

The Universities at Shady Grove
National Pollutant Discharge Elimination System
MS4 Phase II Annual Report - Year 3 (FY 2021)
General Discharge Permit #13-SF-5501



The Universities
AT SHADY GROVE

October 25, 2021

Maryland Department of the Environment, Water and Science Administration Sediment,
Stormwater, and Dam Safety Program
1800 Washington Boulevard, Suite 440, Baltimore, MD 21230-1708
Phone: 410-537-3543 FAX: 410-537-3553
Web Site: www.mde.maryland.gov
RE: NPDES/MS4 - Year 3 (FY '21) Progress Report for the Universities at Shady Grove

To whom it may concern:

This submission package contains the Universities at Shady Grove's Year Three NPDES Phase II Annual Reporting documents, in accordance with the NPDES/MS4 General Permit requirements. Although the BMP Database and Restoration Activity Schedule documents are included in this package, as pdf files, they are also being submitted as separate attachments, in Excel format, per the MS4 submission requirements.

It should be noted that USG (a USM institute) and IBBR (a University of Maryland at College Park institute) share the campus jointly; however, there are separate NOI's for USG and IBBR. This Year 3 progress report only covers the 34 acres that are managed by USG, as shown on the Site Map.

Feel free to contact me if there are any questions regarding this submission package.

Thank You,



Paul Jackson Jr.
Planning Manager
The Universities at Shady Grove

Table of Contents

- USG Campus Site Map
- Section I.** State and Federal Small MS4 Progress Report
 - A. MDE Appendix D Documents
 - B. Section I- Impervious Area Restoration Reporting
- Section II.** A. USG’s Action Item responses to MDE’s 03/05/21 MS4 Year 2 Progress Report Review
 - B. USG’s Action item responses to MDE’s 06/30/21 Review of the IDDE, SPCC and SWPP Plans
- Section III.** Impervious Area Baseline Analysis (Revised)
- Section IV.** Urban BMP Database
- Section V.** Restoration Activity Schedule
- Section VI.** Impervious Area Restoration Work Plan
- Section VII.** A. IDDE Plan
 - B. IDDE 2021 Outfall Inspection Form
- Section VIII.** SWPPP Plan
- Section IX.** SPCC Plan
- Section X.** MCM #2 Public or Personnel Involvement or Participation

USG Campus Site Map



The Universities AT SHADY GROVE



— Management Boundary 34 Acres

USG Buildings
 IBBR

Parking Lot
 Roads

Waterbody
 Wooded Area

Section I - (A)

MDE Appendix D Documents

Maryland Department of the Environment (MDE)

**National Pollutant Discharge Elimination System (NPDES)
Small Municipal Separate Storm Sewer Systems (MS4) General Permit**

This Progress Report is required for those State and federal agencies covered under General Discharge Permit No. 13-SF-5501. Progress Reports must be submitted to:

Maryland Department of the Environment, Water and Science Administration
Sediment, Stormwater, and Dam Safety Program
1800 Washington Boulevard, Suite 440, Baltimore, MD 21230-1708
Phone: 410-537-3543 FAX: 410-537-3553
Web Site: www.mde.maryland.gov

Contact Information

Permittee Name:	Universities at Shady Grove, Univ System of MD
Responsible Personnel:	Ellen Herbst USM Vice Chancellor for Adm & Finance
Mailing Address:	3300 Metzert Road Adelphi, MD 20783-1690
Phone Number(s):	301-445-1923
Email address:	eherbst@usm.edu
Additional Contact(s):	Jane Briggs, USG Dir of Facilities & Planning
Mailing Address:	9636 Gudelsky Dr.
Phone Number(s):	(301) 738-6111
Email address:	Jbriggs1@umd.edu

Signature of Responsible Personnel

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.

Ellen Herbst		10/19/2021
Printed Name	Signature	Date

Reporting Period (State Fiscal Year):

Due Date:

Date of Submission:

Type of Report Submitted:

Impervious Area Restoration Progress Report (Annual):

Six Minimum Control Measures Progress (Years 2 and 4):

Both:

Permittee Information:

Renewal Permittee:

New Permittee:

Compliance with Reporting Requirements

Part VI of the Small MS4 General Discharge Permit (No. 13-SF-5501) specifies the reporting information that must be submitted to MDE to demonstrate compliance with permit conditions. The specific information required in this MS4 Progress Report includes:

1. Annual: Progress toward compliance with impervious area restoration requirements in accordance with Part V of the general permit. All requested information and supporting documentation must be submitted as specified in Section I of the Progress Report.
2. Years 2 and 4: Progress toward compliance with the six minimum control measures in accordance with Part IV of the general permit. All requested information and supporting documentation shall be reported as specified in Section II of the Progress Report. MDE may request more frequent reporting and/or a final report in year 5 if additional information is needed to demonstrate compliance with the permit.

Instructions for Completing Appendix D Reporting Forms

The reporting forms provided in Appendix D allow the user to electronically fill in answers to questions. Users may enter quantifiable information (e.g., number of outfalls inspected) in text boxes. When a more descriptive explanation is requested, the reporting forms will expand as the user types to allow as much information needed to fully answer the question. The permittee must indicate in the forms when attachments are included to provide sufficient information required in the MS4 Progress Report.

Section I – (B)

Impervious Area Restoration Reporting

Section I: Impervious Area Restoration Reporting

1. a. Was the impervious area baseline assessment submitted in year 1?
 Yes No

b. If No, describe the status of completing the required information and provide a date at which all information required by MDE will be submitted:

- c. Has the baseline been adjusted since the previous reporting year?
 Yes No

2. Complete the information below based on the most recent data:

Total impervious acres of area covered under this permit:

Total impervious acres treated by stormwater water quality best management practices (BMPs):

Total impervious acres treated by BMPs providing partial water quality treatment (multiply acres treated by percent of water quality provided):

Total impervious acres treated by nonstructural practices (i.e., rooftop disconnections, non-rooftop disconnections, or vegetated swales):

Total impervious acres untreated:

Twenty percent of this total area (this is the restoration requirement):

Verify that all impervious area draining to BMPs with missing inspection records is not considered treated. Describe how this information was incorporated into the overall analysis:

3. Has an Impervious Area Restoration Work Plan been developed and submitted to MDE in accordance with Part V.B, Table 1 of the permit or other format?
 Yes No

Has MDE approved the work plan?
 Yes No

Section I: Impervious Area Restoration Reporting

If the answer to either question is No, describe the status of submitting (or resubmitting) the work plan to MDE and provide a date at which all outstanding information will be available:

The Impervious Area Restoration Work Plan was submitted to MDE on 8/11/21 and resubmitted on 9/3/21, with adjustments made to the submission per MDE's 08/17/21 comments. The Revised Impervious Area Work Plan is being included in this submission (under Section VI) as a formal submission to MDE for approval of the Work Plan.

Describe progress made toward restoration planning, design, and construction efforts and describe adaptive management strategies necessary to meet restoration requirements by the end of the permit term:

Per the Restoration Activity Schedule, USG is finalizing agreements with Contractors to provide Design and Construction services for the restoration activities. The Design and permitting phases for the sand filter repairs are expected to be completed by the end of this fiscal year (FY '22). This takes into account the time needed for design development, design reviews, comments, clarifications, revisions and the permitting process. The bioswale/bioretention repairs are projected to be complete by the end of the next fiscal year (FY '23).

4. Has a Restoration Schedule been completed and submitted to MDE in accordance with Part V.B, Table 2 of the permit?

Yes No

In year 5, has a complete restoration schedule been submitted including a complete list of projects and implementation dates for all BMPs needed to meet the twenty percent restoration requirement?

Yes No

N/A. This is USG's Year 3 submission report.

Are the projected implementation years for completion of all BMPs no later than 2025?

Yes No

Describe actions planned to provide a complete list of projects in order to achieve compliance by the end of the permit term:

This information has been provided in USG's Restoration Activity Schedule, resubmitted on 9/3/21.

Describe the progress of restoration efforts (attach examples and photos of proposed or completed projects when available):

5. Has the BMP database been submitted to MDE in Microsoft Excel format in accordance with Appendix B, Tables B.1.a, b, and c?

Section I: Impervious Area Restoration Reporting

Yes No

Is the database complete?

Yes No

If either answer is No, describe efforts underway to complete all data fields, and a date that MDE will receive the required information:

6. Provide a summary of impervious area restoration activities planned for the next reporting cycle (attach additional information if necessary):

USG expects the Design and Permitting process for the Restoration Activities will be completed during the FY '22 reporting cycle, with Construction and Repair activities commencing at the start of the next fiscal year (FY '23). This schedule will allow USG to complete the restoration activities by the end of the 5-year permit term.

7. Describe coordination efforts with other agencies regarding the implementation of impervious area restoration activities:

USG has entered into an agreement with Maryland Environmental Service to assist with the design, planning and construction management of the restoration activities, as outlined on the Restoration Activity Schedule. Due to the limits of disturbance for the restoration activities, USG will be coordinating these efforts with the Maryland Department of Natural Resources (DNR), the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service (USFWS), the Maryland Historical Trust (MHT) and with MDE's Non-Tidal Wetlands and Waterways Division.

8. List the total cost of developing and implementing impervious area restoration program during the permit term:

The total costs for developing and implementing this program during the permit term is estimated at \$350 - \$400k, which includes the consulting services cost to date

Section II – (A)

USG's Action Item responses to MDE's 03/05/21 MS4 Year 2
Progress Report review

After review of USG's Year Two Progress Report, MDE provided comments on their March 5, 2021 response document, which included action items for USG to resolve/respond to. Listed below are MDE's comments, followed by USG's responses. It should be noted that during the course of this Year 3 reporting period (FY '21), USG has been in communication with MDE and has (informally) submitted documents and responses that address MDE's review comments. The responses below represent USG's formal submission to MDE's comments.

