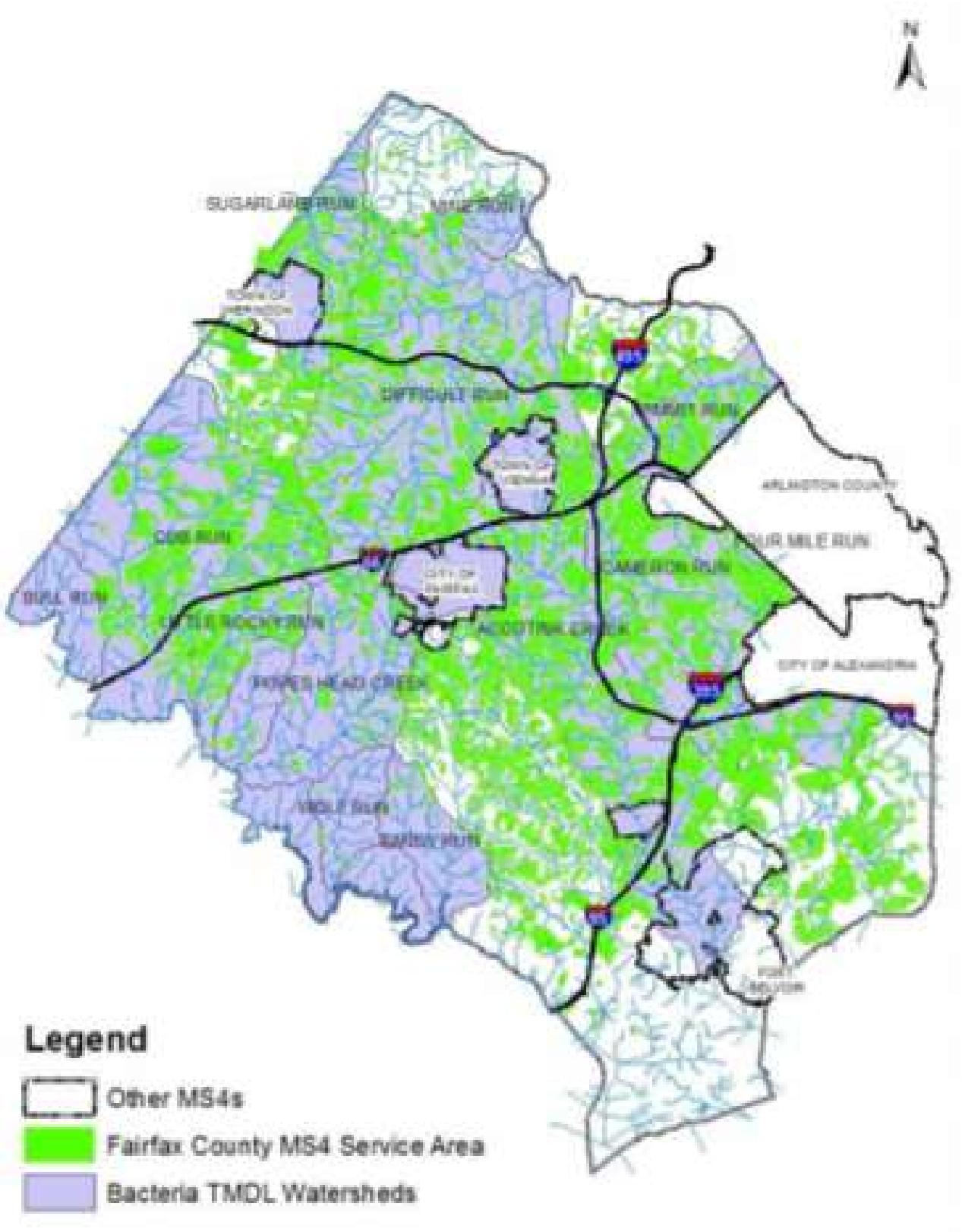


Figure 26 Fairfax County Bacteria TMDL Watershed

Figure 27 Fairfax County Bacteria TMDL Impaired Stream Segments

APPENDIX A

Written Notification

United States Department of the Interior
U.S. GEOLOGICAL SURVEY
12201 SUNRISE VALLEY DRIVE
Reston, VA 20192-0002