1) MDE Comment (Bullet Point #1):

- USG submitted a complete Progress Report Form with contact information, but did not include a signature and date for the appropriate responsible personnel. This information was also not provided in the 2019 Progress Report. The Department requests that USG include a signature and date in future reports.

USG Response:

- The signature and date have been included in this submission.

2) MDE Comment (Bullet Point #2):

- Additional information is required to approve the impervious area baseline analysis as noted in the attachment and the September 9, 2020 correspondence.

USG Response:

- The Impervious Area Baseline Analysis was revised and is being formally submitted in this MS4 Year 3 (FY '21) submission package, under **Section III**, with an untreated impervious area baseline of 4.78 acres and a 20% Restoration Target of 0.96 acres.

3) MDE Comment (Bullet Point #3):

- USG must continue to update the BMP database in accordance with the required template format.

USG Response:

- The Urban BMP database is up to date and is included in this MS4 Year 3 (FY '21) submission package, under **Section IV**.

4) MDE Comment (Bullet Point #4):

- USG must provide a Work Plan that includes details regarding identifying restoration opportunities, collecting construction completion or as-built data as needed, repairing BMPs, and developing adaptive management strategies.

USG Response:

- The Impervious Area Restoration Work Plan is being formally submitted in this MS4 Year 3 (FY '21) submission package, under **Section VI**.

5) MDE Comment (Bullet Point #5):

- USG must provide additional information to show progress toward compliance with the Illicit Discharge Detection and Elimination and Public/Personnel Involvement and Participation MCMs.

USG Response:

- The additional information is detailed below in items #6 (Public/Personnel Involvement and Participation) and #7 (IDDE).

6) MDE Comment (MCM #2: Public or Personnel Involvement and Participation, Item #17):

- Additional information is required for USG to demonstrate sufficient progress toward compliance with MCM #2 requirements. USG must continue to develop and implement this program as noted below and report progress with the year 3 Progress Report due on October 31, 2021.

USG Response:

- USG held a public participation event on April 27, 2021, in recognition of Earth Day (April 22), where the community was invited to assist in cleaning trash, dirt and debris from the wetlands and campus area. This annual event discusses the reason for the event and the need to keep the wetlands free from trash. It also promotes togetherness and a sense of community. Supporting documents and additional information from this year's event is included in this MS4 Year 3 (FY '21) submission package, under **Section X** and is also posted on USG's website. The plan going forward is to continue with this event and to add other events that will allow the community to participate and to have a greater understanding of the need for stormwater management controls, discharges and cleanup.
- Between the last reporting period and this reporting period, USG has worked tirelessly to establish an EHS website, which includes topics such as Safety, Hazardous Waste Management and Environmental Compliance. Nestled under the Environmental Compliance heading is Stormwater Management, which contains all things MS4 related, including, but not limited to, NOI information, Annual Reports, Public Participation and Educational Resources. USG will continue to update the information on the website so that it is current and available to all who wish to peruse the website, which can be found here: <https://shadygrove.umd.edu/campus-resources/Facilities/EHS/stormwater>

7) MDE Comment (MCM #3: Illicit Discharge Detection and Elimination Item #20):

- Additional information is required for Universities at Shady Grove to demonstrate sufficient progress toward compliance with MCM #3 requirements. Universities at Shady

Grove must continue to develop and implement this program as noted below and report progress with the year 3 Progress Report.

USG Response:

- Specific items showing continued development and implementation of MCM #3 requirements are addressed below, in item #8.

8) MDE Comment (MCM #3: Illicit Discharge Detection and Elimination Item #21):

- USG submitted a map of the MS4 that included stormwater BMPs, manholes, inlets, storm drain pipes, and outfalls. The Department requests that USG also identify waters receiving stormwater discharges.

USG Response:

- The waters that receive stormwater discharges from the Universities at Shady Grove campus are specifically from the outflow of Gudelsky Pond. Gudelsky Pond flows into the Piney Branch Watershed which flows into the Potomac River.

9) MDE Comment (MCM #3: Illicit Discharge Detection and Elimination Item #22):

- USG follows UMD policies that grants authority to the Department of Environmental Safety, Sustainability and Risk (ESSR) to ensure compliance with Environmental regulations. USG does not have a campus policy that explicitly prohibits illicit discharges. USG must develop this policy and submit it to the Department for review.

USG Response:

- This information is included in the final versions of the IDDE plans that were submitted to MDE on 05/21/21 and are being formally submitted in this MS4 Year 3 (FY '21) submission package, under **Section VII - A**.

10) MDE Comment (MCM #3: Illicit Discharge Detection and Elimination Item #23):

- USG submitted a draft SOP for the IDDE program. The SOP includes reporting procedures, screening and investigation procedures, and enforcement actions. Universities at Shady Grove has one outfall on the property and reported that 50% of outfalls are required to be screened each year. Due to the size of the property (i.e., 34 acres), the outfall must be screened annually. In addition, the outfall discharges from a regional pond with a large drainage area. The Department recommends that Universities at Shady Grove identify a point further up the system, such as an inlet or manhole where visual indications of an illicit discharge can be more easily identified, and include that location in the SOP.

USG Response:

- The Universities at Shady Grove IDDE Plan has been re-evaluated specifically with respect to outfall locations shown in Appendix B – Site Map (page 23) that flow into county or state waters. The single outfall out of Gudelsky Pond shown on the site map of the IDDE Plan from the Year 2 Progress Report has been expanded to seven outfalls. These are all shown on the new site map that is contained in the updated IDDE Plan (sent to MDE on May 21, 2021 and included in this package as a formal submission under **Section VII - A**). 100% of the seven outfalls will be screened annually.

11) MDE Comment (MCM #3: Illicit Discharge Detection and Elimination Item #24):

- The SOPs must include a checklist for dry weather outfall screenings and the map of the storm drain system. Guidance on developing these checklists can be found at: mde.maryland.gov/programs/Water/StormwaterManagementProgram/Documents/IDDE_SOP_Guidance_MS4PhaseII.pdf. Updated SOPs must be submitted in the year 4 Progress Report.

USG Response:

- The Outfall Inspection Form (located in Appendix E of the IDDE Plan documents) represents a SOP and checklist for dry weather outfall screenings.
- The Site Map (located in Appendix B of the IDDE Plan documents) contains detailed stormwater drainage system maps of the site including outfall inspection locations. These SOPs and maps were developed using the MDE guidance document and are currently used at the Universities at Shady Grove for annual screening and planning for illicit discharge incident response and tracking.

12) MDE Comment (MCM #3: Illicit Discharge Detection and Elimination Item #25):

- The Department requests that USG update and submit a revised SOP.

USG Response:

- An updated IDDE Plan was sent to MDE on May 21, 2021 and is included in this package as a formal submission under **Section VII - A**.

13) MDE Comment (MCM #3: Illicit Discharge Detection and Elimination Item #26):

- USG did not screen any outfalls during the reporting period. Universities at Shady Grove must commence screening and report on results.

USG Response:

- 100% of the outfalls (seven in total) were screened on July 15, 2021. The Universities at Shady Grove IDDE 2021 Outfall Inspection Form, which documents annual screening during a dry day, is attached to this submission and can be found under **Section VII - B**.

14) MDE Comment (MCM #3: Illicit Discharge Detection and Elimination Item #27):

- USG does not maintain inspection records that are available to the Department upon request. Universities at Shady Grove must maintain inspection records on-site and submit an example inspection report with the year 3 Progress Report.

USG Response:

- The Universities at Shady Grove keeps records of all plans, documents, and forms, which are available upon request. Example forms that the Universities at Shady Grove uses for inspections, screenings and reports of illicit discharges can be found in the IDDE Plan (**Section VII - A** of this submission), Appendix D – USG Illicit Discharge Incident Tracking Sheet and in Appendix E – IDDE Outfall Inspection Form. An example document showing proof of annual screening and response efforts documenting annual screening during a dry day is included in this submission under **Section VII - B**. During this progress reporting period (FY '22), The Universities at Shady Grove had no reports of illicit discharges, thus the Illicit Discharge Incident Tracking Sheet was not use.

8) MDE Comment (MCM #6: Pollution Prevention and Good Housekeeping Item #37):

- USG reported that it does not maintain good housekeeping plans and inspection records. However, USG submitted a draft stormwater pollution prevention plan and a spill prevention, control, and countermeasures plan that includes information required in the good housekeeping plan. The Department requests that USG report progress on finalizing these plans and documenting inspections.

USG Response:

- USG's plan going forward is to use the inspection documents from the SWPP and SPCC plans and tailor them to meet the requirements of this MCM. Currently, these documents are under development, in particular the annual training items needed for this MCM. USG expects to have them implemented by Q1 2022.

Section II – (B)

USG's Action Item responses to MDE's 06/30/21
Review of the IDDE, SPCC and SWPP Plans

USG Submitted “Final” versions of the IDDE and SWPP plans to MDE on May 21, 2021. MDE provided comments regarding this submission via their June 30, 2021 email correspondence. Listed below is MDE’s comment and USG’s corresponding response.

MDE Comment:

- Suggestion to include contact information for spills and discovered illicit discharges in the IDDE SOP.

USG Response:

- Contact information and reporting pathways are contained in the IDDE Plan in Section 4.5 – Immediate Response Procedures. In the updated IDDE Plan (included in this MS4 Year 3 (FY ‘21) submission package, under **Section VII – A**). A reporting telephone number was added for clarity, even though the contact information for the Public Safety & Security Office is listed on the Universities at Shady Grove’s website.

Section III

Impervious Area Baseline Analysis (Revised)

~~September 3, 2021~~ Updated October 25, 2021

Christina M. Lyerly
Natural Resources Planner IV
Water and Science Administration
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, MD 21230

Deborah J. Cappuccitti
Senior Regulatory Compliance Engineer
Water and Science Administration
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, MD 21230

RE: Universities at Shady Grove's (USG) Updated Revised Baseline Analysis Document.

Dear Christina M. Lyerly and Deborah J. Cappuccitti:

This document adjusts the impervious area baseline analysis used for USG's MS4 Year Two Progress Report, in accordance with the information presented in MDE's August 17, 2021 email and September 23, 2021 email correspondence.

The methodology used and the primary adjustments made on this submission can be found under the "Planning" and "Conclusion" sections of this document.

We are hopeful that the adjustments made in this report are accepted by MDE.

I look forward to your follow up regarding this document.



Paul Jackson Jr.
Planning Manager
The Universities at Shady Grove



Larry Hogan GOVERNOR

Boyd K. Rutherford LT. GOVERNOR

Charles Glass, Ph.D., P.E. EXECUTIVE DIRECTOR

August 23, 2021

Paul Jackson
Planning Manager
The Universities at Shady Grove (USG)
9636 Gudelsky Drive
Building III - Office 3149
Rockville, MD 20850

Dear Mr. Jackson,

Maryland Environmental Service (MES) has prepared this memorandum for the Universities at Shady Grove (USG) regarding updates to their baseline assessment. In June 2020, MES prepared a baseline adjustment report for USG in response to MDE notifying USG only 0.5" of credit could be claimed for Gudelsky Pond, which was originally determined to fully treat the campus in their year one baseline assessment. MDE provided additional comments to the June 2020 report, requesting clarification of USG's redevelopment credit computations for their year 2 progress report. MES revised the June 2020 memorandum which was submitted in July 2021. MDE provided additional comments to the revised memo, which have been addressed herein.

Introduction

This report is written by Maryland Environmental Service (MES) for the Universities at Shady Grove (USG) regarding updates to their restoration requirements at the end of year two of their National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Phase II permit. In year one, USG reported to Maryland Department of the Environment (MDE) the campus was full treated by Gudelsky Pond, resulting in no restoration requirement. After further review, MDE identified Gudelsky Pond as being in-stream, reducing the maximum allowable credit to 0.5" of treatment. MES was tasked with updating USG's baseline assessment to reflect this change in credit, as well as including recently completed projects on campus and addressing other comments provided by MDE. This report will summarize these findings and describe the methodology used for determining USG's restoration requirement.

Updates

As previously mentioned, a significant change was made to USG's baseline assessment by reducing Gudelsky's treatment credit to 0.5". Treatment credit was also reduced for the Institute for Bioscience and Biotechnology Research (IBBR) pond from 2.6" to 0" due to MDE notifying USG the pond was not built for water quality treatment. Additionally, a redevelopment project consisting of 16 facilities located at the Biomedical Sciences and Engineering (BSE) building was completed in November 2019. Treatment provided by these facilities was added to USG's restoration credit, which is discussed further in this report.

Methodology

For each BMP, MES reviewed the status, type, construction purpose and built date to determine if the BMP provides treatment and if that treatment should be applied to the baseline or restoration goal. Only facilities in passing condition received treatment credit. Baysavers located on campus do not qualify for treatment credit according to MDE guidelines, as they only provide pre-treatment. If the BMP is classified as new development, the provided treatment was applied to the baseline. New development BMPs can be credited for treatment up to 1" and do not receive credit for additional treatment that may be provided. This same methodology was applied to redevelopment and restoration BMPs built prior to 2006. Redevelopment projects completed within or after 2006 were included in USG's restoration credit if additional treatment was provided beyond any new development requirements, which is discussed later in this report.

Inspections and computations were not completed by MES for the BSE BMPs. These facilities were assumed to be in passing condition due to their newly constructed status, and Pe values were used from the design plans. Inspection and maintenance records will need to be prepared for these facilities as a requirement under the MS4 permit. Although in passing condition, plans were not available for the Building 3 Green Roof to determine provided treatment. Therefore, this facility is not receiving treatment credit, until a point that as-built plans are completed. Currently only Gudelsky Pond meets the as-built documentation requirement. As-built documentation will need to be provided for all remaining facilities on both USG and IBBR campuses. If existing as-builts cannot be obtained, then

verification survey will need to be completed prior to the end of the permit term to maintain eligible credits.

To determine the impervious treatment provided by Gudelsky Pond, all other BMPs were evaluated first to determine the baseline treatment without the pond. Redevelopment projects had to be reviewed to determine if these projects included new development requirements, which would be credited toward the baseline. Additionally, if the existing impervious was already being treated prior to redevelopment, this credit would also be counted toward the baseline. This analysis is discussed later in this report, in addition to credit computations provided in Appendix A.

After all other BMPs were evaluated, Gudelsky Pond received baseline credit for treating the first 0.5” of runoff for untreated impervious located on the USG and IBBR campuses. Tables 1 and 2 provide a summary of each BMP, for USG and IBBR, respectively, along with each BMP’s associated credit.

Table 1. USG BMP Summary

BMP ID	BMP Name	Purpose	Status	Impervious Area (ac.)	Pe (in.)	Baseline Credit (ac.)	Restoration Credit (ac.)
USG19BMP00001	Travilla Gateway Garage Baysaver	REDE	P	0.73	0	0.00	
USG19BMP00002	Building 2 Sand Filter	NEWD	F	1.93	0.07	0.00	
USG19BMP00008	Green Roof at Building 3	REDE	P	0.19	0	0.00	
USG19BMP00009	Building 3 Baysaver	REDE	P	0.15	0	0.00	
USG19BMP00010	BSE ESD-8	REDE	P	0.4	1	0.29	0.11
USG19BMP00012	Micro-Bioretention 4 at Shady Grove Garage	NEWD	P	0.15	1	0.15	
USG19BMP00013	Micro-Bioretention 5 at Shady Grove Garage	NEWD	P	0.33	0.65	0.21	
USG19BMP00014	Micro-Bioretention 3 at Shady Grove Garage	NEWD	P	0.29	1	0.29	
USG19BMP00015	Micro-Bioretention 2 at Shady Grove Garage	NEWD	P	0.29	1	0.29	
USG19BMP00017	Micro-Bioretention 1 at Shady Grove Garage	NEWD	P	0.36	0.71	0.26	
USG19BMP00018	Bioretention 9 at Parking Lot 1	NEWD	P	0.06	0.39	0.02	
USG19BMP00019	Bioretention 8 at Parking Lot 1	NEWD	F	0.31	0.92	0.00	
USG19BMP00020	Bioretention 7 at Parking Lot 1	NEWD	F	0.35	0.7	0.00	
USG19BMP00021	Bioretention 5 at Parking Lot 1	NEWD	F	0.43	0.29	0.00	
USG19BMP00022	Bioretention 6 at Parking Lot 1	NEWD	F	0.47	0.48	0.00	
USG19BMP00023	Micro-Bioretention 3 at New Campus Entry	REDE	P	0.18	0.93	0.17	
USG19BMP00024	Micro-Bioretention 2 at New Campus Entry	REDE	P	0.26	0.9	0.23	
USG19BMP00025	Micro-Bioretention 1 at New Campus Entry	REDE	P	0.29	0.64	0.19	
USG19BMP00026	Gudelsky Pond	NEWD	P	13.71	0.5	5.26	
USG19BMP00027	BSE ESD-13	REDE	P	0.06	2.6	0.06	0.02
USG19BMP00028	BSE ESD-9	REDE	P	0.12	1.4	0.09	0.04
USG19BMP00029	BSE ESD-10	REDE	P	0.09	1.4	0.07	0.03
USG19BMP00030	BSE ESD-5	REDE	P	0.11	1.3	0.08	0.04

USG19BMP00031	BSE ESD-3	REDE	P	0.14	1	0.10	0.04
USG19BMP00032	BSE Cistern #1	REDE	P	0.75	1	0.53	0.22
USG19BMP00033	BSE Cistern #2	REDE	P	0.11	2.6	0.11	0.04
USG19BMP00034	BSE ESD-6	REDE	P	0.12	1	0.08	0.04
USG19BMP00035	BSE ESD-12	REDE	P	0.07	1.4	0.05	0.02
USG19BMP00036	BSE ESD-11	REDE	P	0.06	1.4	0.05	0.02
USG19BMP00037	BSE ESD-2	REDE	P	0.12	1	0.08	0.04
USG19BMP00038	BSE ESD-1	REDE	P	0.02	1	0.01	0.01
USG19BMP00039	BSE ESD-4	REDE	P	0.12	1.3	0.09	0.04
USG19BMP00040	BSE ESD-7	REDE	P	0.19	1	0.13	0.06
USG19BMP00041	BSE ESD-14	REDE	P	0.04	2.6	0.04	0.02
					Total	8.93	0.79

Table 2. IBBR BMP Summary

BMP ID	BMP Name	Purpose	Status	Impervious Area (ac.)	Pe (in.)	Baseline Credit (ac.)	Restoration Credit (ac.)
USG19BMP00003	Infiltration Trench 1 at IBBR	NEWD	F	0.14	0.5	0	
USG19BMP00004	IBBR Outfall Stabilization	REST	P		-		0.50
USG19BMP00005	Infiltration Trench 1 at IBBR	NEWD	P	0.06	1	0.06	
USG19BMP00006	Infiltration Trench 1 at IBBR	NEWD	F	0.48	0.78	0	
USG19BMP00007	IBBR Pond	NEWD	P	1.11	0	0	
USG19BMP00026	Gudelsky Pond	NEWD	P	4.52	0.5	2.22	
USG19BMP00042	IBBR Non-Rooftop Disconnect	NEWD	P	0.03	1	0.03	
					Total	2.31	0.50

Baseline Assessment

Utilizing the findings and methods described above, MES determined USG is providing treatment for 8.93 acres out of their 13.71-acre baseline. Thus, there are 4.78 untreated impervious acres which brings USG’s 20% restoration goal to 0.96 acres. IBBR is treating a total of 2.31 acres out of 4.52 acres, bringing their 20% restoration goal to 0.44 acres. A breakdown of the baseline calculations is provided in Table 3 below.