In Reply Refer To:
Mail Stop 153

September 28, 2017

Ms. Kate Bennett, MS4 Program Coordinator
Stormwater Planning Division (SWPD)
Fairfax County Department of Public Works & Environmental Services (DPWES)
12000 Government Center Parkway, Suite 449
Fairfax, Virginia 22035

Subject: U.S. Geological Survey-National Center, Reston, Virginia
Virginia Stormwater Management Program (VSMP)
General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (Permit Number VAR040126)
MS4 Permit

Kate,

In accordance with our VSMP MS4 Permit, we are notifying you that portions of our stormwater system discharge into the Fairfax County stormwater system. Please do not hesitate to contact me if additional information or documentation is required.

Also, please respond to me via email (provided below) acknowledging receipt of this notification.

Sincerely,

Larry E. Herrington

Larry E. Herrington
Environmental Specialist, Eastern Service Area
U.S. Geological Survey, MS-153
12201 Sunrise Valley Drive
Reston, Virginia 20192
Tel: (703) 648-4634
Cell: (703) 488-8879
LHerrington@usgs.gov

Notifications and Responses
Interconnecting MS4 Systems

Herrington, Larry <lherrington@usgs.gov>

RE: U. S. Geological Survey-National Center, Reston, Virginia: Notification of Interconnecting Stormwater Systems

1 message

Bennett, Kate <Kate.Bennett@fairfaxcounty.gov> Thu, Sep 28, 2017 at 6:29 PM
To: "Herrington, Larry" <lherrington@usgs.gov>

Larry,

I have received your notification of interconnecting stormwater systems.

Thank you,

Kate

From: Herrington, Larry [mailto:lherrington@usgs.gov]
Sent: Thursday, September 28, 2017 6:02 PM
To: Bennett, Kate <Kate.Bennett@fairfaxcounty.gov>
Subject: U. S. Geological Survey-National Center, Reston, Virginia: Notification of Interconnecting Stormwater Systems

Kate,

Attached is a notification letter of our interconnecting stormwater systems. Thanks for your help.

Larry E. Herrington
Environmental Specialist, Eastern Service Area
U.S. Geological Survey, MS-153
12201 Sunrise Valley Drive
Reston, Virginia 20192
Tel: (703) 648-4634
Cell: (703) 488-8879
Fax: (703) 648-4688

United States Department of the Interior
U.S. GEOLOGICAL SURVEY
12201 SUNRISE VALLEY DRIVE
Reston, VA 20192-0002

In Reply Refer To:
Mail Stop 207

April 25, 2018

Sent via Email

Ms. Marian Carroll
NOVA District NPDES Coordinator
Marian.Carroll@vdot.virginia.gov

Subject: U.S. Geological Survey-National Center, Reston, Virginia
Virginia Stormwater Management Program (VSMP)
General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (Permit Number VAR040126)
MS4 Permit

Ms. Carroll:

In accordance with our VSMP MS4 Permit, we are notifying you that portions of our stormwater system discharge into the Virginia Department of Transportation (VDOT) stormwater system. Please do not hesitate to contact me if additional information or documentation is required.

Also, please respond to me via email (provided below) acknowledging receipt of this notification.

Sincerely,

Larry E. Herrington

Larry E. Herrington
Environmental Specialist, Eastern Service Area
U.S. Geological Survey, MS-207
12201 Sunrise Valley Drive
Reston, Virginia 20192
Tel: (703) 648-4634
Cell: (703) 488-8879
LHerrington@usgs.gov

Notifications and Responses
Interconnecting MS4 Systems

Herrington, Larry <lherrington@usgs.gov>

[EXTERNAL] Re: U. S. Geological Survey-National Center, Reston, Virginia: Notification of Interconnecting Stormwater Systems

1 message

Carroll, Marian <marian.carroll@vdot.virginia.gov> Wed, Apr 25, 2018 at 3:24 PM
To: Christopher Swanson <chris.swanson@vdot.virginia.gov>, Alex Forasté <alex.foraste@vdot.virginia.gov>
Cc: "Herrington, Larry" <lherrington@usgs.gov>

Larry - Thank you for the notification.

Chris and Alex - Please see the e-mail and attachment from Mr. Larry Herrington with the USGS in Reston, VA.

Thanks,
Marian

On Wed, Apr 25, 2018 at 12:12 PM, Herrington, Larry <lherrington@usgs.gov> wrote:

> Ms. Carroll:
>
> Attached is a notification letter of our interconnecting stormwater systems. Please let me know if additional information is required.
>
> Thank you.
>
> Larry E. Herrington
> Environmental Specialist
> U.S. Geological Survey, MS-207
> 12201 Sunrise Valley Drive
> Reston, Virginia 20192
> Tel: (703) 648-4634
> Cell: (703) 488-8879
> Fax: (703) 648-4688
> LHerrington@usgs.gov
> External website: www.usgs.gov
>
> Please consider the environment before printing this e-mail.

--

Marian

Marian Carroll | District NPDES Coordinator | VDOT | NoVA District Office | 4975 Alliance Drive, Fairfax, VA 22030 | 703.259.1739 (o) | 571.474.4748 (m) | marian.carroll@vdot.virginia.gov

APPENDIX B

USGS MS4 Program Summary

USGS MS4 PROGRAM PLAN SUMMARY

Permit Ref	Permit Condition	Res Party	Program Plan	Schedule (Permit Yr)				
				1	2	3	4	5
I.E.1	Public education and outreach.							
I.E.1.b	The permittee shall identify no less than three high-priority stormwater issues	NCOB	Three high-priority stormwater issues that have been identified are: • Chesapeake Bay TMDL • Impairment of Sugarland Run, a tributary of Potomac River • Illicit Discharge These issues have been selected because any mismanagement of stormwater program is likely to contribute to the impairment of the Chesapeake Bay and Sugarland Run. Illicit discharge of non-stormwater is the most likely cause of mismanagement of the stormwater management program.	x				
I.E.1.d	The permittee shall use two or more of the strategies listed in Table 1 below per year to communicate to the public the high-priority stormwater issues identified in accordance with Part I E 1 b including how to reduce stormwater pollution.	NCOB	BMP: Implement a public education and outreach program to increase public's knowledge and awareness with respect to stormwater issues with focus on issues identified in I.E.1.b SOP: • Signage: labeling and storm drain stenciling • Media Materials: Information provided on USGS web site • Training materials: Materials developed to disseminate during Annual Earth Day activities Measurable Goal: • Conduct quiz and award successful respondents to gauge public's understanding of issues discussed during Earth Day.	x	x	x	x	x

Permit Ref	Permit Condition	Res Party	Program Plan	Schedule (Permit Yr)				
				1	2	3	4	5
			• Response provided to public enquiry on stormwater issues • Number of illicit discharges identified					
1.E.2	Public involvement and participation.							
I.E.2.b	No later than three months after this permit's effective date, the permittee shall develop and maintain a webpage dedicated to the MS4 program and stormwater pollution prevention.	NCOB	BMP: Webpage dedicated to MS4 program and stormwater pollution prevention SOP: Develop and maintain web page Measurable Goal: Assess extent of public participation by keeping track of number of hits	x				
I.E.2.c	The permittee shall implement no less than four activities per year from two or more of the categories listed in Table 2 below to provide an opportunity for public involvement to improve water quality and support local restoration and clean-up projects.	NCOB	BMP: Increasing awareness SOP: • Restoration: Watershed cleanup day • Educational events: Annual Earth Day presentation • Educational events: Participation in CDEPC Forum to discuss environmental issues, including the ones related to stormwater management • Pollution prevention: storm drain marking Measurable Goal: • Extent of participation in these activities • Amount of trash collected from watershed cleanup • % of storm drains marked	x	x	x	x	x
I.E.3	Illicit discharge detection and elimination.							
I.E.3.1.a.1	The permittee shall develop and maintain an accurate MS4 map and information table	NCOB	BMP: SOP: Develop MS4 Map and Information Table. Completed Figure 5 and 6. Measurable Goal: Development of the map.	x				
I.E.3.1.a.2	The permittee shall maintain an information table associated with the storm sewer system map	NCOB	BMP: SOP: Update MS4 Map and Information Table, as needed.					