Table 3. USG Baseline Assessment

Baseline Year	Area (ac)		Impervious (ac)		Treated Impervious (ac)		Untreated Impervious (ac)		20% Restoration Goal (ac)	
	USG	IBBR	USG	IBBR	USG	IBBR	USG	IBBR	USG	IBBR
2019	29.44	12.18	13.71	4.52	8.93	2.31	4.78	2.21	0.96	0.44

Restoration

Treatment provided by redevelopment and restoration BMPs built within or after 2006 are eligible to be claimed for restoration credit. Additionally, unlike new development BMPs, these facilities are eligible to be credited over 1” if additional storage is provided. However, for redevelopment projects an analysis of the existing conditions had to be completed to ensure the project was not subject to new

development requirements. If the project was determined to include new development, treatment was credited to meeting this requirement prior to awarding restoration credit. Furthermore, if the existing impervious was being treated prior to redevelopment, this credit did not qualify for restoration and was instead counted toward treatment of the baseline.

MES used aerial imagery to estimate the change in impervious for New Campus Entry. It was determined there was no increase in impervious, as shown in Figure 1, therefore the project was not subject to new development requirements.

Figure 1. New Campus Entry Impervious Area Change



Existing Impervious = 0.74 acres



Proposed impervious = 0.72 acres

However, this project did not qualify for restoration credit because the existing impervious was fully treated by a combination of micro-biorententions, since removed as part of redevelopment, and Gudelsky Pond. Therefore, treatment of the redeveloped impervious provided by the newly constructed micro-biorententions and Gudelsky was credited toward treatment of the baseline.

The design plans provided for the BSE redevelopment project indicated the project resulted in a net decrease in impervious, demonstrated by Figure 2.

Figure 2. BSE Impervious Area Change



Existing Impervious = 4.1 acres Proposed Impervious = 3.65 acres

Additionally, the plans indicated an existing sand filter, removed during the BSE construction, provided treatment for 1.2 acres of impervious. Gudelsky Pond also provided treatment of the existing impervious surface, with a computed credit of 1.23 acres. Since the existing impervious area was not fully treated, this project was eligible for restoration credit.

Due to redevelopment requirements, the new BSE facilities were required to treat 50% of the existing untreated impervious area, in addition to replacing the treatment provided by the removed sand filter. Of the full project impervious area, 2.52 acres is managed by both the BSE facilities and Gudelsky Pond, and the remaining 1.13 acres managed by only Gudelsky Pond. MES utilized the Pe values provided in the design plans to calculate the total treatment provided by the BSE facilities is 2.65 acres. This includes credit for treatment over 1" at a discounted rate of 25%. Credit was not awarded for any treatment provided beyond the maximum 2.6". Although Gudelsky Pond also provides additional over management to the impervious qualifying for restoration credit, restoration credit was not awarded due to Gudelsky Pond being built for new development purposes. The remaining 1.13 acres of the project impervious area was credited as being treated by Gudelsky Pond for the first 0.5" of runoff. A full breakdown of the credit computations is provided in Appendix A.

In total, MES determined the BSE facilities combined with Gudelsky Pond provide treatment for 3.22 acres of impervious. The existing treatment of 2.43 acres is credited toward treatment of the baseline, 0.57 acres provided by Gudelsky and 1.86 acres provided by the BSE facilities. The remaining treatment of 0.79 acres provided by the BSE facilities was credited as restoration. This brings USG's remaining restoration goal to 0.17 acres, as shown in Table 4.

In addition to redevelopment projects, alternative practices also qualify for restoration credit. On the IBBR campus, an outfall stabilization was completed in 2006, providing a restoration credit of 0.5 acres. This credit surpasses the campus’ restoration requirement 0.44 acres, also shown in Table 4 below.

Table 4. USG Restoration Totals

20% Restoration Goal (ac)		Restoration Credit (ac)		Remaining Goal (ac)	
USG	IBBR	USG	IBBR	USG	IBBR
0.96	0.44	0.79	0.50	0.17	-0.06

Planning

Over the course of Year 3, USG has been coordinating for the repairs to the 4 failing bioretentions within Parking Lot 1 and retrofit of the failing Building 2 sand filter. The initial estimated credit to be achieved for repairing the bioretentions is 0.60 acres. This estimate is based on restoring ponding to only 0.5’ as shown in the original design and regrading the facilities. Since these facilities were built for new development and are not being redesigned to provide over management, this credit would be counted toward the baseline. Following maintenance, as-builts will be completed to verify the provided treatment.

The sand filter will be undergoing full design to either update the facility to current MDE standards or potentially retrofit the facility to a submerged gravel wetland. Assuming 1” of treatment is to be achieved by the design for the full impervious area, this would provide another 1.93 acres of credit. It is assumed the original sand filter was designed for water quality treatment. In combination with Gudelsky Pond, it is assumed the impervious draining to the sand filter was being fully treated. Therefore, the 1.93 acres earned by redesigning the facility would be counted toward the baseline.

Once these 5 facilities are restored, the treatment credit provided by Gudelsky will be reduced to 3.99 acres. This is due to Gudelsky only receiving treatment credit for impervious on USG’s property not being treated by other BMPs since these are nested drainage areas. Taking this reduction into consideration along with the now provided treatment from the bioretentions and sand filter, USG’s baseline credit will increase to 10.20 acres of existing impervious area treatment. Thus, reducing their restoration goal to 0.70 acres. Therefore, with a current restoration credit of 0.79 acres, USG will satisfy their 20% restoration requirement.

Baseline Treated Impervious Area at USG		Untreated Impervious Area at USG (ac)		20% Restoration Goal (ac)		Remaining Goal (ac)	
Current	Proposed with Repairs to Failing Facilities	Current	Proposed with Repairs to Failing Facilities	Current	Proposed with Repairs to Failing Facilities	Current	Proposed with Repairs to Failing Facilities
8.93	10.20	4.78	3.51	0.96	0.70	0.17	-0.09

Conclusion

USG is responsible for a total of 13.71 acres of impervious under their MS4 permit. University of Maryland, College Park is responsible for the 4.52 acres located at the IBBR campus. MES determined 8.93 acres of the USG impervious area is being treated, and 2.31 acres of the IBBR campus impervious. This treatment resulted in a 20% restoration goal of 0.96 acres for USG and 0.44 acres for IBBR. Through redevelopment projects, USG has earned 0.79 acres of restoration credit, reducing their 20% restoration requirement to 0.17 acres. USG is currently planning the restoration of several failing facilities, which is estimated to increase their baseline treatment to 10.20 acres of existing impervious area treatment. This will reduce their target restoration goal to 0.70 acres, which USG will surpass with their 0.79 acres of restoration credit. Additionally, IBBR has earned 0.5 acres of restoration credit through alternative practices, surpassing their restoration goal.

Appendix A: Redevelopment Analysis



Existing Impervious = 4.1 acres



Proposed Impervious = 3.65 acres

- **BSE Change in Impervious** = Purposed - Existing = $3.65 - 4.1 = -0.45$ acres
- **Net decrease in impervious**, *does not* have to meet new development requirements.
- Total existing impervious being treated by sand filter (now removed) = 1.2 ac.
- Total existing impervious being treated by Gudelsky = $(0.5 * (3.65 \text{ ac} - 1.2 \text{ ac})) = 1.23$ acres
- **Treated impervious prior to redevelopment** = $1.2 + 1.23 = 2.43$ ac.
- **Existing untreated impervious** = $3.65 - 2.43 = 1.22$ ac.
- Impervious requiring treatment =
50% untreated impervious + replacement of 1.2 acres treatment lost by removing sand filter =
 $0.5 * (1.22) + 1.2 = 1.81$ acres

Redevelopment

- Total site impervious = 3.65 ac.
- **Impervious managed by both BSE facilities & Gudelsky = 2.52 ac**
 - Three BSE facilities providing Pe 2.6"
 - Impervious area treated to 2.6" = $(0.06 + 0.11 + 0.04) = 0.21$ ac.
 - Credit = $0.21 + 0.25 * 0.21 * (2.6 - 1) = 0.29$ ac.
 - Remaining 13 BSE facilities provide Pe 1.09"
 - Impervious area treated to 1.09" = $2.52 - 0.21 = 2.31$ ac.
 - $2.31 + 0.25 * 2.31 * (1.09 - 1) = 2.36$ ac.
 - **Total credit** = credit from all BSE facilities = $2.36 + 0.29 = 2.65$ ac.
- **Impervious managed by only Gudelsky = $3.65 - 2.52 = 1.13$ ac.**
 - $1.13 * 0.5 = 0.57$
- **Total BSE impervious treatment credit** = credit for impervious managed by both Gudelsky & BSE + credit for impervious managed by only Gudelsky = $0.57 + 2.65 = 3.22$ ac.
- **Restoration credit** = post redevelopment treatment – existing treatment = $3.22 - 2.43 = 0.79$ ac.
 - **BSE restoration credit** = total restoration = **0.79 ac.**

- **Baseline credit = existing treatment = 2.43 ac.**
 - **Gudelsky baseline = 0.57ac.**
 - **BSE baseline credit = total baseline – Gudelsky credit = 2.43 – 0.57 = 1.86 ac.**

Distribution of Credit

BSE Facilities: 1.86 acres out of 2.65 acres total credit counted toward baseline. This is equivalent to 70% of treatment provided by each BSE BMP. Remaining treatment credited as restoration.

BMP ID	BMP Name	Purpose	Status	Impervious Area (ac.)	Pe (in.)	Baseline Credit (ac.)	Restoration Credit (ac.)
USG19BMP00010	BSE ESD-8	REDE	P	0.4	1	0.29	0.11
USG19BMP00027	BSE ESD-13	REDE	P	0.06	2.6	0.06	0.02
USG19BMP00028	BSE ESD-9	REDE	P	0.12	1.4	0.09	0.04
USG19BMP00029	BSE ESD-10	REDE	P	0.09	1.4	0.07	0.03
USG19BMP00030	BSE ESD-5	REDE	P	0.11	1.3	0.08	0.04
USG19BMP00031	BSE ESD-3	REDE	P	0.14	1	0.10	0.04
USG19BMP00032	BSE Cistern #1	REDE	P	0.75	1	0.53	0.22
USG19BMP00033	BSE Cistern #2	REDE	P	0.11	2.6	0.11	0.04
USG19BMP00034	BSE ESD-6	REDE	P	0.12	1	0.08	0.04
USG19BMP00035	BSE ESD-12	REDE	P	0.07	1.4	0.05	0.02
USG19BMP00036	BSE ESD-11	REDE	P	0.06	1.4	0.05	0.02
USG19BMP00037	BSE ESD-2	REDE	P	0.12	1	0.08	0.04
USG19BMP00038	BSE ESD-1	REDE	P	0.02	1	0.01	0.01
USG19BMP00039	BSE ESD-4	REDE	P	0.12	1.3	0.09	0.04
USG19BMP00040	BSE ESD-7	REDE	P	0.19	1	0.13	0.06
USG19BMP00041	BSE ESD-14	REDE	P	0.04	2.6	0.04	0.02

Gudelsky Pond:

- **0.57 acres** for BSE property credited toward baseline.
- **Remaining Gudelsky Credit USG property** = 0.5 * (USG total impervious – BSE property – treatment provided by other BMPs excluding BSE) = 0.5 * (13.71 – 2.52 – 1.81) = **4.69 ac.**
- **Gudelsky Credit IBBR Property** = 0.5 * (IBBR total impervious – treatment provided by otherBMPs) = 0.5 * (4.52 – 0.09) = **2.22 ac.**

Section IV

Urban BMP Database

USG | Urban BMP Database

Table B.1.a. BMP Reporting Requirements

This table represents the basic data elements that are required of all structural, ESD and alternative Best Management Practices (BMPs)

BMP_ID ¹	REPORTING_YEAR	MD_NORTH ²	MD_EAST	PERMIT_NUM	LOCAL_BMP_ID	BMP_NAME	BMP_CLASS	BMP_TYPE	CON_PURPOSE	LAST_INSP_DATE	BMP_STATUS	MAIN_DATE	REINSP_DATE	REINSP_STATUS	GEN_COMMENTS
USG19BMP00001	FY '21	158592.9121	382612.8465	13-SF_5501	08-SF-0247	Travilla Gateway Garage Baysaver	S	XOGS	REDE	6/27/2019	P				BaySaver, Pretreatment Credit Only
USG19BMP00002	FY '21	158507.8265	382664.1875	13-SF_5501	BMP00002	Building 2 Sand Filter	S	FSND	NEWD	1/11/2019	F				
USG19BMP00008	FY '21	158461.9453	382517.7791	13-SF_5501	03-SF-0279	Green Roof at Building 3	E	AGRE	REDE	6/27/2019	P				
USG19BMP00009	FY '21	158401.7903	382528.9745	13-SF_5501	03-SF-0279	Building 3 Baysaver	S	XOGS	REDE	6/27/2019	P				BaySaver, Pretreatment Credit Only - Plans had 0.11 more DA called out
USG19BMP00010	FY '21	158280.7799	382623.8966	13-SF_5501	16-SF-0044	BSE ESD-8	E	MMBR	REDE		P				
USG19BMP00012	FY '21	158363.5978	382918.1225	13-SF_5501	BMP00012	Micro-Bioretenion 4 at Shady Grove Garage	E	MMBR	NEWD	1/8/2019	P				Filter media depth determined from overflow inlet inverts
USG19BMP00013	FY '21	158355.0224	382932.8523	13-SF_5501	BMP00013	Micro-Bioretenion 5 at Shady Grove Garage	E	MMBR	NEWD	1/11/2019	P				Treatment filter depth assumed from Typical MDE Designs STD
USG19BMP00014	FY '21	158304.9582	382901.8775	13-SF_5501	BMP00014	Micro-Bioretenion 3 at Shady Grove Garage	E	MMBR	NEWD	1/11/2019	P				Treatment filter depth assumed from Typical MDE Designs STD
USG19BMP00015	FY '21	158254.2953	382863.4784	13-SF_5501	BMP00015	Micro-Bioretenion 2 at Shady Grove Garage	E	MMBR	NEWD	1/15/2019	P				Filter media depth determined from overflow inlet inverts
USG19BMP00017	FY '21	158234.8149	382894.6457	13-SF_5501	BMP00017	Micro-Bioretenion 1 at Shady Grove Garage	E	MMBR	NEWD	1/15/2019	P				Filter media depth determined from overflow inlet inverts
USG19BMP00018	FY '21	158202.0436	382770.0917	13-SF_5501	BMP00018	Bioretention 9 at Parking Lot 1	S	FBIO	NEWD	1/11/2019	P				
USG19BMP00019	FY '21	158187.7871	382811.4598	13-SF_5501	BMP00019	Bioretention 8 at Parking Lot 1	S	FBIO	NEWD	1/15/2019	F				Bio8 (ID#19)
USG19BMP00020	FY '21	158169.4363	382816.6197	13-SF_5501	BMP00020	Bioretention 7 at Parking Lot 1	S	FBIO	NEWD	1/11/2019	F				Bio7 (ID#20)
USG19BMP00021	FY '21	158178.6135	382768.3286	13-SF_5501	BMP00021	Bioretention 5 at Parking Lot 1	S	FBIO	NEWD	1/11/2019	F				Bio5 (ID#21)
USG19BMP00022	FY '21	158160.5992	382768.5889	13-SF_5501	BMP00022	Bioretention 6 at Parking Lot 1	S	FBIO	NEWD	1/11/2019	F				Bio6 (ID#22)
USG19BMP00023	FY '21	158197.4072	382735.0511	13-SF_5501	14-SF-0205	Micro-Bioretenion 3 at New Campus Entry	E	MMBR	REDE	1/11/2019	P				
USG19BMP00024	FY '21	158198.7169	382687.9331	13-SF_5501	14-SF-0205	Micro-Bioretenion 2 at New Campus Entry	E	MMBR	REDE	1/11/2019	P				
USG19BMP00025	FY '21	158184.006	382680.419	13-SF_5501	14-SF-0205	Micro-Bioretenion 1 at New Campus Entry	E	MMBR	REDE	1/11/2019	P				
USG19BMP00026	FY '21	158139.3293	382595.6051	13-SF_5501	BMP00026	Gudelsky Pond	S	PWET	NEWD	1/8/2019	P				Credit Sharing with Montgomery County, and UMD
USG19BMP00027	FY '21	158412.6877	382639.5859	13-SF_5501	16-SF-0044	BSE ESD-13	E	MMBR	REDE		P				
USG19BMP00028	FY '21	158284.4832	382564.1415	13-SF_5501	16-SF-0044	BSE ESD-9	E	MMBR	REDE		P				
USG19BMP00029	FY '21	158303.3197	382552.9166	13-SF_5501	16-SF-0044	BSE ESD-10	E	MMBR	REDE		P				
USG19BMP00030	FY '21	158296.731	382588.3088	13-SF_5501	16-SF-0044	BSE ESD-5	E	MMBR	REDE		P				
USG19BMP00031	FY '21	158331.5408	382572.2397	13-SF_5501	16-SF-0044	BSE ESD-3	E	MMBR	REDE		P				
USG19BMP00032	FY '21	158383.8795	382580.817	13-SF_5501	16-SF-0044	BSE Cistern #1	E	MRWH	REDE		P				
USG19BMP00033	FY '21	158329.8029	382662.0177	13-SF_5501	16-SF-0044	BSE Cistern #2	E	MRWH	REDE		P				
USG19BMP00034	FY '21	158314.0939	382632.4654	13-SF_5501	16-SF-0044	BSE ESD-6	E	MMBR	REDE		P				
USG19BMP00035	FY '21	158343.4201	382541.0596	13-SF_5501	16-SF-0044	BSE ESD-12	E	MMBR	REDE		P				
USG19BMP00036	FY '21	158322.7846	382547.0566	13-SF_5501	16-SF-0044	BSE ESD-11	E	MMBR	REDE		P				
USG19BMP00037	FY '21	158351.9782	382566.4497	13-SF_5501	16-SF-0044	BSE ESD-2	E	MMBR	REDE		P				
USG19BMP00038	FY '21	158371.75	382559.1536	13-SF_5501	16-SF-0044	BSE ESD-1	E	MMBR	REDE		P				
USG19BMP00039	FY '21	158310.1113	382580.5892	13-SF_5501	16-SF-0044	BSE ESD-4	E	MMBR	REDE		P				
USG19BMP00040	FY '21	158318.6979	382647.0605	13-SF_5501	16-SF-0044	BSE ESD-7	E	MMBR	REDE		P				
USG19BMP00041	FY '21	158365.5008	382660.5512	13-SF_5501	16-SF-0044	BSE ESD-14	E	MIBR	REDE		P				

Note: The following template is based on recent MD Phase II NPDES data reporting requirements. Definitions of each column and data elements can be found in the three descriptions sheets.

Note: Several Example BMPs have been incorporated to help display the new structure.

¹ Every BMP Identified in this table should match BMP_ID data entered in either "Table B1.b._ESD.STRUCTURAL" sheet or "Table B.1.c._Alternative" sheet

² Northing and Easting are geographic points used to locate BMPs, Maryland requires using State Plane NAD 83 meters for geographic location. You can use Geographic Information Systems (GIS) or other computer programs to provide these coordinates.

Questions on Maryland specific stormwater design? Follow the link below.