Permit Ref	Permit Condition	Res Party	Program Plan	Schedule (Permit Yr)				
				1	2	3	4	5
			Measurable Goal: Development of map					
I.E.3.1.a.3	No later than July 1, 2019, the permittee shall submit to DEQ a permittee's MS4 map as a PDF document.	NCOB	BMP: SOP: Completed Figure 5 and 6 Measurable Goal: Development of map	x				
I.E.3.1.a.4	No later than October 1 of each year, the permittee shall update the storm sewer system map and outfall information table to include any new outfalls constructed or TMDLs approved or both during the immediate preceding reporting period.	NCOB	BMP: SOP: Update map, as needed. Measurable Goal: Development of map					
I.E.3.1.c	The permittee shall maintain, implement, and enforce illicit discharge detection and elimination (IDDE) written procedures designed to detect, identify, and address unauthorized non-stormwater discharges, including illegal dumping, to the small MS4 to effectively eliminate the unauthorized discharge.	NCOB	BMP: Process to identify illicit discharge and take corrective action, if found. SOP: Development of procedure for IDDE Measurable Goal: Number of illicit discharge and successful implementation of corrective action, if needed.					
I.E.4	Construction site stormwater runoff control.							
I.E.4.a	The permittee shall utilize its legal authority, such as ordinances, permits, orders, specific contract language, and interjurisdictional agreements, to address discharges entering the MS4 from regulated construction site stormwater runoff.	NCOB	BMP: Control construction site stormwater runoff. SOP: Review and if needed, update the contract language to address discharges entering the MS4 from regulated construction site stormwater runoff. Measurable Goal: Contract review for the adequacy of the contract language.	x				
I.E.4.b	the permittee shall inspect all land disturbing activities as defined in § 62.1-44.15:51 of the Code of Virginia that result in the disturbance activities of 10,000 square feet or greater, or 2,500 square feet or greater in accordance with areas designated under the Chesapeake Bay Preservation Act.	NCOB	BMP: Control construction site stormwater runoff. SOP: If needed, provide construction inspection and oversight. NOTE: no new construction activities of 2,500 square feet or greater are anticipated. Measurable Goal: Construction Report review					
I.E.5	Post-construction stormwater management for new development and development on prior developed lands.							
I.E.5.a	The permittee shall address post-construction stormwater runoff that enters the MS4 from the	NCOB	BMP: Control construction site stormwater runoff.					

Permit Ref	Permit Condition	Res Party	Program Plan	Schedule (Permit Yr)				
				1	2	3	4	5
	following land disturbing activities by implementing a post-construction stormwater runoff management program		SOP: implement a postconstruction stormwater runoff control program through compliance with 9VAC25-870 and with the implementation of a maintenance and inspection program consistent with Part I E 5 b Measurable Goal: Program implementation					
I.E.5.b	The permittee shall implement an inspection and maintenance program for those stormwater management facilities owned or operated by the permittee that discharges to the MS4		BMP: Control construction site stormwater runoff. SOP: Inspection and Maintenance Plan Measurable Goal: Development of the plan in a timely manner	x				
I.E.5.d	The permittee shall maintain an electronic database or spreadsheet of all known permittee owned or permittee-operated and privately owned stormwater management facilities that discharge into the MS4. The database shall also include all BMPs implemented by the permittee to meet the Chesapeake Bay TMDL load reduction as required in Part II A.	NCOB	BMP: BMPs in place to improve stormwater quality SOP: Development of spreadsheet to calculate TMDL for nitrogen, phosphorus, and total suspended solids and TMDL reduction attributed to BMP Measurable Goal: TMDL reduction	x				
I.E.5.e	The electronic database or spreadsheet shall be updated no later than 30 days after a new stormwater management facility is brought online, a new BMP is implemented to meet a TMDL load reduction as required in Part II, or discovered if it is an existing stormwater management facility.	NCOB	BMP: Update any new BMP introduced to improve stormwater quality. SOP: Calculate TMDL reduction Measurable Goal: TMDL reduction.					
I.E.5.f	The permittee shall use the DEQ Construction Stormwater Database or other application as specified by the department to report each stormwater management facility installed after July 1, 2014, to address the control of post-construction runoff from land disturbing activities	NCOB	BMP: Control construction site stormwater runoff. SOP: Report any stormwater management facility to address control of post-construction run-off Measurable Goal: Timely reporting					
I.E.5.g	No later than October 1 of each year, the permittee shall electronically report the stormwater	NCOB	BMP: Update any new BMP introduced to improve stormwater quality.	x	x	x	x	x