[Link to Maryland's Stormwater Design Manual](#)

Section V

Restoration Activity Schedule

Section VI

Impervious Area Restoration Work Plan

Impervious Area Restoration Work Plan

Timeline	Restoration Planning, Management and Goals
Year 1 (FY 2019)	<ul style="list-style-type: none"> • Submit the Year One Progress Report, noting there is no Restoration Requirement (based on USG’s understanding of the data, metrics and other information at the time).
Year 2 (FY 2020)	<ul style="list-style-type: none"> • In response to MDE’s position of USG having a Restoration Requirement, submit follow up information to MDE for approval of USG’s Impervious Area Baseline and Restoration Requirement. • Begin identifying restoration activities in anticipation of a Restoration Requirement.
Year 3 (FY 2021)	<ul style="list-style-type: none"> • Confirm USG’s Restoration Requirement with MDE. • Once the Restoration Requirement has been approved, confirm the Restoration Activities and Adaptive Management Strategies that will meet and/or exceed USG’s Restoration Requirement. • Develop scopes of work, budget estimates and project timeframes for completion of the Restoration Activities.
Year 4 (FY 2022)	<ul style="list-style-type: none"> • Identify funding sources to be used for the Restoration Activities and seek approval to use said funding sources. • Bid, award, schedule and proceed with the Restoration Activities, including Design and Construction.
Year 5 (FY 2023)	<ul style="list-style-type: none"> • Complete construction of the Restoration Activities. • Provide As-Built documentation to MDE for the Sand Filter repairs. *As-Built documentation for the Bioswales is not required. • Continue to identify water quality improvement projects as part of USG’s Stormwater Management long-term planning strategy.

USG has identified the restoration of the four Bioswales in Parking Lot 1(USG BMP Numbers 00019 – 00022) and the repair of the Sand Filter behind Building II (USG BMP Number 00002) as opportunities to meet/exceed the 0.17 Restoration Target Goal, by the end of the permit term. This information was included in USG’s Impervious Area Baseline Analysis Document (Revised and dated September 3, 2021) and can be found on page eight, under the conclusion section of the document. This document is also being formally submitted in the MS4 Phase II Annual Report – Year 3 (FY 2021) submission package, under Section III.

*As noted under the Year 5 section in the chart above, As-Builts will be provided for the Sand filter repairs, however, As-Builts are not required for the Bioswale work, considering the

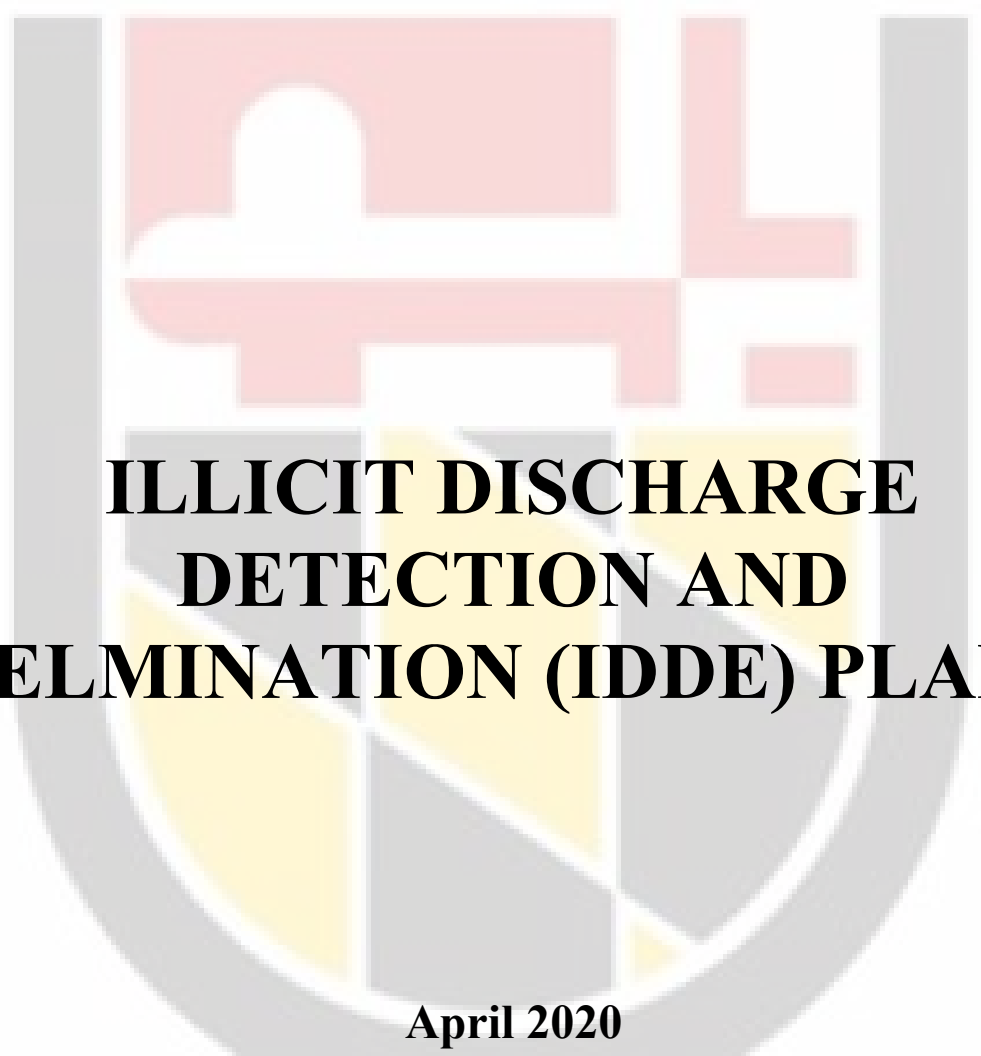
Bioswale work is a maintenance activity and the limits of disturbance is less than 5000 sf and 100 cy of soil. This information was confirmed with MDE PRD on 8/26/21.

Section VII - A

IDDE Plan

THE UNIVERSITIES AT SHADY GROVE

Department of Facilities Management



ILLICIT DISCHARGE DETECTION AND ELMINATION (IDDE) PLAN

April 2020
Updated April 2021

Table of Contents

SECTION 1: PURPOSE AND FACILITY DESCRIPTION..... 1

1.1	Purpose of Illicit Discharge Detection & Elimination Plan.....	1
1.2	Background Information and Site Description	1
1.3	Definitions.....	2

SECTION 2: STORMWATER MAPPING 5

SECTION 3: ORDINANCES 6

3.1	State Ordinances	6
3.2	County Ordinances	6
3.3	City Ordinances	6
3.4	University Policies	6

SECTION 4: DETECTION PROCEDURES..... 7

4.1	Prohibition of Illicit Discharges.....	7
	Table 1.....	7
4.2	Prohibition of Illicit Connections	7
4.3	Procedure to Report an Incident	8
4.3.1	Notification of Spills.....	8
4.3.2	Reporting.....	8
4.4	Inspection Procedures	8
4.4.1	Outfall Inspections	8
4.4.2	Source Identification	9
4.5	Immediate Response Procedures	9
4.6	Investigation and Response Procedures	9
4.6.1	Investigation Protocol.....	10
4.7	Recordkeeping.....	10

SECTION 5: CORRECTIVE ACTIONS & ENFORCEMENT 11

SECTION 6: PUBLIC EDUCATION..... 12

6.1 Public Education and Outreach 12

6.2 Public Involvement and Participation..... 12

SECTION 7: STAFF TRAINING 13

SECTION 8: IDDE CERTIFICATION 14

SECTION 9: IDDE EVALUATION AND MODIFICATIONS15

SECTION 10: REFERENCES 16

Appendices:

Appendix A General Location Map

Appendix B Site Map and Outfall Photo Log

Appendix C USG Illicit Discharge and Connection Stormwater Ordinance

Appendix D USG Illicit Discharge Incident Tracking Sheet

Appendix E IDDE Outfall Inspection Form

Appendix F IDDE Training Materials

SECTION 1: PURPOSE AND FACILITY DESCRIPTION

1.1 Purpose of Illicit Discharge Detection & Elimination Plan

The purpose of this program is to provide for the health, safety, and general welfare of the students, staff, and faculty of the Universities at Shady Grove (USG) through the regulation and elimination of non-stormwater discharges to the storm sewer system to the Maximum Extent Practicable (MEP) as required by federal and state law. This program establishes methods for controlling the introduction of pollutants into the storm sewer system in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit for stormwater discharges associated with the Municipal Separate Storm Sewer System (MS4) general permit (Permit No. 13-SF-5501).

This Illicit Discharge Detection and Elimination (IDDE) plan is designed to identify and effectively eliminate illicit discharges and connections to USG's MS4. The University's IDDE program also includes municipal storm sewer mapping, policies, public education, reporting, recordkeeping, and staff training elements.

Illicit discharges are defined as a measurable flow containing pollutants and/or pathogens to a MS4 during dry weather. A storm drain with measurable flow but containing no pollutants or pathogens is simply considered a discharge. NPDES regulates the discharge of stormwater under the authority of the Federal Clean Water Act. The United States Environmental Protection Agency (USEPA) designates authority to administer NPDES permits within the State of Maryland.

1.2 Background Information and Site Description

Discharges from MS4s often include waste and wastewater from non-stormwater sources. A significant portion of dry weather flows are likely from illicit and/or inappropriate discharges and connections to a MS4.

Illicit discharges can enter a system through either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the MS4 from cracked sanitary systems, spills collected by drain outlets, or chemicals dumped directly into a drain). This results in untreated discharges which could contribute high levels of pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients, and pathogens to receiving water bodies. Pollutant levels from these illicit discharges have been shown in USEPA studies to be high enough at times to significantly degrade receiving water quality and threaten aquatic, wildlife, and human health. Examples of illicit discharges include: sanitary wastewater, effluent from septic tanks, car wash wastewater, improper oil disposal, radiator flushing disposal, laundry wastewaters, spills from roadway accidents, and improper disposal of auto and house hold toxics. The USG's IDDE program, along with public outreach and reporting, helps combat these potential illicit discharges. USG treats some of its

stormwater discharges using various BMPs, including oil-grit separators, bioretention, retention pond, sand filters, and infiltration berms.