Permit Ref	Permit Condition	Res Party	Program Plan	Schedule (Permit Yr)				
				1	2	3	4	5
	management facilities and BMPs implemented between July 1 and June 30 of each year		SOP: Report any new stormwater management facility and BMPs Measurable Goal: Timely reporting					
I.E.6	Pollution prevention and good housekeeping for facilities owned or operated by the permittee within the MS4 service area.							
I.E.6.a	The permittee shall maintain and implement written procedures for those activities at facilities owned or operated by the permittee, such as road, street, and parking lot maintenance; equipment maintenance; and the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers.	NCOB	BMP: Procedure implementation to minimize the adverse impact on stormwater runoff. SOP: Develop written procedure for road, street, and parking lot maintenance; equipment maintenance; and the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers. Measurable Goal: Procedure development in a timely manner.	x				
I.E.6.c	The permittee shall maintain and implement a site specific stormwater pollution prevention plan (SWPPP) for each high priority facility.	NCOB	BMP: Plan implementation to minimize adverse impact on stromwater runoff. SOP: Update the Stormwater Pollution Prevention Plan (SWPPP) for the facility. Measurable Goal: Prepare update in a timely manner.	x				
I.E.6.f	If necessary, the SWPPP shall be updated no later than 90 days after the unauthorized discharge.	NCOB	BMP: Minimize chance of repeat illicit discharge. SOP: Update SWPPP as needed. Measurable Goal: Timely update of the plan.					
I.E.6.i	The permittee shall maintain and implement turf and landscape nutrient management plans	NCOB	BMP: SOP: The landscape work is contracted out. No need to develop turf and landscape nutrient management plan. Measurable Goal:					
I.E.6.k	The permittee shall not apply any deicing agent containing urea or other forms of nitrogen or phosphorus to parking lots, roadways, and sidewalks, or other paved surfaces.	NCOB	BMP: Protect stormwater from nitrogen and phosphorus loading. SOP: Contract language to prevent application of any deicing agent containing urea or other forms of nitrogen or phosphorus to parking lots, roadways, and sidewalks, or other paved surfaces. Measurable Goal: Ensure proper contract language.					

Permit Ref	Permit Condition	Res Party	Program Plan	Schedule (Permit Yr)				
				1	2	3	4	5
I.E.6.l	Contractors employed by the permittee and engaging in activities with the potential to discharge pollutants use appropriate control measures to minimize the discharge of pollutants to the MS4.	NCOB	BMP: Follow process to minimize potential to discharge pollutants to stormwater. SOP: Contract language to ensure that the contractors engaged in activities with the potential to discharge pollutants use appropriate control measures to minimize the discharge of pollutants to the MS4. Measurable Goal: Ensure compliance by the contractors.					
I.E.6.m	The permittee shall develop a training plan in writing for applicable staff.	NCOB	BMP: Train applicable personnel to ensure protection of stormwater. SOP: Development and implementation of training plan. Measurable Goal: Plan development in a timely manner. Ensure participation of applicable staff.					
Chesapeake Bay TMDL Special Condition								
II.A.11	No later than 12 months after the permit effective date, the permittee shall submit an updated Chesapeake Bay TMDL action plan for the reductions required in Part II A 3, A 4, and A 5	NCOB	Develop Chesapeake Bay TMDL Action Plan for the load reductions required for nitrogen, phosphorus, an total suspended solid as per Part II A 3 and A 5 of the permit.	x				
II.A.12	Provide an opportunity for public comment on the additional BMPs proposed to meet the reductions not previously approved by the department in the first phase Chesapeake Bay TMDL action plan for no less than 15 days.	NCOB	If needed, provide opportunity for public comment on proposed BMs in the Chesapeake Bay TMDL action plan.	x				
Local TMDL Special Condition								
II.B	The permittee shall develop a local TMDL action plan designed to reduce loadings for pollutants of concern if the permittee discharges the pollutants of concern to an impaired water for which a TMDL has been approved by the U.S. Environmental Protection Agency (EPA)	NCOB	VDEQ in its 2014 Water Quality Assessment Integrated Report does not list USGS MS4. It does not appear that stormwater generated within the USGS facility is contributing to the impairment of the stream. As such, the development of a local TMDL action plan is not warranted.					