USG began in 1992 as part of the University of Maryland, University College. In 2000, it reformed under its present name. The campus is located in a suburban area, bounded by a mixture of commercial and institutional areas on all sides. USG is bordered by Darnestown Road to the north and east, Traville Gateway Drive to the west, and Gudelsky Drive to the south. The campus currently consists of 4 academic buildings and a parking garage on approximately 30 acres of land. A site vicinity map is included in Appendix A. It should be noted that the Shady Grove Campus consists of two distinct Universities – 1) USG and 2) the University of Maryland Institute for Bioscience and Biotechnology Research (IBBR). USG and IBBR share a property, owned by the State of Maryland and work jointly together to share their property management responsibilities.

The stormwater drainage system at USG consists of intermittent surface flow and catch basins located throughout the campus. Approximately 14 acres (47%) of the campus is considered impervious. The campus maintains a MS4 that consists of seven (7) outfalls. The outfalls discharges to the Gudelsky Retention Pond located onsite, which discharges offsite to the Piney Branch stream. Water the Piney Branch ultimately flows to the Potomac River, a tributary of the Chesapeake Bay. The campus receives all of its potable water from the Washington Suburban Sanitary Commission (WSSC). The distribution system includes periodic flushing of fire hydrants for maintenance purposes.

1.3 Definitions

For the purposes of this program, the following shall mean:

Best Management Practices (BMPs): Schedules of activities, prohibitions of practices, general good housekeeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

Clean Water Act: The U.S. Water Pollution Control Act (33 US.C. §1251 et seq.), and any subsequent amendments thereto.

Construction Activity: Activities subject to NPDES Construction Permits. These include construction projects resulting in land disturbance of one acre or more. Such activities include, but are not limited to, clearing and grubbing, grading, excavating, and demolition. Additionally, projects resulting in 5,000 square feet or more and 100 cubic yards or more require an approved sediment and erosion control plan.

Conveyance: Any structural process for transferring stormwater between at least two (2) points, including piping, ditches, swales, curbs, gutters, catch basins, channels, storm drains, and roadways.

Hazardous Materials : Any material, including any substance, waste, or combination threat which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Illegal Discharge: Any direct or indirect non-stormwater discharge to the storm sewer system, except as exempted in section 4.1 Table 1.

Illicit Connections: An illicit connection is defined as either of the following:

- *Any drain or conveyance, whether on the surface or subsurface that allows an illegal discharge to enter the storm drain system including, but not limited to, any conveyances that allow any non-stormwater discharge including sewage, process wastewater, and wash water to enter the storm drain system and any connections to the storm drain system from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by an authorized enforcement agency or:*
- *Any drain or conveyance connected from a commercial or industrial land use to the storm drain system that has not been documented in plans, maps, or equivalent records and approved by an authorized enforcement agency.*

Municipal Separate Storm Sewer System (MS4): The system of conveyances (including sidewalks, roads with drainage systems, streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) owned and/or operated by USG and designed or used for collecting or conveying stormwater, and that is not used for collecting or conveying sewage.

National Pollutant Discharge Elimination System (NPDES) Permit: a permit issued by USEPA (or by a State under authority delegated pursuant to 33 USC§ 1342(b)) that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

Non-Stormwater Discharge: Any discharge to the storm drain system that is not

composed entirely of stormwater.

Outfall: A point source where the MS4 discharges from a pipe, ditch or other discreet conveyance directly or indirectly to waters of the State of Maryland, or to another MS4.

Person: Any city utility, individual, contractor, student, staff, or faculty.

Pollutant: Anything that causes or contributes to pollution. Pollutants may include, but are not limited to, paints, varnishes, and solvents; oil and other automotive fluids; non-hazardous liquid, solid wastes and yard wastes; refuse, rubbish, garbage, litter, or other discarded or abandoned objects, ordinances, and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage, fecal coliform and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind.

Premises: Any building, lot, parcel of land, or portion of land whether improved or unimproved including adjacent sidewalks and parking strips.

Spill Prevention Control & Countermeasure (SPCC) Plan: A document that describes procedures put in place to prevent and respond to oil and oil product spills.

Storm Sewer System: System of conveyances by which stormwater is collected and/or directed, including but not limited to any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and human-made or altered drainage channels, reservoirs, and other drainage structures.

Stormwater: Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

Stormwater Pollution Prevention Plan (SWPPP): A document that describes the BMPs and activities to be implemented by a person or business to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to stormwater, stormwater conveyance systems, and/or receiving waters to the Maximum Extent Practicable.

Wastewater: Any water or other liquid, other than uncontaminated stormwater, discharged from a facility.

SECTION 2: STORMWATER MAPPING

The development of a storm sewer system map is used to demonstrate a basic awareness of the intake and discharge areas of the system. It is needed to help determine the extent of discharge of dry weather flows, the possible sources of dry weather flows, and the particular water bodies these flows may be affecting. The availability of this map clearly demonstrates such awareness.

USG will utilize AutoCAD, GPS, and GIS technologies to map all conveyance systems and outfalls. All outfall locations will then be incorporated into USG's mapping system and database. All outfalls will be photographed and numbered for reference purposes. Maps will be available to print for public review. A current site map and photo log is included in Appendix B. USG is in the process of updating and enhancing its existing maps; site maps will be updated as needed. The photo log in Appendix B will be completed as each outfall is inspected as described section 4.1.1. of this plan.

SECTION 3: ORDINANCES

3.1 State Ordinances

The Code of Maryland Regulations (COMAR) Title 26, Subtitle 4 identifies all the State's ordinances for water management, specifically water pollution control and abatement. The ordinances can be online found at:

http://www.dsd.state.md.us/COMAR/subtitle_chapters/26_Chapters.aspx#Subtitle04

3.2 County Ordinances

There are currently no county ordinances that apply to USG's IDDE. However, Montgomery County Code of Ordinances Part II, Chapter 19 encompasses its stormwater management ordinances. These ordinances can be found at:

http://montgomeryco-md.elaws.us/code/coor_ptii_ch19

3.3 City Ordinances

There are currently no city ordinances that apply to USG's IDDE. However, Rockville Code of Ordinances Chapter 19, Article IV encompasses its stormwater management ordinances. These ordinances can be found at:

https://library.municode.com/md/rockville/codes/code_of_ordinances?nodeId=CICO_CH19SE COST MA_ARTIVSTMA

3.4 University Policies

While the Universities at Shady Grove does not have a specific ordinance relating to illicit discharge detection and elimination. Furthermore, USG is subject to not just our own policies and procedures, but those of University Maryland, College Park (UMD) and University System of Maryland (USM) as well. Therefore, Section VI of the UMD Policies grants authority to the Department of Environmental Safety, Sustainability and Risk (ESSR) to ensure compliance with all environmental regulations. Therefore, USG facilities management will implement this IDDE Plan since it is required by its NPDES General Permit for Discharges from Small MS4s (State Permit No. 13-SF-5501; NPDES Permit No. MDR05501). More details regarding this University Policy are included in Appendix C of this plan. The complete directory of the University of Maryland's Policies can be found at:

<https://www.president.umd.edu/administration/policies>

SECTION 4: DETECTION PROCEDURES

4.1 *Prohibition of Illicit Discharges*

Illicit discharges, as defined by the USEPA, are defined as a storm drain that has measurable flow during dry weather containing pollutants and/or pathogens. This means any non-permitted discharge to a regulated MS4 or to waters of the State, that does not consist entirely of stormwater, except for naturally occurring floatables, such as leaves, tree limbs, or authorized non-stormwater discharges covered under a NPDES permit.

Illicit discharges can be categorized as either direct or indirect. Examples of direct illicit discharges include sanitary wastewater; piping directly connected from a home to the storm sewer; materials (e.g., used motor oil) that have been dumped illegally into a storm drain catch basin; or a cross-connection between the sanitary sewer and storm sewer systems. Examples of indirect illicit discharges include: a damaged sanitary sewer line leaking into a storm sewer line, or a failing septic system leaking into a storm sewer line, or causing surface discharge into the storm sewer.

The MS4 general permit authorizes the following non-stormwater discharges provided the discharges have been determined unsubstantial contributors of pollutants, as stated in Part VI.C. USG will not consider items listed in Table 1 as illicit discharges. If USG determines any of these activities to be illicit discharges in the future, USG will update its IDDE Plan accordingly.

Table 1.
Exempt Non-Stormwater Discharges

Irrigation water	Springs
Uncontaminated pumped groundwater	Water from crawl space pumps
Diverted stream flows	Footing / foundation drains
Rising ground waters	Lawn watering runoff
Uncontaminated groundwater infiltration	Flows from riparian habitats and wetlands
Discharges from firefighting activities	Residual street wash water

4.2 *Prohibition of Illicit Connections*

The construction, use, maintenance, or continued existence of illicit connections to the storm drain system is prohibited. This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under laws or practices applicable or prevailing at the time of connection. A person is considered to be in violation of this program if the person connects a line conveying sewage to the MS4, or allows such a connection to continue. Improper connections in violation of this program must be disconnected and redirected, if necessary, to the sanitary sewer system.

4.3 Procedure to Report an Incident

4.3.1 Notification of Spills

Notwithstanding other requirements or laws, as soon as any person responsible for any known or suspected release of materials which are resulting or may result in an illicit discharge of pollutants into stormwater runoff, the storm sewer system, or water of the State, said person shall immediately take all necessary actions and measures to: stop, contain, and cleanup such release. In the event of such a release of an illicit discharge, said person shall immediately notify security at USG who then routes the call to facilities management. Reported spills will be tracked by facilities management in the Illicit Discharge Incident Tracking Sheet in Appendix D of this Plan.

Spill procedures regarding emergency actions, such as radiation, chemical, or biological, can be found at this link:

4.3.2 Reporting

If an illicit discharge is identified during a routine inspection or while responding to a notification, facilities management will write a report for each illicit discharge and its location. Facilities management will maintain a database that documents all activities associated with the USG's IDDE Plan ranging from mapping, outfall screening, source identification, and photographs. Records of all illicit discharges and activities associated with this plan will be documented and submitted to Maryland Department of the Environment (MDE) with USG's annual report.

Any illicit discharges in violation of USG's SPCC and/or SWPPP will be reported as outlined within their respective plan(s).

4.4 Inspection Procedures

4.4.1 Outfall Inspections

The Outfall Inspection Form will be completed 100% of the outfalls each year, as required by MDE. The purpose of the inspections is to screen for any source of an illicit discharge and to eliminate any improper connection or illicit discharge to the storm drain system. The inspection sheets are used during dry weather to record descriptive and quantitative information about each outfall inspected in the field.

Field staff conducts an outfall inspection by photographing each outfall and characterizing its dimensions, shape and component material, and recording observations on basic sensory and physical indicators. Each outfall with a flow will have field measurements taken for temperature, pH, ammonia, and chlorine. Basic field equipment needed for the inspections include: waders, a measuring tape, watch, camera, pH probe, ammonia test strips, chlorine meter, and sterile gloves. The Outfall Inspection Form is located in Appendix E. Based on field screening results, additional sampling and/or investigation may be conducted, as warranted.

4.4.2 Source Identification

When identifying any illicit discharges or the source of any violations for their NPDES permit, facilities management will locate the original discharge point by using a map of the storm sewer system and physically following a drainage ditch, or identifying the most up-pipe manhole with a junction. Facilities management may opt to collect additional field and laboratory samples as he or she makes their way upstream or up-pipe in order to compare the outfall sample results with the in-line results in hope of identifying similarities between the sites. If, from following the drainage ditch or inspecting the manhole, facilities management can determine the direction from which the discharge originates, facilities management will then continue upstream or to the next up-pipe manhole until he or she can pinpoint the source or the general vicinity from where the discharge is originating. If facilities management cannot identify the specific source through visual observation, a dye test, smoke test, or video inspection will be necessary to determine the source of the discharge.

4.5 *Immediate Response Procedures*

All illicit discharges should be reported to the USG's security desk at 301-738-6065 who will then route the call to facilities management. The report should include: the location of the problem, time the problem was found, odor/color/turbidity/floatables, photo(s), and any other relevant information.

Any illicit discharges in violation of USG's SPCC and/or SWPPP will follow the reporting procedures as outlined within their respective documents.

Spill procedures regarding emergency actions for various materials, such as chemical, radiological, or biological, can be found at this link:

4.6 *Investigation and Response Procedures*

In the case of the identification of an illicit discharge, it is necessary to conduct an investigation to identify and eliminate the source of the discharge. An investigation may result from:

- A report to USG facilities management staff from the general public;
- A report from a USG staff member or student; or
- Results of outfall screening.

The determination of if an illicit discharge has occurred will be made by USG facilities management staff. In all cases of an illicit discharge, the USG Illicit Discharge Incident Tracking Form, found in Appendix D, must be completed for MS4 permit annual reporting documentation purposes. An investigation of an illicit discharge may result in the source being easily identified or may be complex and should utilize the methods outline in Section 4.4.2 of this plan.

4.6.1 Investigation Protocol

Based on the familiarity of the campus and its drainage areas, an initial field evaluation may easily identify the source of an illicit discharge. Once found, the source should be documented on the USG Illicit Discharge Tracking Form. The remainder of the form shall be completed as appropriate to indicate the source has been eliminated, if applicable, and provide an ending date for the investigation. It is critical that the USG Illicit Discharge Tracking Form is completed in order to demonstrate that illicit discharges have been addressed.

If the source of an illicit discharge is not easily identified, further investigation may be necessary and should be guided by the following procedures:

1. Track the illicit discharge to its point of entry into the storm sewer. Tracking can be supplemented with review of the USG outfall mapping to identify the drainage area of the illicit discharge. Cross reference the mapping with the USG SWPPP mapping that indicates areas most likely to be the source of pollutants.
2. Conduct field inspection of the drainage area near the point of entry to identify the potential pollutant source. Document potential sources with photos, ensuring the photos give the appropriate context to the location of the source.

USG staff will primarily rely upon visual inspections of the areas in the storm sewer system above the outfall at which an illicit discharge is detected. Sampling and analysis can be performed as necessary to determine the characteristics of the illicit discharge and to help identify the most likely source. Improper connections and unpermitted cross-connections to the storm sewer system can be detected by utilizing a combination of methods to investigate non-stormwater discharges, such as visual/video inspections, and dye or smoke tracer testing. Dry-weather testing at a discharge point assists in identification of abnormal conditions such as sporadic or continuous discharge, which can facilitate tracking of the source. Tracking techniques also include visual inspections of drainage structures and lines, dye testing, video inspection, indicator monitoring, smoke testing, and optical brightener monitoring traps. Other more elaborate approaches include using remote sensing tools to identify soil moisture, water temperature, and vegetation anomalies associated with illegal dumping activities.

4.7 *Recordkeeping*

The NPDES Phase II Permit requires USG to keep records of all stormwater program activities and IDDE records for a minimum of five (5) years. USG will maintain a database of illicit discharges and investigation reports, citizen complaints, outfall inspections, and corrective actions. All paper copies will be stored in a file designated for illicit discharges and located in the USG facilities management office. Electronic copies will be available on demand.

SECTION 5: CORRECTIVE ACTIONS & ENFORCEMENT

In order to maintain compliance with the permit, facilities management has the authority to notify entities within the USG MS4 of deficiencies and/or illicit discharges and to require corrective action to be performed. In the case of faculty, staff, or students under the control of USG, facilities management will work directly with the party/parties to address and correct any deficiencies and/or illicit discharges. In the event that tenants or other non-USG entities are involved in the deficiencies and/or illicit discharges, facilities management will notify the party/parties of the required corrective actions and establish a timeframe for compliance. In the event that the party/parties do not comply, the incident will be referred to MDE for enforcement action. USG's facilities management department will enforce compliance with the IDDE Plan and work with the party/parties to obtain compliance. Facilities management, however, is not an "enforcement" entity in the traditional sense and, as such, will not impose fines, penalties, etc. If situations arise where an illicit discharge is determined to be willful and criminal in nature, the matter may be referred to the local police department for further action, in conjunction with referral to MDE.

Deficiencies and/or illicit discharges at USG construction sites will be handled differently; those will be reported to the facilities management department. The facilities management department will then work with their construction contractors to undertake the necessary corrective action(s). If warranted, the facilities management department will refer the issue to the MDE for enforcement action.

SECTION 6: PUBLIC EDUCATION

6.1 Public Education and Outreach

USG shall implement and maintain a public education and outreach program to help reduce illicit discharges of pollutants. Public education and outreach can be coordinated with other portions of USG's stormwater management program, developed independent of other pollution control efforts, or implemented by an entity other than the permittee. At a minimum, the public education program shall contain information about the impacts of illicit discharges on receiving waters, why controlling these discharges is important, and what the public can do to reduce illicit discharge pollutants in stormwater runoff.

Examples of the information that should be considered by the permittee when developing a public education and outreach program include:

1. The types and causes of pollutants found in urban runoff;
2. The importance of reducing, reusing, and recycling;
3. The consequences of stormwater pollutants;
4. Proper disposal of vehicle and equipment fluids;
5. Outfall signage and storm drain stenciling;
6. Residential car washing;
7. Proper pet waste management;
8. Increasing proper disposal of hazardous waste and household hazardous waste (HHW);
and
9. How staff can contribute to USG's stormwater management and IDDE program through the following:
 - a. Proper disposal of vehicle fluids;
 - b. Lawn care and landscaping;
 - c. Hazardous material storage, use, and disposal (e.g., herbicides, pesticides, and fertilizers);
 - d. Spill and illegal dumping hotline; and
 - e. Any other components deemed necessary to ensure adequate public outreach and education.

6.2 Public Involvement and Participation

USG shall implement and maintain a public involvement and participation program. USG shall, at a minimum, comply with all State public notice requirements in actions or decisions made having to do with stormwater management and the IDDE program. Additionally, USG will implement different programs to assist with prevention or and the identification of illicit discharges. This can include: stream cleanups, illicit discharge hotline, promoting educational programs in for faculty, staff, and students, and providing information sessions/material on request. USG requires stormwater training for staff involved in activities that are considered a high risk for potential stormwater pollution.

SECTION 7: STAFF TRAINING

The MS4 Permit requires USG to provide annual training to applicable field personnel in recognition and reporting of illicit discharges. USG requires stormwater training for staff involved in activities that are considered a high risk for potential stormwater pollution. USG facilities management will provide training for field staff and other employees on ways to identify and report non-stormwater discharges, spills, illicit connections, and illegal dumping. The field staff members will receive additional training in appropriate methods to identify, trace, and remove the source of an illicit discharge as well as effective methods to identify emergencies and contain spills. Additionally, USG facilities management will provide training to other staff members in other departments who may come into contact with illicit discharge through their field work on illicit discharge identification and reporting procedures. Any and all staff operating the IDDE hotline will be trained on how to respond to calls. Training will be provided annually to keep all staff members up-to-date. Training materials are available in Appendix F.

SECTION 8: IDDE 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 gathered and evaluated 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.

Name: Nico Washington **Title:** Chief Operating Officer, Administration and
Financial Services

Signature:  **Date:** March 29, 2021

SECTION 9: IDDE EVALUATION AND MODIFICATIONS

Revision	Date	Details / Comments
Revision 00	April 2020	Original IDDE Plan
Revision 01	April 2021	Updated to reflect personnel changes and MDE comments

SECTION 10: REFERENCES

The following references were used to prepare this plan and contain supplemental information that may be helpful to City staff.

IDDE Program Manuals:

Center for Watershed Protection and Robert Pitt. *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*. October 2004. U.S Environmental Protection Agency. Washington, D.C.
https://www3.epa.gov/npdes/pubs/idd_manualwithappendices.pdf

New England Interstate Water Pollution Control Commission. *Illicit Discharge and Elimination Manual: A Handbook for Municipalities*. January 2003. Lowell, MA.
http://www.neiwpcc.org/neiwpcc_docs/iddmanual.pdf